



**The International  
Council of Business  
Schools and  
Programs**

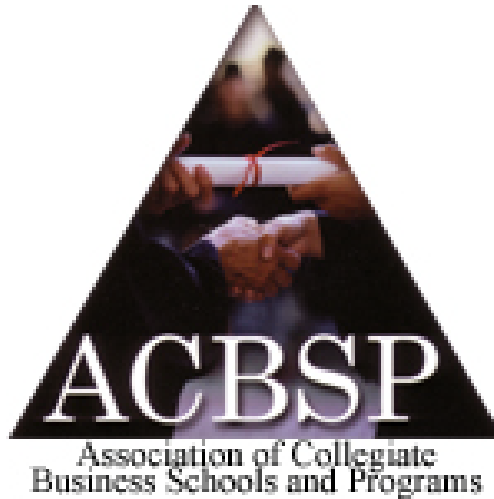
**ACBSP Region 8**

**“Recognizing Excellence in  
Business Education”**

**Annual Conference Proceedings  
November 26<sup>th</sup> to 29<sup>th</sup>, 2009  
Paris, France**



# **International Council of Business Schools and Programs**



## **Region 8**

### **Annual Conference Proceedings**

### ***“Recognizing Excellence in Business Education”***

**November 26 – 29, 2009, Paris, France  
Volume 1, Issue 1; ISSN (CD): 1948-920X**

Copyright © Association of Collegiate Business Schools and Programs – Region 8

No part of this publication may be reproduced, stored or transmitted in any material form or by any means (including electronic, mechanical, photocopying, recording or otherwise) without the prior written permission of the publisher, except in accordance with the provisions of the Copyright Designs and Patents Act 1988 or under the terms of a license issued by the Copyright Licensing Agency Ltd. or the Copyright Clearance Center Inc.

---

## Editorial Board

---

### Editor in Chief

**S. Peter Horn, Ph.D., LL.M.**

Chancellor - International School of Management  
148 rue de Grenelle, 75007, Paris, France.  
110 East 59<sup>th</sup> Street, 23<sup>rd</sup> Floor, New York, NY 10022, USA.  
Email: [peter.horn@ism.edu](mailto:peter.horn@ism.edu)

### Executive Editor

**Professor Des Cooney, Ph.D., (ABD)**

Assistant Dean - International School of Management  
148 rue de Grenelle, 75007, Paris, France  
Email: [des.cooney@ism.edu](mailto:des.cooney@ism.edu)

### Members of the Editorial Board

**Dr. Jeremy Cripps, Ph.D, FCA, CPA**

Head of Business & Economics Division  
Professor of Accounting and Management  
American University of Kuwait  
Email: [jcripps@auk.edu.kw](mailto:jcripps@auk.edu.kw)

**Dr. Michael Gordon, Ph.D.**

Professor of Entrepreneurship  
International School of Management  
[angeldeals@yahoo.com](mailto:angeldeals@yahoo.com)

**Dr. Joe Santora, Ed. D.**

Dean, School of Business & Management,  
Thomas Edison State College

**Dr. Lloyd Williams, Ph.D., D. Min.**

Chairman, Institute for Transformative  
Thought and Learning  
Professor, International School of  
Management  
Email: [orgdoctor@ittl.org](mailto:orgdoctor@ittl.org)

**Mark Esposito, Ph.D.**

Dean & Director of Research  
MBA Program  
International School of Management  
Email: [mark.esposito@ism.edu](mailto:mark.esposito@ism.edu)

**Dr. Howard Reed, Ph.D.**

Senior Director, Higher Colleges of Technology  
Director, Dubai Women's College  
[hreed@hct.ac.ae](mailto:hreed@hct.ac.ae)

**Bruce Stetar B.A. MBA**

Chair, Business Programs, ACS  
Higher Colleges of Technology  
Email: [bruce.stetar@hct.ac.ae](mailto:bruce.stetar@hct.ac.ae)

**Dr. James Kahlman, Ph.D., ARM, RF.**

President, Kallman Consulting Services  
Professor, International School of  
Management  
Email: [kcsERM@earthlink.net](mailto:kcsERM@earthlink.net)

---

## Introduction

---

### **S. Peter Horn, Ph.D., LL.M.**

Chancellor

International School of Management

148 rue de Grenelle, 75007, Paris, France.

110 East 59<sup>th</sup> Street, New York, NY 10022, USA

President ACBSP Region 8

email: peter.horn@ism.edu

**Biographical Notes:** Dr. Horn has a Ph.D. in International Finance; and a Masters in International Tax Law from Regent University's School of Law. He is Chancellor of the International School of Management – a small privately funded university offering Masters and Doctoral degrees in business. It is the institution's focus on quality and continuous improvement that has proven to be the key component in maintaining its competitive advantage in the international education environment.

He is a Chair-Elect of the Board of Commissioners for Baccalaureate and Graduate Degree Programs for the Association of Collegiate Business Schools and Programs (ACBSP), sits on their Strategic Planning Committee and is President of the International Council for Business Schools and Programs – ACBSP Region 8. He is also a member of several US and European corporate Boards.

Dr. Horn's current research interests focus on quality in education, international tax law and modeling the international financial markets.

---

A World Bank study shows a distinct correlation between economic development and the development of higher education. In countries belonging to the OECD enrollment ratios in higher education averaged over 50% compared to 21% in middle income countries and 6% in low income countries<sup>1</sup>.

---

<sup>1</sup> Quality Assurance in Higher Education: Recent Progress; Challenges Ahead by Elaine El-Khawas Graduate School of Education University of California, Los Angeles Robin DePietro-Jurand and Lauritz Holm-Nielsen The World Bank, 1988



In addition, studies conducted by the UN clearly show that the “quality of a country’s higher education sector and its assessment and monitoring is not only key to its social and economic well-being, it is also a determining factor affecting the status of that higher education system at the international level. The establishment of quality assurance systems has become a necessity, not only for monitoring quality in higher education delivered within the country, but also for engaging in delivery of higher education internationally. As a consequence, there has been an impressive rise in the number of quality assurance and accreditation bodies for higher education in the past two decades”<sup>2</sup>.

The general theme of this conference focuses on recognizing excellence in business education. Since the 1980s, cross-border higher education through the mobility of students, academic staff, programmes / institutions and professionals has grown considerably. In parallel, new delivery modes have appeared, such as campuses abroad, electronic delivery of higher education and for-profit providers. These new forms of higher education offer increased opportunities for improving the skills and competencies of individual students but also present new challenges in ensuring quality – developing appropriate procedures and systems in order to maximize the benefits and limit the potential drawbacks of the internationalization of higher education on quality.

Designed to develop, promote and coordinate research on quality assurance issues in quality assurance; this conference also seeks to help professionals, business educators and policy-makers to contribute, to disseminate information and to learn from each other's work. The international dimension, albeit with a quality assurance focus, is emphasized in order to overcome cultural and national barriers and to meet the needs of accelerating technological change and changes in the global economy.

### **Subject Coverage:**

This Conference seeks to provide a venue to publish original and review papers, case studies, conference reports, management reports, book reviews and commentaries on developments in the literature and practice on excellence in business education. Papers are solicited that address these

---

<sup>2</sup> United Nations Educational, Scientific and Cultural Organization Guidelines for Quality Provision in Cross-border Higher Education Paris, 2005 ([http://www.chea.org/pdf/UNESCO\\_Guidelines.pdf](http://www.chea.org/pdf/UNESCO_Guidelines.pdf)), last accessed April 11, 2009

issues from an empirical and/or conceptual point of view. Possible topics of interest include (but are not limited to):

- Policies and procedures for recognizing excellence in business education.
- Approval, monitoring and periodic review of programs and awards.
- Assessment of students.
- Outstanding, innovative practices of teaching staff.
- Learning resources and student support.
- Information systems.
- Use of internal monitoring systems to ensure excellence in business education.
- Development of external excellence in business education benchmarks.
- Excellence in business education criteria for decisions.
- Excellence in business education processes and fit with the institutions purpose.
- Excellence in business education reporting.
- Periodic quality reviews.
- Use of external quality assurance procedures.
- Analysis of political, economic, social, legal and cultural environment in which educational organisations work.
- Autonomy, professionalism and decision policies
- Case studies from schools in different countries.
- Change management and education quality.
- Classroom management.
- Computers in educational administration.
- Differing cultural perceptions of management in education.
- Distance education and multimedia environments.
- Education economics.
- Educational leadership.
- Educational systems planning/strategic planning.
- Equity and education.
- Finance and accountability.
- Globalisation and education.
- Individual professional learning portfolio.
- Information systems for education and training support.
- Knowledge and education.
- Leadership in education.
- Lifelong learning and development of competences.
- Management in higher education.
- Management of e-education.
- Managing the curriculum.
- Marketing in education.
- Mobile learning: policy and management.

- Policy analysis and evaluation of institutions and study programmes.
- Professional development of teaching staff.
- Research methods in education.
- School and school system improvement.
- Transactional education, student and teaching mobility.
- Other relevant topic areas.



### **Conference Venue:**

- Institut Supérieur Européen de Gestion (ISEG) - Paris, 28 rue des France-Bourgeois, 75003, Paris, France.

### **Conference Theme:**

- Recognizing Excellence in Business Education

### **Host Institutions:**

- **Institut Supérieur Européen de Gestion (ISEG) - Paris**, 28 rue des France-Bourgeois, 75003, Paris, France, Telephone : +33 (1) 44 78 88 88 88, Fax : +33 (1) 44 78 88 89, Website: <http://www.iseg.fr/fr/index.aspx>

**Institutional Profile:** Since its creation in 1988 by Mr. Mark Sellam, the ISEG Group of institutions has revolutionized the French higher education system of business education. With campuses located in the major French cities of Paris, Bordeaux, Lille, Lyon, Nantes, Strasbourg and Toulouse; the ISEG Group is a major player in the development of French business. For example, their Master in Business Administration (MBA) program generates approximately 250 graduates per year distributed throughout France; who take up positions in domestic SMEs as well as domestic and foreign multinationals.

- **The International School of Management**, 148 Rue de Grenelle, 75007, Paris, France, Telephone: +33 (0) 1 45 51 09 09, Fax: +33 (0) 1 45 51 09 08, Website: <http://www.ism.edu>

**Institutional Profile:** The International School of Management is a privately funded institution dedicated to executive development which values quality over quantity. Their degree programs (MBA, IEMBA, DBA, Ph.D.) continue to attract the highest calibre of candidates from business, government and academia. Their unique faculty model allows them to engage the “best in the business” in each academic discipline, and their effective pedagogical initiatives provide relevant, innovative, value adding programs.

### **Keynote Speakers:**

- **Senator Iyiola Omisore**; FNSE, H'Dip/Eng; B.Tech; M.Sc., C.Eng; FCIBS, F.A. Cost E; FNIMech, E; R. Eng; FNSE; Chairman, Senate Committee on Appropriations; Chairman UNDP/NASS Implementation Committee; National Assembly, Federal Republic of Nigeria - **Education for Corporate and National Development: A Perspective from Nigeria.**
- **Dr. Yacov Geva**, DBA, Ph.D. (cand.); Chairman, LifeWatch, AG,, The Number 1 Growth Company on the Swiss Stock Exchange in 2009, the company specializes in the areas of cardiology, hypertension, diabetes, ob/gyn, and pulmonology  
<http://www.cardguard.com/cardguard> - **The Impact of Education on Business Success.**

### **Corporate Sponsors:**

- **Institut Supérieur Européen de Gestion (ISEG)** - Paris, 28 rue des France-Bourgeois, 75003, Paris, France. Website: <http://www.iseg.fr/fr/index.aspx>
- **The International School of Management**, 148 Rue de Grenelle, 75007, Paris, France, Website: <http://www.ism.edu>
- **Peregrine Academic Services**, LLC, Box 741, 801 East 4<sup>th</sup> Street, Suite #2, Gillette, Wyoming, USA, 82717, Website: <http://www.peregrineacademics.com/>
- **Trusconsulting, SA**, 19 Boulevard Malesherbes, 75008, Paris, France, Website : <http://www.trusconsulting.com>

### **Educational Sessions:**

- **Measuring Student Learning and Institutional Effectiveness**, Steve Parscale, ACBSP Director of Accreditation.
- **Assessing Faculty Credentials**, Dr. Annette Craven.
- **ACBSP Standards and Criteria – An Overview**, Professor Bruce Stetar
- **Leadership and Strategic Planning – ACBSP Standards 1 and 2**, Dr. Peter Horn
- **Basic Wine Tasting Principles**, Dr. Pierre Camps.

### Peer Reviewed Paper Submissions:

- **Developing Executive Brain Functions Through Brain Based Learning**  
*Dawn E, Bowden*
- **Integrating Online Curricula and Assessment**  
*Don Capener*
- **Learning About How We Learn**  
*Rob Wood*
- **Executive Education and Development at Deutsche Post World Net (DPWN)Add**  
*Hannah Zaunmüller*
- **The Value of Reputation in Higher Education**  
*Benoit Lorel*
- **Comparative investigation of accreditation agencies in Higher Education – Suggested Models to foster teaching excellence**  
*Chantal Ladias*
- **The Role of Emotions in Brain Based Learning**  
*Soteris Kefalas*
- **An Assessment of Business Accreditation Organizations and Standards**  
*Dawn E. Bowden*
- **Complex Experiences for Powerful Learning**  
*Jeff Klein*
- **Optimizing Education Through Brain Based Learning – Voted “Best of the Region”**  
*Amanda McKinney*
- **Fundamentals in Analyzing and Teaching Cases with an Example**  
*Andrej Lengyel*
- **The ELearning Model**  
*Soteris Kefalas*
- **Information Systems in Education: Strategic Initiative or Operational Support?**  
*Jacqueline Musabende*



---

## Keynote Address: Education for Corporate and National Development: A Perspective from Nigeria

---

### Senator Iyiola Omisore

FNSE, H'Dip/Eng; B.Tech; M.Sc., C.Eng; FCiBS, F.A. Cost E;  
FNIMech, E; R. Eng; FNSE,  
Chairman, Senate Committee on Appropriations  
Chairman UNDP/NASS Implementation Committee  
National Assembly  
Federal Republic of Nigeria

**Keywords:** Excellence in Education, Nigeria, Accreditation, Educational Systems, Quality Assurance in Education, Corporate Development, National Development, Cultural Development, Business Education, Assessing Excellence in Business Education.

**Reference:** Reference to this paper should be made as follows:  
Omisore, I. (2009) "Education for Corporate and National Development a Perspective from Nigeria", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

---

### 1.0 Introduction

I consider it a rare privilege the opportunity offered to me to share my views with this elite gathering of education professionals on the above subject; drawing upon my lessons of experience from my home country of Nigeria. I also commend the organizers of this conference on their choice of the overall theme of the conference, namely "Recognizing Excellence in Business Education" which I believe could not have been timelier.

The desirability of the theme, in my view, derives from the following considerations, among others. First, we are operating a global village for which the corporate world is acting as the main engine for its growth. However, the recent financial, and now economic crises, suggest that need for an in-depth rethinking and refocusing of the role of the private sector in the emerging global village. This will call for a review of our business education curriculum and processes accordingly. Secondly, I believe one of the major deliverables from this conference would be the development of generally acceptable criteria for evaluating excellence in business education in tandem with current realities noted above. Thirdly, the

theme will engender information sharing and peer learning among members of the association, all towards enhancing the quality of business education for the overall benefit of the global economy.

These are some of the major considerations that informed the focusing of this paper, with some reference to the Nigerian environment. I hope the information emanating there from will be helpful to the members of the Association, thereby fostering expanded networking with public and private business education institution in Nigeria.

## **2.0 Importance of Education**

The importance of education appears self-evident. However, rather than engaging in generalities, I consider it more desirable to contextualize the discussion thereof within a development framework. By this, education can be perceived as a means to an end, rather than as an end by itself. For this purpose, we adopt a working definition of education simply as the whole process that seeks to achieve two major objectives.

First, it seeks to develop the intellectual capacity of an individual to enable him/her to contribute meaningfully towards continual improvement in the welfare of the society in various ways. This is fostered through acquisition of knowledge, especially from formal and modern education. The second is to nurture into maturity the mind, and to also mould the behavior of an individual, towards becoming a worthy citizen and a respectable member of his/her community. This is the behavioral modification role of both formal and non-formal education.

Generally, the education curriculum has been carefully designed with a view to achieving these two major goals. Consequently, nearly all educational systems have courses of instruction in arts, sciences, humanities and vocational studies. Each region of the world has also developed specific or special courses in areas such as civic, moral and political education to meet their peculiar needs.

As noted earlier, the end goal of education is primarily to promote national development on which we can elaborate along four dimensions:

- The first is political development in terms of strength of political structures and instructions that will facilitate the emergence and sustainability of a real democratic political system. Under this system, only eligible and duly elected representatives of the people occupy elective offices, and in turn they should ensure that public policies and programs are based upon the genuine wishes of the people. They are expected to operate as honest agents of the people who are the electorates, failing which they

(the electorates) should have an unfiltered freedom in withdrawing their mandate from any dishonest agent.

- We can also mention the concept of economic development. This is concerned with the purposeful mobilization and prudent management of societal resources, towards improving the economic well-being of every citizen in the nation. This entails, not only sustained growth of the economy, but also equitable distribution of its proceeds. Adequate human resource development programs through the education system are the critical inputs towards achieving the desired quality of macroeconomic management conducive to the attainment of the economic development aspirations.
- National development also encompasses both social and cultural development. Social development refers to improvements in social relations, in which there is great respect for, and observance of human rights, and good neighborliness, among others.
- Finally, cultural development on the other hand, refers to gradual but purposeful reforms to the norms, values and reward system of the society in a manner that promotes and rewards hard work, honesty, and fosters good citizenry, without destroying these core values and norms. Incidentally, the issue of cultural development is often ignored in the discourse on national development. Whereas historically, meaningful development was neither attainable nor sustainable when the culture of the society was destroyed and replaced with foreign cultures. At the same time, national cultures cannot remain static; else they become a cog in the wheel of progress in other areas of development. Hence, a developed nation is characterized by a development-oriented culture, political stability, social harmony, and economic prosperity.

An incisive reflection shows that the quality of national development depends critically on the quality of the people in different areas of endeavor, whether in politics, economic management, inter-personal relations, and cultural orientation. The quality of the people on the other hand, is determined and sustained, to a large extent, by the quality of education to which they have been exposed. Herein lays the link between education and national development.

### **3.0 Developments in Nigeria’s Education Sector**

Given its crucial role, it is important to reflect on some developments in the provision of education in Nigeria over time. Historically, available information indicates that Christian missionaries from Europe introduced the Western type of education in Nigeria in the 1840s. It commenced from the coastal areas, and started spreading gradually into the hinterland.



The establishment of schools was usually demand-driven, and designed towards meeting the needs of the immediate and extended community. The size of each class in particular, and the overall student population in each school in general, were carefully regulated to ensure an ideal student-teacher ratio and close interaction between teachers and students. The curriculum was robust enough to allow for balanced educational development, including arts, crafts and sports, while moral education was also mainstreamed in the process.

Specifically, the Nigerian education system compares favorably with other parts of the world regarding the scope of its courses of instruction. The issue of quality of delivery of these courses is another matter, which we are leaving for another day. Religious education also played, and to a limited extent, still plays an important role in the area of civic and moral education, but the level of civic education is steadily declining. Also in the olden days, there used to be a strong partnership between parents and teachers in molding the character and behavior of students, to ensure that the moral education to which they have been exposed was not wasted.

There was close collaboration between teachers and parents to reinforce the virtues of moral education and good behavior on the part of the students. Missionaries and communities also provided financial assistance to very brilliant students from poor families. Education was therefore an investment in the future of both the beneficiary and the community.

Later on, the various regional governments, assumed their rightful role in leading the process of providing education for their citizenry. This entailed the establishment of public schools, as well as the design and implementation of policies to enhance adequate supply of standard educational facilities to the people. All these led to the significant expansion of standard educational facilities to meet the needs of the increasing population of school age children and youths. More interestingly, there was healthy competition between public and non-public providers of education services. Later on, around 1976, the Federal Government initiated a policy whereby the public sector became the sole provider of services across all levels of education in Nigeria.

#### **4.0 Emergence of Business Education**

Early education policies, programs and facilities were geared towards meeting the administrative needs of a newly independent Nigerian nation, especially between 1948 (when the University of Ibadan was established as a College of The University of London) up to early 1970s, at the end of the civil war. However, the success of the post-war reconstruction efforts, coupled with the emergence of oil, which led to a boom in national

revenue and foreign exchange earnings, prompted growth in economic activities, under the guiding principle of a mixed-economy framework.

The ensuing emergence of local entrepreneurs in addition to the entrenched foreign owned corporate enterprises, underscored the need for business education. This was geared towards domesticating the training of required manpower for the emerging corporate sector expansion, and conserving foreign exchange in the training and re-training of various categories of private sector employees abroad.

This urge was reinforced with a series of economic policy reforms and programs in a least two dimensions. The first was the deregulation of the Nigerian economy, in which the private sector was to become the engine of economic growth. Complementing this was the deregulation of the provision of education services at all levels whereby the private sector became active in the provision of educational services, right from kindergarten/nursery to University levels. The positive response to this new era continues to blossom at an increasing rate.

The first set of visible evidence of the emergence of business education started with the introduction of business-related disciplines in both secondary and University levels from the mid-70s. Around this time, courses such as Accounting, Banking, Commerce, Finance and Marketing, among others, were introduced. The flagship business-related post-graduate discipline remains the Masters in Business Administration (MBA), the demand for which continues to be strong to this very day.

There has also been an expansion of the curriculum of business education over the last five years or so. In line with the emerging market-led economic system, business schools are now emphasizing entrepreneurship and innovation as key components of their course curricula. In fact, many Universities such as the University of Ibadan have established centers specifically devoted to these new focus areas, to complement other business-related courses and programs at the University.

### **5.0 Assessing Excellence in Business Education**

Ascertaining excellence in issues such as business education is a multi-dimensional and multi-party affair. It is multi-dimensional in the sense that such evaluation needs to cover issues such as conduciveness of national policy to the promotion of business education, the robustness of the curriculum, the quality of teaching staff, the adequacy and sophistication of teaching aids, and the quality of related research, among others. Excellence is also perceived by several interested parties and groups. In our own context, eligible groups include the proprietors of schools and/or providers of facilities, students, government

supervisory agencies, and relevant policy units, in addition to the end-users of products of the schools, especially various categories of employers and even the community.

For now, I am not aware of a comprehensive excellence assessment framework that adequately covers these two dimensions. Rather, there currently exists the ranking of business schools based on some criteria. Even then, this limited focus seems more confined to the developed economies. Major criteria for these exercises include the visibility of research by the academic staff, and level of provision of information and communication technology (IXCT). In such an environment, the alumni associations play an important role in promoting and sustaining excellence in their alma mater, and this affects positively the opportunities for employment of the graduates of these schools. While these are good initiatives, I believe there is still room for significant improvement, by incorporating criteria centered on the multi-dimensional and multi-party approaches noted above.

### **6.0 Excellence in Business Education: Some Personal Experiences**

I seek the permission of this audience to allow me to use my personal experiences to represent the views of at least three groups of relevant stakeholder groups. These are beneficiaries of business and professional education systems as employers of graduates of business education, and finally as a policy maker within the executive and legislative arms of the government in Nigeria.

I was lucky to have had access to very good educational facilities in the United Kingdom, where I earned my first degree and post-graduate professional education basically in the areas of engineering and project management. This solid foundation has generated a lot of positive effects for me as a person and my immediate and larger community as a whole at various times.

Immediately after graduation, I secured a job with a private engineering firm and project manager in the United Kingdom. Within a short while, I rose to the rank of General Manager. Thereafter, I was seconded to Nigeria, where I started managing several projects for the company. In recognition of my sustained good professional performance and active engagement in the activities and programs of several organizations, I have been conferred fellowships from approximately nine professional organizations. These span the disciplines of engineering, consultancy and project management.

These engagements widened my horizon and I was able to continually identify areas that required improvements in various areas of endeavors. This led to my taking a foray into politics. This paid off when our ticket won the governorship election, and I was sworn-in as the Deputy Governor of Osun State in Nigeria. Thereafter, I moved from the executive arm

to the legislative arm when I won a senatorial election and thereby became a Senator of the Federal Republic of Nigeria. I served on various Committees of the Senate before being appointed as the Chairman of its Appropriations Committee which I still lead.

The current Committee enabled me to further appreciate the relevance of business education towards improving the quality of decisions on national financial resource allocations. In addition, I encourage Universities to seek public-private partnership (PPP) in the expansion of their professional programs. By this, substantial funds are now allocated to Universities to provide basic infrastructures to attract private funds for the sponsorship of various business-related programs.

I must admit that the modest success I have been able to record to date was in no small measure attributable to the high quality of professional and business education I had. In fact, I am currently enrolled in a postgraduate program at the International School of Management to deepen my theoretical and analytical knowledge in business education. This, I believe, will enable me to contribute further to the enhanced quality of national resource management in Nigeria. It will also facilitate my becoming a better manager of my private enterprises whenever I decide to return full-time to private practice.

### **7.0 Promoting Business Education in Developing Economies**

The need for high quality business education for developing economies cannot be over-emphasized. For example, nearly all economies the world over are switching to market-led systems. This requires adequate supply of high-level manpower to manage professionally the emerging private sector agents in each country. We also note the fast-moving globalization process, in which private sector agents in developing economies will be required to engage in an increasingly competitive global economy. I believe that associations of business educators, such as this Association of Collegiate Business Schools and Programs, have a duty to empower adequately the managers and operators within the private sector in developing economies towards coping with challenges ahead.

In addition, business education curriculum should be developed at two levels. The first relates to received theories and generally accepted practices and procedures. The second should cover the peculiar features of distinct operating units, for example, on each continent. This should focus on the understanding of the norms and values of each operating environment, as well as the issue of social responsibility to the host community or nation. These should help towards productive adaptation and entrenchment of good business ethics by national and international private sector agents.

### **8.0 Concluding Remarks**

I sincerely appreciate the opportunity afforded me to share my thoughts with this wonderful audience. I hope this will provide an opportunity for deeper information sharing, peer learning, and informed networking. I express my full support for the letter and spirit behind the theme of this conference, given my penchant for and admiration of excellence in business education and practices. I enjoin this conference to evolve an acceptable framework for periodic and objective recognition of such excellence. I also appeal for the adoption of a wholistic perspective to the definition of excellence along the multi-dimensional, multi-party approaches noted earlier.

Finally, I must reiterate that the current global economic crisis has thrown up new forms of challenges for business education. In particular, there is a need to evolve a procedure for ameliorating the negative side effects of globalization through the activities of private sector agents. It also emphasizes the desirability of a greater focus on good business ethics and a better understanding of the merits and limits of the free markets. Reciprocally, this suggests the need for a pro-active and facilitative role for government in the process.

I thank you for your attention.

---

## The Impact of Education on Business Success

---

### **Dr. Yacov Geva, DBA, Ph.D., (Cand.)**

Chairman, LifeWatch, AG  
Rundbuckstrasse 6  
CH – 8212 Neuhausen am Rheinfall Switzerland  
Telephone: 41 52 632 00 50  
Fax: 41 52 632 00 51

**Keywords:** Life Watch, health care, cardiac monitoring, health care products, health and wellness, personal well-being, consumer health, screening and monitoring, health management, disease management, wellness and fitness, health care technology

**Reference:** Reference to this paper should be made as follows:  
Geva, Y. (2009) "The Impact of Education on Business Success",  
International Council of Business Schools and Programs Annual  
Conference Proceedings, Volume 1, Number 1,

**Corporate Profile:** Rated the Number 1 growth company for 2009 on the Swiss Stock Exchange, LifeWatch AG (SIX Swiss Exchange: LIFE), headquartered in Neuhausen am Rheinfall, Switzerland, is a leading company for healthcare technologies and solutions, specializing in advanced telehealth systems and wireless cardiac monitoring services for high-risk and chronically ill patients, including ordinary consumers of health products and those who are worried about their wellness.

LifeWatch's strategy is to become the global leader in developing & providing state-of-the-art technologies and services for personal well being through the development of innovative and cost-effective solutions for real time detection, diagnosis and monitoring of personal well-being. LifeWatch's newest wireless healthcare system, the PMP4, provides the tools required for screening, monitoring, and the management of General Consumer Health, Disease management and Wellness and Fitness.

LifeWatch manufactures a line of traditional products for the telehealth market, including 1 to 12-lead ECG event recorders, looping recorders, a diagnostic 12-lead ECG, Spirophone, Fetal Maternal Monitors, and telemedicine software packages.



WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



Watching Life

## Third Quarter 2009 Results

International Council of Business Schools and Programs  
“The Impact of Education on Business Success”



**This presentation contains forward looking statements which involve risks and uncertainties. The actual performance, results and timing of the business of LifeWatch AG, could differ materially from the performance, results and timing in this presentation. This presentation does not constitute an offer to sell or a solicitation to an offer to purchase any securities of LifeWatch AG, any such decision must not be made on the basis of the information provided in this presentation. This presentation must not be distributed in or into the United States of America.**

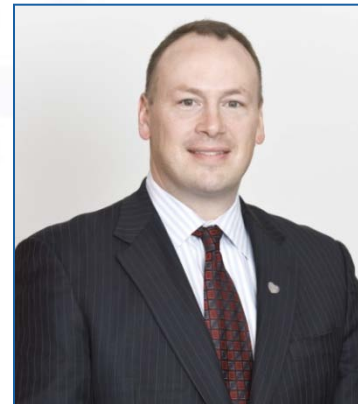
# LifeWatch – Presentation Team



**Dr. Yacov Geva**  
*Chairman & CEO*  
*LifeWatch AG*



**Kobi Ben Efraim**  
*Chief Financial Officer*  
*LifeWatch AG*



**Brent Atwood**  
*Chief Operating Officer*  
*LifeWatch*

# Agenda

- Business Highlights Q3 2009 – Dr. Yacov Geva
- Financials Review Q3 2009 – Kobi Ben Efraim
- Reimbursement Environment – Brent Atwood
- NiteWatch Launch Update – Brent Atwood
- Summary – Dr. Yacov Geva



WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



Watching Life

## Business Highlights Q3 2009

Dr. Yacov Geva, Chairman & CEO, LifeWatch AG

# LifeWatch Overview

Headquartered in Switzerland,  
listed on SIX Exchange

- Main subsidiary LifeWatch headquartered in Rosemont, IL

Profitable wireless healthcare  
monitoring company

- The leading 24/7/365 cardiac event monitoring company in U.S.
- Employs 692

Delivers Next-Generation  
health monitoring platform

- Wireless Ambulatory Cardiac Telemetry – LifeStar ACT
- Comprehensive platform for multiple markets – eHealth, Home Health, Disease Management and Wellness

Increasing market acceptance

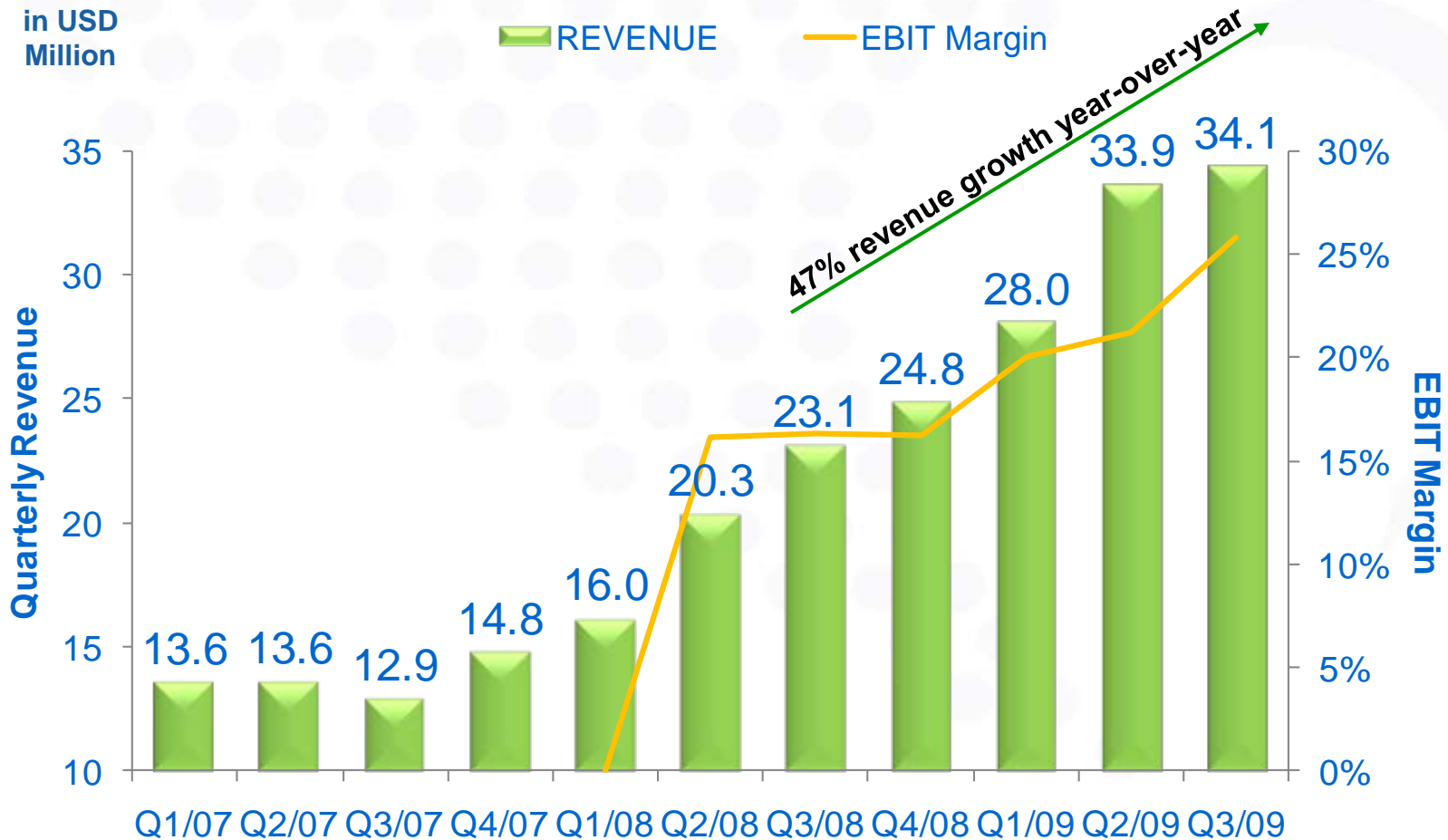
- Covers >297 million lives at a higher reimbursement rates for ACT
- Over 1.5 million patients monitored by LifeWatch

Strong financial performance

- USD 34.1m Q3 2009 revenues reflecting 47% growth over Q3 2008
- 30.6% EBITDA margin

# LifeWatch Continued Success

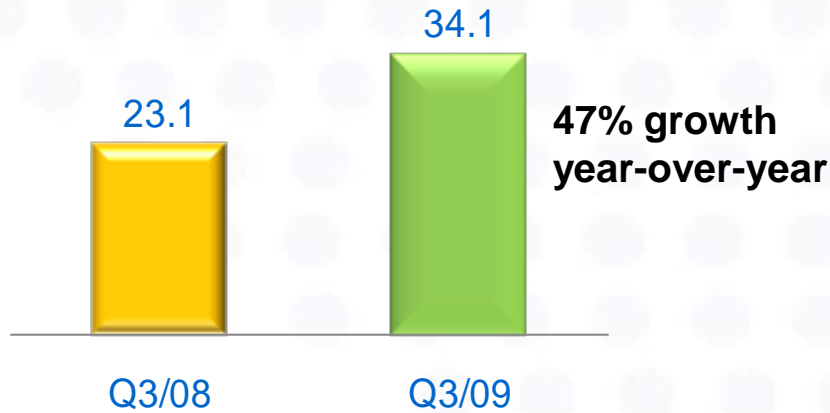
## LifeWatch Quarterly Revenue



# Fiscal Highlights Q3 2009 versus Q3 2008

in USD Million

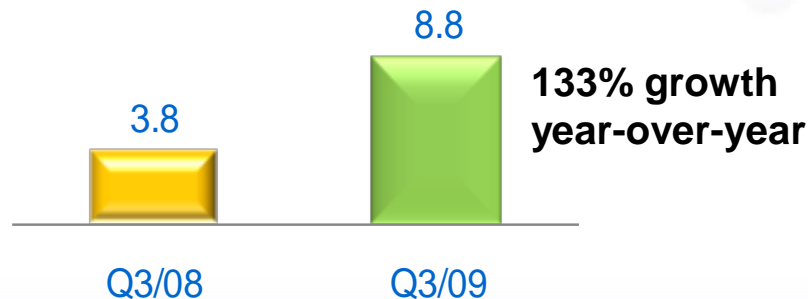
## REVENUES



## EBITDA



## EBIT

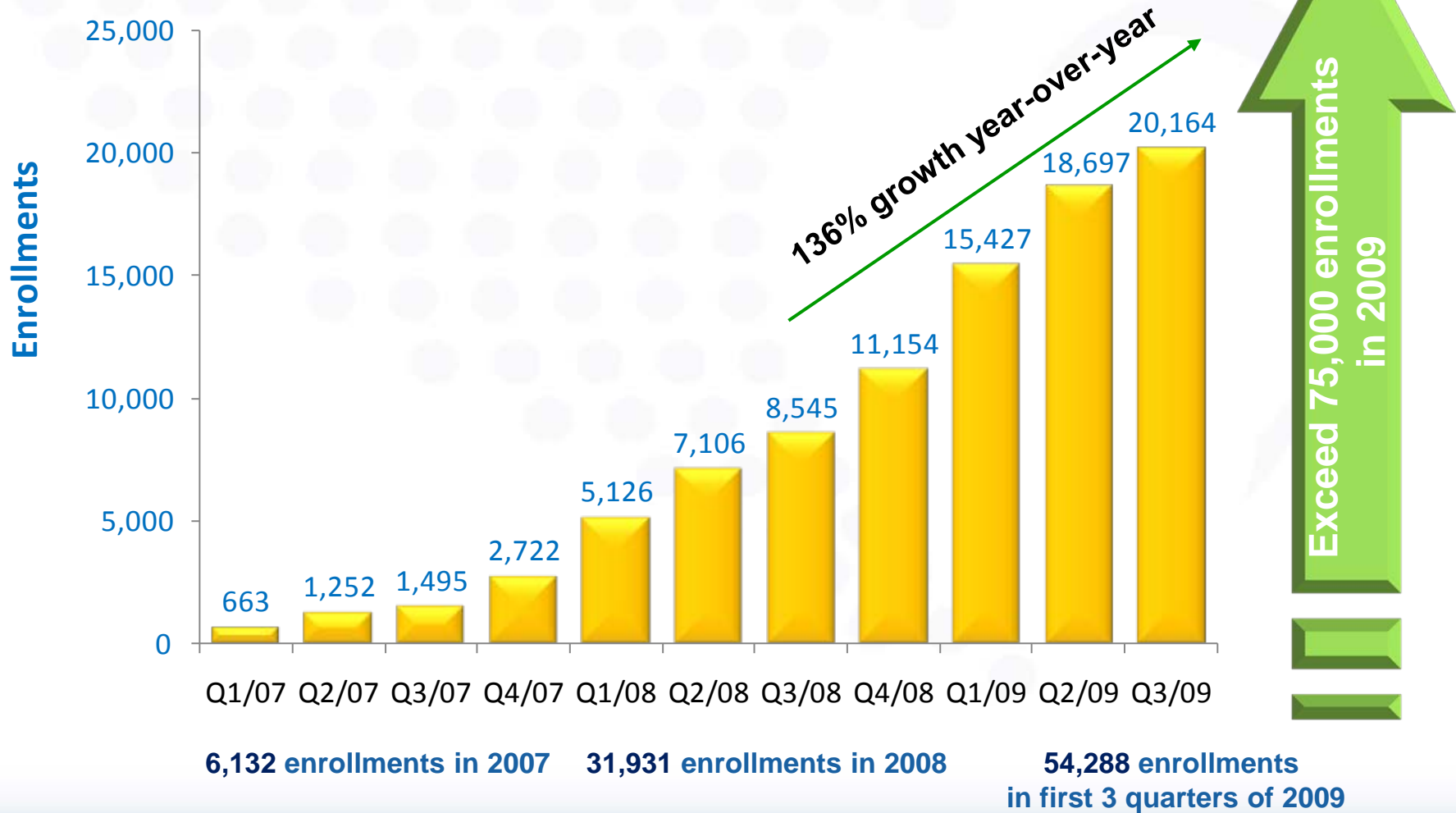


## Cash from Operations





# LifeStar ACT Growth



# Expanding ACT Family of Products



## Act I

Launched: Q1 2007

Features: Auto-detect,  
auto-send

## Act III

Launched: Q1 2008

Features: 3-channel

## Act Ex

Launched: Q2 2009

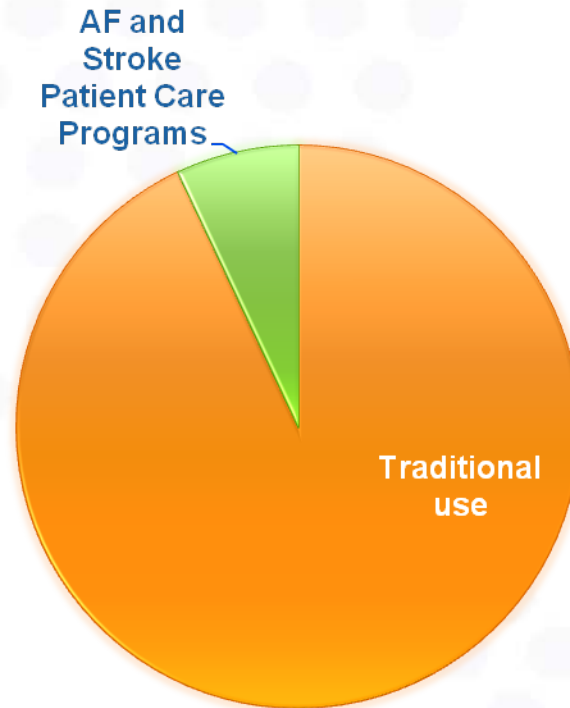
Features: Holter  
capabilities

## o Patient care programs:

- o **AF Patient Care Program:** Launched Q2 2008: Customized program for post-surgical monitoring of patients undergoing AF catheter and surgical ablation procedures.
- o **Patient Stroke Care Program:** Launched Q3 2009: Monitoring patients who have experienced a Transient Ischemic Attack / Stroke of unknown origin (cryptogenic).

# Diverse LifeStar ACT Revenue

## LifeStar ACT Enrollments Q3 2009

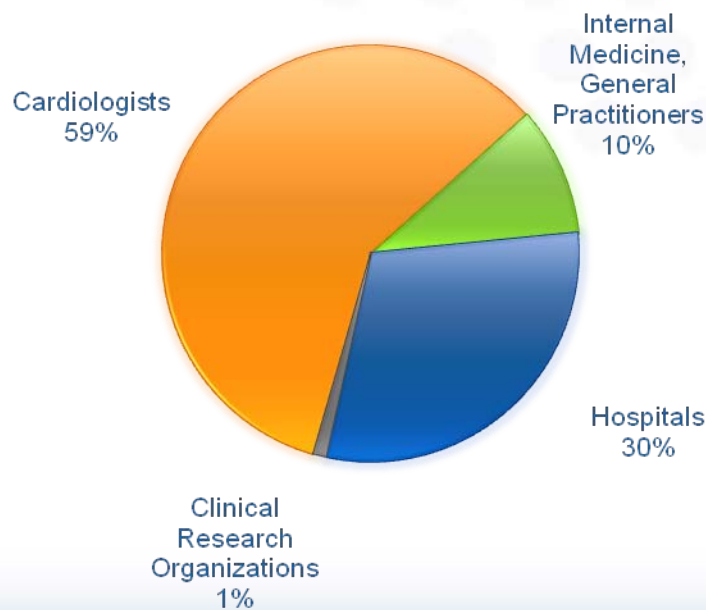


**LifeWatch Continues to Diversify the ACT Platform**

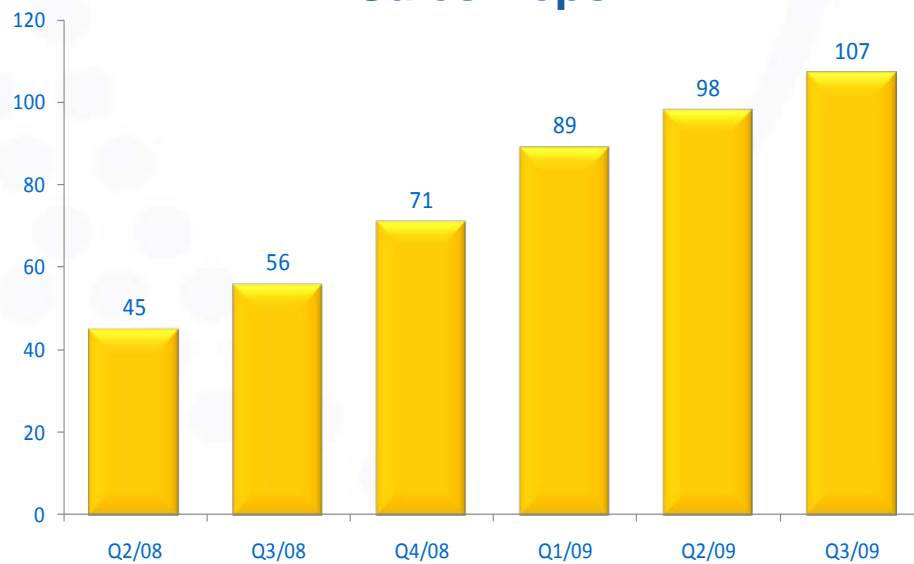
# LifeWatch Clients / Sales Force Expansion

- Customer base: Over 7,000 U.S. customers including 3,900 private cardiology groups (serving 23,000 cardiologists)
- 4 new Federal accounts in Q3 2009, bringing the total to 39 Federal accounts

## LifeWatch Clients



## Sales Reps

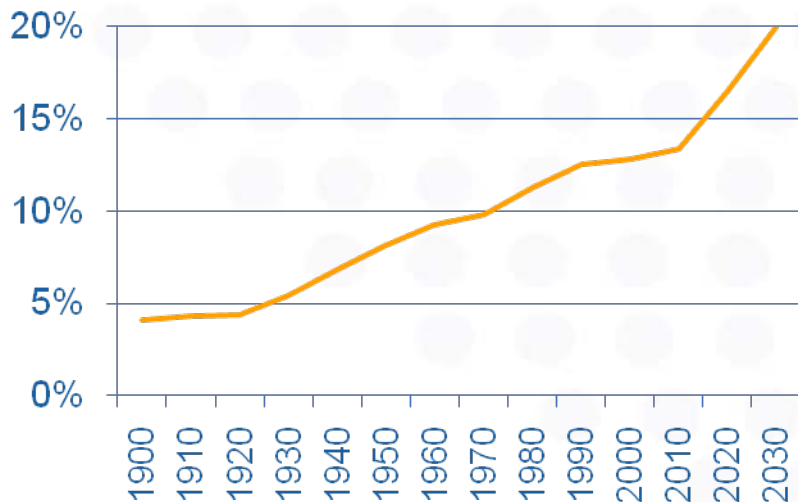


# Multiple Growth Opportunities

- Demographic changes drive demand
  - Aging population
  - Obesity
- Product innovation
- Expansion into additional disease states leveraging our monitoring platform
- Continued outsourcing of cardiac monitoring
- Consolidation of Independent Diagnostic Testing Facilities

# Demographic Changes Driving Demand for Cardiac Monitoring

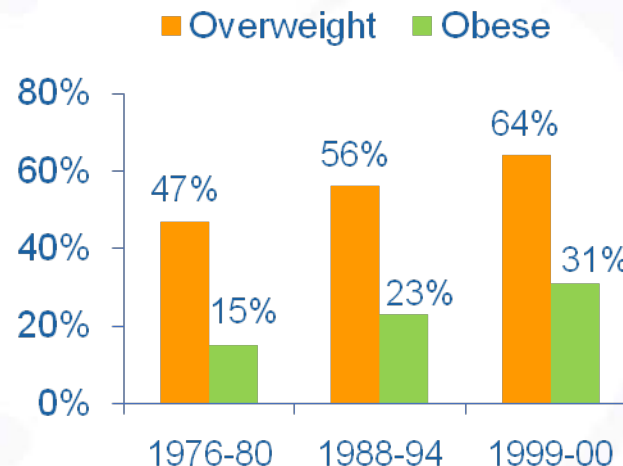
**Graying of America:  
Percent of U.S. Population Over 65**



Source: Population Division, U.S. Census Bureau;  
August 14, 2008

**As people get older the risk of cardiac arrhythmias increase**

**Obesity:  
Prevalence of Overweight and Obese in U.S.**



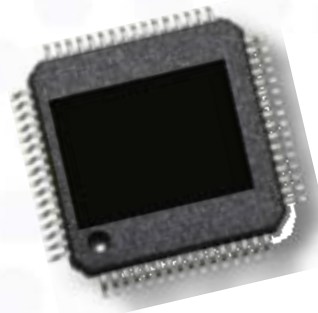
Source: Centers of Disease Control; National Health and Nutrition Examination Survey (NHANES); 2002

**Obesity is a major risk factor for heart attack, according to the American Heart Association.**

**Aging and obesity trends are driving demand for cardiac monitoring**

# ASIC Core Technology

- o Embedded software and hardware in one microchip for:
  - o Cardiology
  - o Diabetes
  - o Hypertension
  - o Wellness applications
  - o Congestive heart failure (CHF)
  - o Chronic obstructive pulmonary disease (COPD)
- o Indispensable technology for implementing highly functional, compact integrated circuits used in today's electronic products
- o Faster time to market through shorter design and development cycles



**Strong Technology Platform Leveraged Into New Markets**



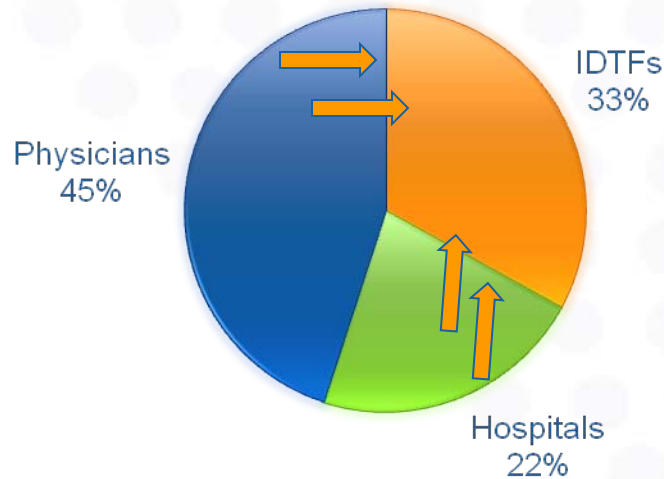
# Comprehensive Wireless Health Care Platform for Multiple Markets

- Increasing Disease Prevalence by population
  - Cardiovascular Disease
  - Diabetes
  - COPD/Asthma
  - Obesity
  - Sleep Apnea
- Chronic diseases
- Aging population
- Nursing shortage
- Exploding healthcare costs



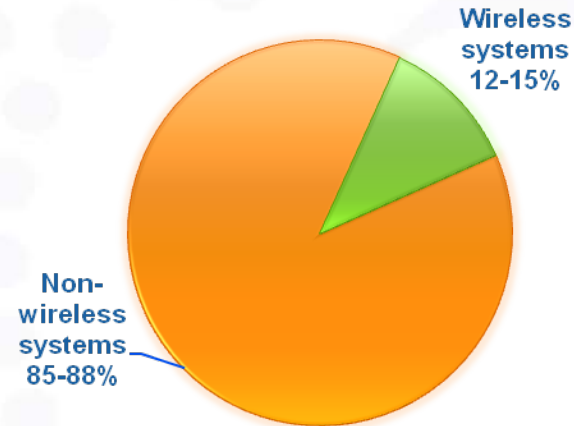
# U.S. Cardiac Arrhythmia Monitoring Market = USD 2 billion

## U.S. Cardiac Monitoring Market



**Independent diagnostic testing facilities (IDTFs) gain share as hospitals and physician offices continue to outsource**

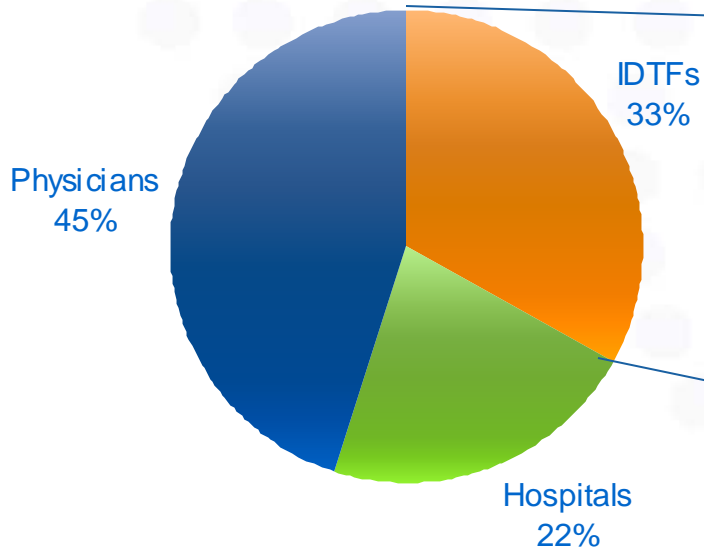
## Wireless Monitoring Penetration



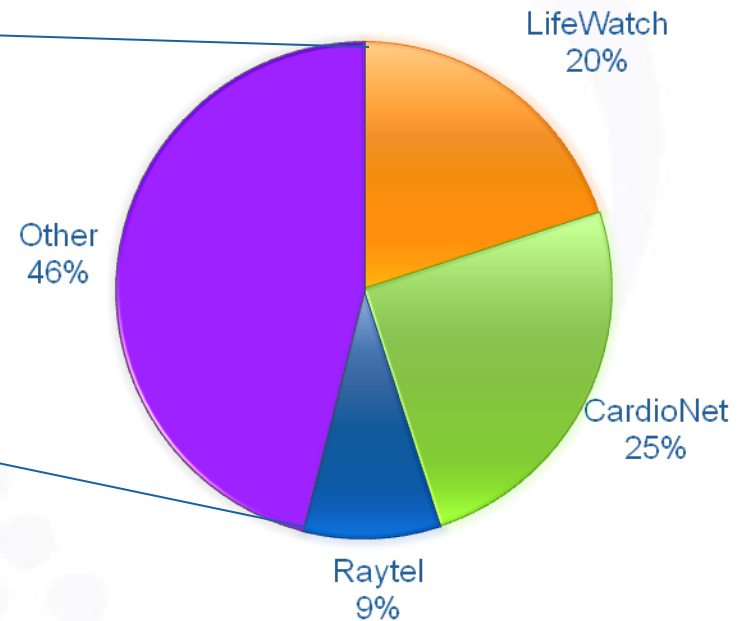
**Higher diagnostic yield will drive adoption of wireless systems**

# U.S. Cardiac Arrhythmia Monitoring Market = USD 2 billion

U.S. Cardiac Monitoring Market



Highly Fragmented Market  
Dominated by a Few Providers



**Market leaders will benefit from consolidation**



WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



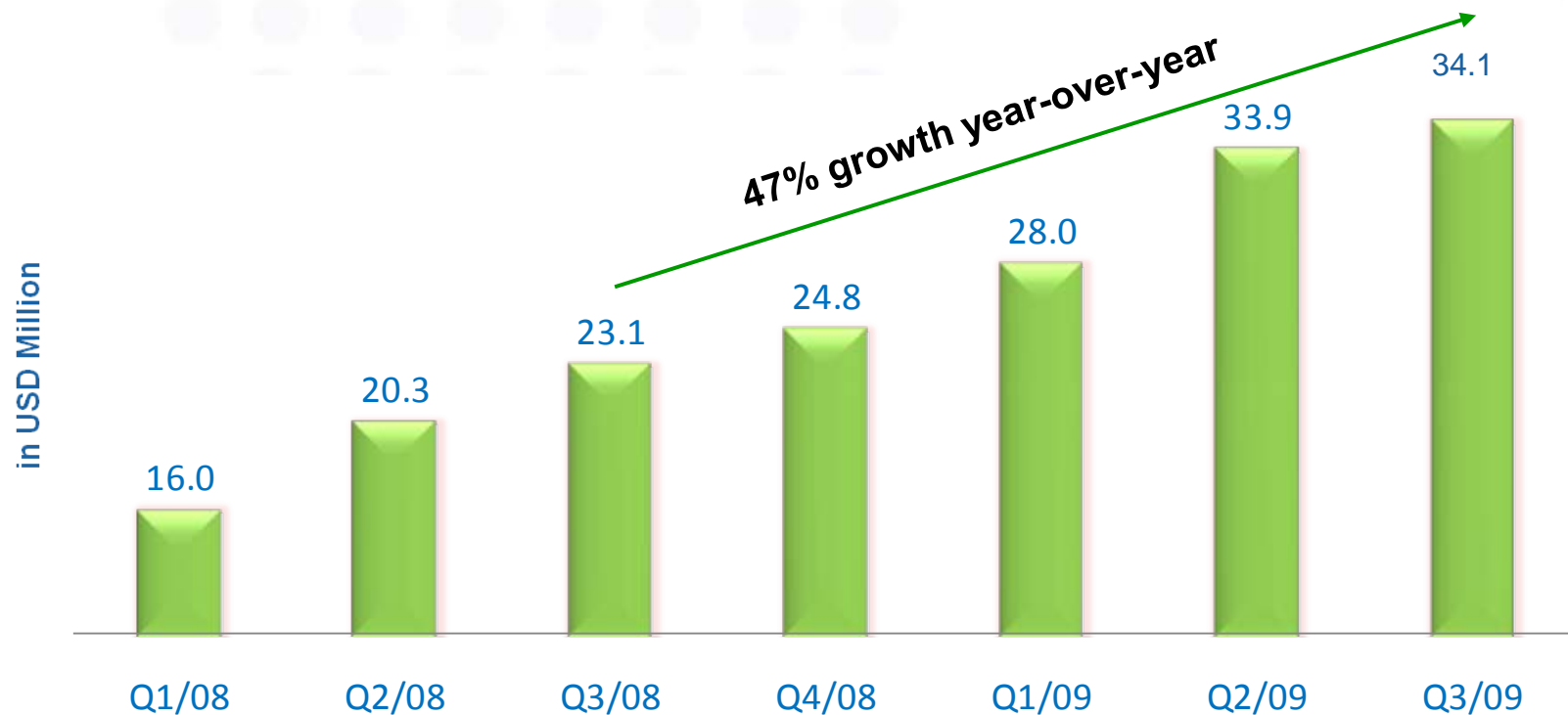
Watching Life

## Group Financial Review Q3 2009

**Kobi Ben Efraim, Chief Financial Officer, LifeWatch AG**

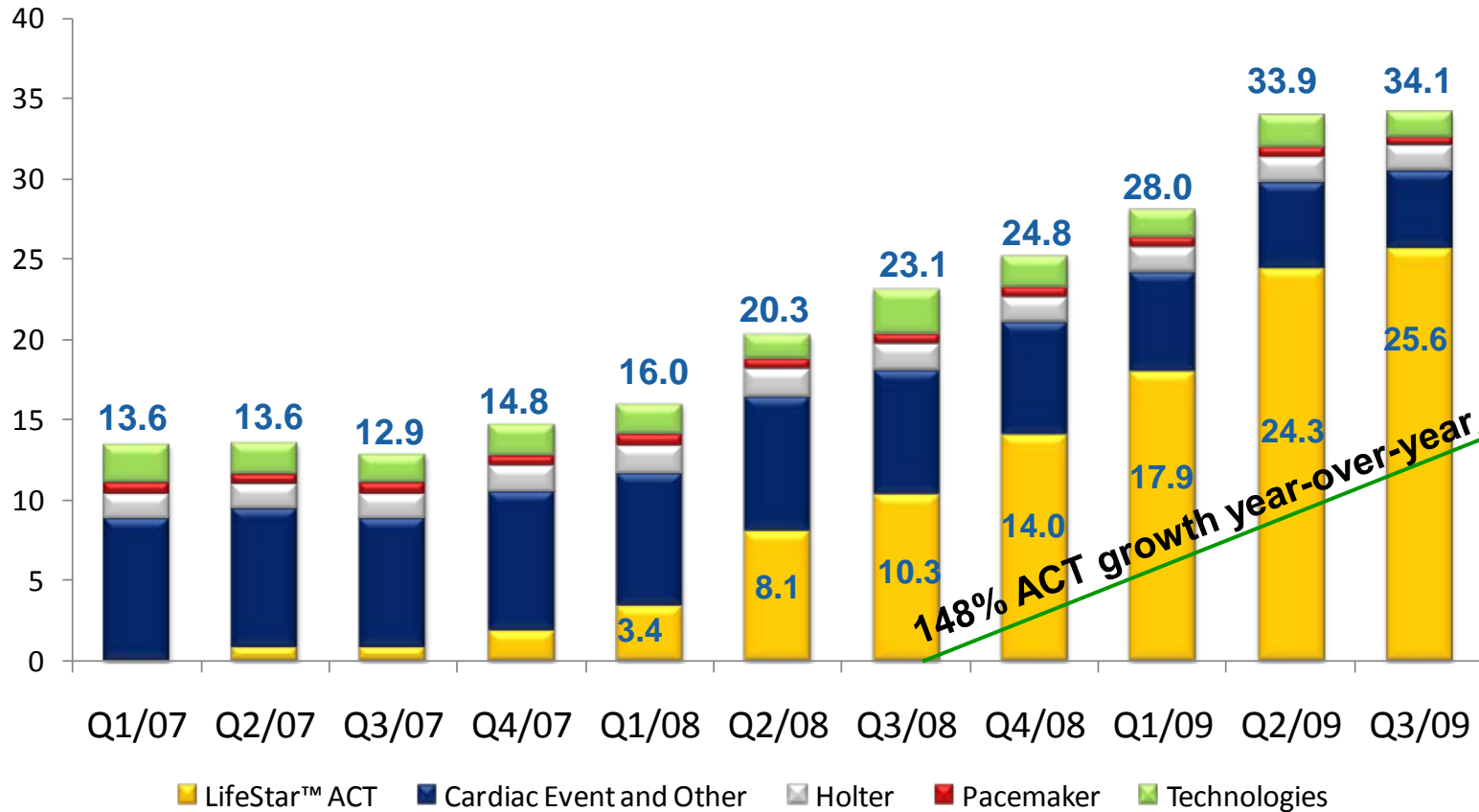
# Strong Revenue Growth

- Q3 2009 of USD 34.1 million increased 47% over Q3 2008
- Monitoring Services contributed 95.4% of total revenues



# Primarily Driven by LifeStar ACT

in USD Million



**ACT revenue of USD 25.6 million increased 148% in Q3 2009 compared to Q3 2008**

# Efficiency Initiatives

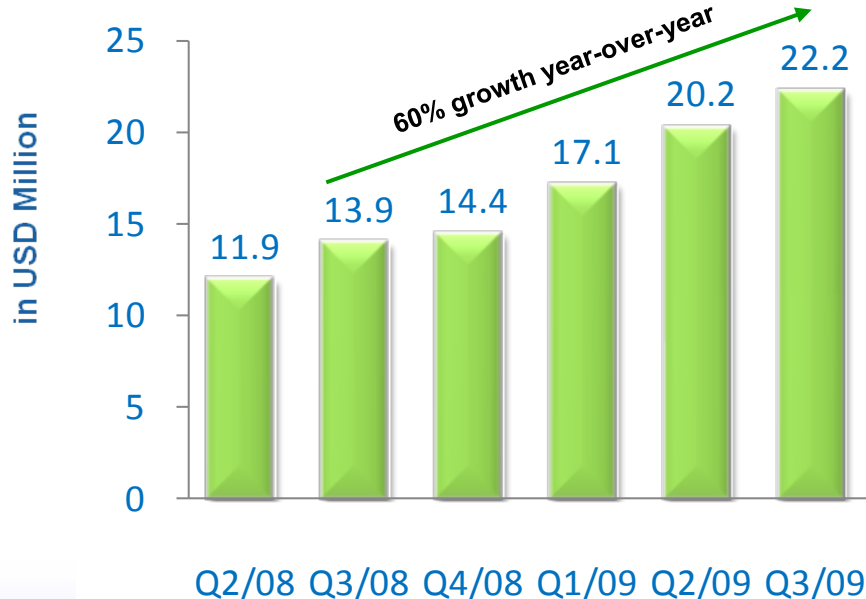
- LifeWatch implemented cost efficiencies in an effort to offset a portion of the Highmark/Medicare reimbursement reductions
  - Improved software algorithms lower the average number of transmissions per patient
  - Reduced labor cost
  - Renegotiated communication cost and limited phone activation time
- Despite the flat sequential revenues, LifeWatch still delivered improved profitability



# Improving Profitability

- Gross profit: USD 22.2 million in Q3 2009 increased 60% YOY from USD 13.9 million in Q3 2008
- Gross margin: 65.2% in Q3 2009 compared to 60.1% in Q3 2008
- EBITDA: USD 10.4 million in Q3 2009 increased 118% from USD 4.8 million in Q3 2008
- EBITDA margin: 30.6% in Q3 2009 compared to 20.7% in Q3 2008

## Gross Profit

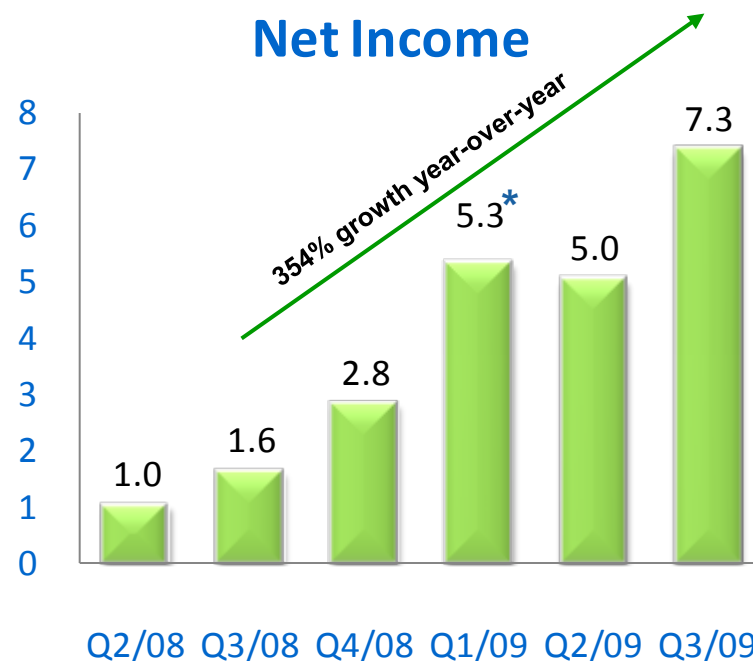
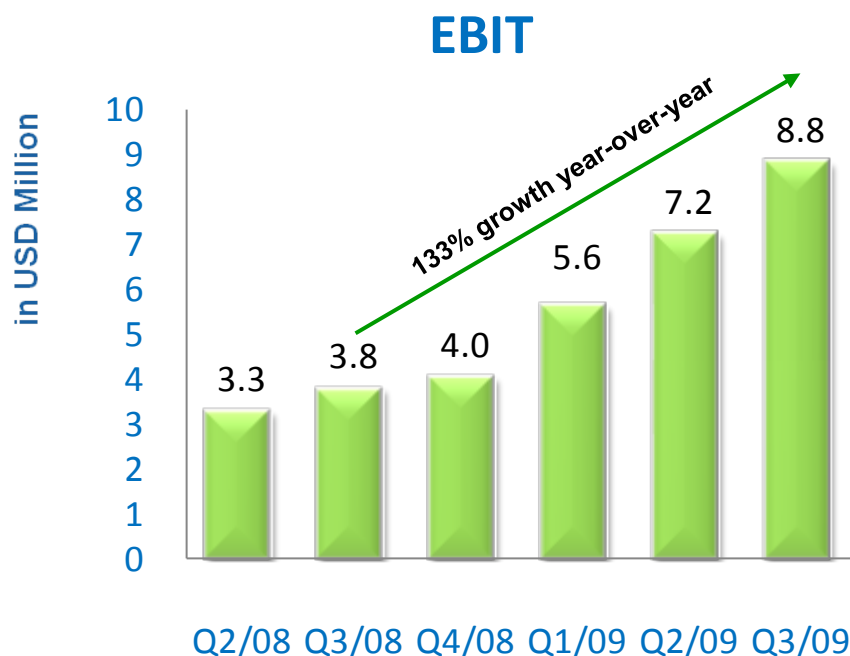


## EBITDA



# EBIT and Net Income Performance

- EBIT: USD 8.8 million in Q3 2009 increased 133% from USD 3.8 million in Q3 2008
- EBIT margin: 25.8% in Q3 2009 compared to 16.3% in Q3 2008
- Net income: USD 7.3 million in Q3 2009 increased 354% from USD 1.6 million in Q3 2008
- Net income margin: 21.5% in Q3 2009 compared to 7.0% in Q3 2008



\*USD 5.3 million does not include the one time tax benefit of USD 5.7 million

## Improving Cash Flow From Operations

- Cash flow provided by operations of **USD 9.2 million**, versus **USD 3.3 million** in Q3 2008
- Days sales outstanding in Q3 2009 of **45 days** compared to **50 days** in Q3 2008



# Stable Financial Position

- Q3 2009 cash, cash equivalents, marketable securities and structures in an amount of USD 38.0 million





WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



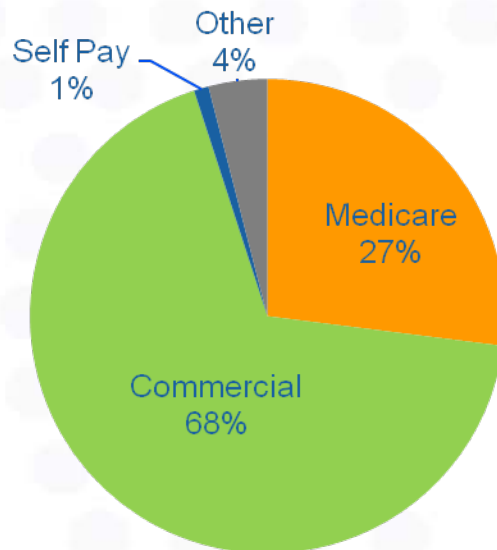
Watching Life

Reimbursement Environment

Brent Atwood, Chief Operating Officer, LifeWatch Corp.

# LifeWatch Reimbursement Profile

LifeWatch Revenue Mix



- Highmark Medicare Services implemented a reimbursement rate of USD 754 per patient on September 1, 2009
- Commercial payor reimbursement rate has remained stable for the third quarter 2009

# Medicare Reimbursement Environment

- o January 1, 2009, Category 1 code 93229 took effect for wireless cardiac monitoring
  - o At the time CMS did not price the code nationally and allowed regional Medicare administrators to set rates
  - o Highmark of Pennsylvania set the reimbursement rate at USD 1,123
- o July 1, 2009, CMS declined to establish a national reimbursement rate
- o July 10, 2009, Highmark communicated an intent to reduce the reimbursement rate from USD 1,123 to USD 754 beginning September 1, 2009
- o September 1, 2009, Highmark implemented the reimbursement rate of USD 754
  - o LifeWatch is in continued discussion with Highmark in an effort to demonstrate the value of wireless cardiac monitoring and quantify our cost structure

# Commercial Reimbursement Environment

- LifeWatch has contracts with 469 independent commercial payors covering 297 million lives
  - Q3 2009 added 5 managed care contracts covering 1 million lives
- Majority of commercial contracts automatically renew at the same rate ever year

**HUMANA**  
Guidance when you need it most

**UnitedHealthcare**



**CIGNA**



*National Preferred Provider Network*



**BlueCross  
BlueShield  
Association**

**Beech Street**  
A CONCENTRA COMPANY



**MidlandsChoice**

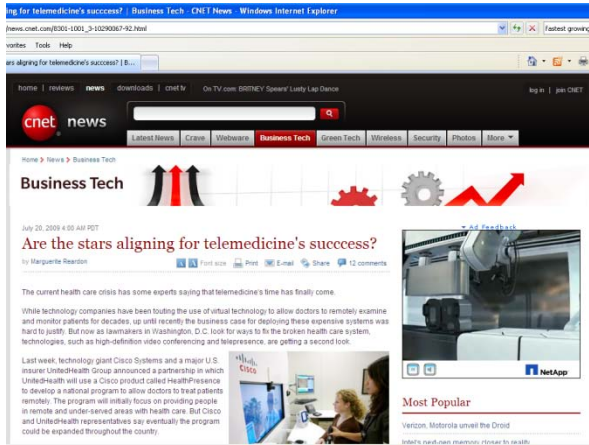




# LifeWatch Reimbursement Strategy

- IDTF Coalition
- Federal and State legislative efforts
- Partnership with U.S. wireless carriers
  - (Verizon / AT&T)
- Landmark clinical assessment of about 1,000 ACT patients
- Active dialogue with Highmark and CMS

# Realizing the Value of Wireless Medicine



*"The current health care crisis has some experts saying that telemedicine's time has finally come."*

*CNET July 2009*



*"We are already experiencing the promise and potential of the next generation of telemedicine systems that focus on improving the productivity of clinical staff, and quality, access, and convenience for all health consumers."*

*Rep. Butterfield (D-N.C.) May 2009*



*"Intel prescribes telemedicine to treat health costs".*

*San Francisco Business Times 2009*



WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



Watching Life

## NiteWatch Launch Update

Brent Atwood, Chief Operating Officer, LifeWatch Corp.



# The Dawn of a New Day

## Home Sleep Apnea Testing

- In July, LifeWatch announced its intent to launch a home sleep test (HST) for the diagnosis of obstructive sleep apnea (OSA)
- OSA is a widely undiagnosed medical condition that is highly correlated with other chronic diseases
- LifeWatch will leverage its medical monitoring expertise into a competitive advantage in the OSA market
- LifeWatch is the first Cardiac IDTF to enter the sleep apnea market
- HST is a first step in diversifying LifeWatch's service offering

## Sleep Apnea Diagnosis is a Large Market Opportunity

- o 38 million patients affected with OSA
  - o 18 million afflicted with moderate to severe OSA
    - 15 million undiagnosed (85%)
- o 3 billion (USD) Market Internationally (2008)
  - o U.S. Market approximately USD 1.5B
  - o Estimated 2 million tests in 2006 (1 million U.S. tests)
  - o Equipment, Diagnostic Testing, Therapy Products/Services
  - o 20-30% annual growth over next 5 years
  - o Diagnostic location: 80% sleep lab / 20% home testing



# NiteWatch: Corporate Website Launched

## November 2009

The screenshot shows a Windows Internet Explorer browser window displaying the NiteWatch corporate website. The browser's address bar shows the URL <http://nitewatchservices.com/>. The website header features the NiteWatch logo on the left and the text "Home Sleep Testing Services" on the right, with links for "Physician Login" and "Contact Us". A navigation menu below the header includes "About NiteWatch", "NiteWatch Solution", "Patient Educational Tools", and "News And Events".

The main content area is divided into several sections:

- Service Overview:** An orange box on the left states "NiteWatch provides comfortable and easy Home Sleep Testing services:" followed by a list of features: "Medicare Approved", "3 Night Service", and "Online Results". A "Read More >" link is provided below.
- Image:** A large image shows a man sleeping in a bed with a NiteWatch device attached to his chest.
- News And Events:** A dark grey box on the bottom left contains the heading "News And Events" and a snippet of text: "LifeWatch AG Announces 'NiteWatch' Home Sleep Apnea Testing Service". A "Read More >" link is present.
- How It Works?:** A light orange box in the center features the heading "How It Works?" and an image of a person's torso with a device and a play button icon.
- Patient Instructions:** A white box on the bottom right has the heading "Patient Instructions PDF download" and provides contact information: "For Trouble Shooting or Questions 1.877.246.NITE (1.877.246.6483) FOR 24/7 CUSTOMER SUPPORT". It includes a PDF icon and a "Download Here >" link.
- The Latest Press Release:** Below the instructions, there is a link for "The Latest Press Release PDF download".

The browser's status bar at the bottom shows "Done" on the left and "Internet" with a 100% zoom level on the right.

# NiteWatch Service Model

## Step 1

Physicians enroll patients on NiteWatch



## Step 2

LifeWatch validates insurance for NiteWatch coverage



## Step 3

LifeWatch establishes patient hook-up for NiteWatch service



## Step 6

LifeWatch bills patients' insurance company  
ASP of USD 400-450



NiteWatch  
Continuum  
of Care

## Step 5

Report sent to prescribing physician after interpretation by LifeWatch contracted physician



## Step 4

Ave. 2-3 nights of data is recorded and sent back to LifeWatch



# NiteWatch Payor Coverage Update

- WPS/Medicare approval pending as a Sleep Apnea IDTF
  - Filed application with Medicare: October 1, 2009
  - Completed on-site review: mid-October
- Signed 166 managed care contracts, covering 90 million lives for the NiteWatch service
- We are negotiating with about 200 of remaining carriers
- Anticipated ASP: USD 400-450



# NiteWatch Market Entry Milestones

## Beta Test Update

- About 10 client organizations participating in our beta program
  - 30-40 patients enrolled in LifeWatch service
- Coordinating a nationwide network of physicians to interpret sleep data in the State that it was recorded.
  - Necessary for Medicare certification
  - On track for January 2010 for national physician coverage

## NiteWatch Milestones

- NiteWatch monitoring service rollout:
  - Q3 2009 beta testing
  - Q4 2009 expanded launch
  - Q1 2010 general availability
- Managed care objective:
  - 60%-70% commercial coverage by January 2010



WE PROVIDE  
HEALTH CARE SOLUTIONS AND SERVICES  
ANYTIME ANYWHERE



Watching Life

## LifeWatch Summary

Dr. Yacov Geva, Chairman & CEO, LifeWatch AG

## Investment Highlights

- Large and growing outpatient cardiac monitoring market
- Expanding penetration of wireless technology
- Leading provider in a highly fragmented market
- Multiple growth opportunities
- Blue-chip customer base
- Entering an attractive sleep apnea market

# Corporate Outlook

## o Operational objectives

- o Focus resources on wireless monitoring penetration and market share growth
- o Exceed 75,000 ACT enrollments in 2009
- o Continuous development of next generation ACT platform
- o Expansion into new service offering - Sleep Apnea

## o Financial objectives for 2009

Revenue Growth	USD 127 – 130 million (>50%)
EBITDA Margin	>20%
EBIT Margin	>16%

## LifeWatch receives Swiss Equity Award for successful corporate development September 2009





## LifeWatch receives Swiss Equity Award for successful corporate development September 2009



---

## Measuring Student Learning and Institutional Effectiveness

---

### **Steve Parscale, M.Sc. Ed.D. (cand.)**

Director of Accreditation  
Association of Collegiate Schools and Programs  
11520 West 119th Street  
Overland Park , KS 66213  
Telephone: (913) 339-9356  
Fax: (913) 339-6226  
Email: [sparscale@acbsp.org](mailto:sparscale@acbsp.org)  
Website: [www.acbsp.org](http://www.acbsp.org)

**Keywords:** student learning, institutional effectiveness, accreditation standards, ACBSP, outcomes assessment, business schools,

**Reference:** Reference to this paper should be made as follows:  
Parscale, S. (2009) "Measuring Student Learning and Institutional Effectiveness", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Steve Parscale is pursuing a Doctor of Education Degree (Ed. D.) in Adult and Continuing Education with an emphasis on issues related to accreditation and quality assurance in higher education. He was appointed by the United States Department of Commerce, National Institute of Standards and Technology to serve as an Examiner on the 2003 Board of Examiners of the Malcolm Baldrige National Quality Award. Steve was the Director of Quality and helped lead Lee Aerospace, Inc. to ISO 9001 certification. Steve is Past President of the Sunflower Chapter of the American Society for Training and Development (ASTD). He has been a Judge for the Kansas Award for Excellence since 2000.

Steve is a Certified Quality Manager through the American Society for Quality (ASQ). He was the Program Director for the Bachelor of Science Degree in Business Quality Management, and a member of the Academic Advisory Council for Southwestern College, Professional Studies Center in Winfield and Wichita, Kansas.

# **Assessment**

## **Association of Collegiate Business Schools and Programs (ACBSP)**

Steve Parscale  
Director of Accreditation



# Contact Information



Steve Parscale

Director of Accreditation

Association of Collegiate Business  
Schools and Programs (ACBSP)

11520 West 119th Street

Overland Park, KS 66213 USA

phone: 913-339-9356

[sparscale@acbsp.org](mailto:sparscale@acbsp.org)

# Assessment and the Linkage to ACBSP Standards and Criteria

- Standard 1 Leadership
- Standards 2 Strategic Planning
- Standard 3 Student and Stakeholder Focus
- Standard 4 Measurement and Analysis of Student Learning and Performance
- Standard 5 Faculty and Staff Focus
- Standard 6 Educational and Business Process Management



# Standard 1 Leadership

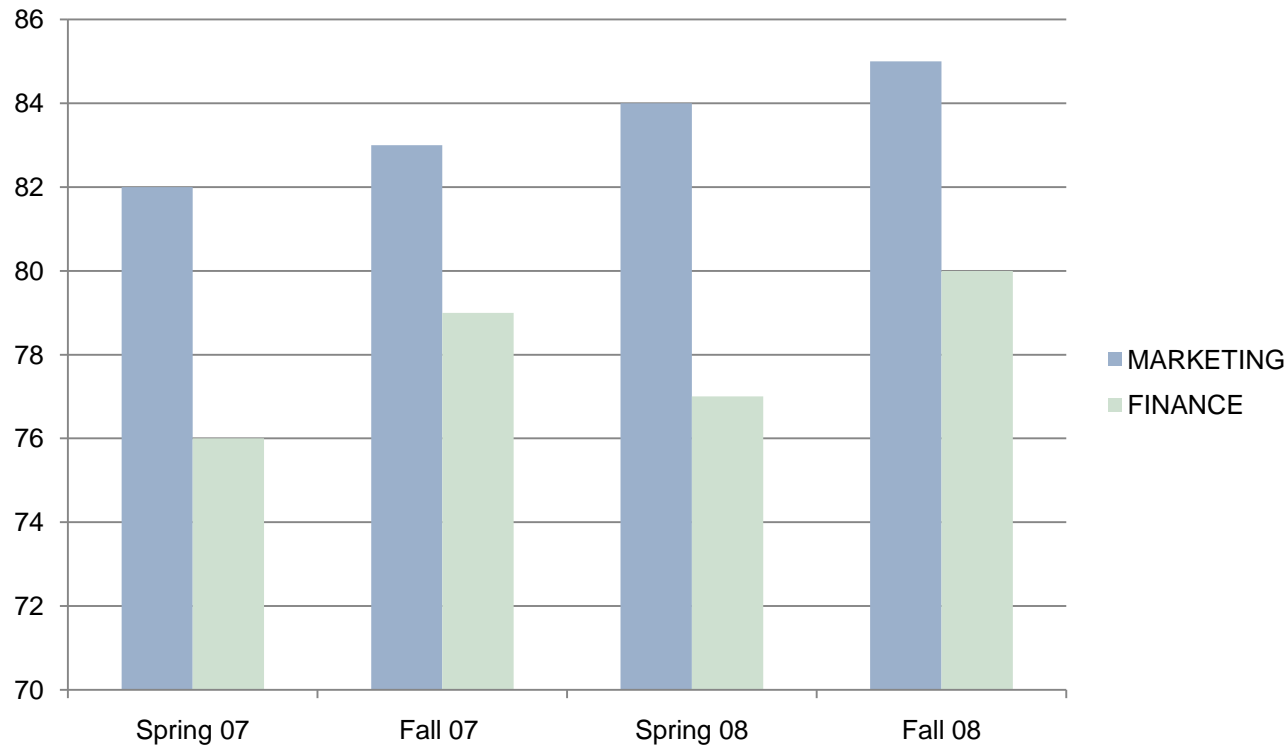
Part of the Standard reads:

- Business unit leaders must personally be involved in creating and sustaining business program directions and performance expectations.
- Leaders should meet and determine business unit direction
  - Increase enrollment
  - Increase retention
  - Increase doctorate coverage
  - Increase stakeholder involvement
  - Improve student outcomes learning assessment results
- Tie program directions into Standards 2 Strategic Plan
- Tie program directions into other standards

# Standards 2 Strategic Planning

- Strategic Goal 3.1 Increase stakeholder involvement
  - Increase alumni Satisfaction
  - Increase Faculty Satisfaction
- Strategic Goal 4.1 Improve student outcomes learning assessment results
  - Marketing
  - Finance

# Standard 4 Measurement and Analysis of Student Learning and Performance



# Standards 2 Strategic Planning

- Strategic Goal 5.1 Increase Doctorate qualified faculty members from 30% to 40%
  - Promote education through reimbursement 3% increase by 2011
  - Hire doctoral qualified faculty 7% increase by 2011

# Standard 5 Faculty and Staff Focus

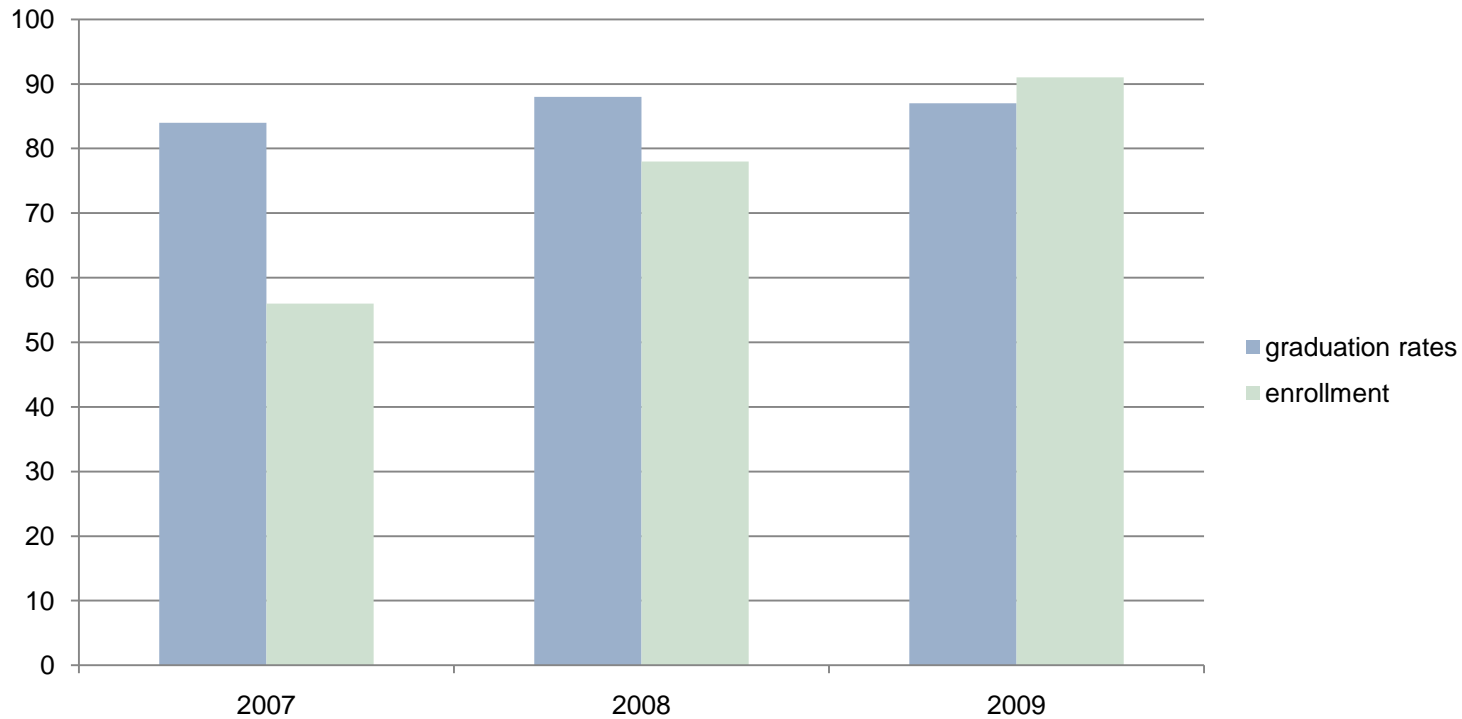
- Human Resources Plan
  - Increase Doctorate qualified faculty members from 30% to 40%
  - Promote education through reimbursement 3% increase by 2011
  - Hire doctoral qualified faculty 7% increase by 2011

# Standards 2 Strategic Planning

- Strategic Goal 6.1
  - Increase enrollment
- Strategic Goal 6.2
  - Increase graduation



# Standard 6 Educational and Business Process Management



# Standard 4 Measurement and Analysis of Student Learning and Performance

Direct Assessment

Indirect Assessment

Formative Assessment

Summative Assessment

Comparison

Internal Assessment

External Assessment

# Standard 4 Measurement and Analysis of Student Learning and Performance

## Direct Assessment

Pre-test          Post-test

Capstone Course

Major Field Test in Business

Assessment of critical accounting course

# Standard 4 Measurement and Analysis of Student Learning and Performance

## Indirect Assessment

Evaluation of Internship

Licensure passage

Survey of learning



# Standard 4 Measurement and Analysis of Student Learning and Performance

## Formative Assessment

During the students educational career



# Standard 4 Measurement and Analysis of Student Learning and Performance

## Summative Assessment

At the end of the students program of  
education

# Standard 4 Measurement and Analysis of Student Learning and Performance

## Comparison

Compare results from one program to another program

Compare from one campus to another campus

Compare from traditional students to non-traditional students

# Standard 4 Measurement and Analysis of Student Learning and Performance

## Internal Assessment

Assessment utilizing internally developed instruments:

Capstone

Pre Post-Test



# Standard 4 Measurement and Analysis of Student Learning and Performance

## External Assessment

Assessment using an externally developed instrument

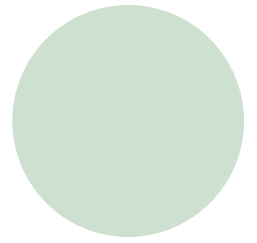
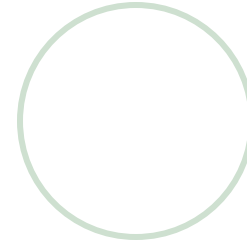
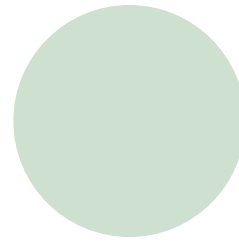
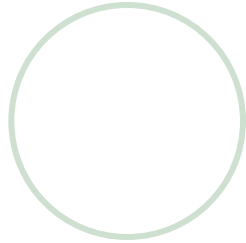
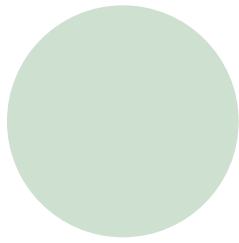
Ivy Software

ETS MFTB

Livetext

Peregrine Leadership Institute

A partner institution



Thank you for being here

Questions and Discussion

---

## Assessing Faculty Credentials

---

### **Annette E. Craven, Ph.D.**

President Elect

Chair of The Credentials Committee

Association of Collegiate Business Schools and Programs (ACBSP)

Faculty Senate President

Associate Professor of Management

University of the Incarnate Word

craven@uiwtx.edu

Website: <http://www.uiwtx.edu>;

**Keywords:** academic credentials, academically qualified faculty, doctoral qualified faculty, professionally qualified faculty, faculty credentials, faculty qualifications, graduate faculty, undergraduate faculty

**Reference:** Reference to this paper should be made as follows:  
Craven, A. (2009) "Assessing Faculty Credentials", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Annette E, Carven is an Associate Professor of Management at the University of the Incarnate Word, H-E-B School of Business and Administration in San Antonio, Texas. Her Ph.D. is in Higher Education Administration and Human Communications, her masters' degrees are in Human Relations and Adult Education, and her bachelor degree is in Business Administration. She is President Elect of the Association of Collegiate Business Schools and Programs, has served as a Malcolm Baldrige National Quality Examiner (2007 – 2009), a Quality Texas Examiner (2003 – 2008) and as an ACBSP Baccalaureate / Graduate Degree Commissioner. Her research interests include quality management and continuous performance improvement in higher education, and cross-cultural differences in the global environment.



# Assessing Faculty Credentials

Annette E. Craven, Ph.D.  
ACBSP Region 8 Meeting

# National Credentials Committee

- Responsibility
  - Accurately assess the credentials of faculty submitted by accredited schools to determine level (Academically or Professionally Qualified) and discipline (management, marketing, law, accounting, etc.)





# ACBSP Credentials Committee

- Credentials Committee
  - Annette E. Craven, Chair, Region 6
  - Peter Horn, Region 8
  - Sam Dunne, Region 7
  - Hanora O’Sullivan, Region 2
- Process
  - School submits credentials to ACBSP home office
  - ACBSP home office sends packets to each member of the committee
  - Chair completes credentials worksheet and forwards to committee members for review & response
  - Virtual Vote and Response to ACBSP home office
  - School is notified



# Credentials Committee Worksheet



<i>Insert Faculty Name in Column Header</i>	
<i>Semester/Year of Hire</i>	
<i>Credential Requested</i>	
<i>Insert discipline(s) for which credential approval is being sought</i>	
<b><i>Indicate level of faculty qualification by selecting "yes" in the appropriate drop-down box</i></b>	
Doctorate in Business with Major, minor, or concentration in the area of teaching responsibility, <b><u>or</u></b>	
Doctorate in Business With Professional certification in the area of teaching responsibility, <b><u>or</u></b>	
Doctorate in Business with 5+ years of professional & management experience directly related to the area of teaching responsibility	
Juris Doctor (JD) <b><u>and</u></b> Teach business law, legal environment of business or other area with predominantly legal content, <b><u>or</u></b>	
Juris Doctor (JD) <b><u>and</u></b> Hold a business related master's degree with a specialization in the area of teaching responsibility, <b><u>or</u></b>	
Juris Doctor <b><u>and</u></b> Hold professional certification and teach in the area of the certification, <b><u>or</u></b>	
Juris Doctor <b><u>and</u></b> Have 5+ years of professional and management experience directly related to the area of teaching responsibility	



# Credentials Committee Worksheet



Out-of-Field Doctorate with 15 hours graduate course work in field or business master's w/major in field, or professional certification in area, or post-grad training in teaching field AND evidence of successful student outcomes

Out-of-Field Doctorate with evidence of scholarly productivity, AND successful professional practice in area of teaching responsibility




# Credentials Committee Worksheet



Professionally Qualified: ABD with major, minor or concentration in area of assigned teaching responsibilities

Professionally Qualified: Master's degree in business-related field and professional certification appropriate to assigned teaching responsibilities

Professionally Qualified: Master's degree in business-related field and extensive/substantial documented successful teaching experience in teaching discipline; and involvement in scholarly activities, or 5+ years of professional/management experience in work directly related to teaching discipline

Professionally Qualified: Completed special post-grad training program (ACBSP approved) designed to improve knowledge & teaching skills in teaching discipline



# Credentials Committee Worksheet

Minimally Qualified: Master's degree in field appropriate to assigned teaching responsibilities

***For each faculty member, provide response to the following items:***

Doctoral Discipline

Master's Level Discipline(s)

Number of hours graduate course work in teaching discipline

Professional Certification(s)

Number of years of professional/management experience directly related to teaching discipline

Name of ACBSP approved post-grad training program





# Credentials Committee Worksheet

*Indicate portfolio contents by selecting "yes" in the appropriate drop-down box*

Current C.V.

Evidence of degree completion (transcript required)

Evidence of scholarly activity (list of publications, presentations)

Evidence of professional certification

Evidence of successful student outcomes



# AQ vs. PQ

- ***Academically Qualified***
  - Having the terminal degree and the related scholarly activity in the teaching discipline
  - Can be business doctorate or out-of-field doctorate with appropriate number of graduate hours in the teaching discipline
- ***Professionally Qualified***
  - Be A.B.D. or
  - Have the appropriate master's level degree in combination with professional experience, evidence of successful learning outcomes, involvement in professional organizations, or substantial scholarly activity



# Credentials: Levels



<i>Associate Degree</i>	<i>Baccalaureate/Graduate Degree</i>
Master's or Doctorate Degree Qualified	Doctorally Qualified <ul style="list-style-type: none"><li>•Doctorate in Business</li><li>•Juris Doctor (JD)</li><li>•Out of Field Doctorate</li></ul>
Professionally Qualified	Professionally Qualified
	Minimally Qualified



# Master's or Doctorate Degree Qualified

## *Associate Degree*

A Master's or Doctorate Degree Qualified faculty member meets at least one of the following criteria:

1. Doctorate in teaching field
2. Juris Doctorate
3. MBA (Qualified to teach any introductory or principle level business courses)
4. Master's degree in teaching field
5. Related or out-of-field master's or doctorate degree with 18 semester/27 quarter credit hours or equivalent of courses in field beyond the introductory principles level –
6. Related or out-of-field master's or doctorate degree with documentation in two or more of the following areas:
  - a. In-field professional certification (national, regional, or state)
  - b. In-field professional employment
  - c. Teaching excellence
  - d. In-field research and publication
  - e. Relevant additional training equivalent to 18 sem/27 qtr credit hours of CEU's, military training, vendor training, etc.







# Master's or Doctorate Degree Qualified

## Associate's Degree - Professionally Qualified

A Professionally Qualified faculty member possesses a bachelor's degree in the teaching field with documentation in two or more of the following areas:

- 
- Professional certification (national, regional, or state)
  - In-field professional employment—The institution must provide a minimum of 2 years of documented experience from the employer.
  - Teaching excellence
  - In-field research and publication
  - Relevant additional coursework beyond the bachelor's degree equivalent to 18 sem/27 qtr credit hours or equivalent subject matter coursework, CEU's, military training, vendor training, etc.



**Note:** Criterion 5.3 provides that at least 90 percent of the faculty FTE should be Master's or Doctorate Degree Qualified or Professionally Qualified, allowing a maximum of 10 percent exceptions.

**NOTE:** *All faculty qualifications must be validated with original transcripts, certificates, and/or related written documentation which clearly states the qualification.*



# Master's or Doctorate Degree Qualified

## *Baccalaureate/Graduate Degree*

**Doctorally Qualified:** To be considered doctorally qualified a faculty member may:

**1. Hold a doctorate in business with (a)** a graduate level major, minor, or concentration in the area of teaching responsibility **or** **(b)** professional certification in the area of teaching responsibility **or** **(c)** five or more years of professional and management experience directly related to the area of teaching responsibility

**OR**

**2. Hold a Juris Doctor (JD) and (a)** teach business law, legal environment of business or other area with predominantly legal content **or** **(b)** hold a business related master's degree with a specialization in the area of teaching responsibility **or** **(c)** hold professional certification and teach in the area of the certification **or** **(d)** have five or more years of professional and management experience directly related to the area of teaching responsibility

**OR**





# Master's or Doctorate Degree Qualified

## *Baccalaureate/Graduate Degree*

- 3. Hold an out of field doctorate, meet a. and b., and c. or d.**
  - a. Demonstrate content area knowledge by evidence of (1) 15 hours of graduate course work in the field **or** (2) a master's degree in business with a major, concentration or specialization in the field **or** (3) possess professional certification in the area **or** (4) have completed a special post-graduate training program (ACBSP approved) especially designed to improve the faculty member's knowledge and teaching skills in the area of the assigned teaching responsibilities.
  - b. Demonstrate teaching effectiveness in the teaching area including evidence of successful student outcomes.
  - c. Demonstrate scholarly productivity evidenced by publications in the discipline considered as expert work by external colleagues (refereed journals) or papers in the teaching discipline presented at a national meeting.
  - d. Demonstrate successful professional practice evidenced by (1) substantial professional or management level practice **or** (2) significant involvement in professional organizations related to the teaching field **or** (3) significant consulting activity.



# Professionally Qualified

## *Baccalaureate/Graduate Degree*

### **Professionally Qualified**

To be considered professionally qualified a faculty member may:

1. Hold an MBA to be qualified to teach principle or introductory level business courses.
  2. be A.B.D., (i.e., has completed all course work required for a Ph.D. in business or D.B.A., passed the general exams, but has not completed a dissertation) with a major, minor or concentration in the area of assigned teaching responsibilities
- or**
3. hold a Master's degree in a business-related field and professional certification (e.g. CPA, CDP, CFM, CMA, PHR, etc.) appropriate to his or her assigned teaching responsibilities

**Or**



# Professionally Qualified

## *Baccalaureate/Graduate Degree*

4. hold a Master's degree and
  - a. have extensive and substantial documented successful teaching experience in the area of assigned teaching responsibilities, and demonstrate involvement in meaningful research and/or programs for the enhancement of pedagogical skills.  
*or*
  - b. have five or more years of professional and management experience in work directly related to his or her assigned teaching responsibilities.
  
- or*
5. have completed a special post-graduate training program (ACBSP approved) especially designed to improve the faculty member's knowledge and teaching skills in the area of the assigned teaching responsibilities.







# Minimally Qualified

*Baccalaureate/Graduate Degree*


## Minimum Qualifications

The minimum qualifications for a faculty member must include a Master's degree. An institution may make an exception to this minimum requirement only in emergency cases or special situations where the faculty member has unique qualifications that meet a specialized need.

**This area is limited to 10% of total faculty coverage**



# Higher Education Accreditation in the US



Council for  
Higher Education  
Accreditation

- Council for Higher Education Accreditation

Regional  
Accreditation

- 6 Regional Associations

Specialty  
Accreditation

- ACBSP
- AACSB
- IACBE

# US Regions vs. ACBSP Regions

<i>ACBSP Region</i>	<i>US Region</i>
Region 1: Connecticut, Maine, Massachusetts, New Hampshire, New Jersey, New York, Puerto Rico, Rhode Island, Vermont, US Virgin Islands, Canadian Provinces of Newfoundland & Labrador, Prince Edward Island, Nova Scotia, New Brunswick, and Quebec	<ul style="list-style-type: none"><li>•New England Association of Schools &amp; Colleges;</li><li>•Middle States Commission on Higher Education</li></ul>
Region 2: Delaware, D.C., Maryland, Pennsylvania, Virginia, West Virginia	<ul style="list-style-type: none"><li>•Middle States Commission on Higher Education;</li><li>•Northcentral Association Higher Learning Commission</li></ul>
Region 3: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee	Southern Association of Colleges & Schools
Region 4: Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, Canadian Province of Ontario	Northcentral Association Higher Learning Commission





# US Regions vs. ACBSP Regions

<i>ACBSP Region</i>	<i>US Region</i>
Region 5: Iowa, Kansas, Missouri, Nebraska, North Dakota, South Dakota, Canadian Province of Manitoba	Northcentral Association Higher Learning Commission
Region 6: Arkansas, Louisiana, New Mexico, Oklahoma, Texas	•Northcentral Association Higher Learning Commission; •Southern Association of Colleges & Schools
Region 7: Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, Wyoming, Canadian Provinces of Saskatchewan, Alberta, British Columbia & the Canadian Territories of Yukon Territory, Nunavut Territory & the Northwestern Territories	•Northwest Commission on Colleges & Universities; •Northcentral Association Higher Learning Commission; •Western Association of Schools & Colleges



# Regions 8 & 9

- Region 8

- Albania, Arab Emirates, Austria, Bangladesh, China, Cyprus, Czech Republic, France, Germany, Greece, India, Italy, Kazakhstan, Kuwait, Lebanon, Mongolia, Morocco, Netherlands, Qatar, Republic of Benin, Russia, Saudi Arabia, Slovenia, Spain, Switzerland, Singapore, & United Kingdom





# Region 9

- Argentina
- Colombia
- Mexico
- Panama
- Paraguay
- Peru



# NEASC (ACBSP Region 1)

- 5.2 ***The preparation and qualifications of all faculty are appropriate to the field and level of their assignments. Qualifications are measured by advanced degrees held, evidence of scholarship, advanced study, creative activities, teaching abilities, and relevant professional experience, training, and credentials.*** (See 4.22)
- 4.22 Institutions offering graduate degrees have an adequate staff of full-time faculty in areas appropriate to the degree offered. **Faculty responsible for graduate programs are sufficient by credentials, experience, number, and time commitment for the successful accomplishment of program objectives and program improvement.** The scholarly expectations of faculty exceed those expected for faculty working at the undergraduate level. Research-oriented graduate programs have a preponderance of active research scholars on their faculties. Professionally-oriented programs include faculty who are experienced professionals making scholarly contributions to the development of the field.





# MSCHE (ACBSP Regions 1 & 2)

**Standard 10 – Faculty:** The institution's instructional, research, and service programs are devised, developed, monitored, and supported by qualified professionals.

- Within some institutions, functions previously assumed to be a part of traditional faculty roles are now the responsibility of other qualified professionals. **A professional is qualified by virtue of education, training, experience or appropriate skills. Designated professional qualifications should be consistent with the expected academic outcome, reflecting both appropriate standards of quality and the institutional mission. Whenever used in these standards, the term "faculty" shall be broadly construed to encompass qualified professionals such as third parties contracted by the institution, part-time or adjunct faculty, and those assigned responsibilities in academic development and delivery.** Such professionals may include, as well, those responsible for the institution's academic information resources.

## Fundamental Elements of Faculty

- An accredited institution is expected to possess or demonstrate the following attributes or activities: **faculty and other professionals appropriately prepared and qualified for the positions they hold, with roles and responsibilities clearly defined, and sufficiently numerous to fulfill those roles appropriately;**





# SACS (ACBSP Regions 3 & 6)

Comprehensive Standard 3.7.1 of the *Principles of Accreditation* reads as follows: The institution employs competent faculty members qualified to accomplish the mission and goals of the institution. **When determining acceptable qualifications of its faculty, an institution gives primary consideration to the highest earned degree in the discipline. The institution also considers competence, effectiveness, and capacity, including, as appropriate, undergraduate and graduate degrees, related work experiences in the field, professional licensure and certifications, honors and awards, continuous documented excellence in teaching, or other demonstrated competencies and achievements that contribute to effective teaching and student learning outcomes.** For all cases, the institution is responsible for justifying and documenting the qualifications of its faculty.

When an institution defines faculty qualifications using faculty credentials, institutions should use the following as credential guidelines:

- **Faculty teaching general education courses at the undergraduate level: doctorate or master's degree in the teaching discipline or master's degree with a concentration in the teaching discipline (a minimum of 18 graduate semester hours in the teaching discipline).**

Continued....



# SACS (ACBSP Regions 3 & 6)

- Faculty teaching associate degree courses designed for transfer to a baccalaureate degree: doctorate or master's degree in the teaching discipline or master's degree with a concentration in the teaching discipline (a minimum of 18 graduate semester hours in the teaching discipline).
- Faculty teaching associate degree courses not designed for transfer to the baccalaureate degree: bachelor's degree in the teaching discipline, or associate's degree and demonstrated competencies in the teaching discipline.
- Faculty teaching baccalaureate courses: doctorate or master's degree in the teaching discipline or master's degree with a concentration in the teaching discipline (minimum of 18 graduate semester hours in the teaching discipline).
- Faculty teaching graduate and post-baccalaureate course work: earned doctorate/terminal degree in the teaching discipline or a related discipline.
- *Approved: College Delegate Assembly, December 2006*



# NCAHLC (ACBSP Regions 2, 4, 5 & 6)

**Faculty credentials generally refer to the degrees faculty have earned at certain levels that provide a foundation for knowing what students should learn in a specific discipline or field.** Over the years, some hallmarks and common expectations for faculty credentials have emerged within the higher education community, such as:

- Faculty teaching in higher education organizations should have completed a **significant program of study in the discipline they will teach and/or for which they will develop curricula, with substantial coursework at least one level above that of the courses being taught or developed.** Further, it is assumed that successful completion of a coherent degree better prepares a person than an unstructured collection of credit courses;
- Faculty teaching in undergraduate programs **should hold a degree at least one level above that of the program in which they are teaching, and those teaching general education courses typically hold a master's degree or higher and should have completed substantial graduate coursework in the discipline of those courses;**
- Faculty teaching in **graduate programs typically hold the terminal degree determined by the discipline;**
- Faculty overseeing doctoral education should know how to conduct research appropriate to the program and degree.







# NWCCU (ACBSP Region 7)

## Standard 4.A – Faculty Selection, Evaluation, Roles, Welfare, and Development

The selection, development, and retention of a competent faculty is of paramount importance to the institution. The faculty's central responsibility is for educational programs and their quality. The faculty is adequate in number and qualifications to meet its obligations toward achievement of the institution's mission and goals.

- 4.A.1 The ***institution employs professionally qualified faculty*** with primary commitment to the institution and ***representative of each field or program*** in which it offers major work.
- 4.A.8 Part-time and adjunct faculty are ***qualified by academic background, degree(s), and/or professional experience*** to carry out their teaching assignment and/or other prescribed duties and responsibilities in accord with the mission and goals of the institution.



# WASC (ACBSP Region 7)

- 2.1 The institution's educational programs are appropriate in content, standards, and nomenclature for the degree level awarded, regardless of mode of delivery, and are **staffed by sufficient numbers of faculty qualified for the type**
- 3.2 The institution demonstrates that it employs a **faculty with substantial and continuing commitment to the institution. The faculty is sufficient in number, professional qualifications, and diversity to achieve the institution's educational objectives, to establish and oversee academic policies, and to ensure the integrity and continuity of its academic programs wherever and however delivered and level of curriculum offered.**

*GUIDELINE: The institution has an instructional staffing plan that includes a **sufficient number of full-time faculty with appropriate backgrounds, by discipline and degree level.***



# EQUIS (ACBSP Region 8)

- *The School should recruit, develop and manage its faculty in accordance with its strategic objectives and have **sufficient core faculty to cover the major disciplines and constitute a viable body of distinctive expertise** (i.e. a minimum of 25).*
- *The **size, qualification, and composition of the faculty are expected to be sufficient to allow adequate servicing of the School's programmes and to be in accordance with the current position of the School.***
- Again the profile of the faculty will depend on the mix of activities. A school with a primary focus on executive education will require a quite different faculty skills profile from a school that mainly offers full-time degree programmes.



# ACBSP Region 9

- Mexico, Central America, South America
- Typically regulated by governmental agency, e.g. Ministry of Education
- There is currently no equivalent association to the US Regional Agencies or EQUIS





# Credential-related Issues

- Regional Accreditation Agency Policy
  - Program accreditation policy can be more restrictive than, but not more lenient than, regional accreditation policy; Some regions are very specific (NCA & SACCS); others are very general
- Availability of Qualified Full-time Faculty
  - There is an ongoing shortage of terminally qualified faculty, particularly in the business disciplines



# Credential-related Issues

- Clarity of Criteria
  - For example, a recent change to the Baccalaureate/Graduate definition for Minimum Qualifications left out the words *business-related field*. The result has been the inaccurate interpretation that any Master's degree-regardless of field-would qualify an individual to teach at the baccalaureate/graduate level. Issue for deans; issue for site visit teams.





# Credential-related Issues

- Understanding non-U.S. requirements
  - Just as there is a hierarchy of requirements in the U.S. (CHEA, regional associations), there is a hierarchy in the countries which comprise Regions 8 & 9
  - The credentials committee needs to understand the systems and requirements in Regions 8 & 9



# Institution Related Issues

- Availability of Qualified Faculty
  - Financial Resources
    - Particularly during the recession, institutions have limited financial resources to pay competitive salaries and attract most highly qualified faculty
  - Non-U.S. markets
    - Not all countries have the traditional “full-time” faculty; many schools function with a fully part-time faculty comprised of working professionals
  - Alternative delivery systems
    - Virtual degree programs, adult completion programs, executive degree programs, etc.





## ACBSP Credentials Committee Recommendations

- Reinstate the Baccalaureate / Graduate definition for Minimum Qualifications **which includes the words** *business-related field*.
- Add a portfolio requirement
  - Require schools to include documentation of their regional/governmental/country requirements for credentialing to ensure that the school does not risk violation of requirements by adhering only to program accreditation requirements



# Questions? Comments?

- *Do you have expertise in Region 8 or 9 credential requirements? If so, please take the time to explain to us or guide us to the proper sources!*

• *Thank you!*

- [craven@uiwtx.edu](mailto:craven@uiwtx.edu)



---

## ACBSP Standards and Criteria – An Overview

---

### **Bruce Stetar B.A. MBA**

Chair, Business Programs, ACS  
Higher Colleges of Technology  
PO Box 15825, Dubai  
United Arab Emirates  
Telephone: (+9714) 4038312 Fax: (+9714) 3260303  
Email: bruce.stetar@hct.ac.ae Website: www.hct.ac.ae

**Keywords:** Association of Collegiate Business Schools and Programs, ACBSP. Accreditation, standards and criteria.

**Reference:** Reference to this paper should be made as follows:  
Stetar, B. (2009) "ACBSP Standards and Criteria – An Overview",  
International Council of Business Schools and Programs Annual  
Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Mr. Bruce Stetar has over 17 years experience as an educator in Business Communications, Management, Management Information Systems, Business Information Systems, Computer Programming, and Computer Networking. He is Chair of the Business programs for a 17 campus college system catering to 18,000 students. In addition he is also involved with AIESEC, Students in Free Enterprise (SIFE), the bi-annual Education Without Borders Conference, the Bi-annual Festival of Thinkers Conference, sits on numerous faculty search committees, and has successfully authored three accreditation self-study reports including his College's ACBSP Reaffirmation Self-Study Report in 2006-2007. Prior to entering academics Mr. Stetar had a successful career in business, working for over fifteen years in the finance and oil industries.

Mr. Stetar has held numerous professional certifications, has been a recipient of the Lousie McKinney Scholarship, and was a member of the U.S. National Dean's List. Mr. Stetar has been involved with the Association of Collegiate Schools & Business Programs (ACBSP) since 2005. During that time he has attended National and Regional conferences, served on/chaired previous ACBSP Accreditation Teams, is the ACBSP Champion to ACBSP for his institution and is the current President Elect for ACBSP Region 8.

# ACBSP Region 8 2009 Regional Conference

A Presentation  
on  
Standards and Criteria

# Who Should be Seeing this Presentation?

- Anyone who is a candidate for accreditation and has not yet written their self study,
- Anyone looking to reacquaint themselves with the standards and criteria in preparation for a reaffirmation or
- Anyone who is just looking for a refresher and a better understanding of the topic of standards and criteria.



# Defining Standards and Criteria

If you search the Internet there are a number of definitions and meanings for these two terms but I choose the following as being pertinent to what we do in the field of accreditation.

- **Standard** - established or well-known or widely recognized as a model of authority or excellence;

**Criterion** - specifies the attributes of successful or meritorious performance.

- **Standard/Criterion** - a basis for comparison; a reference point against which other things can be evaluated;

# Why Standards and Criteria

So how do these definitions apply to accreditation in general and ACBSP specifically?

At its basest level accreditation is really about **perception.**

What makes a particular accreditation valuable and desirable to certain institutions is because they perceive it to be the “standard” against which they wish to “measure” themselves and against which they want to be “measured” by others.

# Why Standards and Criteria

So, why do institutions choose to seek ACBSP accreditation as opposed to accreditation from other similar bodies?

Because they believe or **perceive** that ACBSP has a set of **standards and criteria** which define excellence.

# Why Standards and Criteria

So why does ACBSP have a set of Standards and Criteria?

Because they are the reference point against which we the members believe all quality academic institutions seeking excellence should be measured – or if you want “the ideal” or the “gold standard”

# ACBSP Standards and Criteria Background

The accreditation **standards** employed by ACBSP are the reference point against which member institutions measure themselves and the **criteria** are how those institutions demonstrate their compliance with the standards.



# ACBSP Standards and Criteria Background

ACBSP has three main sets of Standards and Criteria:

- One for Demonstrating Excellence in Associate Degree Schools and Programs
- One for Demonstrating Excellence in Baccalaureate/Graduate Degree Schools and Programs
- One for Demonstrating Excellence in Baccalaureate/Graduate Degree Accounting Programs

# ACBSP Standards and Criteria

## Background

It is key to understand that the Standards and Criteria employed by ACBSP are in fact determined ultimately by we the members of the ACBSP.

- The accreditation standards for the “Associate Degree Schools and Programs” are set by the Associate Degree Commission.
- And the accreditation standards for the “Baccalaureate/Graduate Degree Schools and Programs” and the “Baccalaureate/Graduate Degree Accounting Programs” are set by the Baccalaureate/Graduate Degree Commission.

Both of these bodies are staffed by individuals - from ACBSP member institutions - who are themselves ACBSP members.

# ACBSP Standards and Criteria Background

In turn, the criteria

- for the “Associate Degree Schools and Programs” accreditation is developed and approved by the Associate Degree Board of Commissioners
- for the “Baccalaureate/Graduate Degree Schools and Programs” and the “Baccalaureate/Graduate Degree Accounting Programs” accreditation are developed and approved by the Baccalaureate/Graduate Degree Board of Commissioners

The members of these Boards are elected by the members of the respective Degree Commission’s from individuals employed by the ACBSP member institutions and who are - again - themselves ACBSP members.

# ACBSP Standards and Criteria Background

Each of the Boards of Commissioners have

*“the responsibility for administering all accreditation activities for the degree-granting institutions, including the development and interpretation of the standards, and making final decisions pertaining to accreditation.”*

# ACBSP Standards and Criteria

## Key Documents

There are three key documents which detail the standards and criteria used by ACBSP.

- **ACBSP Standards and Criteria** for Demonstrating Excellence in Associate Degree Schools and Programs - July 2009
- **ACBSP Standards and Criteria** for Demonstrating Excellence in Baccalaureate/Graduate Degree Schools and Programs - Rev G, August 2009
- **ACBSP Standards and Criteria** for Demonstrating Excellence in Baccalaureate/Graduate Degree Accounting Programs - Rev C, June 2008



# ACBSP Standards and Criteria

## Key Documents

All these three documents can be found on the ACBSP website under the “Accreditation Section” and the appropriate degree sub section

(<http://www.acbsp.org/p/cm/ld/&fid=73>).

Each of these documents is in a PDF format and should be printed and read by any institution seeking accreditation or reaffirmation.

# ACBSP Standards and Criteria

## Key Documents

The screenshot shows the ACBSP Gateway website in Internet Explorer. The browser's address bar displays the URL <http://www.acbsp.org/p/cm/ld/&fid=73>. The website header includes the ACBSP logo and the text "Association of Collegiate Business Schools and Programs". A navigation menu contains links for Home, About ACBSP, Why Join?, Accreditation, Conferences, Regions, Award/Honor Societies, Global, and Blogs. A sidebar on the left is titled "Accreditation Links" and contains a list of links: Accreditation Home, Outcomes Assessment, Value of Accreditation, Associate Degree Accreditation, Baccalaureate/Graduate Degree Accreditation, Accounting Degree Accreditation, CHEA Recognized, Site Visit Arrangements, F.A.Q., 2006 Pre-Conference Workshop CD, and a link to the Accreditation Home page. A red arrow points to the "Accounting Degree Accreditation" link. The main content area is titled "ACBSP Accreditation" and "Accreditation Home", with a paragraph stating: "In this section you will find all the information you need in order begin the accreditation process. We encourage you to review and download the materials here and contact the ACBSP if you have any questions. Please use the links to the left to review the materials available." The footer contains copyright information for 2009 and a "Powered By" logo for Jocious.

# ACBSP Standards and Criteria

## Key Documents

Quality Assurance Report  
This report is filed every other year by accredited associate degree institutions on or before September 30th.

---

**Associate Degree Standards**

Example Reaffirmation of Accreditation Self-Study  
This example can provide some insight into preparing your self-study for reaffirmation of accreditation of your Associate Degree Programs.

**STANDARDS AND CRITERIA for Demonstrating Excellence in Associate Degree Schools and Programs**  
This document presents the standards and criteria for institutions to demonstrate compliance with the accreditation standards of the Associate Degree Commission for initial accreditation and for reaffirmation of accreditation.

---

**Associate Evaluator Self-study Review**

ACBSP Evaluator Application Form  
ACBSP Members who have completed evaluator training at the regional or national level should complete this form and submit it along with a current resume. The form should be submitted to Steve Parscale, Director of Accreditation or Diana Hallerud, Accreditation Coordinator.

Evaluator Self-Study Review Integrated Standards and Criteria for Initial Accreditation - Rev. B  
This document is used by the evaluators during the site visit to determine how well the institution meets the 2002 standards and criteria for accreditation. Institutions preparing their self-study can also use this document to make sure that they have adequately supplied the information needed to address all the standards.

Program Evaluators Self-Study Review - 1999 Revision  
This document is used by evaluators during the site visit to determine how well the institution meets the 1999 standards and criteria for accreditation. Institutions preparing their self-study can also use this document to make sure that they have adequately supplied the information needed to address all the standards.

Program Evaluators Self-Study Review for Reaffirmation -Associate Degree Schools & Programs  
This document is used by evaluators during the site visit to determine how well the institution meets the reaffirmation standards and criteria for accreditation. Institutions preparing their self-study can also use this document to make sure that they have adequately supplied the information needed to address all the standards

---

**Shared Best Practices in Accreditation**  
ACBSP is committed to a quality and institutional, functional accreditation process. In achieving this commitment, ACBSP endorses the following accepted best practices:  
The eight regional accrediting commissions through its Council of Regional Accrediting Commissions developed the Statement of "[Best Practices for Electronically Offered Degree and Certificate Programs](#)." Each commission separately in keeping with their own policies and procedures is currently considering the document.

Internet | Protected Mode: Off | 100%

Running - Blac... | Disconnected ... | 3 Microsoft ... | Microsoft Pow... | 2007-2008 | ACBSP : ACBS... | 3:39 PM

# ACBSP Standards and Criteria Format

In general each of the three sets of Standards and Criteria listed above employ six main standards, each of which then have sets of criteria used by institutions to demonstrate compliance with that standard. In general the standards are:

1. Leadership
2. Strategic Planning
3. Student and Stakeholder Focus
4. Measurement and Analysis
5. Faculty and Staff Focus
6. Process Management

# ACBSP Standards and Criteria Format

There are, however, some minor differences between the three sets as detailed below:

Associate	Baccalaureate/Graduate	Accounting
Leadership	Leadership	Leadership
Strategic Planning	Strategic Planning	Strategic Planning
Student, Stakeholder and Market Focus	Student and Stakeholder Focus	Student and Stakeholder Focus
Measurement, Analysis and Knowledge Management	Measurement and Analysis of Student Learning and Performance	Measurement and Analysis of Student Learning and Performance
Faculty and Staff Focus	Faculty and Staff Focus	Faculty and Staff Focus
Process Management	Educational and Business Process Management	Educational and Business Process Management



# **ACBSP Standards and Criteria In Detail**

**ACBSP Standards and Criteria  
for  
Demonstrating Excellence  
in  
Associate Degree Schools and Programs  
July 2009**

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 1: LEADERSHIP**

- Criterion 1.1 - Leadership Strategies
- Criterion 1.2 – Leadership Measures of Performance
- Criterion 1.3 – Leadership and Community

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 2: STRATEGIC PLANNING**

- Criterion 2.1 - Strategic Planning Process
- Criterion 2.2 - Current Strategic Plan
- Criterion 2.3 - Finances
- Criterion 2.4 - Facilities
- Criterion 2.5 - Equipment

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 3: STUDENT, STAKEHOLDER, AND MARKET FOCUS**

- Criterion 3.1 - Stakeholders
- Criterion 3.2 - Stakeholder Satisfaction
- Criterion 3.3 - Student Support
- Criterion 3.4 - Stakeholder Results
- Criterion 3.5 - Business/Industry Relations

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 4: MEASUREMENT, ANALYSIS, AND KNOWLEDGE MANAGEMENT**

- Criterion 4.1 - Student Learning Outcomes Assessment
- Criterion 4.2 - Program Evaluation
- Criterion 4.3 - Student Assessment



# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 5: FACULTY AND STAFF FOCUS**

- Criterion 5.1 - Human Resource Planning
- Criterion 5.2 - Faculty Qualifications
- Criterion 5.3 - Faculty Composition
- Criterion 5.4 - Faculty Deployment
- Criterion 5.5 - Faculty Load
- Criterion 5.6 - Faculty Evaluation
- Criterion 5.7 - Faculty and Staff Professional Development and Scholarly Activities
- Criterion 5.8 - Faculty Instructional Development
- Criterion 5.9 - Faculty Operational Policies, Procedures, and Practices

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Associate Degree** Schools and Programs are:

## **STANDARD 6: PROCESS MANAGEMENT**

- Criterion 6.1 - Curriculum
- Criterion 6.2 - Professional Component
- Criterion 6.3 - General Education Component
- Criterion 6.4 - Business Major Component
- Criterion 6.5 - Off-Campus Operations and Unique Items
- Criterion 6.6 - Minimum Grade Requirement
- Criterion 6.7 - Learning and Academic Resources
- Criterion 6.8 - Support Services
- Criterion 6.9 - Educational Innovation
- Criterion 6.10 - Articulation and Transfer Relationships

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Baccalaureate/Graduate Degree Schools and Programs** are:

## **STANDARD 1. Leadership**

- a. Do your administrators and faculty set, communicate, and deploy business school or program values and performance expectations? Do administrators and faculty include focus on creating and balancing value for students and other stakeholders in their performance expectations?
- b. Do your administrators and faculty create an environment that fosters and requires legal and ethical behavior?
- c. Do your administrators and faculty review business school or program performance and capabilities to assess business school or program success and your business school or program's ability to address changing business school or program needs?

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Baccalaureate/Graduate Degree Schools and Programs** are:

- d. Does your business school or program have processes in place for evaluating the performance of your administrators and faculty?
- e. Does your business school or program address the impacts on society of your program offerings, services, and operations?
- f. Does your business school or program ensure ethical business practices in all student and stakeholder transactions and interactions?

# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Baccalaureate/Graduate Degree Schools and Programs** are:

- g.** Does your business school or program have measures for monitoring ethical behavior throughout the business school or program?
  
- h.** Does your business school or program have processes in place for monitoring regulatory and legal compliance?



# ACBSP Standards and Criteria In Detail

In detail the Standards and Criteria for **Baccalaureate/Graduate Degree Accounting** Programs are:

## **STANDARD #1. Leadership**

- a. Do your administrators and faculty set, communicate, and deploy accounting unit values and performance expectations? Do administrators and faculty include focus on creating and balancing value for students and other stakeholders in their performance expectations?
- b. Do your administrators and faculty create an environment that fosters and requires legal and ethical behavior?
- c. Do your administrators and faculty review accounting unit performance and capabilities to assess accounting unit success and your accounting unit's ability to address changing accounting unit needs?

# ACBSP Standards and Criteria Evaluation

Ultimately your institution will be evaluated based on, or measured against, its application of these standards and criteria.

Basically the evaluation team will look to see **if**:

- You have a process in place dealing with the standard/criteria in question
- Is that process being applied
- Is that process generating data
- Is that data being analyzed and reviewed
- Are the results being used to improve the institution or program.

# ACBSP Standards and Criteria Evaluation

However, to be more exact the team will be rating your institution using a **Qualitative Process Scoring Band** under which they will determine the approximate degree to which your business unit meets the accreditation standards /criteria for Educational Performance Excellence by rating you against four degrees of application:

- **Approach** – a systematic approach/process is evident
- **Deployment** – how well is the approach deployed
- **Learning** – how is the generated data analyzed and used to improve the unit
- **Integration** – how well the approach/process is actually implemented across the unit.

# ACBSP Standards and Criteria Evaluation

Within each of these four areas your processes will be rated using the following Qualitative Scores:

- Best in Class
- Very Good to Excellent
- Very Good
- Good
- Improvements Needed
- Major Improvements Needed

# ACBSP Standards and Criteria Evaluation

Each of the qualitative scores has a descriptor.

Qualitative Score	Approach	Deployment	Learning	Integration
<b>Best in Class</b>	An effective, systematic approach, fully responsive to the overall requirements of the criteria, is evident.	The approach is fully deployed without significant weaknesses or gaps in any areas or work units.	Fact-based, systematic evaluation and improvement and organizational learning are key organization-wide tools; refinement and innovation, backed by analysis and sharing, are evident throughout the organization.	The approach is well integrated with organizational needs identified in response to the other criteria.
<b>Very Good to Excellent</b>	An effective, systematic approach, responsive to the overall requirements of the criteria, is evident.	The approach is well deployed, with no significant gaps.	Fact-based, systematic evaluation and improvement and organizational learning are key management tools; there is clear evidence of refinement and innovation as a result of organizational-level analysis and sharing.	The approach is integrated with organizational needs identified in response to the other criteria.



# ACBSP Standards and Criteria Reporting Against

Overall the standards and criteria are the goal that we should be aspiring to in the running of our institutions but on a more practical basis they are what you need to report against during your initial accreditation self study or your reaffirmation self study.

# ACBSP Standards and Criteria Reporting Against

When you seek accreditation you are effectively stating that you are willing to stand up and be examined by someone outside your own institution.

To do that when writing your self study, you need to think about each of the standards and criteria listed above in light of the four areas described before :

- **Approach** – do we have a process
- **Deployment** – is the process being used
- **Learning** – what data does the process produce and how do we use it to improve the unit
- **Integration** – does everyone know about the process and do they use it

# ACBSP Standards and Criteria Reporting Against

It is also key to note when reporting against the standards and criteria that **they are not mutually exclusive** but rather they do in some cases overlap.

For example *Strategic Planning*, which is Standard 2 Criteria 5, also has elements of Standard 5 Criterion 1, which is *Human Resource Planning*.

# ACBSP Standards and Criteria

## Reporting Against

Now let's look at how you would actually report against the standards including some examples of the type of things you would report on.

Let's look at Standard 1 for example. How would you report against this standard and its criteria?

### **STANDARD 1. Leadership**

- a. Do your administrators and faculty set, communicate, and deploy business school or program values and performance expectations? Do administrators and faculty include focus on creating and balancing value for students and other stakeholders in their performance expectations?

**Remember it is not enough just to say “yes we have a process” – you must prove that it exists, show that it is being used, and show that it is producing data which you are analyzing and using to make improvements.**

# ACBSP Standards and Criteria

## Reporting Against

To report against this standard you could:

- Provide an overview of your leadership structure
- List your unit's Mission, Vision and Goals
  - Show how you communicate your unit's Mission, Vision and Goals to your stakeholders, faculty and students.
  - Reference the processes you have in place for updating the unit's Mission, Vision and Goals
  - Reference the minutes of meetings where these processes were implemented
  - List any changes made as a result of the process to your unit's Mission, Vision and Goals
- Reference your unit's catalogue, student handbook and faculty handbook showing where faculty and student performance expectations are detailed.

# ACBSP Standards and Criteria

## Reporting Against

To report against this standard you could:

- Reference your unit's Strategic Plan including:
  - The processes for developing it
  - How it is communicated to faculty and students
  - The minutes of meetings where it is discussed, reviewed and updated.
- Reference any reporting mechanism which track the “status against” your strategic plan.



# ACBSP Standards and Criteria Reporting Against

To report against this standard you could:

- Reference your unit's:
  - Policies and Procedures
  - Learning Model
  - Graduate Outcomes
  - Your unit's lines and modes of communication – i.e. the use of websites, intranets, sharepoint portals, news letters, meetings, etc.

**Remember that all of these should be included as documents in your appendix and referenced accordingly in your self study.**

# ACBSP Standards and Criteria Reporting Against

Now lets look at how you would actually report against the standards including some examples of the type of things you would report on.

Let's look at the next criteria within Standard 1 for example.

## **STANDARD 1. Leadership**

- b.** Do your administrators and faculty create an environment that fosters and requires legal and ethical behavior?

# ACBSP Standards and Criteria

## Reporting Against

To report against this standard you could:

- Reference your unit's Mission, Vision and Goals if, and where, they address these two issues.
- Reference your unit's policies on ethics and cheating.
- Reference your Faculty Handbook for the "Faculty Code of Conduct"
- Reference your Student Handbook for the "Student Code of Conduct"
- Reference your policies on student discipline

# ACBSP Standards and Criteria

## Reporting Against

To report against this standard you could:

- Reference faculty contracts if they have sections dealing with these issues.
- Reference your human resource regulations
- Reference courses within the unit's programs of study dealing with ethics and legal behavior.
- Reference the minutes of meetings where any of the above are discussed, updated, upheld or enforced.
- Reference your unit's Policy on Copyright
- Provide tangible evidence of the application of the above.
  - i.e. – last academic year three students were dismissed for violating the student code of conduct or for cheating on an exam.

# ACBSP Standards and Criteria Reporting Against

As an example here is a section from an actual self study report:

“Each student is then governed during their time with HCT by the *Student Conduct and Discipline Procedures* (see Section 10 in the *Regulations, Academic Policies and Procedures* portion of the *HCT 2007-2008 Catalogue* in Appendix C), which include sections on *Standards of Student Conduct, Non Academic-Misconduct, Disciplinary Measures* and *Procedures for Disciplinary Measures Beyond Warnings.*”

# ACBSP Standards and Criteria

## Reporting Against

- In addition, HCT has policies and procedures that govern both faculty and students in the following areas (see Appendix Y):
  - *Internet Access and Usage Policy, Policy GP 401 and GP038*
  - *Software License Policy, Policy GP402*
  - *HCT Copyright; p. 31 of the 2007-2008 HCT Catalogue (see Appendix C)*
  - *Finance and Account Regulations*
  - *Nepotism, Policy GP016*
  - *Human Resource Regulations (see Appendix U)*
  - *Academic and Student Regulations (see Appendix V)*
  - *Academic Honesty, Policy LP201*
  - *Attendance, Policy LP210*
  - *Non-Academic Misconduct, Policy LP216*
  - *Student Rights and Responsibilities, Policy LP218*
  - *Special Needs, Policy LP217*



# **ACBSP Standards and Criteria Reporting Against**

**Again remember that all of these should be included as documents in your appendix and referenced accordingly in your self study.**

# ACBSP Standards and Criteria In Conclusion

A wise leader with a wealth of background in accreditation and quality assurance once told me

*“It isn’t quality if you can’t prove it”*

The ACBSP Standards and Criteria are how you prove that you have a quality school or program.

# ACBSP Standards and Criteria In Conclusion

*“Questions”*

---

## Leadership and Strategic Planning – ACBSP Standards 1 and 2

---

### **S. Peter Horn, Ph.D., LL.M.**

Chancellor

International School of Management

148 rue de Grenelle, 75007, Paris, France.

110 East 59<sup>th</sup> Street, 23<sup>rd</sup> Floor, New York, NY 10022, USA.

email: peter.horn@ism.edu

**Abstract:** This presentation examines the ACBSP Standards related to Institutional Leadership and Strategic Planning (Standards 1 and 2). It examines the specific Standards in detail and then discusses ways in which institutions may interpret and adapt their current operating procedures to satisfy the requirements of the Standards.

**Keywords:** institutional leadership, education management, business communications, management teams, administrative committees, strategic planning, long term goals, short term goals, budgeting, organizational structure, strategic plan, goals and objectives.

**Reference:** Reference to this paper should be made as follows: Horn, P. (2009) “Leadership and Strategic Planning – ACBSP Standards 1 and 2”, International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Dr. Horn has a Ph.D. in International Finance; and a Masters in International Tax Law from Regent University’s School of Law. He is Chancellor of the International School of Management – a small privately funded university offering Masters and Doctoral degrees in business.

A member of several corporate Boards, He is a Chari-Elect of the Board of Commissioners for Baccalaureate and Graduate Degree Programs for the Association of Collegiate Business Schools and Programs (ACBSP), sits on their Strategic Planning Committee and is President of the International Council for Business Schools and Programs – ACBSP Region 8. Dr. Horn’s current research interests focus on quality in education, international tax law and modeling the international financial markets.

# ACBSP Accreditation Standards and Criteria

---

Standard 1: Leadership

Standard 2: Strategic Planning

---

# ACBSP Accreditation Standards and Criteria

---

## □ The Goal

- Continuous improvement in educational performance excellence
-



# ACBSP Accreditation Standards and Criteria

---

- The Purpose of the Standards: The ACBSP accreditation standards, supporting criteria, and core values provide the building blocks and integrating mechanism to develop a viable education system.
-

# ACBSP Accreditation Standards and Criteria

---

## Characteristics of the ASBSP Standards:

- ❑ Focus on organizational results
  - ❑ Are non-prescriptive and adaptable
  - ❑ Integrate key educational themes
-

# ACBSP Accreditation Standards and Criteria

---

- **Leadership**
  - **Strategic Planning**
  - **Student and Stakeholder Focus**
  - **Information and Analysis**
  - **Human Resource Development and Management**
  - **Educational and Business Process Management**
-

# ACBSP Accreditation Standards and Criteria

---

- **Standard #1 Leadership: Administrators (Chief Academic Officers, Deans, Department Chairs) and faculty must personally lead and be involved in creating and sustaining values, business school or program directions, performance expectations, student focus, and a leadership system that promotes performance excellence. The values and expectations must be integrated into the business school's or program's leadership system; and the business school or program must continuously learn, improve, and address its societal responsibilities and community involvement.**
-

# Standard #1 Leadership:

---

- **Do administrators and faculty set, communicate and deploy business school program values and performance expectations for students and other stakeholders?**
  - **Do Administrators and faculty review business school or program performance and capabilities and the business school or program's ability to address changing needs?**
  - **Does the business school of program have processes in place for evaluating the performance of your administrators and faculty?**
  - **Does the business school or program address the impacts on society of your program offerings, services or operations?**
-

# Standard #1 Leadership:

---

- **Does the business school or program ensure ethical business practices in all student and stakeholder transactions and interactions?**
  - **Does your business school of program have processes in place for monitoring regulatory and legal compliance?**
  - **Table 1.1: Table of Impact on Society**
  - **Table 1.2: Table of Ethical Behaviour**
-



# ACBSP Accreditation Standards and Criteria

---

- **Standard #2 Strategic Planning:** The business school or program must have a process for setting strategic directions to better address key student and program performance requirements. The strategy development process should lead to an action plan for deploying and aligning key plan performance requirements. It should also create an environment that encourages and recognizes innovation and creativity.
-

# Standard #2 Strategic Planning

---

- **Do you use a formal process to set the strategic direction for your business school or program?**
- **Do Faculty and staff members participate or have a choice in this process?**
- **Have you established your business school or program's key strategic objectives and the timetable for the current planning period?**
- **Do you have action plans for this planning period?**
- **Do you have long-term actions plans?**

# Standard #2 Strategic Planning

---

- **Do you develop you key human resource polans as part of your business school or program's short- and long-term strategic objectives and action plans?**
  - **Have you established performan measures for tracking progress relative to your actions plans?**
  - **Have you communicated your objectives, action plans, and measurements to all faculty, staff, and stakeholders as appropriate?**
-

# Standard #2 Strategic Planning

---

- **Figure 2.1: Table for Strategic Direction.**
  - **Figure 2.2: Table for Action Plans.**
  - **Figure 2.3: Table for Action Plan Measurement.**
-

# Questions

---

Thank you!

Questions?

---

---

## Basic Wine Tasting Principles

---

### **Dr. Pierre X. Camps, DBA**

Chairman

GMC Education

13 rue des Princes

92100 Boulogne-Billancourt,

France

Email : [pierre.camps@gmceducation.com](mailto:pierre.camps@gmceducation.com)

**Keywords:** wine tasting, French wine, red wine, white wine, wine education, education consulting.

**Reference:** Reference to this paper should be made as follows: Camps, P.X, (2009) "Basic Wine Tasting Principles", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Pierre X. Camps, a French and American citizen, has more than 25 years experience in the marketing and advertising business in the U.S.A. and in France. He has worked for several major advertising agencies, firms and government institutions in both countries and has expertise in the Polish business environment as well. He was a Sales Promotion Consultant for Bullock's, Federated, Inc. and May Company Department Stores in Los Angeles and worked on Direct Marketing for middle and higher segmentation customers. He served as the Creative Director for Galeries Lafayette in Paris, where he created the world famous claim and concept "*Galeries Lafayette Capital of Fashion*" and was in charge of Sales Promotion and advertising campaigns. In the late 1980s he was founder-CEO of Immergence SA, in Paris, a marketing communication agency. Dr. Camps has won several distinctions in France and U.S.A. for his work.

He has served as Dean of MBA and Dean of External MBA Programs at the International School of Management, Paris-New York. He has been Dean of MBA Programs at Weller International Business School where he is in charge of Quality



and Accreditation Processes. Dr. Camps conducts seminars in Marketing, Strategic Marketing and Advertising at BBA, MBA and DBA levels. He is an Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico (ITESM) Affiliated Professor. He holds a Doctorate in Business Administration and an international executive MBA from ISM. He studied Advertising Film Production at UCLA and is a graduate from the Jagellonian University in Cracow, Poland and University Paris Sorbonne where he studied Polish Language and Culture. He is presently founder/CEO of “Global Market Consulting” a Paris located international consultancy.

On a more personal basis, Pierre Camps has had a passion for the Art of Wine for many years. He has followed numerous training with experts such as Didier Bordas and Francis Crépin, both Chefs-Sommelier at Les Caves Taillevent, Francine Legrand, Caves Legrand and Odile Pontillo, in Paris. He has build a unique private wine Cellar for over 20 years and has been a Jury at the Concours Général Agricole – Salon International de l’Agriculture since 2006.

# **Wine Tasting**

## **A Short Presentation Basic Wine Tasting Principles**

**Prepared by Pierre X. Camps  
GMC Education**

**Archetype of French Wines known  
and appreciated worldwide chosen for the  
degustation:**

**White Burgundy: Chablis**

**Red Bordeaux: Saint-Emilion**

**Using the right tools and proper environment:**

- 1) The best drinking temperature**
- 2) The right tasting glass**
- 3) Be aware of odors around you**
- 4) Do not use food**
- 5) Have your senses at peace but alert!**

# The three Steps of Wine Tasting

- 1) Appearance
- 2) Aroma
- 3) Taste

# The Appearance (1)

- look at the color (using a white handkerchief)
  - green, light gold, dark gold for white wines...
  - from light red to dark, almost brown or even black for some red wines (Cahors)...



# The Appearance (2)

- look at the nuance, look at the clarity
  - is there any impurity in the wine?
  - what is the density of the wine?

# The Appearance (3)

- Swirl the wine in the glass
  - Prepare the glass for optimum aroma expression
  - Are the tannins tainting the glass?  
(red wine showing strong tannins)

# The Aroma (1)

- The three main attitudes:
  - 1) Far away
  - 2) Close to the glass
  - 3) Nose in the glass

# The Aroma (2)

- Identify the primary aromas, then higher complexity
  - 1) Take your time
  - 2) Redo the operation if necessary
  - 3) Take a few seconds off

# The Aroma (3)

- Younger wines may offer more fruits
- Older wines perhaps more complexity
- Be aware of its maturity



# The Taste (1)

**Pay attention to the first expressions  
(they may last a very short time!)**



# The Taste (2)

Swirl the wine in your mouth (the first time, try it at home, rather than in the restaurant... :-)

- 1) Oxygen the wine
- 2) Obtain the fullest gustatory profile
- 3) Pause and focus through each step

# The Taste (3)

When acquiring experience, analyze and identify all different flavor

- 1) Immediate taste in mouth
- 2) Principal (middle) taste in mouth
- 3) Late and lasting taste in mouth

# The Assessment

Assess each step, as well as  
the overall experience

- Trust yourself
- Acknowledge your own experience
- Remain humble in front of the complexity



# Enjoy yourself!

Pierre X. Camps  
[pierre.camps@gmceducation.com](mailto:pierre.camps@gmceducation.com)

## Thank you!

---

## Developing the Executive Brain Functions through Brain-Based Learning

---

### **Dawn E. Bowden, Ph.D.**

International School of Management, Paris, France

Product Strategist, Jumpstart Innovations, Silverthorne, CO, USA

Address: 561 County Road 1012; Silverthorne, CO 80498

Phone: (970) 724-9290

Mobile: (303) 818-1560

Email: dawn.bowden@gmail.com

**Abstract:** The recent business failures and the deteriorating global economic environment is cause for alarm. There is no single cause for the current state of affairs. To varying degrees, business schools worldwide have experienced criticism regarding the value and practical application of business programs to produce effective and ethical business leaders. At the root of this criticism is the lack of development of the practical skills of critical thinking, decision-making, and reasoning that require the executive brain functions. One way to overcome this criticism is to ensure that pedagogies maximize learning through a comprehensive understanding of how the brain works, or through brain-based learning. Educators and business leaders need to transform environments and approaches to cultivate the executive brain functions. This paper provides strategies to help educators and business leaders achieve this objective.

**Keywords:** brain-based learning, principles of learning, executive functions, business education

**Reference:** Reference to this paper should be made as follows: Bowden, D. (2009) "Developing the Executive Brain Functions through Brain-Based Learning", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes:** Dawn E. Bowden, Ph.D., is the principal of Jumpstart Innovations, an organization that partners with organizations worldwide to improve the health and well-being of communities and individuals. Dr. Bowden's work includes teaching, research, and management of projects in innovation, strategic marketing, change management, and health care

delivery. She holds a Ph.D. from the International School of Management in Paris, France and serves as adjunct faculty for universities in the United States and Europe for both marketing and management disciplines. Dr. Bowden is a member of the Women Business Leaders of the U.S. Health Care Industry Foundation, the International Foundation of Employee Benefit Plans, and serves on the Board of Directors for the Colorado Chapter of the American Marketing Association.

---

### Introduction

***"The primary key to learning is developing the ability to make good decisions in the real world, based on the knowledge that people have and the sense they have made of experience."***

(Caine, Caine, McClinitic, and Klimek, 2005)

The recent scandals with Tyco, Arthur Andersen, WorldCom, and Enron in addition to the financial insolvency of many financial institutions and the bailouts such as Merrill Lynch, Fannie Mae, Freddie Mac, and AIG are alarming. There are a multitude of reasons for why these failures occurred and why the world economy is experiencing one the most significant and broad-sweeping downturns in recent history. Some have attributed these failures, and even the executives that have failed, to the lack of intellectual and ethical education and thinking, and to the lack of focus on professional and practical coursework and application as opposed to research. Whether this is a direct cause of the failures is surely debatable, but it does raise the issue of business school education relevance and applicability.

Business schools have evolved from technical, trade school oriented roots towards a scientific and research-oriented program delivery. Unfortunately, there are concerns that business schools are not preparing students for the complex issues and situations encountered in the business world and management. The root of many of these concerns is the lack of development of higher-level functioning or cognition, also known as the executive brain functions. A well-structured pedagogy focused on the development of the executive brain functions will aid in appropriately preparing students for their experience and success in the real-world. Traditional teaching methods will continue to fall short both in the classroom and the boardroom. How courses are taught can be more important than the topic or course being taught. There is no one grand solution or approach to learning, and ultimately, to teaching a collective group of students that have had very different experiences in life and have developed unique neural networks and learning styles.

---



The same holds true in the business world and in the individual pursuit for lifelong learning. Educators and leaders must transform environments to create a safe and enriched learning place. All learning is an integrated psychophysiological experience with a convergence of physical and mental functioning (Caine, et al., 2005). The objective is to maximize learning by understanding how the brain works and to help learners realize their peak potential. Brain-based learning can capture the essence of this objective to maximize learning while also improving the ability of business schools to balance practical needs versus scientific and academic rigor.

### **In Consideration of the Brain**

There has been an extensive amount of research and development in understanding how the brain works. Part of this work has been focused on how the brain learns and the basic operations that occur to accomplish the development or change in structure in response to the environment (Palombo Weiss, 2000b). Further understanding of how the brain functions and the parts of the brain that produce higher-level cognition and functioning are required to fully appreciate the relevance and application of brain-based learning.

### ***Higher-Level Cognition and the Executive Functions***

Terms such as higher-level cognition and the executive functions are often used interchangeably and refer to the capacities that are most commonly linked to the prefrontal cortex. These capacities guide complex behavior over time through planning, decision-making, abstract and formal reasoning, and problem-solving. Flexibility to change with the environment, display appropriate inhibitions, process and respond to novel tasks, and monitor and evaluate results for accuracy and errors are essential for higher level functioning. One critically important result of these capacities is goal-directed behavior. This requires rapid updating and comprehensive maintenance of information to clearly formulate and execute a plan. This planning requires processing and updating based on internal representations of future situations versus response to current stimuli (O'Reilly and Munakat, 2000).

Executive functions are present in infancy but do not reach maturity until late adolescence or young adulthood (Caine, et al., 2005). Higher-level cognitive learning, which is comprised of six categories of cognitive objectives: knowledge, comprehension, application, analysis, synthesis, and evaluation, can and must be developed. Knowledge involves recall of information while comprehension is the lowest level of understanding of what is being communicated that the individual can in turn use within the context learned. The use of ideas, principles, and theories in a given context equates to applications. Analysis involves separating parts of a problem or communication into distinct elements (e.g. categorization,

comparisons, and distinguishing or recognizing patterns). Synthesis is the process of putting parts together to form a new structure including development of a plan, designing a product, proposing a strategy, and writing a new communication (Page and Mukherjee, 2007).

The final objective of evaluation requires making a judgment on the basis of explicit and complex criteria versus on the basis of inherent likes and dislikes (e.g. comparing proposals, ranking projects, recommendations, and appraising value). The activities of analysis, synthesis, and evaluation are generally considered higher-level, or higher-order, thinking skills (Page and Mukherjee, 2007). The challenge at hand is how educators and business leaders alike can build a more flexible and dynamic cognitive system that is capable of abstract processing and linking a series of cognitive operations over time to ultimately achieve the higher order cognitive objectives.

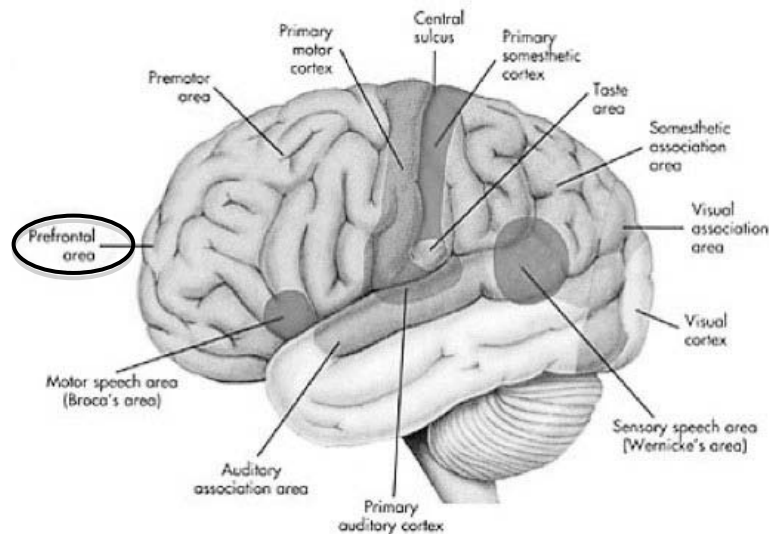
### ***The Prefrontal Cortex***

It has been found that different brain functions are localized in different regions of the brain. This functional localization articulates that specific brain regions are responsible for driving certain mental processes. However, mental processes and even the executive functions are not specific to certain structures or regions of the brain. There are many interconnected systems of brain regions that work together versus individually and thus, any specific mental process is functioning as part of the "system of the brain" versus an individual area (Ledoux, 1996).

For example, some regions of the prefrontal cortex are connected with the hippocampus and are involved in the formation and retrieval of explicit memories. Inputs to the amygdala from these areas may allow emotions to be triggered by memories, thus playing a key role in planning and executing emotional actions. Another example is the anterior cingulate cortex, which is interconnected with the prefrontal cortex to form the attentional network. This is a cognitive system involved in mental resource allocation, decision-making processes, and voluntary movement control (Ledoux, 1996).

The executive functions are amongst the most sophisticated cognitive functions and are contained in the part of the cerebral cortex that has expanded the most in primates. Many regard the prefrontal cortex, and specifically the lateral prefrontal cortex, as the executive controller. This area of the brain determines appropriate blend and prioritization between a sensory input and motor output to meet environmental demands. Cognitive ability heavily relies on the function of the prefrontal cortex (circled in Figure 1 - below).

**Figure 1: Location of the Prefrontal Cortex**



Source: [www.reference.com/browse/wiki/Prefrontal\\_cortex](http://www.reference.com/browse/wiki/Prefrontal_cortex)

The lateral prefrontal cortex performs general-purpose working memory functions and has connections with various sensory systems such as the visual and auditory systems, neocortical systems that perform temporary storage functions (spatial and verbal), and the hippocampus and other cortical areas involved in long-term memory (Ledoux, 1996).

The prefrontal cortex and the hippocampus can be altered by stress. In the event of a stressful situation, both areas work to maintain an appropriate level of stress hormones and prevent too many from being released. If there is a stress-induced shutdown of the prefrontal cortex the amygdala (fear) is more fully released and the new learning that occurs is strong and more resistant to extinction. This may appear to be a positive effect, however, too much stress or fear has an adverse affect and in extreme cases results in phobias, post-traumatic stress disorder, anxious thoughts, and panic (Ledoux, 1996).

### ***Development of the Executive Functions***

Development of the executive functions is highly dependent upon the learning environment. In a very high stress environment or where there are stressors experienced throughout the learning process, there is a psychophysiological response to the threat (or stress). This type of response to the stressor triggers the brain to respond through the primary pathway engaging the thalamus (the relay station of the brain) and amygdala (drives brain events associated with fear) through to the cerebellum.

A quick overview of memory is important to understand the implications of this. The brain is integrated and responds as a whole to a stimulus even though memory can be divided into

different processes with each served by different regions of the brain. There are two approaches to memory to consider. The first is rote learning and the ability to store or archive isolated facts, skills and procedures. The second is dynamic memory which is the capacity to engage multiple systems in order to make sense of experience. The primary pathway described above is representative of what occurs during rote learning. This type of information is stored as static knowledge, or veridical knowledge (Caine, et al., 2005). The impact under a stressful stimulus: Higher-level, complex thinking and creativity are hindered (Palombo Weiss, 2000b). The executive functions are not being engaged or developed.

In contrast, environments that are low-stress or provide learners a sense of control or choice result in a different memory process. Stored memories are housed in higher-level thinking areas of the brain. In a low-stress environment, there is no longer a "fight or flight" response and the brain responds in a more reflective and analytic mode through the thalamus, hippocampus (responsible for making new memories), and cortex. This also allows other archived information to be gathered in order to provide context and draw inferences (Palombo Weiss, 2000a). The result: higher-level cognition and the executive functions are exercised.

The executive functions, or higher-level cognition, depend upon many of the cognitive abilities such as attention, perception, memory, and language. Thus, development of the executive cannot be achieved through the rote learning process alone. There must be an opportunity for actor-centered adaptive decision-making versus veridical knowledge. Veridical knowledge is static, it is what is known, or discovered by others. Actor-centered adaptive decision-making requires the learners to ask questions driven by individual goals, purposes, needs and interests. Consequently, the answers are meaningful and relevant to the individual. This further drives the need for more information, questions, and answers (Caine, et al, 2005).

### ***Importance of Executive Functions in Business and Education***

Historically, companies were willing to spend money to train graduates to develop many of the functions and professional skills required. The prevailing trend however, is that companies now expect new graduates to have already developed these skills to gain employment (Treleaven and Voola, 2008). By nature, business is a broad-based activity that draws from many other disciplines including sociology, economics, psychology, accounting, politics, philosophy, history, language, literature, and more. The capacity to synthesize data and make practical decisions is driven by the executive functions. This capacity for critical thinking is also essential for effective functioning as a business leader. Business school graduates must be able to manage cross-functional teams, synthesize mass quantities of information, identify alternatives, and identify criteria to evaluate alternatives. Business

leaders must be able to recognize and understand tradeoffs and compromises, understand what information is relevant, and make decisions on-the-spot.

Universities worldwide are now expected to develop skills, values, and attributes related to critical thinking, intellectual curiosity, ability to solve problems, independent thought, communication, integrity, ethics, sustainability, intercultural sensitivity, and lifelong learning (Treleaven and Voola, 2008). Unfortunately, there is little evidence that business schools are changing curricula and pedagogy. Curriculum has been refreshed to incorporate new knowledge but the basic structure of the courses and the approaches are the same (Ulrich, 2005).

Further, Noel, Michaels, and Levas (2003) found that individuals have unique sets of personality traits that pre-dispose them to certain majors. For example, accounting students were "significantly more reserved, prone to use concrete and focused thinking, affected by feelings, restrained, persistent, timid, practical, and tense in their personal interactions". Marketing students were "easygoing, creative, enthusiastic, persistent, venture-some, imaginative, and edgy in the personal level of extroversion" (Noel, et al., 2003). These findings identify an opportunity for further research relative to the use of different teaching strategies but also provide insight into an immediate opportunity to tailor teaching approaches to develop the necessary skills and executive functions.

### **Brain-Based Learning**

#### ***Defined***

With an understanding of the executive functions of the brain, it is clear that a defined approach for leveraging how the brain learns will be critical in order to maximize learning for the benefit of students and businesses. Development of the executive brain functions or higher-level cognition can be achieved through the classroom or even appropriate work learning environments through brain-based learning principles.

Brain-based learning acknowledges the structure and function of the brain. Teaching is organized and based on this structure and function to ensure that education is compatible and the brain is not prohibited from its normal processing (Caine and Caine, 1994). Consequently, learning resources, student/learner support, the curriculum and course delivery, the classroom or real-world learning experience are based on principles defined by brain functioning.

#### ***Explicit versus Implicit Learning***

Development of executive functions is more likely with the understanding of several key concepts and learning forms and specifically the role of explicit versus implicit learning. Explicit learning is "learning with awareness" and is often referred to as declarative learning

and memory. This includes memories that can be consciously and intentionally stored and recalled. The explicit learning and memory system is supported by a single system, the temporal lobe memory system. Implicit, or procedural learning, is guided by unconscious factors, drawn indirectly from a situation or the environment, and access is unconscious. In contrast to explicit learning and memory, implicit learning and memory appear to be supported by multiple procedural memory systems from disparate brain areas (Reber, Allen, and Reber, 1999).

Several studies leveraging traditional IQ tests measuring higher mental processes have also validated that the individual differences in implicit learning are not influenced by the same factors that influence explicit learning. Most interesting was the finding that those that "took responsibility for their actions tended to be better at implicit learning" though this could possibly be attributed to differences in motivation or attention as well. There is evidence that there is less variability in implicit learning versus explicit learning due to age, indicating that the ability to implicitly learn may be primal. Further, other research found that implicitly learned knowledge could not be applied as flexibly as explicitly learned knowledge (Reber, et al., 1999). This suggests that development of learning experiences should incorporate implicit as well as explicit activities.

### ***Brain/Mind Learning Principles & Capacities***

Much has been learned about how the brain works and learns and this can be used to create a learning environment that cultivates the executive functions. Despite the proliferation of modules within the brain for specific functions, thoughts, emotions, physical health, interactions with others, and even the time of day and the learning environment, are all interconnected. The human body has high-low cycles of approximately 90 – 110 minutes and the brain has plasticity and can change in response to the environment in which exposed (Palombo Weiss, 2000a). These elements must be accounted for collectively to create a learning environment and associated activities. The learning principles developed by Caine, et al. (2005) clearly define and categorize what has been learned thus far about the brain. These principles can serve as a guide for implementation of approaches and programs to maximize learning (Figure 2 – below).



**Figure 2: Brain/Mind Learning Principles & Capacities**

	<b>Brain/Mind Learning Principles</b>	<b>Brain/Mind Learning Capacities</b>	<b>Teaching Element</b>
<b>1</b>	All learning is psychological.	Engage the physiology in learning.	Orchestrated Immersion
<b>2</b>	The brain/mind is social.	Engage social interactions.	Relaxed Alertness
<b>3</b>	The search for meaning is innate.	Engage their innate search for meaning.	Relaxed Alertness
<b>4</b>	The search for meaning occurs through patterning.	Engage their capacity to recognize and master essential patterns.	Orchestrated Immersion
<b>5</b>	Emotions are critical to patterning.	Engage emotional connections.	Relaxed Alertness
<b>6</b>	The brain/mind processes parts and wholes simultaneously.	Engage their ability to perceive both details and the larger view.	Orchestrated Immersion
<b>7</b>	Learning involves both focused attention and peripheral perception.	Engage both their ability to focus attention and learn from the peripheral context.	Active Processing
<b>8</b>	Learning always involves conscious and unconscious processes.	Engage both conscious and unconscious processing.	Active Processing
<b>9</b>	There are at least two approaches to memory: archiving isolated facts and skills or making sense of experience.	Engage their capacity to learn from memorizing isolated facts and biographical events.	Active Processing
<b>10</b>	Learning is developmental.	Acknowledge and engage developmental steps and shifts.	Orchestrated Immersion
<b>11</b>	Complex learning is enhanced by challenge and inhibited by threat associated with helplessness.	Reduce threat and enhance self-efficacy.	Relaxed Alertness
<b>12</b>	Each brain is uniquely organized.	Engage their individual style and uniqueness.	Active Processing

The effectiveness of learning activities is impacted by how the brain processes information and the environment in which it is learning. Three interactive teaching elements underpin these twelve principles and ensure that students have an appropriate learning experience: Relaxed Alertness, Orchestrated Immersion in Complex Experience, and Active Processing of Experience (Caine, et al., 2005).

Relaxed Alertness: Principles 2, 3, 5, and 11 are focused on creating an optimal emotional state for learning by reducing the fear (amygdala) and creating a high challenge environment. Through the establishment of emotional and social competence in the learning environment, students are then able to personally experience competence and confidence. This includes linking the learning experience to personal goals and interests.

Orchestrated Immersion in Complex Experience: Principles 1, 4, 6, and 10 focus on establishing an experiential learning environment with interactive experiences. Limiting lectures and creating learning experiences and opportunities that engage the senses, allow learners to make meaningful and personal connections, and apply what has been learned. The key in this element is to be able to create an experience that new information is shared and builds on what the learner already knows and cares about...in essence, providing the context. This approach leads to actor-centered adaptive decision-making, which is governed by the executive functions of the brain.

Active Processing of Experience: Principles 7, 8, 9, and 12 take learning to the next level through dynamic engagement of learning through questioning and feedback, analytical thinking, on-the-spot thinking, development of goals and timelines, communication of understanding, and deeper thinking on a given topic. Principles focused on the active processing element fully embrace the development of the executive functions of the brain through intensive analysis. Through these principles, students consolidate and internalize information that is personally meaningful and conceptually coherent (Caine, et al., 2005).

### ***Teaching Approaches***

There are three styles of teaching that are worth noting and one that specifically accomplishes the task of developing the executive functions. The first approach uses very traditional strategies including lecturing and memorization. Veridical decision-making, repetition, and practice are mainstays. Instructors comfortable and dedicated to this approach align discipline or adherence to the plan with the term "relaxed alertness". The inclusion of visual aids, guest lectures, and student questions in follow up to lectures and presentations may also be included in the format (Poole, 1997).

The second approach incorporates learning strategies that are a bit more innovative and expand beyond a discipline. The instructor still primarily directs student learning though opportunities for adaptive decision-making are available as opposed to veridical decision-making. Students are able to make choices and provide inputs on assignments and how the learning environment is working. With this approach assessment begins to integrate with teaching and goes beyond purely standardized testing (Caine, et al., 2005).

The third instructional approach is the rarest and the most applicable to the discussion at hand: brain-based teaching and development of the executive functions. Instructors and students have much more mutual responsibility. There is joint learning through questioning, investigation, and leveraging of experts. The instructor uses a variety of strategies to achieve learning outcomes. Curriculum is embedded in real-world projects, which are driven, by student choices and interests. Assessment is focused on authentic performance versus standardized testing (Poole, 1997; Caine, et al., 2005).

Pedagogical strategies that are concerned with higher-level cognitive learning or attitude and motivation have been found to be superior to the lecture strategy, which entails one-way communication from the instructor to the students. Specifically, the perceived helpfulness in learning was greater for more nontraditional pedagogical strategies (e.g. experiential or interactive strategies with dynamic two-way communication or active learning) versus traditional strategies (e.g. Instructor-centered strategies with one-way communication). These nontraditional strategies are also more successful in meeting more complex and higher-level cognitive needs including application, analysis and evaluation. Furthermore, personality traits and interpersonal behaviors impact the effectiveness of different pedagogical strategies experienced during the learning process (Ulrich, 2005).

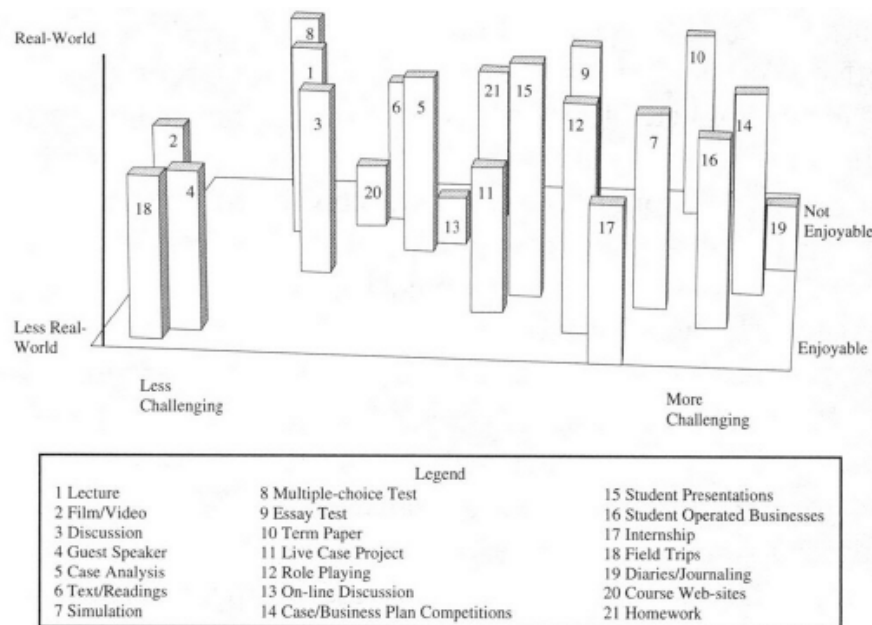
In a recent study by Karns (2005), undergraduate marketing students rated various learning activities based on the student perceptions of the activities being enjoyable, challenging, and real-world. The results:

- Internships, field trips, and guest speakers were the most enjoyable (fun, personal, and somewhat more preferred)
- Text/readings, homework, multiple-choice tests, essay tests, and term papers were considered least enjoyable.
- Challenging activities were considered to be more difficult, demanding, more abstract, more active, more personal, less preferred, and less fun. The most challenging activities included diaries, case/business plan competitions, and student-operated businesses.
- Films/videos, field trips, and guest speakers were the least challenging.
- Activities that were more applied, more active, and more stimulating but also involved more effort and challenge were considered real-world. Students found student presentations and role playing activities to be more real-world.
- Least real-world activities included online discussion, diaries, and course web sites (Karns, 2005).

Figure 3 (below) provides an overview of the results for each of the activities relative to the three variables. Each column depicts the coordinates for the learning activity relative to

being challenging and enjoyable. The height of the column represents the relative real-world ranking.

**Figure 3: Multidimensional Plot of Learning Activities**



Learning depends on the willingness of a student to engage knowledge through various pedagogical approaches. What is compelling about these results is that students indicate preference for learning activities that align with the brain-based learning principles and capacities, and particularly, the development of executive functions. Creating an enriched environment for learning through active, experiential learning pedagogies is the essence of the teaching elements for orchestrated immersion and active processing. Activities that evoked a favorable response were also those that had real-world and applied connections such as live-case projects, student presentations, and case/business competitions.

Applied learning and real-world activities, while preferred by students, also must be carefully leveraged. Real-world activities tend to involve more complexity, ambiguity, and "big-picture" orientation. This ambiguity must be balanced with very specific topics, situations, and examples to achieve the learning results desired. Web sites and journals/diaries, which received lower preference responses, do have a place in the curriculum. For example, text/readings, multiple-choice test, and homework meet the learning objectives of knowledge and comprehension. Even the traditional activities such as term papers can be changed to be more applied in nature, and have an improved response rate from students. However, to fulfill higher-order learning objectives such as analysis and synthesis, live-case projects, student-operated businesses, and advanced cases analyses will be more effective.

Ongoing research on how the brain learns, the preference of students for specific learning activities, and different pedagogical approaches that are effective in satisfying the principles of brain-based learning are useful in guiding educators in the selection of pedagogical approaches. There are already numerous strategies that can be employed to affect higher order thinking and development of the executive functions.

### **Strategies for Development of Executive Functions**

In response to declining enrollment, many business programs are now offering graduate level business degrees with specializations. Interestingly enough, research has shown that offering degrees with a specialization are not truly answering the call of employers looking for qualified employees (Gupta, Saunders, and Smith, 2007). Again, what are missing are the practical skills of critical thinking, decision-making, and reasoning—the executive functions.

The development of the executive functions is an ongoing process. It is clear that brain-based learning is invaluable and necessary in the development of the skill set required to deal with the real world. How to accomplish this goal is not always clear and often times, educators are grappling with the same challenge of understanding the theory while still needing to implement practical solutions in curricula. The following are just a selection of instructional strategies that capture the essence of "Active Processing of Experience" and will help to achieve both academic and business objectives.

### ***Active Learning Techniques***

Many of the strategies and approaches that follow are situated within the active learning domain. Active learning experiences are effective for engaging higher order thinking and specifically the three cognitive objectives of higher-order thinking: analysis, synthesis, and evaluation. Students are involved dynamically in the course materials in order to "learn by doing" or learn through experience. The approach incorporates active learning experiences into curricula. For example, negotiations or debates on given topics require students to first understand the content for the course but then practice higher-order thinking skills in order to contribute and respond (Page and Mukherjee, 2007).

Visual-based instruction, discussion, debates, role playing, in-class writing, simulations, and peer teaching are just a few additional examples of active learning activities that can be leveraged. Students are more involved in the learning process when active learning activities are implemented. Learning is also enhanced when there is hands-on participation. Collaborative learning, another subset of active learning, has also shown to be a positive predictor of personal development, analytical skills, and openness to diversity (Thompson and Beak, 2007).

***Neural Branching versus Neural Pruning***

The brain has a natural tendency to develop mental patterns to handle an overwhelming amount of stimuli. This process is called "neural pruning" and it closes down the ability to absorb and understand information. "Neural branching" opens up the mind to new perceptions and promotes creative thinking. There are seven exercises that can be used to exercise and strengthen the brain, or encourage neural branching (Figure 4 – below). The purpose of these types of questions is to promote divergent thinking and processing (Cardellichio and Field, 1997).



**Figure 4: Neural Branching Exercises**

<b>Neural Branching Exercise</b>	<b>Examples of Thought-Provoking Questions</b>
<b>Hypothetical Thinking</b>	What if this had happened?; What if this were not true?; What if this had not occurred?; What if I could do something I cannot do?
<b>Reversal</b>	What if I turn the picture upside down or sideways?; What could have happened to cause this?; How does this change if I go backwards?; What if _____ had happened first?
<b>Application of Different Symbol Systems</b>	Apply verbal symbol system to numerical symbol system problem.; Graph or chart relationships in social situations or literary works.; Write an equation to show how human interactions are related.; Can I make this into a word problem?; Can I make this into a number problem?; Can I draw a picture of this?; Can I represent this in musical terms?; Can I act it out?; Can I make a dance to represent this?
<b>Analogy</b>	Look for correspondences.; How is this like _____?; "How is Pythagorean theorem like a cooking recipe?"
<b>Analysis of Point of View</b>	Why does someone hold a particular opinion or belief?; What else could account for this?; Who would benefit if I thought this?; What harm might occur if _____?; How many other ways could someone look at this?; What would _____ say/think about this?
<b>Incompletion</b>	Remove the conclusion from a short story and ask the students to create their own ending: How would you end the story?; Give the students the steps in a process or solution (to math problem, for example) with one or two steps missing. What's missing?; What goes in the blank space?; What is the missing piece or step?; Write the beginning of _____.; What if _____ did not happen?
<b>Web Analysis</b>	Web analysis is concerned with what actually happened, not with possibilities. The goal is to uncover the complex multitude of effects that may flow from a single source.; How extensive were the effects of _____?; How many effects can you imagine from ____?; Track the relationship of events following from _____.; How is _____ connected to _____?

### ***Performance-Based Learning Outcomes***

Development of a curriculum or a corporate training program requires an understanding and development of competencies. A competency includes the ability to translate knowledge, skills, and abilities into an outcome. As part of the process, the learner consequently acquires the prerequisite knowledge, skills, and abilities to use and apply in future job-related or real-world situations.

Most importantly, a competency measures what is known or learned, but also whether this information can be used to accomplish a task and produce an outcome that is valued. Thus, competency-based instruction will help individuals reach a competent level while still providing opportunity for additional learning and work experiences to gain further proficiency (Chyung, Stepich, and Cox, 2006). In the current academic and business environment, understanding what will add value and be valued is achievable through the design of a construct that takes into account relevant behaviors for specific organizational functions, behaviors and processes.

### ***Student Centered, Problem-Based Learning***

One of the key elements in brain-based learning is to create environments that allow learners to make meaningful and personal connections, and apply what has been learned. Problem-based learning facilitates understanding of social and contextual factors and is typically led by educators that balance student direction with assistance, contribute knowledge and experience, create a pleasant learning environment, and stimulate the critical evaluation of ideas (Tham and Werner, 2005).

**Consultant learning** is a form of student centered, problem-based learning that is quite effective at motivating students because there is direct value to their own lives and obtaining employment in the future through the development of a portfolio of projects. Students select and design their own projects and obtain continuous and immediate feedback. Additionally, students understand at the outset of the course that the payment or grade will be determined based on what they put into the course. There is a guaranteed payoff for the effort (Kunkel, 2002).

In the business world, sub-standard work by executives and consultants is not acceptable. Leveraging "consultant learning" is a unique and relatively new approach that requires a high quality standard of "professionalism" as part of the coursework. Every written and oral transaction that students submit must be at the quality level of a professional consultant or an executive. When work does not meet the standard, the work must be reworked and resubmitted until the work is professional. Substandard or unprofessional work does not receive credit.

The assessment model is subsequently based on the quantity of work that the student completes and submits at the high quality level. Grading is based on the quantity of work at that professional level. In a traditionally graded course students that deliver an assignment with excellent quality work receive an "A" while students that deliver average or mediocre work receive a "C". In this approach, mediocre quality is not acceptable. Furthermore, learning takes place as students become familiar with what is required to produce professional quality projects (Kunkel, 2002). This type of learning offers a new pedagogy that is directly relevant for business education by providing future utility driven from individual learning goals.

**Project-based learning** can also fall under this rubric. In this type of approach students investigate a complex question or program via means of a long-term project that requires teamwork with other students. This approach has been used broadly, particularly at elementary and secondary levels with positive results in problem-solving capabilities, communication, and understanding. Project-based learning activities are characterized by five criteria:

1. The projects are central to the curriculum versus an adjunct project outside of the core,
2. The projects involve constructive investigation by the students,
3. Projects are focused on questions or problems that motivate or drive students to grapple with the key principles on a given topic or discipline,
4. Projects are primarily student-driven, and
5. Projects are real-world, applicative (Thompson and Beak, 2007).

Many active learning techniques tend to be relatively short in duration and focused on singular concepts. The benefit of project-based learning is that longer-term projects that incorporate many different concepts can be tackled. These longer-term projects are consequently more difficult and complex and require interactivity among the students and other project participants. Students must become actively engaged and are unable to assume a "passive learner" role.

### ***Case Study Teaching***

One strategy that has gained momentum in the classroom is the case study methodology. Again, students "learn by doing" as they are engaged in group discussions and develop problem-solving skills to meet the objectives of the case. The interaction increases student confidence in their ability to work through issues and develop real solutions to real problems. The risk-free environment of a classroom allows students to practice problem-solving skills (Finney and Pyke, 2008).

Case study teaching provides educational objectives that focus on conceptual development, the enhancement of critical thinking skills, decision-making and problem-solving. The activity brings groups together by providing a focus for student-centered learning. In contrast to traditional methods of teaching such as lecture teaching, case studies are more effective at applying knowledge and learning skills, increasing student motivation, and stimulating learning more effectively (Finney and Pyke, 2008).

Students also see the value in case studies. Relevance of business topics, importance of business topics, application to career interests, and integration of business functions are all areas that were rated favorably by students in a study by Finney and Pyke (2008) regarding content relevance of case studies. The challenge will be to avoid the pitfalls of case teaching. Case teaching is not a replacement for lectures but rather an application to motivate students to learn the theory and science behind the decision-making and emphasize analytical versus debate skills (Shugan, 2006).

### **Conclusion**

The strategies and approaches outlined above do have many common elements beyond the ability to engage and develop the executive functions. One prerequisite is that each must be able to operate in a risk-free environment, allowing students to be in a state of relaxed alertness with peers and with the instructor. Creation of an enriched environment starts with a low threat and high challenge construct. Layering on this environment are the activities that promote learning through experience. The ability to actively process the specific instructional strategies selected by the instructor will ensure that as many aspects of learning are engaged as possible.

Employability of graduates is a paramount concern for business schools. The inability to prove out the value and return on investment for business degrees and educational attainment results in reduced enrollment and income from tuition. Through the development of the executive functions and the ability to make good decisions in the real world, business schools can overcome the recent stigma associated with programs that are not delivering on the promise of employability for students and practical application and knowledge required for the real-world and business.

**References:**

- Caine, R.N., Caine, G., McClintic, C., & Klimek, K., (2005) *12 Brain/Mind Learning Principles in Action*. Thousand Oaks, CA: Corwin Press.
- Caine, R.N. & Caine, G., (1994) *Making Connections: Teaching and the Human Brain*. Menlo Park, CA: Addison-Wesley Publishing Company.
- Cardellichio, T. & Field, W., (1997, Mar.). Seven Strategies That Encourage Neural Branching. *Educational Leadership*, 54(6), pp. 33 – 36.
- Chyung, S.Y., Stepich, D. & Cox, D., (2006, Jul./Aug.). Building a Competency-Based Curriculum Architecture to Educate 21<sup>st</sup>-Century Business Practitioners. *Journal of Education for Business*, 81(6), pp. 307 – 311.
- Finney, S. & Pyke, J., (2008, May/June.). Content Relevance in Case-Study Teaching: The Alumni Connection and Its Effect on Student Motivation. *Journal of Education for Business*, 83(5), pp. 251 – 257.
- Gupta, P.B., Saunders, P.M. & Smith, J., (2007, Jul./Aug.). Traditional Master of Business Administration (MBA) Versus the MBA With Specialization: A Disconnection Between What Business Schools Offer and What Employers Seek. *Journal of Education for Business*, 82(6), pp. 307 – 312.
- Karns, G.L., (2005, Aug.). An Update of Marketing Student Perceptions of Learning Activities: Structure, Preferences, and Effectiveness. *Journal of Marketing Education*, 27(2), pp. 163 – 171.
- Kunkel, S.W., (2002, Apr.). Consultant learning: A model for student-directed learning in management education. *Journal of Management Education*, 26(2), pp.121 – 138.
- Ledoux, J., (1996). *The Emotional Brain*. New York, New York: Simon & Schuster Paperbacks.
- Noel, N.M., Michaels, C. & Levas, M.G. (2003, Jan./Feb.) The relationship of personality traits and self-monitoring behavior to choice of business major. *Journal of Education for Business*, 78(3), pp. 153 – 157.
- O'Reilly, R.C. & Munakat, Y., (2000). *Computational Exploration in Cognitive Neuroscience*. Cambridge, MA: MIT Press.
- Page, D., Mukherjee, A., (2007, May/June.) Promoting Critical-Thinking Skills By Using Negotiation Exercises. *Journal of Education for Business*, 82(5), pp. 251 – 257.
- Palombo Weiss, R. (2000a, Jul.). Brain-Based Learning. *Training & Development*, 54(7), pp. 20 - 24
- Palombo Weiss, R. (2000b, Oct.). Memory and Learning. *Training & Development*, 54(10), pp. 46 – 50.
-

Poole, C.R., (1997, Mar.). Maximizing Learning: A Conversation with Renate Nummela Caine. *Educational Leadership*, 54(6), pp. 11 – 15.

Reber, A.S., Allen, R., & Reber, P.J., (1999). Chapter 14: Implicit versus Explicit Learning. In R. Sternberg (Ed.), *The Nature of Cognition*. Cambridge, MA: The MIT Press.

Shugan, S.M., (2006, Mar./Apr.). Editorial: Save Research-Abandon the Case Method of Teaching. *Marketing Science*, 25(2), pp. 109 – 115.

Tham, C.M. & Werner, J.M., (2005). Designing and Evaluating E-Learning in Higher Education: A Review and Recommendations. *Journal of Leadership & Organizational Studies*, 11(2), pp. 15 – 25.

Thompson, K.J. & Beak, J., (2007, Apr.). The Leadership Book: Enhancing the Theory-Practices Connection through Project-Based Learning. *Journal of Management Education*, 31(2), pp. 278 – 291.

Treleven, L. & Voola, R., (2008, Aug.). Integrating the Development of Graduate Attributes Through Constructive Alignment. *Journal of Marketing Education*, 30(2), pp. 160 – 173.

Ulrich, T. A., (2005, May/Jun.). The Relationship of Business Major to Pedagogical Strategies. *Journal of Education for Business*, 80(5), pp. 269 – 274.



---

## Integrating Online Curricula and Assessment

---

### **Don Capener, Ph.D. (Cand.)**

Vice President for Strategic Planning,  
Monmouth College  
700 East Broadway, Monmouth, IL 61462  
Telephone: (309) 221-9211  
Email: dcapener@monm.edu

**Abstract:** Many colleges are struggling to balance the need to go online with their curriculum with their traditional strength in the traditional classroom experience. We know that in order to succeed in a complex world, students must be able to adapt quickly to new ideas and technologies, in the same way colleges must weigh the benefits and deficits of innovation with a critical, curious intelligence. Therefore, we will emphasize learning goals and assess those goals using as many direct methods as possible. Younger learners are more capable than ever of learning online, and in experiential situations. While classroom learning will continue to be our foundation, we need to be responsive in thinking about how we can adapt to the great resources available today. Our academic program must remain open to innovative curricula, technology, assessment, and partnership. Direct assessment using Web 2.0 vehicles may be the key to meeting the needs of today's young students."

**Keywords:** online learning, elearning, curriculum, education technology, learning goals, student learning outcomes, outcomes assessment, student learning assessment

**Reference:** Reference to this paper should be made as follows:  
Capener, D. (2009) "Integrating Online Curricula and Assessment", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Don Capener is the Vice President for Strategic Planning and Associate Professor of International Business at Monmouth College in Illinois. He graduated from Thunderbird, the Global School of Management in 1985 with a Master's Degree in International Management. He founded three

companies including Above The Rim, Nauvoo Properties, and Capener, Matthews & Walcher. He also helped Netcentives Inc. of Silicon Valley go public via NASDAQ in 1999.

---

## Introduction

*“We know that in order to succeed in a complex world, students must be able to adapt quickly to new ideas and technologies, even as they weigh the benefits and deficits of innovation with a critical, curious intelligence. Therefore, we will emphasize critical, creative, responsive thinking throughout our academic program, and we will remain open to innovative curricula, technology, and partnerships”.*

Online courses are an anomaly at Monmouth College despite the advantages. Elizabeth Birr Moje, a professor of education at the University of Michigan believes advantages of online learning include the individualized pace and better access to multimedia content. Other education researchers believe online students will be better prepared to interact in an increasingly digital world. Rand Spiro, a professor in education psychology at Michigan State University claims online learners will be more adaptable thinkers. Online learning takes students deeper into academic subjects more quickly (Glader, 2009). .The Monmouth faculty see the “the wave” of online courses coming from both for-profit and state institutions, yet we do not have a policy in terms of how to grant credit or assess our own online courses.

The purpose of this paper is to set the stage for an enlightened approach to online learning and assessment using technology as a tool. I will propose a new model and rationale for integrating and assessing online learning at Monmouth College. The challenge at Monmouth continues to be the cost of the equipment and the people to train and maintain that technology. Therefore, a balance must be pursued that can harness the advantages of new technology along with the:

1. Scarcity of resources inherent in higher education today; especially in instructional technology
2. Monmouth’s commitment to providing a 4-year traditional residential college experience

## Monmouth College in Context

Founded as an academy in 1853 by the Associate Reformed Presbyterian Church and elevated to a college three years later, Monmouth brought opportunity for higher learning to the

---

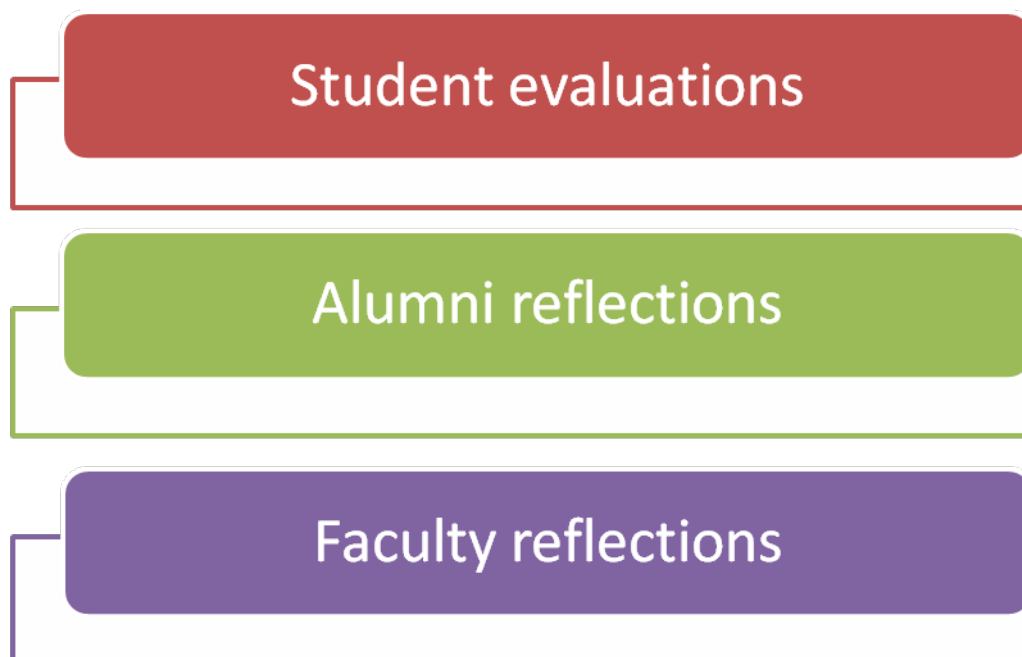
people of the frontier. From its earliest days, Monmouth’s faculty maintained a commitment to the teaching of intellectual and spiritual values. Monmouth College is a four-year liberal arts college that devotes all of its resources - human, financial and physical - to developing and maintaining a program of undergraduate education of the highest possible quality. The college remained under 1250 students until 2009 when President Mauri Ditzler set a goal of moving beyond 1500 students. Our 2010 enrollment goal is 1500 students.

Monmouth has chosen to remain the liberal arts college it was founded to, prefer not to expand into a graduate or research university. Monmouth’s purpose is not to pursue knowledge for its own sake, but to encourage students to examine values and find meaning by bringing together knowledge and belief in a coherent whole. Monmouth seeks to prepare its students for rich, fulfilling personal and professional lives and for responsible citizenship in the world. Monmouth is at its core a residential college. The personal lives of its students, the social life of the campus, and academic course work are all closely interwoven. In fact, the close relationship between the faculty and students has been a hallmark of the college. It is this element of college tradition that is most shared by alumni across the years. To this day, the most powerful force shaping the direction of the college remains our commitment to advancing student learning. Our assessment program represents a more formal way of pursuing a very traditional goal of the college. <sup>i</sup>

The close relationship that students have with one another and the daily conversations among students, faculty and staff play a key role in the student’s growth and development. Implicit in this feature of the college character is an emphasis on individual abilities and needs. We are not so much concerned with where students begin, but with how far they can go, how much they can achieve. This too is reflected in the nature of assessment at Monmouth College. If online curricula can enrich that experience, then we need to experiment with the best materials and methods.

As a faculty assessment committee, we are charged with assessment of current curriculum including any online curricula. I proactively took the challenge to develop a model for the day when we begin to integrate our classroom based instruction with more online activities. The current assessment model is based on input from the three sources of traditional assessment data. Please see the summary of the three sources in Exhibit 1.

**Exhibit 1-Sources for Assessment**



**Feedback**

Annually, Monmouth gathers and analyzes data from these sources in a process I call "incremental learning approach". The incremental learning approach is well suited to environments where little to no change is anticipated or deemed necessary. All the surveys are necessary because each of the 8-9 instruments used at Monmouth College do something "different" or are targeted at a unique audience. All of these instruments produce data that is utilized to evaluate the institution's effectiveness in achieving learning goals, retaining students, and raising perceived value of a Monmouth College education. When we meet with an accreditation committee, the main question the reviewers ask is how we know we are meeting some or all of the learning goals. Each of the instruments is administered annually or every few years so when results are analyzed and results are tabulated certain patterns emerge.

Incremental shifts are best represented by the small and sometimes minor changes in how students respond to pedagogy, instructors or the teaching environment. Monitoring this incremental change has been the most prudent course of action over the last 20 years. In order to improve the learning environment at Monmouth, data is analyzed based on prescribed learning outcomes from goals set for each major, program, and general education rubric. Most of these learning goals are quite similar despite the difference between science

and business administration. As an example, see the goals for the Business Administration Major at Monmouth College in Exhibit 2:

**Exhibit 2: Goals for the Department of Political Economy and Commerce, Monmouth College**

A Student who completes the Business Administration major will be able to:

- Create business plans that effectively integrate marketing, management, and finance in order to create value for customers, owners, employees, and the communities they serve.

A student who completes the Business Administration major will be able to:

- Create business plans that effectively integrate marketing, management, and finance in order to create value for customers, owners, employees and the communities they serve.
- Interpret and explain data used in the decision-making process to assess tradeoffs among alternatives
- Engage in civil discourse with those who disagree and acknowledge the strengths, weaknesses and risks associated with alternative actions.
- Clearly communicate complex ideas and business strategy through effective oral and written presentations
- Contribute to the success of a team-based work as a leader, peer, and subordinate. Identify the social, legal, and ethical factors involved in business strategy and incorporate these factors into decision making

As these goals shift, the curriculum, course goals, and assessment tools such as student evaluations must be modified. Alumni feedback should also be collected electronically so various sources of quantitative data can be incorporated and compared as integral parts of the assessment model. Currently, online course standards do not exist at Monmouth. If transfer credit is proposed, the courses are arbitrarily chosen by department faculty for what they believe constitutes a quality online course. That definition is not published so it is hard to not compare those courses with a traditional classroom based course. I recommend we establish a standard for online courses in the same way we would evaluate transfer credit.

This issue creates an issue for advising and future policy. The controversy surrounds the belief that most Monmouth faculty believe our undergraduate students do not know what they want out of their course of study so all of their goals must be set for them. This process is

flawed because the process does not include any assessment of where students want to go with their degree and why they stay in school. Therefore I recommend we solicit student input outside of transcript reflection or Instructor/Course evaluations.

### **Not Bad, but Different**

Online courses are not inherently bad. Let me use an example to illustrate my point. Faculty rarely question the value of a “concentrated” January term business course that is taught in only four weeks when it usually takes 16 because considerable more time spent in the classroom during those four weeks. Why then are online courses so much more suspect? Can we really assume the participant’s out of class time in the January term is the same experience as a 16-week semester? Similar questions arise with online courses. Why are online courses inferior learning experiences?

Is the problem really the assessment of those courses? All of us tend to fear things we are not familiar with. One challenge with online courses is the unfamiliarity with methods by which the instructor can grade exams or online assignments. Proctors for assignments are not always possible online. For example, so it is not the same thing to assign a lab experiment or administer a Japanese language exam online versus in a traditional lab or classroom where someone can observe the participants.

The Monmouth faculty is particularly suspicious of transfer credit and dual credit courses. Dual credit is when students in high school take a college level course from a community college instructor and receive credit towards high school graduation. With the explosion of new online courses and programs, Monmouth students are tempted to take summer courses or repeat courses online. So that we can remain competitive and yet maintain academic standards the faculty voted to limit the amount of dual credit and transfer credit allowed. In the future we will be challenged by different models because of the rising cost of higher education. Can we afford to ignore the student’s desire to efficiently complete their course of study and graduate? My recommendation is we explore ways to directly assess students who transfer in credit, even if they are first time freshman and not categorically dismiss this type of prospect.

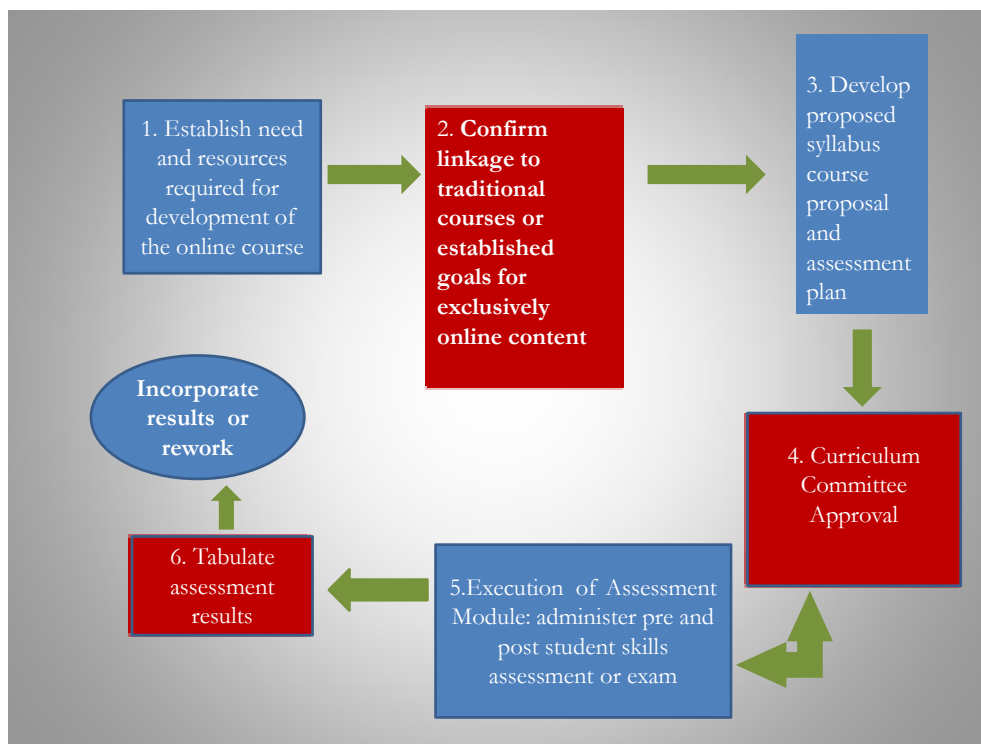
Assessment of traditional classroom experience is not a precise science, so assessment of online curricula could be particularly troubling for Monmouth. It is difficult to isolate variables with online learning or compare the effectiveness of instructors across different disciplines and courses, without a more in-depth knowledge of how online learning differs from the traditional classroom. It is different, not worse or better than traditional assessment. One



example of something that is different is the asynchronous<sup>ii</sup> learning experience inherent in any online course of study.

Refer to Exhibit 2. The process involves integrating the goals of the similar courses already included in the curriculum.

**Exhibit 2-Proposed model for establishing online courses and assessment at Monmouth College**



The model in Exhibit 2 represents a continuum that starts with a curricular need best addressed with instructional technology or online curricula. With so much content available from the internet and Web 2.0 content, many new sources of data are online. Often a need can be best fulfilled via an online source or parts of the course material can be enriched in ways the traditional lecture could not match. One example is the change is how young people communicate. With young students, it is natural to communicate via instant messaging. There is evidence that their use of text messages increases monthly. Web 2.0 is a concept that content is created by the users and through a democratic process the most popular content is featured. Youtube and Facebook are the most widely used Web 2.0 vehicles. According to www.Alexa.com, Youtube and Facebook were the fourth and fifth most visited web sites in the United States, and many other countries (Alexa, 2009)

## Direct Assessment

Is there something students are already doing online or a forum that could be utilized to collect direct assessment information? Direct assessment is evidence of the student's engagement or understanding of a learning goal. Because online activity can be tracked and analyzed, I am intrigued with the possibility of collecting assessment data directly from students participation in online assignments. Monmouth College uses resources and time in collecting assessment data from eight or nine different sources. Why? Because we must provide evidence for accreditation and we want to improve retention of students we recruit. All of these instruments require students, faculty, alumni and staff to stop what they are doing and focus on the instrument. None of these instruments collect direct assessment based on the mission of the college or goals of the course. Direct According to my sources on the assessment committee, much of the final data comes in verbatim form and tabulated results. The verbatim are usually sourced from open ended questions which are hard to analyze without any automation tools.

As we focus more on assessing a major or discipline, we need to explore ways to directly collect evidence students are meeting the minimum standards or achieving the major's goals. Threaded discussions via Moodle, Blackboard, or even Facebook could be tested as a vehicle to collect and analyze this data without having to use an additional test or instrument. This would save time and money while being a less arbitrary indicator of the student's performance when compared to grades. For example, grades in secondary schools may appear high when cross tabbed with standardized scores on a college entrance exam. By comparing the two instruments we gain insight from a different perspective. Threaded discussions could be a great resource for assessment. Since most students enjoy learning from their peers, the assignments create a new forum for class participation. These “posts” are a communication mode similar to instant messaging or texting. A quality online discussion could have the same impact that a group or in-class discussion has, where students build on one another's perspectives and gain a deeper understanding of the materials.

If some Monmouth courses were translated to the online environment students could have more flexibility in choosing courses and scheduling their activities. Monmouth College could be perceived as more progressive and flexible.

According to my proposed model in Exhibit 2, online assessment begins in the middle of the continuum once the course is approved by the curriculum committee and course materials are developed. The best plan is to set learning goals for the course first (or program) and then explore what instructional technology is needed to enrich the course experience. Once course discussions begin, it is important that online assignments tie closely to the goals of the course

and the major. Then we intentionally gather data and analyze what we learned. One alternative to online assignments and threaded discussions are pre and post exams. With exams a baseline could be set based on the course or major goals via a pre-exam. Once the results of the pre-exam are tabulated, a thorough analysis should reveal the strengths, weaknesses or problems in the course or with the instructor. The goal is to learn how our students’ best learn those concepts and materials and reinforce the strengths of the course. Plus we can use the student’s work in our efforts to improve through direct assessment.

### **Issues with Migrating to Online Activity**

Many faculty will fight the decision to require direct assessment through online assignments. But testing this is something we must experiment with. Online learning has many advantages. Some audiences adapt themselves to online learning because they realize their peers are in remote locations and different time zones. We usually do not have that issue at a residential college such as Monmouth, but the student’s desire for more flexibility in the curriculum will increase as our students work as interns, part-time workers, and participate in experiential or non-traditional learning. In the future, distance learning may be the only way certain students can participate given their occupation or time commitments.

Also, many students leave Monmouth before finishing the requirements to earn their diploma for various reasons. Online classes are ideal for these students who invested thousands of dollars in their education but could not finish. Problems with the current assessment process include:

1. Little to no direct assessment
2. Extra work, time and money needed to address assessment requirements
3. Lack of clear course or program goals
4. Faculty concern poor assessment will jeopardize their employment
5. Slow pace of reporting
6. Difficulty working with verbatim comments from open ended questions

By the time new assessment results are tabulated, the faculty goes on break and months pass before the data is tabulated or discussed. Since syllabi are prepared every three to six months, few changes are incorporated or course corrections are not made. It takes six months or a year to react to assessment data. Currently, assessment criteria are an arbitrary “line in the sand” set by influential faculty rather than a result of student testing, evaluation, or interaction. There are no assessment baselines to refer to and very little information can be cross-tabulated.

Some faculty fear going online with course material because of their lack of familiarity with technology; how discussions can be organized, or how exams or assignments can be administered online. The fear factor is a stagnating influence in academia and other institution and testing new forums for online assessment is no exception.

### **Student Evaluations**

Another debate among the faculty at Monmouth is the efficacy of student evaluations. How the questionnaire is constructed and what questions are contained in the (and focus of) student evaluations are constantly debated at Monmouth College. Currently these evaluations are being reevaluated by the faculty, based solely on faculty input. Faculty bias diminishes the role of the student learner and the learning environment that can lead to quality discussions and interactions. Students have no input into what questions should be asked in the student evaluation. The learning goals are important too and often left off most questionnaires. If there is a “disconnect” between what the students want to learn and what the faculty thinks students should learn, we would not learn much from reviewing the student evaluations.

Outside of the obvious laziness of some undergraduates, students are motivated to learn things that appear meaningful to them. Students might want to practice applying two or three useful theories in a semester course and some faculty want to teach seven new theories and skip the application. Incremental learning assessment convinced most Monmouth faculty to develop more Moodle or Blackboard based courses and bring learning materials to the student rather than try and keep the focus on one text or classroom activity.

Currently, our alumni feedback is not collected in any structured manner so it is very difficult to read all of the verbatim and come away with any common conclusions. However, one piece of feedback get stronger each year from all assessment data sources. That feedback can be summarized as encouragement to continue more experiential learning and integrating disciplines such as economics, finance, marketing and management.

If we assume that some online experiences can be as effective as classroom lectures, we must invest in developing online course material and test both traditional and online class experiences. Anecdotally, it has been beneficial to create experiential learning modules and bring alums into the classroom. I am doing this more frequency using a conference phone when speakers cannot be on campus in person. This experimental approach to teaching via guest speakers and non-scholarly periodicals such as the Wall Street Journal must be assessed, but trying new things and taking risks are critical to quality learning in this day and

age. The guiding philosophy of Monmouth College should be to blend online learning opportunities and courses when it can enhance student's learning.

*"We know that an engaged community is a learning community. We expect all college personnel to be fully committed to promoting the Monmouth ideal of a student-centered, liberal arts education.*

*We know that students who are engaged intellectually and socially are better prepared for success. Therefore, we will provide facilities and resources that encourage interactive learning, both within and outside the classroom, and we will encourage our students to be active in campus and civic organizations.*

*We know that in order to succeed in a complex world, students must be able to adapt quickly to new ideas and technologies, even as they weigh the benefits and deficits of innovation with a critical, curious intelligence. Therefore, we will emphasize critical, creative, responsive thinking throughout our academic program, and we will remain open to innovative curricula, technology, and partnerships".<sup>1</sup>*

The last sentence of the college's mission mentions innovative curricula, technology, and partnerships. All of these will apply to quality online learning. But how can Monmouth best transition its work online and how can those practices be modified to utilize technology? As Monmouth's develops online curriculum will it require a separate assessment plan?

The following pages contain information on the various activities that comprise Monmouth's current assessment program (guiding principles can be found at [www.monm.edu](http://www.monm.edu)) as I understand it. Included in this model are background materials on the college and the nature of assessment, statements of general policy and procedure for the conduct of online assessment, and descriptions of assessment activities designed for specific college programs<sup>2</sup>.

### **Background on Assessment**

The essential elements of the prior assessment program included five requirements established by the faculty: 1) a focus on student learning outcomes, 2) use of the Purposes of Monmouth College as the basis for assessment of general education, 3) the annual collection of student evaluations and feedback, 4) alumni data for all academic majors, 5) special surveys for general education, 6) a five-year cycle of reviews for majors and college programs, and 6) a program of student portfolios.

---

<sup>1</sup> <http://www.monm.edu/academics/academic-affairs.aspx>

<sup>2</sup> Members of the assessment committee also wrote sections of the policy including Frank Gersich, Cheryl Meeker, and Kevin Baldwin

Whether embarking on a course of study online or in the classroom, student motivation is central to learning success. 17 and 18 year-olds today are accustomed to learning and reading material online. To ignore the potential and possibility of online learning and course material is unthinkable. But to develop a duplicate set of courses from the traditional classroom into online curricula for the sake of being online is expensive possibly a waste of precious resources. Monmouth revised its assessment model a few years ago because of the availability of new tools such as the internet to collect survey data and organize the results. Monmouth’s younger faculty possesses a renewed focus on how instructional technology could play an integral role in student learning goals for each program and course. This energy should be harnessed so that we test and learn how to best proceed with online assessment tools.

This goal to emphasize instructional technology is new. The idea is that if Monmouth Faculty created or assembled a great set of materials, delivered it in an interesting or compelling way, the student learning would be enriched. The perceived value of a Monmouth education will also rise. Monmouth administrators must be able to see how easy it is to fall behind without a consistent investment in instructional technology and the development of online curricula. One example of how technology can help is the area of collecting student feedback on courses and instructors. There are tools that could function more efficiently than the current process but change is difficult and scary. Administrators found that when analyzing student and alumni evaluations; faculty went to length to gather data on the quality of the books, learning materials and the methods, only to find that the questions focused on criteria not central to the learning goals or even the method or way the learners wanted to learn.

The central issue is the out-of-date collection methods and questions. The current assessment data is not based on the discipline’s learning goals so faculty could ignore the result. The reason the data can be ignored is the students used the evaluation as a weapon for a poor grade or the questions were not relevant to that course of study. Great lectures or even interesting material does not ensure a quality learning experience. Learning does not really occur if the students do not understand or cannot interpret what is being taught. Even if the materials and instructor believe they delivered a great lecture, it is a sin of omission to ignore the student’s level of understanding or abilities.

*What did the student really learn that could be applied to some aspect of their education?*

Teachers assume that because they are making an effort to “teach”, students must be learning something of value. That is not the case if it does not contribute to the achieving the goals of the program. We are misleading students if we do not have a goal. As an example, students assume that because they have read their text or memorized some theory, they

must have learned something of value. Both assumptions appear to be false more often than not because they quickly forget what they learned.

While working on this paper I came across following quote in the 1973 movie *The Paper Chase*:

*“Here we use the Socratic method: I call on you; I ask you a question; you answer it.  
Why don't I just give you a lecture?”*

*Because through my questions you learn to teach yourselves. By this method of questioning-answering, questioning-answering, we seek to develop in you the ability to analyze that vast complex of facts that constitutes the relationships of members within a given society.”*

Professor Kingsfield<sup>3</sup>

In the case of Professor Kingsfield, it was more important to bring his students with him through a subject, than give a brilliant oration on the merits of the law. As we learn more about how best to deliver an online learning experience at Monmouth College, undoubtedly our assessment program must evolve.

The Monmouth curriculum will evolve and the assessment plan should evolve with it. The primary function of an assessment is to provide a common reference point for assessment activities, a place where the many individuals engaged in achieving the goals and mission of the college can find guidance. A second major function is the role this document could play in allowing all of the college constituencies to see the assessment possibilities inherent in online learning. In that regard, I hope this model will expand Monmouth's common understanding of the kind of college Monmouth is and the kind of learning we seek to promote.

### **Historical Context for Assessment**

Monmouth College is accredited by the Higher Learning Commission of the North Central Association of Colleges and Schools. The current assessment program at Monmouth College is a more formal and structured version of what has been our practice throughout the college's history. Monmouth has long recognized the importance of maintaining awareness of the progress our students make and the success our teaching efforts produce in advancing the goals of students and the greater community. The impetus for a more formal system of monitoring student learning outcomes came out of initiatives instituted by the North Central Association of Colleges and Schools (NCA), an accrediting association of which Monmouth has long been a member.

---

<sup>3</sup> The Paper Chase. Universal Pictures Release 1973



While NCA mandates an assessment program and has developed criteria defining the general characteristics of an effective one, top tier member institutions, such as Monmouth, have had wide latitude to design systems that most appropriately serve institutional needs. In response to the call for development of a Monmouth College online assessment plan, academic departments, general education rubrics and other programs began discussions involving three issues: a) defining the scope of the online curriculum and its relation to the college mission, b) articulating the specific goals of the online program, and c) considering possible means of assessing student learning within the online curriculum. These discussions will continue over the next 12 months.

### **The Rationale for Assessment at Monmouth**

The structure of the assessment program should continue to be defined by five elements that were established over ten years ago. These principles are relevant in the online environment and should guide the process.

1. Our first principle is an emphasis on continuously improving student learning outcomes. I call this incremental enrichment of our methods and materials. By this we intend that all online assessment activities should lead to a better understanding of how students are learning online in addition to the classroom or the laboratory. What concepts, theories, or ideas they can learn as well or better online when compared to traditional classroom situations? During their time at Monmouth, we want to gauge how well that learning enables students to meet the goals established. Our attention is not so much on where students begin but on where they arrive as they come to the end of their online course of study. We hope to test new strategies and methods for improved online teaching and learning effectiveness and learn from other similar institutions.
  
2. Our second principle is that the online learning experience should be an extension of what has always been a feature of the Monmouth experience, close attention to our students and their needs. Assessment activities should not become burdensome additions to faculty workloads. Rather, in so far as possible, we seek simply to formalize and record the activities that fit the goals of our online programs and use them more systematically to foster improvement and innovation. In all cases, assessment must be an integral part of our teaching and managing responsibilities.

One idea worth exploring is experimenting with is testing the use of a **Prior Learning Assessment (PLA) in our admissions process. Since applicants come to Monmouth with a variety of both academic and work related experiences, we could look at**

granting exceptions to certain requirements based on experience, such as living for five years in South America and being required to complete a course in Global Perspectives. Monmouth grants credit for Advanced Placement work, but will not grant credit for dual-credit and other college level courses. At some colleges and universities PLA is a process by which you can earn academic credit for what you already know and can do, though the formal evaluation of a learning portfolio that contains documents, and highlights significant college-level learning acquired through informal or independent study, work experience, community service, non-credit courses, or other life experiences. PLA is based upon the belief that college-level learning is not limited to the classroom. At Monmouth, this concept could have great potential in attracting non-traditional students.

3. Our third principle is ongoing and incremental improvement. Both for college-wide assessment and individual program assessment activities, our intent is to begin with methods that allow us to take calculated risks and discover areas where improvement seems possible, then follow these experiments with more specific studies that can lead to better learning environments.
4. Our fourth principle is that assessment policy for majors should be created by professionals within those disciplines and the online programs must run parallel or tie-into the existing assessment plan. One example is the concept of synchronous learning. In the classroom we take synchronous learning for granted since instructors assume students are following their lecture or discussion. But in the online environment, we can never make this assumption. Any learning event where interaction happens simultaneously in real-time it is considered to be synchronous learning. In an online environment, this would require learners to attend class online at its scheduled time. Could be held in a traditional classroom, or delivered via distributed or e-Learning technologies.
5. Our last principle is that online activities must be useful to those who conduct them, to programs, to the institution. We expect that for the purposes of online curricular planning, resource allocation, and long-range planning, assessment data will be useful and will be used. One area we would like to explore through the online learning curricula is the idea of cohorts. Cohorts are groups of students that move together through an educational program. Cohorts allow a small number of learners, usually starting courses at the same time, to take a group of core classes over the four years at Monmouth. However, because students in a cohort may not necessarily progress through the program at the same rate or graduate at the same time it must be tested.

However, because we believe in general education and an interdisciplinary approach, the concept of establishing a 1<sup>st</sup> year cohort could be very beneficial, because students can get to know each other really well and provide a supportive learning environment for each other.

Our online curricula as described in this model contain the vehicles by which program improvement through assessment will be documented. Equally important is the likelihood that, through feedback from students (alumni and others), the overall assessment program itself will add to the quality of Monmouth’s educational experience.

### **Online Learning Does Not Conflict with our Mission**

As a small residential college, Monmouth is very different from a for-profit online university. As an undergraduate liberal arts college Monmouth recognizes its key asset. That asset is the close relationship of its faculty to students. This relationship is fundamental to our learning environment. As a community of learners we strive to create and sustain an environment that is value-centered, intellectually challenging, aesthetically inspiring, and culturally diverse; and we hold as central our commitment to liberal arts education and to one another.

Monmouth integrates its four year program of general education with in-depth study in the major and a rich array of co-curricular activities in order to foster the discovery of connections among disciplines and of larger patterns of meaning. Through these experiences, we help our students explore multiple perspectives on the human condition and prepare themselves for rich personal and professional lives...for leadership, citizenship, and service in a global context. Why spend the college’s resources to duplicate this experience online when you can enhance the curriculum in a few core areas through innovative online coursework and cooperative relationships with online universities?

### **ONLINE ASSESSMENT INTEGRATION PROCESS**

The next step is to develop a plan to fund, create, and implement a online initiative. The previous sections describe the current state of the Monmouth College Assessment Program and the procedures by which online assessment can be accomplished. While the Faculty and the President’s Council mandate several elements in developing a new assessment process, the specific procedures described in this document remain open to debate, change, and adjustment as the college discovers new needs and better methods for reflecting both online and traditional classroom instruction. The incremental learning assessment model will not suffice in light of the commitment and speed needed to adapt the online tools and course material necessary to compete.

I will recommend that administration consider alliances with online universities who have already worked out the “kinks” and can offer something completely new for a fee. This collaborative arrangement will benefit Monmouth and its future students. At the same time, Monmouth will also need to create proprietary online course material and invest in online innovation in a few strategic areas. The future can be bright if online resources are harnessed and strategic partners are welcomed.

*We know that in order to succeed in a complex world, Monmouth students must be able to adapt quickly to new ideas and technologies, even as they weigh the benefits and deficits of innovation with a critical, curious intelligence. Therefore, Monmouth should emphasize critical, creative, responsive thinking throughout the development of online programs, as we continue to develop innovative curricula tied to technology, and partnerships.*

## Appendix 1

### DO THE GOALS OF MONMOUTH COLLEGE CONFLICT WITH ONLINE CURRICULA?

*As an undergraduate liberal arts institution Monmouth College exists to:*

1. Prepare students for rich personal and professional lives.(students and alumni will continue to use web-based tools everyday in their career and personal research)
2. Prepare students for positions of leadership, service, and citizenship in a global context.(technology has brought greater awareness and understanding of different cultures)
3. Promote awareness and exploration of the sometimes contradictory principles which exist in democracy, pluralism, equality, and freedom.(see #2)
4. Create and maintain a learning environment that is value centered, intellectually challenging, aesthetically inspiring, and culturally diverse. This includes:
  - (A) Providing students with a four year general education program, in-depth study in the major, and a rich array of co-curricular activities.
  - (B) Fostering the discovery of connections among disciplines and of larger patterns of meaning.
  - (C) Promoting an understanding of a value system that is shaped by individual and collective experiences.
5. Explore the spiritual dimension of human existence and the relationship between faith and knowledge.(online resources can help in many areas to illustrate differences and commonalities in the human experience)
6. Introduce students to multiple perspectives on the human condition and promote self awareness of global perspectives both through the curriculum and through campus life.
7. Foster and promote intellectual inquiry and critical analysis through mentoring relationships characterized by individual attention.(online tools can aid instructors in providing more timely and meaningful feedback)
8. Develop creativity and skills in written and oral communication and artistic expression.
9. Understand the methods of inquiry and expression in (A) the arts, (e.g. art, music, theatre, creative writing) (B) the humanities, (e.g. English, foreign languages, history, philosophy, religion, speech) (C) the sciences, (e.g. biology, chemistry, physics, environmental science) and (D) the social sciences. (e.g. psychology, sociology, government, political economy and commerce)

Based on my analysis of the nine principles, there is nothing that should impede the introduction of online exercises and course development at Monmouth.

## Appendix 2-COMMON ONLINE CURRICULUM TERMS

**Asynchronous Communication** - Non-synchronous, two-way communication in which there is a delay between when a message is sent and when it is actually received. In distance learning, asynchronous communication most often take the form of email (e.g. the instructor emails you with feedback on an assignment), voicemail (e.g. you leave a message for you're the instructor on his/her office phone), and discussion boards (e.g. you post a reply to a classmate's question in a threaded class discussion.)

**Asynchronous Learning** - Any learning event where interaction is delayed over time. This allows learners to participate according to their schedule, and be geographically separate from the instructor. Developed in the form of a correspondence course or e-learning. Interaction can make use of various technologies like threaded discussion.

**Cohort** - A cohort is a group of students that move together through an educational program. Cohorts allow a small number of learners, usually starting courses at the same time, to take a group of core classes over a period of time. However, students in a cohort may not necessarily progress through the program at the same rate or graduate at the same time. Cohorts can be very beneficial, because students can get to know each other really well and provide a supportive learning environment for each other.

**Computer Based Training (CBT)** - Training or instruction where a computer program provides motivation and feedback in place on a live instructor. CBT can be delivered via CD-ROM, LAN or Internet. Creation is done by teams of people including instructional designers, and often has high development costs.

**Course Management System** - Also shortened to "CMS." The software, usually web-based, used by colleges and universities, as well as corporations and government, that facilitates distance learning by centralizing the development, management, and distribution of instructional-related information and materials. A CMS provides faculty with a set of tools that allows the easy creation of course content - syllabi, course modules, lecture notes, assignments, tests and quizzes, etc. - and is the framework in which they teach and manage the class. To an online student, a CMS is simply the vehicle by which you, the instructor, and your fellow learners interact using asynchronous discussion boards and live chat tools; access course information and materials, submit assignments, check your grades, etc.

**DHTML** - "Dynamic HyperText Markup Language". Dynamic web pages are written in a combination of languages that add interactivity. They allow users to enter data, send it to the server, and to move items. Dynamic web pages often establish two-way communication and

allow for customized portal pages where the user behavior is recorded and "remembered" to give the user a customized experience

**e-Learning** - Any learning that utilizes a network (LAN, WAN or Internet) for delivery, interaction, or facilitation. This would include distributed learning , distance learning (other than pure correspondence ), CBT delivered over a network, and WBT . Can be synchronous , asynchronous , instructor-led or computer-based or a combination.IM may be used in distance learning to facilitate communication between two students or between a learner and his or her instructor.

**Prior Learning Assessment (PLA)** A process available at some colleges and universities by which you can earn academic credit for what you already know and can do, though the formal evaluation of a experiential or prior learning portfolio that identifies, documents, and assesses significant college-level learning acquired through informal or independent study, work experience, community service, non-credit courses, and other life experiences. PLA is based upon the belief that college-level learning is not limited to the classroom.

**Section 508** - The section of the 1998 Rehabilitation Act is a U.S. law that requires that all electronic and information technology procured, used, or developed by the federal government after June 25, 2001, to be accessible to people with disabilities. Affected technology includes hardware such as copiers, fax machines, telephones, and other electronic devices as well as application software and Web sites.

**Synchronous Learning** - Any learning event where interaction happens simultaneously in real-time. This requires that learners attend class at its scheduled time. Could be held in a traditional classroom, or delivered via distributed or e-Learning technologies.

**Threaded Discussion** - A feature of distance learning that allows students to interact with their classmates and instructor. A threaded discussion is a series of messages on a particular topic posted in a discussion forum. A threaded discussion is asynchronous, not fixed in time or space, so students can log on at any time from any Internet-enabled computer to seek clarification for issues they encounter in their coursework, to discuss topics raised in class, or to initiate new discussions on related topics. A good online discussion has the same effect of group or in-class discussion, in which students build on one another's perspectives to gain a deeper understanding of the materials.

**Whiteboard** - The electronic equivalent of a blackboard and chalk on a computer screen that allows multiple, remote users to add text, create drawings or diagrams in a shared electronic workspace that is visible to all participants. Whiteboards are a common feature of distance



learning course management software systems because it can be used for online instruction the same way a blackboard is used in a traditional classroom.

---

<sup>i</sup> Monmouth College Vision Statement, Revised 2009

<sup>ii</sup> See appendix 1

---

## Executive Education and Development at Deutsche Post World Net (DPWN)

---

### Dr. Hannah Zaunmüller

Project Leader/ Senior Expert

Deutsche Post DHL – Corporate Executive Development

Charles-de-Gaulle-Straße 20

53113 Bonn

Email: [h\\_z aunmueller@hotmail.com](mailto:h_z aunmueller@hotmail.com)

**Abstract:** In recent years the importance of executive education and development has grown as companies attempt to compete through people and in particular through competencies. Executive education and development plays a central role in nurturing and strengthening leadership competencies, and in this way has become part of the backbone of strategy implementation in companies. This paper provides a description of the main phases and the results of the project “Strategic Executive Education and Development” at the department Corporate Executive Development of Deutsche Post World Net (DPWN), the world’s leading logistics Group. Special focus is put on the description of the development and implementation of a global executive education and development framework for the company and a new internet portal matching executive training courses to the company’s competencies.

**Keywords:** Executive education and development, competencies, leadership, Deutsche Post World Net (DPWN), framework, internet portal

**Reference:** Reference to this paper should be made as follows: Zaunmuller, H (2009) “Executive Development at Deutsche Post World Net (DPWN)”, International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes:** Hannah Zaunmüller studied International Economic Studies at Maastricht University in the Netherlands. She received her PhD in Business Administration at RWTH Aachen University in Germany and her MBA with focus Human Resources Management at ZfU International Business School in Switzerland. In 2005 she started working for Deutsche Post DHL – first as Consultant and Senior Consultant in the internal top-management strategy consultancy, and then as Project Leader and Senior Expert at the Department Corporate Executive Development.

## Introduction

In recent years the importance of executive education and development has grown as companies attempt to compete through people and in particular through competencies (Bohlander and Snell, 2007). Companies invest an enormous amount of time and money in educating and developing their executives today (Bolt, Dulworth and McGrath, 2005). In fact, executive education and development plays a central role in nurturing and strengthening leadership competencies, and in this way has become part of the backbone of strategy implementation in companies, since “leadership helps make strategy happen” (Ulrich and Smallwood, 2007).

The department Corporate Executive Development at Deutsche Post World Net (DPWN), which supports the development of the Group’s top 1000 executives, faced two major challenges at the beginning of 2008. Firstly, the divisions of the Group were tackling executive education and development differently and not tapping potential collaboration synergies due to the lack of a corporate executive education and development framework. Secondly, recommended corporate executive education and development offers were not available but repeatedly asked for by different stakeholders.

It was decided to tackle these challenges in the project “Strategic Executive Education and Development”. The key question which guided this project was therefore: “How to improve corporate executive education and development and leadership performance at DPWN in view of the current challenges?”, and two objectives were defined: first, the definition and publishing of a corporate executive education and development framework including roles and responsibilities and, second, the establishment and provision of an overview of selected executive education and development offers.

This paper is structured in four chapters. After the introductory chapter the overall context of the project “Strategic Executive Education and Development” is explained in the second chapter (“Project Context”). Focus is put in the second chapter on describing the company Deutsche Post World Net (DPWN) and its department Corporate Executive Development as well as on the establishment of a theoretical basis regarding executive education and development. The third chapter (“Project Description”), the main chapter of this paper, depicts the overall project management as well as the project execution and results regarding the project phases analysis, development and design, implementation and evaluation. The fourth chapter comprises a conclusion (“Conclusion”).

### Project Context

This chapter provides an overview on the overall context of the project “Strategic Executive Education and Development”: DPWN, the goals of the department Corporate Executive Development of DPWN’s Corporate Center and the theoretical basis of executive education and development.

## **Deutsche Post World Net (DPWN)**

DPWN<sup>1</sup>, with its headquarters in Bonn, Germany, is the world's leading logistics Group and consists of the companies Deutsche Post, DHL and Postbank. These integrated companies offer customized solutions for the management and transportation of goods, information and payments through a global network combined with local expertise. DPWN is also the leading provider of dialog marketing services, which focus on efficient outsourcing and system solutions for the mail business. The Group generated revenue of more than 54 billion Euros in 2008 (63 billion Euros in 2007) with over 500,000 employees in more than 220 countries and territories. DPWN's chief executive officer since February 2008 is Frank Appel.

## **Department Corporate Executive Development of DPWN**

DPWN's Board department comprises six corporate departments, which support the chairman of the Board in his function to govern and control DPWN. The emphasis of the corporate department Corporate Executives lies in four key areas. First, it supports the recruitment and placement of executives through the alignment of the human resources business partners with key internal stakeholders. Second, it develops market shaping reward programs and policies to engage and incentivize the executives. Third, in collaboration with the human resources business partners it develops and links career opportunities throughout the organization by locating and understanding individual talents. Fourth, it supports the development of the executives through a focus on leadership performance.

The latter area is the responsibility of the department Corporate Executive Development. In fact, the overall goal of this department is to have the right leaders with the right leadership performance, in the right jobs, at the right time today and in the future to achieve and sustain superior business success in global markets. The department also acts as a kind of competence center for the Group regarding the entire portfolio of executive education and development topics. It thereby strongly works together with the global divisional human resources development departments.

## **Theoretical Basis of Executive Education and Development**

The goal of education and development is to contribute to the company's overall goals and strategies (Bohlander and Snell, 2007). In more specific words, education and development focus on imparting the qualifications and competencies, which are necessary for optimal performance of current and future tasks and can be professionally, personally as well as socially fostered (Bröckermann, 2007).

To maximize the impact of education and development methods/ measures on individual and organizational performance, four phases should generally be followed: needs

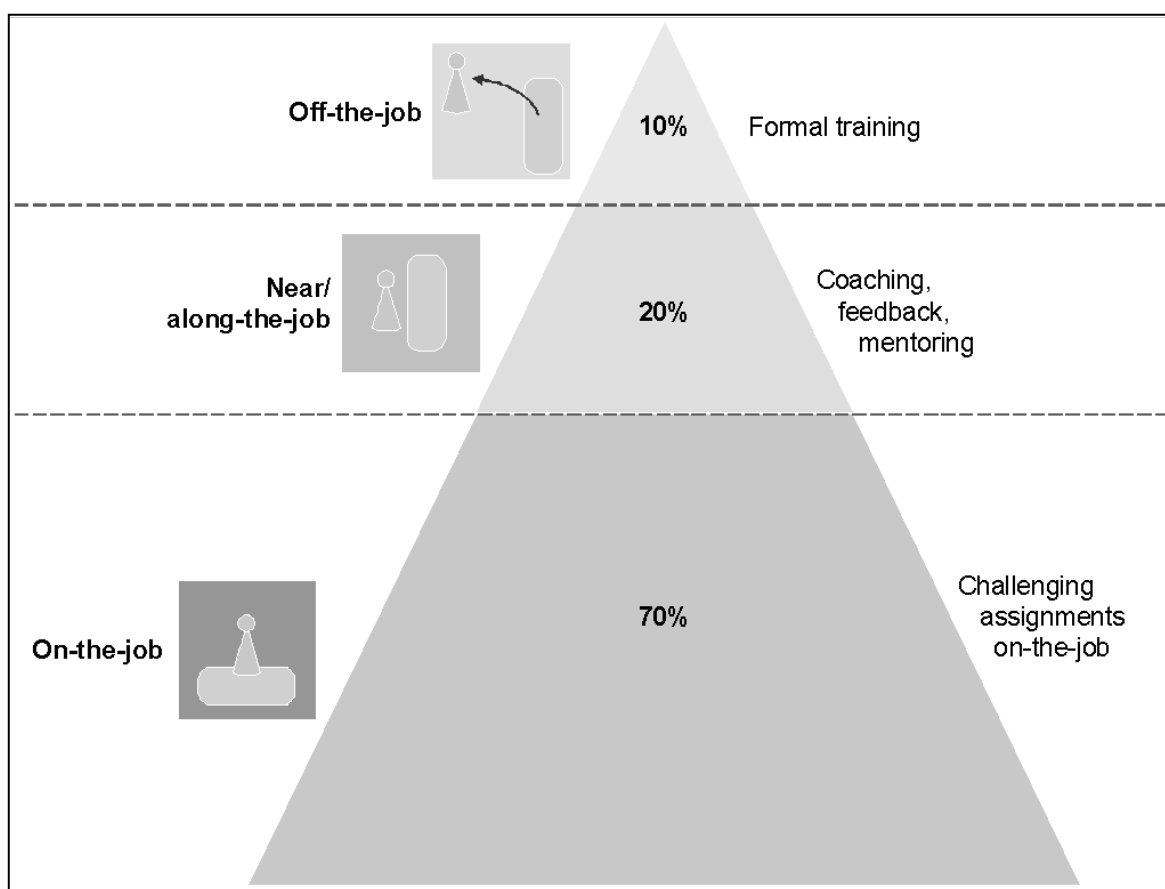
---

<sup>1</sup> At the beginning of March 2009, with the communication of the new strategy DPWN changed its Group name to Deutsche Post DHL. Since the project discussed in this paper took for the most part place in 2008, the company is described in this paper according to its set-up in 2008, and it is also named as in 2008.

assessment, development/ design, implementation and evaluation of education and development. Indeed, a systematic way should be followed for education and development to avoid wasting time and money.

The needs assessment generally consists of an analysis of the organization (environment, strategies and resources) to determine where to emphasize education and development, an analysis of the organizational tasks/ activities in order to find out the qualifications and competencies needed and of specific individual performance, qualifications and competencies in order to determine who needs education and development.

**Figure 1: Education and Development Philosophy: 70-20-10 Formula**



The information gained from the needs analysis is to be utilized for the development/ design of education and development. When choosing among the various methods/ measures available (classroom instruction, e-learning, simulation, case studies, coaching, job rotation, etc.), key consideration needs to be put on determining which ones are appropriate for the specific qualifications and competencies to be learned. Since research shows that development takes mainly place on-the-job (McCall, 1997), the education and development philosophy in many companies is today built upon the 70-20-10 formula: 70% taking place on-the-job, 20% taking place near/ along-the-job and 10% taking place off-the-job (Figure 1) (SMU Cox, 2006).

According to this philosophy, challenging assignments on the job are most effective for development. In fact, on-the-job experience is the best way to learn. Real business situations give the person the opportunity to test and develop skills and to grow. On-the-job experience means leaving the personal comfort zone by exposing oneself to increased or new responsibilities, decision-making processes or projects.

Coaching, feedback and mentoring near or along-the-job are also essential for development. Indeed, on-the-job experience without feedback and reflection is not sufficient for development. The line manager plays a key role regarding near/ along-the-job experience by coaching, giving feedback and mentoring the executive. In addition to experience, feedback and reflection also formal training courses off-the-job support development.

After the implementation of education and development methods/ measures, an evaluation of them is important to determine their effectiveness. Four basic criteria are available to evaluate education and development methods/ measures: reactions, learning, behavior and return on investment (Kirkpatrick and Kirkpatrick, 2006). Each criterion provides different information about the success of the methods/ measures.

The focus of executive education and development lies above all on leadership competencies. Since strategy implementation is heavily relying on leadership, executive education and development has, indeed, become part of the backbone of strategy implementation in companies (Ulrich and Smallwood, 2007).

The topic leadership has attracted an enormous amount of interest and attention in recent years. However, there has not been found a final answer (yet) on what constitutes good and successful leadership (Bruch, Vogel and Krummaker, 2006). In fact, not only in the scientific literature but also in practice there are numerous leadership definitions and concepts. Each company has today an own individual understanding of leadership and defines corresponding required leadership competencies for its executives in the company.

In this paper leadership is defined as “the process of influencing others to understand and agree about what needs to be done and how to do it, and the process of facilitating individual and collective efforts to accomplish shared objectives” (Yukl, 2006). This definition clearly focuses not only on the individual employee, but also on the whole company and its parts. Leadership competencies according to this definition are especially influencing and facilitating skills.

Executive education and development differs from general education and development in companies mainly through the methods/ measures that are applied. Strong focus within executive education and development is currently put in many companies on executive coaching, ideally in combination with a 360 degree feedback (near/ along-the-job method/ measure) (Schorp and Heuer, 2008). But as already explained above, the development of leadership competencies mainly takes place on-the-job (McCall, 1997).

## **Project Description**

This chapter comprises an overview of the overall management of the project "Strategic Executive Education and Development" and a detailed description of the project execution and results. The project execution and results description is structured according to the main project phases: analysis, development and design, implementation and evaluation.

## **Overall Project Management**

The main project execution phases overarching project management comprised all activities necessary for bringing about the successful completion of the specific project objectives according to scope, time and budget constraints. It comprised four phases: project definition, project planning, project controlling and finally project completion (Burghardt, 2007).

At the beginning of 2008 the department Corporate Executive Development at DPWN initiated the project "Strategic Executive Education and Development", which was guided by the question: "How to improve corporate executive education and development and leadership performance at DPWN in view of the current challenges?". Two project objectives were delineated in this project definition phase: First, the definition and publishing of a corporate executive education and development framework including roles and responsibilities and, second, the establishment and provision of an overview of selected executive education and development offers.

The project organization consisted of a project leader and two project team members. The head of the corporate department Corporate Executives and the head of the department Corporate Executive Development acted as steering/ sounding board for the project.

The project execution was planned and divided into four main phases: analysis, development and design, implementation and evaluation. In the project planning phase, for each of these four phases activities were described and deliverables defined and an overall timeline for the project was developed (Figure 2).

Project controlling comprised due date control, expenses control, cost control and deliverable progress control. If deviations were identified, corrective action was taken to support securing project success. Prerequisite for the identification of deviations was project accompanying quality control and project documentation.

Project completion consisted of four components. It started with the overall execution acceptance. Then there was a project closure analysis and lessons learned assurance, finally followed by the official project termination.

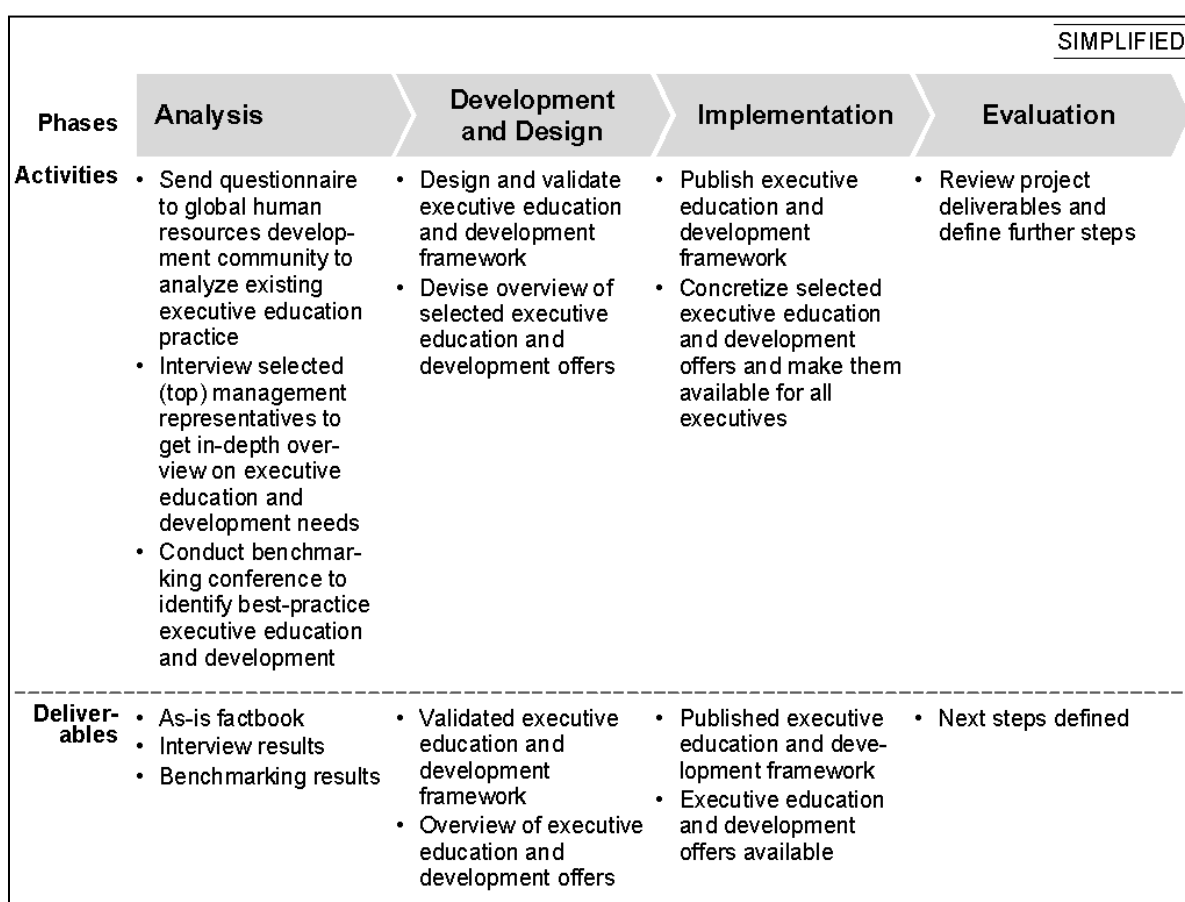


## Project Execution and Results

### Analysis

The analysis phase aimed at three key deliverables: a factbook on existing executive education practice at the different divisions of DPWN, interview results regarding executive education and development needs at DPWN and benchmarking results regarding best-practice executive education and development practices.

**Figure 2: Main Phases of Project "Strategic Executive Education and Development"**



### As-is Factbook

To get an overview on existing executive education practice at the different divisions of DPWN, a questionnaire was devised, piloted and then sent to the global human resources community. The questionnaire, focusing on analyzing the different existing executive training offers, consisted finally of 12 questions. The global human resources community to which the questionnaire was sent per email comprised at this time 18 persons. Half of them filled

out and send back the questionnaire until the deadline set; the others had to be reminded via email and telephone. In the end 14 filled-out questionnaires were available.

The key findings for the project after a thorough analysis of the filled-out questionnaires showed (Figure 3):

- A strong variation of recommended executive training courses/ programs among the divisions
- A limited quantity of recommended executive training courses/ programs especially for senior executives (role classification system grades B-E)
- Customized and open enrolment training courses/ programs.

**Figure 3: Overview of As-Is Analysis**

	Recommended Executive Training Course/ Program	Executive Target Group (Role Classification System Grades)			Kind of Training Course/ Program
		B – D	E	F	
<b>Mail</b>	US – Situational Leadership	x	x	x	Customized training course/ program
	US – Leadership Habits	x	x	x	Customized training course/ program
	US – 4 Disciplines of Negotiation	x	x	x	Customized training course/ program
<b>Logistics</b>	AP – Acceptance of Change	x	x	x	Customized training course/ program
	EMEA – Leader of the Future		x		Open enrollment training course
	EMEA – Active Leadership			x	Customized training course/ program
	EMEA – Leadership Challenge Program			x	Customized training course/ program
	EMEA – Advanced Negotiations			x	Open enrollment training course
	AP – Accounting and Financial Management		x	x	Customized training course/ program
	AP – Leading High Performance Teams		x	x	Open enrollment training course
	AP – Building Organizational Capability		x	x	Open enrollment training course
<b>Global Business Services</b>	Global Business Services Executive Leadership Program		x		Customized training course/ program
	Business Leadership Program (for IT only)			x	Customized training course/ program
<b>Postbank</b>	Change Management			x	Open enrollment training course
	Personal Performance			x	Open enrollment training course
	Chart Design and Storyline Refreshed			x	Open enrollment training course
<b>Express</b>	AP – Business Leadership Program		x	x	Customized training course/ program
	European Leadership Program			x	Customized training course/ program
<b>Corporate Center</b>	International Business Leadership Program			x	Customized training course/ program
	Executive Transition Program		x	x	Open enrollment training course
	Negotiating Business Success		x	x	Open enrollment training course
	House of Finance (Executive Part)		x	x	Including customized and open enrollment modules

### Interview Results

The interviews with selected (top) business and human resources management representatives at DPWN to get an in-depth overview on executive education and

development needs were the key part of the project analysis phase. Overall, 21 structured interviews were conducted. The interviews were structured into three parts: firstly, divisional education and development needs, secondly, corporate education and development needs, and, thirdly, executive training requirements.

The interview results regarding the topic divisional education and development needs were rather different for the different divisions. While for example “mastering market liberalization” was a key strategic challenge and “customer orientation” a key organizational capability required for the MAIL division, the “turnaround of the loss-making US business” was a key strategic challenge and “understanding industry trends and adapting to them” a key organizational capability required for the EXPRESS division. “Openness for change” was then for example a key personnel competency required for the MAIL division, while “industry knowledge” was a key personnel competency required for the EXPRESS division.

The interview results regarding the topic corporate education and development needs were more similar for the different divisions. “Strategic challenges” that were named were:

- Definition of clear organizational structure
- Quality improvement to become first choice for customers
- Achievement of organic growth targets with increasingly fierce competition
- Implementation of required speed of change regarding product innovation and implementation
- Preparation for war for talents, especially in Asia.

“Needed organizational capabilities” that were named were:

- Collaboration within, between and among the divisions
- Leadership orientation for the Group
- More communication
- General management expertise
- Integration of existing subcultures resulting from acquisitions
- Attraction of required well-skilled people.

“Required personal capabilities” that were named were:

- Leadership competencies, especially feedback giving skills
- General fundamental management skills
- Specific business knowledge
- Openness for change
- Strategic thinking and universal strategy understanding.

The interview results regarding the topic executive training requirements showed that as training providers in general top business schools were requested – to benefit among others from their knowledge about best practices. The use of a variety of different learning methods, for example classroom instruction, self-study and coaching, was especially

emphasized as a training success factor. Moreover, training courses should have an international focus and learning transfer into daily work should be ensured. Regarding the training faculty, it was clearly stated that internal and external faculty should be employed. Internal faculty is important for role modeling and topic expertise. External faculty assures methodological expertise. It was also mentioned in the interviews, that it should be taken care that external faculty acts not “too academic”.

### **Benchmarking Results**

A half-day benchmarking conference was prepared and conducted to identify best-practice executive education and development practices. The Executive Vice Presidents for Corporate Executives of four large companies (BASF, Bosch, EON, ThyssenKrupp) were invited to discuss with the head of the corporate department Corporate Executives of DPWN their executive education and development practices. The conference with the headline “Executive Education and Leadership” had been well prepared by asking specific questions and providing corresponding templates in advance to all participants. The filled-out templates were then consolidated before the conference and were used as basis for the discussions during the conference.

In the conference, especially executive training recommendations and joint cross-company executive trainings were discussed. The different companies recommended different executive training courses (open enrolment as well as customized) as well as training providers and shared their experiences with them. Even outstanding professors or faculty members were discussed in this context. Experiences with joint cross-company executive trainings were rather limited in most of the companies of the conference participants. In fact, during the conference different training topics were then discussed where it would make sense to start joint cross-company executive trainings, namely intercultural management, entrepreneurship in the matrix-organization, customer orientation and leadership.

### **Development and Design**

The analysis phase of the project “Strategic Executive Education and Development” had provided an overview on existing executive education practice at the different divisions of DPWN, an in-depth overview on executive education and development needs at DPWN and best-practice executive education and development practices. In the second phase, the development and design phase, the results of the first phase were used to design and validate an executive education and development framework and to devise an overview of selected executive education and development offers.

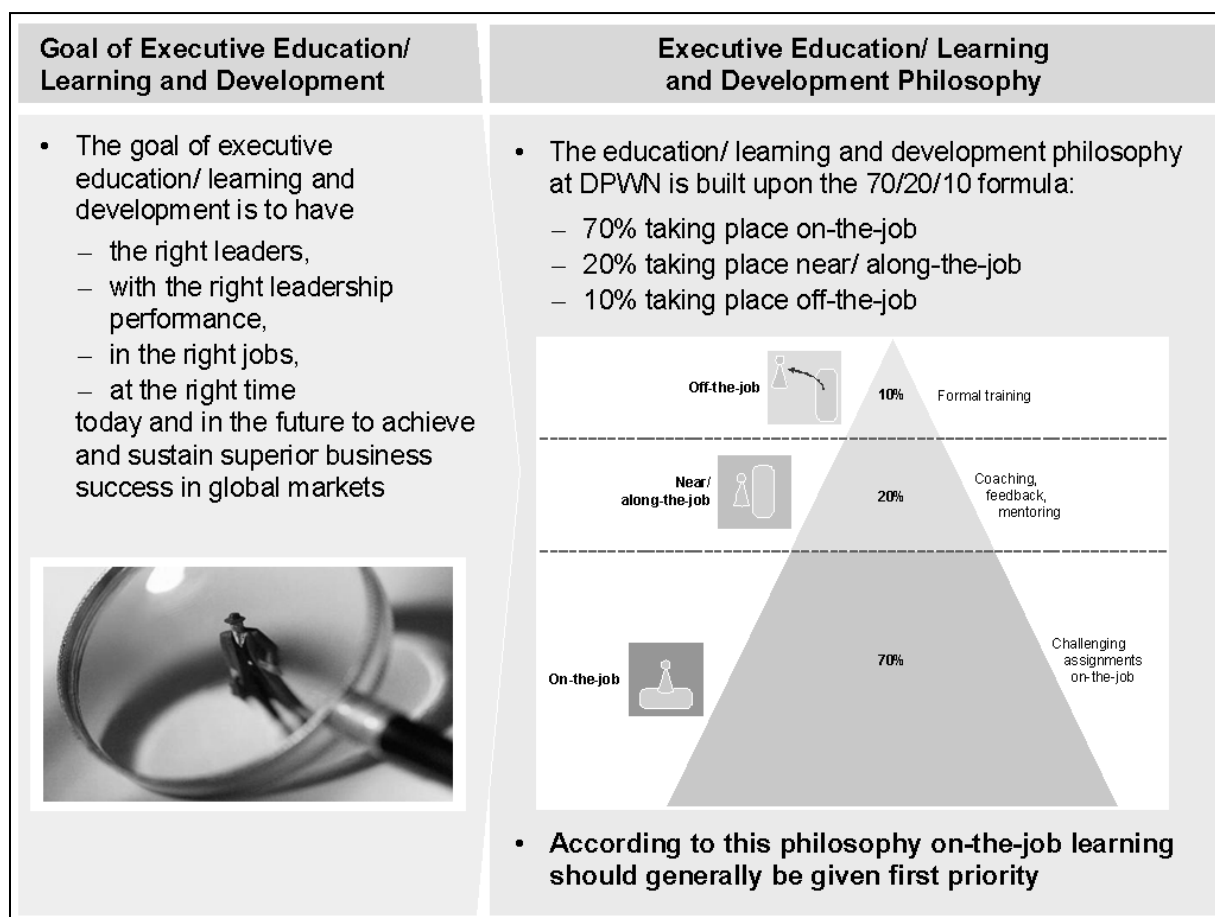
### **Executive Education and Development Framework**

Different human resources (development) stakeholders at DPWN had repeatedly stressed the demand for a corporate executive education and development framework (target group human resources (development)) to provide Group-wide direction for executive education

and development and also to delineate corporate to divisional responsibilities in this context. The design of such a framework was, in fact, easily done with the results of the analysis phase (especially the state-of-the art knowledge) of the project. However, the alignment and validation of this framework was rather time consuming, since almost each division had different opinions regarding the correct delineation of corporate to divisional responsibilities.

After having repeatedly talked with the human resources development representatives of the different divisions, having understood their concerns and adapted the framework and descriptions accordingly, the fourth version of this framework was finally aligned and validated. The core of the framework was the 70-20-10 formula for executive education and development: 70% taking place on-the-job, 20% taking place near/ along-the-job and 10% taking place off-the-job (Figure 4).

**Figure 4: Goal and Philosophy of Executive Education and Development**



For each of the different parts of the 70-20-10 formula an overall explanation was provided and then specifications for different methods/ measures and instruments including a description as well as corporate center, divisional and in particular cost responsibilities. For example, the overall explanation of the "20% taking place near/ along-the-job" part was:

- Feedback and reflection are essential for education/ learning and development; in fact, on-the-job experience without feedback and reflection is not sufficient for development
- The line manager plays a key role regarding near/ along-the-job experience by coaching, giving feedback and mentoring the executive
- In addition, Executive 360 Degree Feedback in combination with Executive Coaching is highly recommended to supplement on-the-job experience.

In this context, a specification of the 360 Degree Feedback instrument explained the following:

- Executive 360 Degree Feedback is an optional/ voluntary instrument with which the self-perception of an executive is systematically compared with the perceptions (i.e. ratings) of others in various groups (supervisor, direct reports, peers, business partners (optionally))
- The instrument addresses the eight competencies defined by Motiv8 (the annual performance and potential management process at DPWN), and also 19 sub-dimensions that can be assigned to the eight competencies
- The ratings are obtained by means of a standardized electronic form, which is available online in different languages
- The instrument is exclusively used at DPWN under the terms and conditions fixed in the Group's license contract with the external provider Cubiks.

The corporate center responsibilities in the context of the 360 Degree Feedback instrument were then depicted as: policy, monitoring, divisional human resources (development) consulting for n, n-1 and n-2 (chief executive officer, chief executive officer's direct reports and also direct reports of chief executive officer's direct reports) as focus person and execution on direct request for n and n-1 (chief executive officer and chief executive officer's direct reports) as focus person. The divisional responsibility was depicted as the general execution of the instrument. Moreover, it was stated that the system usage costs were centrally sponsored, but that the related administration and feedback meeting costs had to be borne by the divisions.

### **Executive Education and Development Offers**

The results of the analysis phase, the overview on existing executive education practice at the different divisions of DPWN (principally the recommended training courses/ programs by the different divisions), the in-depth overview on executive education and development needs at DPWN (particularly the executive training requirements), and the best-practice executive education and development practices (especially the executive training recommendations from different companies) were used to devise an overview of selected executive education and development offers. Moreover, the 2007 rankings of the Financial Times for executive education at business schools on the one hand and open enrolment

executive training courses on the other hand were used to enhance the off-the-job education offers.

The executive education and development offers were finally structured into two key areas: near-the-job and off-the-job offers. The first area was called “Feedback and Coaching” and the second area comprised the categories “Executive Management/ Leadership Skills”, “Soft Skills” and “Functional and Business Knowledge”.

### ***Near-the-job Offers***

The area “Feedback and Coaching” included information for Executive 360 Degree Feedback and Executive Coaching at DPWN. Regarding 360 Degree Feedback, different questions were answered (and a link to further information and support was provided):

- What is 360 Degree Feedback? 360 Degree Feedback is primarily an instrument for personal development of a manager. Its basic idea is to collect feedback from various groups of reviewers and to contrast the aggregated results with the self-perception of the manager. Scope of the feedback is the demonstrated work-related behavior of a person. The feedback combines the view of the manager’s supervisor, peers, and direct reports. Optionally, business partners (for example internal or external customers) can also be included.
- What is the purpose of 360 Degree Feedback? By combining different perspectives, 360 Degree Feedback enables the manager to have a better assessment of his/ her work-related behavior with explicit information on strengths as well as on development potential. Beyond personal development, 360 Degree Feedback can also be used for organizational development purposes with involvement of a whole department or unit.
- How does the 360 Degree Feedback process work? The 360 Degree Feedback is based on an online questionnaire. The items within this questionnaire reflect relevant dimensions of work-related behavior and are based on the Motiv8-competencies. To ensure confidentiality, the process is outsourced to our Group-wide external provider Cubiks. Cubiks processes the data in full accordance with data security and confidentiality requirements. Please note that providing feedback as reviewer within a 360 Degree Feedback process is voluntary and anonymous.
- How are the results of the 360 Degree Feedback communicated? The focus person receives a written report with the feedback results. An internal or external expert conducts a feedback meeting with the focus person to go through the report thoroughly. Of course, the report content as well as the content discussed in the meeting are treated confidentially.

Also regarding Executive Coaching the area “Feedback and Coaching” provided answers to different questions:



- What is Executive Coaching? It is an intense and professional counseling offer for executives. It aims at the development and maintenance of the executive's business excellence and ability to act effectively in a fast moving business environment. Executive Coaching is a result and solution-oriented approach with a strong focus on deployment of personal resources and enhancement of reflection of own behavior and interactions with others. To ensure high quality DPWN offers Executive Coaching via externally selected coach suppliers.
- In which situations is Executive Coaching especially recommended?
  1. First 100 Days Coaching: Changing to a new role is an important phase in one's professional life. First 100 Days Coaching helps to position yourself in the new role, give support to understand the key challenges, identify the key stakeholders and to initiate first strategic actions. First 100 Days Coaching usually begins 4-6 weeks before the manager starts in the new role and takes in total about 3-5 meetings.
  2. International Transfer Coaching (part of First 100 Days Coaching offer): International Transfer Coaching is meant to support managers when changing to a new role in a different country or to a first international assignment. It focuses on specific challenges in new cultures/ international environments to ease the manager's start in the new role.
  3. 360 Degree Feedback Coaching: 360 Degree Feedback Coaching strongly accelerates the learning experience from a 360 Degree Feedback by reflecting the feedback results in a constructive and effective way. 360 Degree Feedback Coaching supports the manager to thoroughly plan follow up activities.

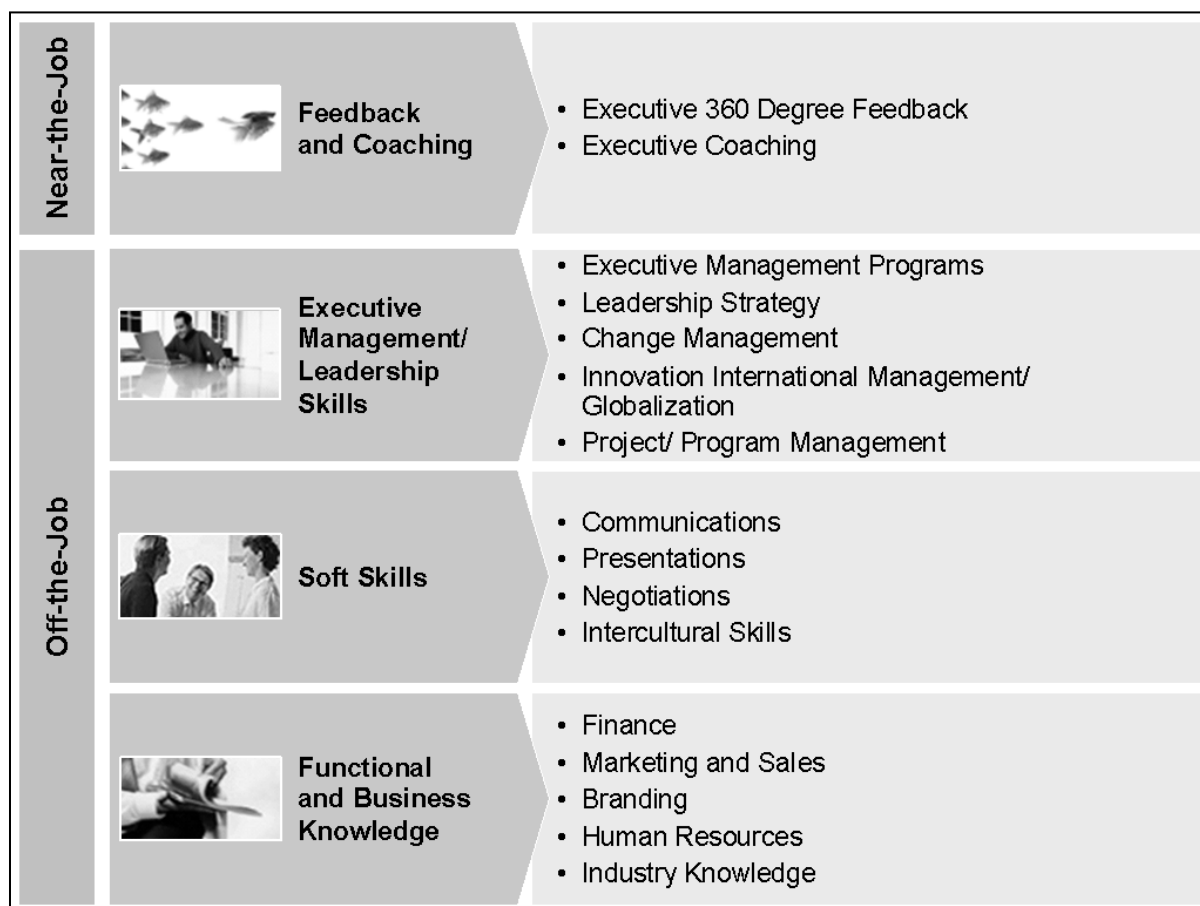
### ***Off-the-job Offers***

Under each of the three off-the-job offer categories "Executive Management/ Leadership Skills", "Soft Skills" and "Functional and Business Knowledge" sub-categories with several training offers were provided (Figure 5). The category "Soft Skills" comprised for example the sub-categories "Communications", "Presentations", "Negotiations" and "Intercultural Skills". The sub-category "Negotiations" contained then, for example, five selected negotiation training courses for DPWN executives around the world:

- "Bargaining and negotiating: A learning laboratory" (University of Virginia)
- "Influencing and negotiation skills for the new workplace" (Macquarie University)
- "Negotiation business success" (ESMT)
- "Negotiation dynamics" (INSEAD)
- "Strategic negotiations: Deal-making for the long term" (Harvard Business School).

The offers were described in detail according to different criteria. Emphasis was put on showing the match of the offers to the DPWN "Motiv8"-competencies (customer orientation, business acumen, cross-border thinking, building and managing partnerships, commitment to excel, shaping direction, constructive challenge, building and leading teams).

**Figure 5: Categories and Sub-Categories of Executive Education and Development Offers**



### **Internet Portal**

The project team decided to create an internet portal for the executives to support them find the right offer according to their individual needs with the help of an intelligent training course finder. In the definition and alignment phase regarding the project set-up for the creation of such an internet portal it became clear that in addition to the training courses and a training course finder a description of the company's education/ learning and development philosophy and the individual development process would also be needed. In fact, a detailed concept for the internet portal was developed and designed. To make sure that the portal would really be used by executives, it was for example decided to find mentors for the different training categories and sub-categories, who would act as promoters for the portal and especially the training courses. It was made sure that at least one mentor was found in each of the different divisions of DPWN.

The internet portal design comprised finally in addition to the near-the-job offers (“Feedback and Coaching”) and the off-the-job offers (training courses for three categories “Executive Management/ Leadership Skills”, “Soft Skills” and “Functional and Business Knowledge”) with an intelligent training course finder an area called “Successful Individual Development”. Moreover, the portal design included a description of the training mentors (incl. quotes of the mentors), frequently asked questions and contact information.

The additional area “Successful Individual Development” included the explanation of the education/ learning and development philosophy at DPWN and the illustration of the individual development process and supporting methods and tools in this context. In fact, a lot of effort was put into the description and alignment of the individual development process within the area “Successful Individual Development”. Like any other process, the individual development process has four key phases – following a generic management approach: analyze the situation, find solutions, implement solutions and evaluate results. The individual development process at DPWN also generally follows Motiv8, the annual performance and potential management process at DPWN. Each of the four key phases of the individual development process was described in detail on the internet portal.

The first phase “Analyze your personal development needs” was described by providing answers to three questions regarding this phase:

- “What is the objective?”
  - Identify your strengths, preferences and areas for improvement to make better informed development decisions
  - Increase your self awareness and confidence in your development decisions
  - Ensure your personal satisfaction by having targeted development activities.
- “What should I do?”
  - Collect all possible relevant information
  - Analyze the requirements of your current role and the strategic goals of your division
  - Analyze feedback received
  - Compare your current competence profile with the desired one, identify your development areas
  - Define and prioritize your development objectives as concretely as possible
  - Try to make your objectives SMART (specific, measurable, attainable, relevant and time-based) as this will help you evaluate the results later.
- “Which tools can I use?”
  - Your individual Motiv8 panel results
  - The DPWN 360 Degree Feedback instrument
  - Diagnostic tests, for example “Insights”, “MBTI”, “PAPI” or “OPQ”.

The second phase “Find the best way to fulfill your development needs” was described by giving answers to two questions regarding this phase:

- "What are the different approaches to successful development?"
  - Challenging assignments on-the-job
  - Coaching, feedback, mentoring
  - Formal trainings off-the-job.
- "How do I select the best opportunity to fit my needs?"
  - Discuss your development needs, develop goals and suitable activities with your superior.
  - Decide together which steps to focus on – also taking into consideration time and financial effort .
  - Document your personal learning objectives and the decided activities in your IDP (individual development plan, which is part of the Motiv8 process).
  - For off-the-job activities use the training course finder.  
The third phase "Implement the identified development activities" was described by giving an answer to the question: "How do I realize the full potential of my activities?"
- Regularly review and reflect on your development progress together with your superior
- Supplement your learning with e-learning offers of DPWN "mylearningworld.net".  
The fourth phase "Evaluate the results" was described by providing an answer to the question: "How can I evaluate the results?":
- Reflect how the development activities have effected your overall development but also your daily work and business success
- Conduct a review discussion with your superior
- Assess the achievement of your personal learning objectives with the IDP (individual development plan, which is part of the Motiv8 process)
- Ask for feedback from the next Motiv8 panel about your progress.

### **Implementation**

The second phase of the project "Strategic Executive Education and Development", the development and design phase, had drawn on the results of the first phase, the analysis phase, to design and validate an executive education and development framework and to devise an overview of selected executive education and development offers. In the third phase, the implementation phase, it was ensured that the results of the development and design phase were implemented.

### **Executive Education and Development Framework**

The aligned and validated executive education and development framework was finally published on the corporate intranet side of the department Corporate Executive Development and communicated through an email to the human resources community at

---

DPWN. Moreover, the document was put on DPWN’s “Human Resources Development Good-Practice Platform”, and different human resources meetings were used to inform about this framework.

### **Executive Education and Development Offers**

The DPWN “Human Resources Development Shared Service Center” and an external website development provider were asked for support regarding the technical realization and testing of the designed internet portal for executive education and development offers. The DPWN “Human Resources Development Shared Service Center” supported the coordination of the external website development provider. The external website development provider was mainly needed for the programming of the intelligent training course finder, which could search for training courses according to free search words, according to training course (sub-) categories and also according to the covered “Motiv8”-competencies in the training courses.

As designed, the final implemented internet portal comprised three main areas:

- “Successful Individual Development” (Figure 6, 7 and 8),
- “Training Courses” (Figure 9, 10, 11 and 12) and
- “Feedback and Coaching” (Figure 13, 14 and 15).

Figure 6: "Successful Individual Development" Area of Internet Portal

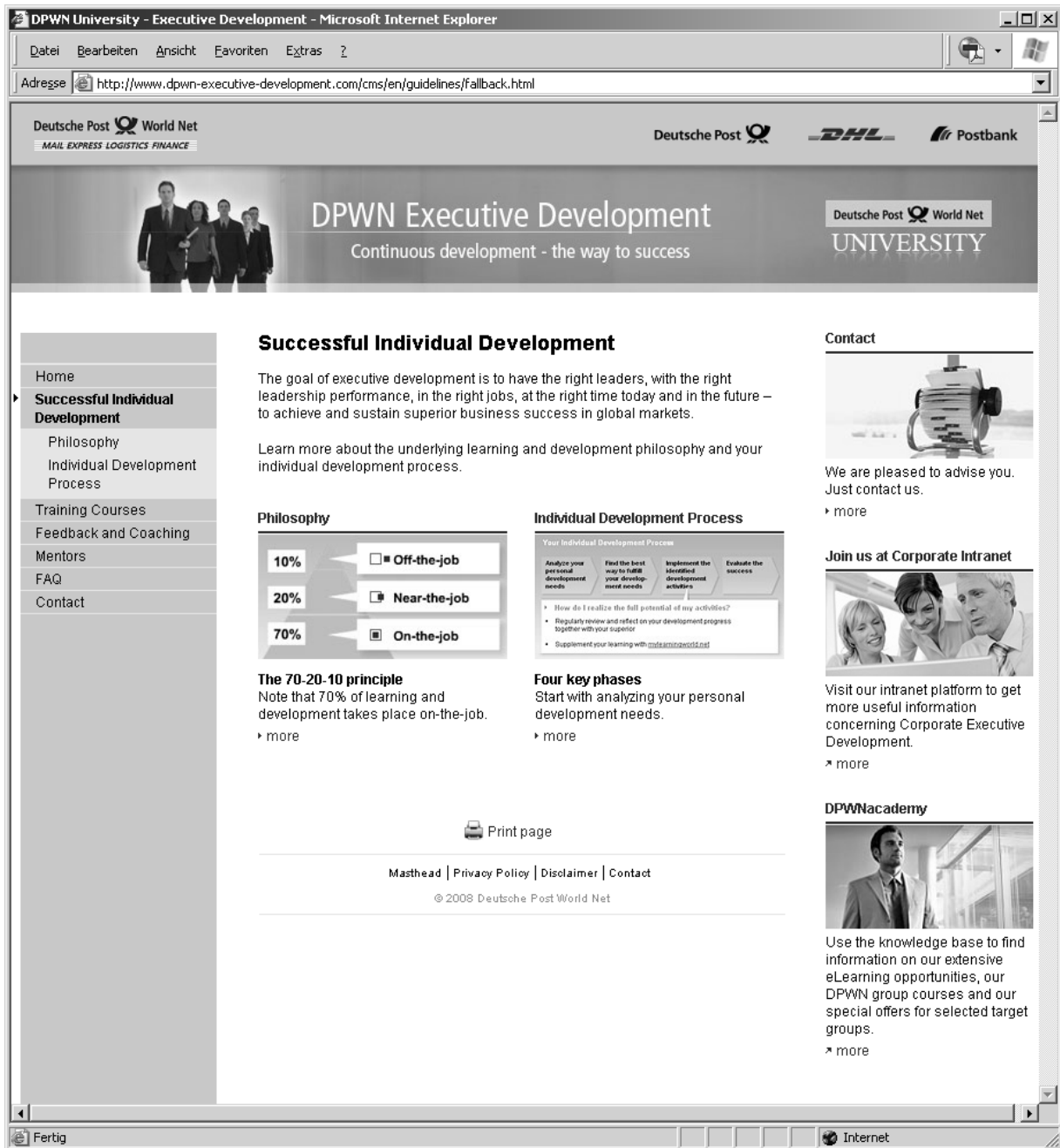


Figure 7: Philosophy Description in Internet Portal

The screenshot shows a web browser window titled "DPWN University - Philosophy - Microsoft Internet Explorer". The address bar shows the URL: <http://www.dpwn-executive-development.com/cms/en/guidelines/philosophy/>. The page header includes logos for Deutsche Post World Net, DHL, and Postbank. The main banner features the text "DPWN Executive Development" and "Continuous development - the way to success".

**Our Development Philosophy**

The education and development philosophy at Deutsche Post World Net is built upon the 70-20-10 principle: 70% taking place on-the-job, 20% taking place near/along-the-job and 10% taking place off-the-job.

The direct manager of the executive is responsible for the development process; however, the executive also actively drives his/ her individual development process.

**Executive Education and Development**  
Find the right mixture for your success

10%  
20%  
70%

**On-the-job**  
Searching for some ideas for your individual on-the-job development? Experience is still the best teacher! People learn best in real business situations that provide them challenging assignments and allow them to apply and test their skills.

► More

► Version without Flash

Print page

Masthead | Privacy Policy | Disclaimer | Contact

© 2008 Deutsche Post World Net

**Contact**

We are pleased to advise you. Just contact us.  
► more

**Join us at Corporate Intranet**

Visit our intranet platform to get more useful information concerning Corporate Executive Development.  
► more

**DPWN Academy**

Use the knowledge base to find information on our extensive eLearning opportunities, our DPWN group courses and our special offers for selected target groups.  
► more



Figure 8: Individual Development Process Description in Internet Portal

The screenshot shows a Microsoft Internet Explorer browser window displaying the DPWN University website. The browser's address bar shows the URL: <http://www.dpwn-executive-development.com/cms/en/guidelines/process/>. The website header includes logos for Deutsche Post World Net, DHL, and Postbank. The main banner features the text "DPWN Executive Development" and "Continuous development - the way to success".

The page content is organized into several sections:

- Left Navigation Menu:** Home, Successful Individual Development, Philosophy, **Individual Development Process** (highlighted), Training Courses, Feedback and Coaching, Mentors, FAQ, Contact.
- Individual Development Process:**
  - Section Header:** Individual Development Process
  - Text:** Like any other process, your individual development process has four key phases – following a generic management approach: Analyse the situation, find solutions, implement solutions and evaluate results. This process generally follows ▶ motiv8, the annual performance and potential management process at DPWN.
  - Diagram:** "Your Individual Development Process" showing four steps:
    - Analyze your personal development needs
    - Find the best way to fulfill your development needs
    - Implement the identified development activities
    - Evaluate the success
  - Content:**
    - ▶ What are the different approaches to successful development?
    - ▶ How do I select the best development activities to fit my needs?
      - Discuss your development needs, develop goals and suitable activities with your superior
      - Decide together which steps to focus on- also taking into consideration time and financial effort. N.B.: Some activities need the approval of the motiv8 panel first
      - Document your personal learning activities and objectives in your IDP (Individual Development Plan). Click here for an [example](#)
  - ▶ Version without Flash
  - Print page** button
- Footer:** Masthead | Privacy Policy | Disclaimer | Contact, © 2008 Deutsche Post World Net
- Right Side Widgets:**
  - Contact:** We are pleased to advise you. Just contact us. ▶ more
  - Join us at Corporate Intranet:** Visit our intranet platform to get more useful information concerning Corporate Executive Development. ▶ more
  - DPWNacademy:** Use the knowledge base to find information on our extensive eLearning opportunities, our DPWN group courses and our special offers for selected target groups. ▶ more

Figure 9: "Training Courses" Area of Internet Portal

The screenshot shows a web browser window titled "DPWN University - Training Courses - Microsoft Internet Explorer". The address bar shows the URL: <http://www.dpwn-executive-development.com/cms/en/courses/>. The page header includes logos for Deutsche Post World Net, DHL, and Postbank. The main banner features the text "DPWN Executive Development" and "Continuous development - the way to success".

**Left Navigation Menu:**

- Home
- Successful Individual Development
- Training Courses**
  - Course Finder
- Feedback and Coaching
- Mentors
- FAQ
- Contact

**Main Content Area:**

**Training Courses**  
 Formal training courses are an important addition to experience, feedback and reflection. Our course finder helps you find an appropriate course from our portfolio. Find the training course that best fits your needs and start your search by selecting one of the three main categories.

**Executive Management and Leadership Skills**  
 Improve your management and leadership skills. Find courses about Leadership, Strategy, Globalization, etc.  
 ▶ more

**Soft Skills**  
 Find courses about communications, presentations, negotiations and intercultural skills.  
 ▶ more

**Functional and Business Knowledge**  
 Finance, marketing and sales, branding, HR and industry knowledge training courses.  
 ▶ more

[Print page](#)

**Right Sidebar:**

**Contact**  
 We are pleased to advise you. Just contact us.  
 ▶ more

**Join us at Corporate Intranet**  
 Visit our intranet platform to get more useful information concerning Corporate Executive Development.  
 ▶ more

**DPWN Academy**  
 Use the knowledge base to find information on our extensive eLearning opportunities, our DPWN group courses and our special offers for selected target groups.  
 ▶ more

**Footer:**

Masthead | [Privacy Policy](#) | [Disclaimer](#) | [Contact](#)  
 © 2008 Deutsche Post World Net

Figure 10: Course Finder in Internet Portal (1/2)



Figure 11: Course Finder in Internet Portal (2/2)

DPWN University - Course Finder - Microsoft Internet Explorer

Adresse <http://www.dpwn-executive-development.com/cms/en/courses/coursefinder.jsp>

Deutsche Post World Net  
MAIL EXPRESS LOGISTICS FINANCE

Deutsche Post DHL Postbank

DPWN Executive Development  
Continuous development - the way to success

Deutsche Post World Net  
UNIVERSITY

### Course Finder

You can search for a special course or just select a course from the list below.

Search for   Show all

Category  Search in all categories

Covered motives competence  Search for all

Date	Training Title	Region
11/16/2008	▶ Creating and executing breakthrough strategy	New York
04/26/2009	▶ Creating and executing breakthrough strategy	New York
11/15/2009	▶ Creating and executing breakthrough strategy	New York
05/18/2009	▶ Strategic issues in mergers & acquisitions	Fontainebleau
02/18/2009	▶ Transforming strategy into business results	Madrid

Page: 1 of 1

Masthead | Privacy Policy | Disclaimer | Contact

© 2008 Deutsche Post World Net

Figure 12: Example of Training Course Description in Internet Portal

The screenshot shows a Microsoft Internet Explorer browser window displaying the DPWN University website. The browser's address bar shows the URL: [http://www.dpwn-executive-development.com/cms/en/courses/1\\_3\\_3\\_creating\\_and\\_executing\\_breakthrough\\_strategy.html](http://www.dpwn-executive-development.com/cms/en/courses/1_3_3_creating_and_executing_breakthrough_strategy.html). The website header features logos for Deutsche Post, World Net, DHL, and Postbank, along with the DPWN University logo and the tagline "Continuous development - the way to success".

The main content area is titled "Creating and executing breakthrough strategy". It includes a sidebar on the left with navigation links: Home, Successful Individual Development, Training Courses (selected), Course Finder, Feedback and Coaching, Mentors, FAQ, and Contact. The main content area displays the following information:

- Training Title:** Creating and executing breakthrough strategy
- Provider:** Columbia University
- Duration:** 5 days

**Locations, Dates & Registrations Codes**

- New York  
Nov 16 - Nov 21, 2008 / COXML0320018 ▶ to Course Registration
- New York  
Apr 26 - 01 May, 2009 / COXML0320019 ▶ to Course Registration
- New York  
Nov 15 - Nov 20, 2009 / COXML0320029 ▶ to Course Registration

**What will I do during the training?**

**General**  
Gain a competitive edge by better understanding your customers, competitors and industry trends. Creating and Executing Breakthrough Strategy will provide you with time-tested, simple techniques for skill-fully developing and effectively implementing successful, highly differentiated strategies, so that you can take full advantage of market opportunities.

**Details**  
The program will introduce you to the strategic learning process – a unique way of integrating strategic analysis, focus, alignment and execution; and give you practical guidelines for implementing new strategic directions. You will gain a greater understanding of leadership in changing circumstances, so that you can leverage corporate culture to your best advantage and overcome resistance. In addition, you will benefit from the opportunity to apply your learning to an important personal case with the help and insight of the faculty and your peers.

**What will I be able to do after participating in the training?**

- Learn to conduct a situation analysis: a powerful method for creating insights

On the right side of the page, there is a "Mentor" section stating: "Markus Reckling acts as mentor of this training-course." with a "more" link. Below it is a "Contact" section with an image of a camera and the text: "We are pleased to advise you. Just contact us." with a "more" link.

Figure 13: "Feedback and Coaching" Area of Internet Portal



Figure 14: 360 Degree Feedback Description in Internet Portal

The screenshot shows a Microsoft Internet Explorer browser window displaying the DPWN University website. The address bar shows the URL: [http://www.dpwn-executive-development.com/cms/en/feedback\\_and\\_coaching/feedback.html](http://www.dpwn-executive-development.com/cms/en/feedback_and_coaching/feedback.html). The page header features logos for Deutsche Post World Net, DHL, and Postbank, along with the DPWN Executive Development logo and the tagline "Continuous development - the way to success".

The main content area is titled "360 Degree Feedback" and includes the following sections:

- What is 360 Degree Feedback?**

360 Degree Feedback is primarily an instrument for personal development of a manager. Its basic idea is to collect feedback from various groups of reviewers and to contrast the aggregated results with the self-perception of the manager. Scope of the feedback is the demonstrated work-related behavior of a person. The feedback combines the view of the manager's supervisor, peers, and direct reports. Optionally, business partners (e.g. internal or external customers) can also be included.
- What is the purpose of 360 Degree Feedback?**

By combining different perspectives, 360 Degree Feedback enables the manager to have a better assessment of his/her work-related behavior with explicit information on strengths as well as on development potential. Beyond personal development, 360 Degree Feedback can also be used for organizational development purposes with involvement of a whole department or unit.
- How does the 360 Degree Feedback process work?**

The 360 Degree Feedback is based on an online questionnaire. The items within this questionnaire reflect relevant dimensions of work-related behavior and are based on the motiv8 competencies. To ensure confidentiality, the process is outsourced to our group-wide external provider Cubiks. Cubiks processes the data in full accordance with data security and confidentiality requirements. Please note that providing feedback as reviewer within a 360 Degree Feedback process is voluntary and anonymous.
- How are the results of the 360 Degree Feedback communicated?**

The focus person receives a written report with the feedback results. An internal or external expert conducts a feedback meeting with the focus person to go through the report thoroughly. Of course, the report content as well as the content discussed in the meeting are treated confidentially.
- Further information**

For further information please have a look at our  
▶ 360 Degree Feedback instrument on our intranet website. For individual consulting please contact your respective HR department or  
▶ Hannah Zaunmüller of department Corporate Executive Development.

On the right side of the page, there are three additional sections:

- Contact**: Includes an image of a 360-degree camera and the text: "We are pleased to advise you. Just contact us." with a "more" link.
- Join us at Corporate Intranet**: Includes an image of three people and the text: "Visit our intranet platform to get more useful information concerning Corporate Executive Development." with a "more" link.
- DPWN Academy**: Includes an image of a man in a suit and the text: "Use the knowledge base to find information on our extensive eLearning opportunities, our DPWN group courses and our special offers for selected target groups." with a "more" link.

At the bottom of the page, there is a "Print page" button and a "Fertig" button in the browser's status bar.



Figure 15: Executive Coaching Description in Internet Portal



The final implementation of the new internet portal was accompanied by different communication measures. The head of the corporate department Corporate Executives sent a so-called “Management Email” – an information tool for executives at DPWN – to inform about the portal. A special email was sent to the human resources community with information on the portal, and the same information was put on DPWN’s “Human Resources Development Good-Practice Platform”. The training mentors received flyers and were asked to distribute them in their divisions.

## **Evaluation**

In the third phase of the project "Strategic Executive Education and Development", the implementation phase, it was ensured that the results of the development and design phase were implemented. The fourth phase, the evaluation phase, focused therefore on the published and communicated executive education and development framework and, especially, on the implemented new internet portal with the selected executive education offers.

## **Review and Next Steps of Executive Education and Development Framework**

The aligned and validated executive education and development framework had been published and communicated. Feedback from the human resources community regarding the framework was very positive, since it provided transparency, clear responsibilities and "had been urgently needed" as the head of Global Human Resources Development of one of the divisions stated.

Overall no urgent next steps were identified for the executive education and development framework. It was therefore decided to review and update the framework regularly after the yearly global human resources development meetings (the next one was planned to take place in October 2009).

## **Review and Next Steps of New Internet Portal with Executive Education and Development Offers**

The feedback received for the new internet portal was overall very positive. The executives and the global human resources community highly appreciated that selected executive education and development offers were available – even online. Improvement potential was stated regarding the availability of training courses in German language, but this had not been and still was not a goal of the website with its global target group.

The new internet portal was overall visited approximately 1600 times in the first month after the communication of the portal via Management eMail. On average approximately 50 users visited the website daily, and the average length of stay was approximately eight minutes. Overall, approximately 1.200 different users visited the website; from these approximately 950 users visited the website once and approximately 250 users visited the website several times. Two executives had registered for a training course in the first month.

It was decided to have quarterly reports regarding frequency and amount of website visits (overall and individual sites) as well as training course registrations (including grade, division, and country) to monitor and evaluate the website. Once a year, an overall quality review should take place, including among others an overall alignment of the website content according to new strategic challenges and corresponding required organizational capabilities as well as competencies at DPWN. Moreover, clear criteria – focusing on training course applications, training course evaluations, portal visits and one of the employee opinion

survey questions – were defined to measure (also once a year) the overall performance of the portal (Figure 16).

**Figure 16: Performance Criteria for Internet Portal**

<b>Training Course Applications</b>	<ul style="list-style-type: none"> <li>• 5% of the target group (executives role classification system grades B-F) conducted a training via application through the portal</li> <li>• Compared to other DPWN training course portals the training courses from this portal are visited as frequent or more frequent</li> </ul>
<b>Training Course Evaluations</b>	<ul style="list-style-type: none"> <li>• Compared to other DPWN training course portals the feedback given to the training courses on this portal is as good or better</li> </ul>
<b>Portal Visits</b>	<ul style="list-style-type: none"> <li>• Compared to other DPWN training course portals this portal has as many visits or more visits</li> </ul>
<b>Employer Opinion Survey (EOS) Question</b>	<ul style="list-style-type: none"> <li>• The outcome for executives of the EOS question "My company provides me with the opportunity for learning and development?" is better compared with previous years</li> </ul>

## Conclusion

This paper has described the main phases and the results of the project "Strategic Executive Education and Development" at the department Corporate Executive Development of DPWN. Special focus has been put on the description of the development and implementation of a global executive education and development framework for the company and a new internet portal matching executive training courses to the company's competencies.

Not only at DPWN, but also in general, the recognition of the importance of executive education and development for nurturing and strengthening leadership competencies to achieve and sustain superior business success has increased in recent years. It is also likely to still strongly increase in the future in view of the financial and economic crisis 2008/ 2009, which has not only been started by financial speculations, but also by the failure of executives and in that way by the failure of the companies of not having the right executives with the right performance in the right jobs at the right time. The problems certainly begin

with the selection and recruitment of executives – by suggesting and not checking professional competencies/ expertise and focusing primarily on soft skills –, but they continue with executive education and development (Scholz, 2008). Many companies start rethinking their overall personnel and especially executive management in view of the financial and economic crisis.

### List of Figures

Figure 1: Education and Development Philosophy: 70-20-10 Formula .....	4
Figure 2: Main Phases of Project “Strategic Executive Education and Development” .....	7
Figure 3: Overview of As-Is Analysis.....	8
Figure 4: Goal and Philosophy of Executive Education and Development .....	11
Figure 5: Categories and Sub-Categories of Executive Education and Development Offers....	15
Figure 6: “Successful Individual Development” Area of Internet Portal.....	19
Figure 7: Philosophy Description in Internet Portal.....	20
Figure 8: Individual Development Process Description in Internet Portal.....	21
Figure 9: “Training Courses” Area of Internet Portal .....	22
Figure 10: Course Finder in Internet Portal (1/2).....	23
Figure 11: Course Finder in Internet Portal (2/2).....	24
Figure 12: Example of Training Course Description in Internet Portal .....	25
Figure 13: “Feedback and Coaching” Area of Internet Portal.....	26
Figure 14: 360 Degree Feedback Description in Internet Portal.....	27
Figure 15: Executive Coaching Description in Internet Portal .....	28
Figure 16: Performance Criteria for Internet Portal .....	30

**Bibliography:**

Bohlander, G.; Snell, S., 2007, Managing Human Resources, Edition 14, South-Western, Mason, p. 294, 295 and 318.

Bolt, J. F.; Dulworth, M.; McGrath, M., 2005, Strategic Executive Development – The Five Essential Investments, Jossey-Bass, San Francisco, introductory pages.

Bröckermann, R., 2007, Personalwirtschaft – Lehr und Übungsbuch für Human Resources Management, 4th Edition, Schäffer-Poeschel Verlag, Stuttgart, p. 420.

Bruch, H.; Vogel, B.; Krummacker, S., 2006, Leadership: Ausgangslage und Ziele des Buches sowie Begriffsverständnis und Ebenen, S. 3, in: Bruch, H.; Krummacker, S.; Vogel, B. (Hrsg.), 2006, Leadership – Best Practices und Trends, Wiesbaden, Gabler Verlag.

Burghardt, M., 2007, Einführung in Projektmanagement – Definition, Planung, Kontrolle, Abschluss, 5. Auflage, Publicis Corporate Publishing, Erlangen, S. 9 ff.

Kirkpatrick; D. L., Kirkpatrick, J. D., 2006, Evaluating Training Programs, Edition 3, Berrett-Koehler Publishers, San Francisco, p. 21 ff.

McCall, M. W., 1997, High-flyers – Developing the next generation of Leaders, HBS Press, p. xii.

Scholz, C., 2008, Der Fisch stinkt vom Kopf her: In einer Studie zum Humankapital landete die Hypo Real Estate auf dem letzten Platz – ein Indiz dafür, dass die Finanzkrise auch mit katastrophalem Personalmanagement zu tun hat, Financial Times Deutschland, October 7, 2008.

Schorp, S. C.; Heuer S., 2008, Führungskräfteentwicklung in der Praxis, p. 424 ff., in: Meifert, M. T. (Editor), 2008, Strategische Personalentwicklung – Ein Programm in acht Etappen, Springer, Heidelberg.

SMU Cox, Fall 2006, The Case for University-Based Executive Education – A White Paper Surveying Current Research, p. 18. Cf. [http://www.princeton.edu/hr/I&d/I&d\\_learning\\_process.htm](http://www.princeton.edu/hr/I&d/I&d_learning_process.htm), October 2008.

Ulrich, D.; Smallwood, N., 2007, Leadership Brand – Developing Customer-Focused Leaders to Drive Performance and Build Lasting Value, Harvard Business School Publishing, Boston, p. 29.

Yukl, G., 2006, Leadership in Organizations, Edition 6, Prentice Hall, Upper Saddle River, p. 8.

### **List of Footnotes**

<sup>1</sup> At the beginning of March 2009, with the communication of the new strategy DPWN changed its Group name to Deutsche Post DHL. Since the project discussed in this paper took for the most part place in 2008, the company is described in this paper according to its set-up in 2008, and it is also named as in 200

---

## Learning About How We Learn

---

### **Robert D. Wood, MBA, PhD (ABD)**

ISM – Paris

Post Office Box 1853

Flat Rock, NC 28731

robw28731@bellsouth.net

**Abstract:** Within the academic environment, while the Doctor of Philosophy degree continues to emphasize research, a majority of PhDs are additionally responsible for instruction within their field of expertise. It is therefore incumbent upon the PhD to acquire fundamental knowledge of the brain's structure and mental processes, associated with learning and intelligence, to better evaluate instruction techniques and facilitate retention among their intellectual wards.

During the course of their education, most instructors have acquired a fundamental understanding of the brain's physiology and associated functionality that enable thought, learning, and retention. Concurrently, a knowledge of established theories associated with learning – how we learn, what environments are conducive to our desire to learn, and what is required to recall past stimuli to act with a current action – were routinely researched. Such activities provide the platform for a discussion of cognitive science - how we think and the principals of learning - bridging to a detailed analysis of brain-based learning.

A utilitarian approach to understanding brain-based learning concentrates on:

- a) an itemization of options available to facilitate the transfer of knowledge and support learning;
- b) correlations between specific information and skills learning theory, and;
- c) a summary of qualified tactics to achieve learning objectives.

This paper will examine these attributes of brain-based learning, summarizing how research over the past decades, regarding the



brain’s functionality, has altered our understanding and expertise concerning instruction methodology, and why it is relevant to the area of international education.

**Keywords:** (brain-based learning), (education theory), (instruction), (international education).

**Reference:** Reference to this paper should be made as follows:  
Wood, R. (2009) “Learning About How We Learn”, International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes: Rob Wood** is a late in life doctoral candidate after a career in international business and strategic marketing. He is currently an ad hoc “professor-for-hire” in western North Carolina, USA, and is completing his dissertation, “Compensation, Corruption, and Culture: An International Perspective.”

---

## Introduction

How do we learn? Research has made great strides illuminating the fundamentals of the brain and its cognitive processes. We have identified certain correlations between cognition and learning and formulated theories related to how the mind works and commonly accepted principles of learning.

The objective of this paper is to develop an understanding of brain-based learning, and the benefits derived from same, by:

- a) defining brain-based learning and its attributes;
- b) examining the core principles associated with brain-based learning, and;
- c) investigating a movement – stringently supported by Daniel Willingham, a professor of cognitive psychology (UVA) and author of *Cognition: The Thinking Animal* - which maintains much of the fervor associated with brain-based learning tenets are “popular myths” (2006).

## The Basics of Learning

Carl Rogers described learning as an “insatiable curiosity” that drives the individual to absorb everything one can see, read, or hear about a topic of interest (Smith, 2007). Indeed, under

the best of circumstances, this is what learning should be and educators should pursue. The reality is that in too many instances, learning is an outcome, not a process.

The core of cognitive learning, as represented by brain-based learning, is based upon the structure and function of the brain. In essence, the theory posits that as long as the brain is not prohibited from fulfilling its normal processes, learning will occur, based in part on the core-principles of brain-based learning (Zambella, 1999):

- The brain is a parallel processor, meaning it can perform several activities at once, like tasting and smelling.
- Learning engages the whole physiology.
- The search for meaning is innate.
- The search for meaning comes through patterning.
- Emotions are critical to patterning.
- The brain processes wholes and parts simultaneously.
- Learning involves both focused attention and peripheral perception.
- Learning involves both conscious and unconscious processes.
- We have two types of memory: spatial and rote.
- We understand best when facts are embedded in natural, spatial memory.
- Learning is enhanced by challenge and inhibited by threat.
- Each brain is unique.

The domain of learning, however, covers a vast array of need acquisition, and has been categorized over time by numerous learning theories as they relate to the type of function, skill, or information to be acquired and retained. They are:

- Cognition Theory – Espoused by Edward Tolman in the 1930's, cognition theory holds that we expect specific outcomes from specific behavior, and although learning can occur without reinforcement, it does require individual or imposed motivation.
- Habit Theory – Habits generally begin as a conscious action, and become something that is executed without thinking about doing it, and the more times it is performed, the easier and more automatic it becomes, eventually requiring practically no thought at all. Even though most psychologists agree that only habits of a beneficial nature are readily adopted - based upon the theory of operant conditioning and positive reinforcement - psychological aberrations also support the adoption of habits associated with negative reinforcement.
- Humanistic Theory – Humanistic theory holds that learning results from an inner drive to be creative and express oneself. While the theory also contends the individual is responsible for his life and actions, it maintains changes can be made at any time through personal awareness and desire, in an effort to satisfy the

total self as it strives for self-actualization, self-maintenance, and self-enhancement.

- Instinct Theory – While instinct and instinctive behavior is categorically found in practically all animal species, and involves neither experience nor learning, instinctive behavior still occurs in response to a stimulus, with the higher animals capable of modifying their instinctive behavior via learning.
- Physiological Learning – Physiological learning theory is the foundation for the "left-brain/right-brain" syndrome, based upon the fact that the brain is symmetrically split into two parts, the left and right hemispheres. The left hemisphere is critical to the learning process, being responsible for language, analytical thought, reasoning, and sequential skills, while the right is focused on non-language processes - spatial ability, art, music, memory, and recognition, with each hemisphere relating to its opposite side of the body. In over 90% of the population, the left hemisphere controls fine motor control and communication skills, including language - conceptualization, speaking, writing, and verbal comprehension - making it the dominant hemisphere. Hence, most people are right-handed.
- Psychomotor Skills – Finally, there is learning based upon the application of psychomotor skills, which result from organized muscle activity in response to stimuli from the environment. These skills are controlled by the sensory and motor cortex of the brain, crossing between both hemispheres, and involve substantial physical reinforced practice. (Smith, Learning Theory, 2007)

The effectiveness of instruction, resulting in learning, is predicated on conditioning, or the types of human behavioral attributes that induce learning. These four conditioning applications, originally listed in "The Brain: A History" (Oracle Education Foundation, 2002) are:

- Classical conditioning;
- Operant conditioning;
- Multiple response learning, and;
- Insight learning.

The first, classical conditioning, is stimulus-response focused, and also known as associative learning, in that it employs associations of two or more stimuli in order to change a response to one or more of them based on previous experience memory.

Classical conditioning maintains that learning occurs when a new stimulus begins to elicit behavior similar to the behavior produced by an old stimulus. The most famous study associated with classical conditioning, and a prime example of a conditioned response, is

the early 1900s study by Ivan Pavlov wherein dogs were trained to salivate in response to two stimuli: noise or light, and food or a sour solution. In this instance, unconditional stimuli - the food and sour solution - allowed both the learning to occur and simultaneously reinforced the learning.

A major advantage of classical conditioning is its understanding how people acquire emotional behavior responses, such as developing a new fear, when a particular present stimulus is combined with a previous frightening stimulus, producing the emotional response.

The second behavioral attribute, operant conditioning, is purely goal-directed - learning to perform a particular response for a known expectation, such as a child learning to whine, knowing that the behavior will result in the desired attention.

B. F. Skinner conducted the most famous operant conditioning experiment in the 1930s by training mice to press levers to receive food, substantiating that if a behavior is rewarded, the behavior will occur more frequently. Skinner's experiment demonstrated one of four potential types of associated operant learning:

- Positive Reinforcement, exemplified by the more often the action is performed, the more the stimulus is reinforced;
- Negative Reinforcement, or when performing an action removes an undesirable stimulus;
- Punishment, or experiencing an undesirable stimulus in response to an action, and;
- Omission Training, when performing an action prevents the delivery of a pleasant stimulus.

The third attribute, multiple-response learning, involves nothing more than learning a sequence of simple movement-patterns, which are combined to form more complicated skill-associated abilities. Of note is the concept of latent learning, an extension of multiple-response, which occurs in the absence of an immediate reward, with the missing reinforcement of a reward stifling the process.

Finally, insight learning involves the ability to solve an unfamiliar problem by assembling a solution based on its relative similarities to smaller problems solved in the past. Instead of learning by trial-and-error, insight learning involves trials and cumulative option evaluations, which occur mentally.

General learning concepts are fundamentally essential to the successful acquisition and retention of information, although not specific to any singular application. Among the more important are:

- **Attention**, or the conscious ability to focus on a specific activity, either involuntarily or causative. Its effectiveness is directly proportional to the strength of the stimulus, and it diminishes with habituation.
- **Concept Formation**, concerning any broad abstract thought, includes defining properties ascribed by the individual and based upon the interaction of the mind and reality.
- **Habituation**, an attribute of attention, is a decrease in responsiveness to unimportant or inappropriate stimuli, or possibly the acquired trait of not responding to certain stimuli.
- **Memory** is probably the most vital part of the learning process, but to date little is known about how memories are stored in the brain. Current consensus is that it involves both chemical and structural changes in the neurons, where the activity of various chemicals provides temporary occupancy for newly acquired information, lasting for a few minutes, and unless essential molecules and genes are activated, this fresh knowledge is evicted and forgotten. Research indicates that the process of transforming a short-term memory into a long-term memory begins when brain cells receive signals that induce reactions involving the molecule protein kinase A, which triggers another molecule in the cell known as cyclic AMP-response element binding protein (CREB). CREB activates genetic activity, which initiates the production of special proteins that change the structure and activity of nerve cells, fixing information for days, weeks or longer. This core molecular switch appears to be involved in securing the memories of facts and events, known as explicit memories, as well as implicit memories, which involve motor skills and perceptual strategies and remind us how to do something. While at least some of the chemical reactions needed to convert a short-term memory into a long-term memory appear to be the same, using the CREB core molecular switch in securing both explicit and implicit memories, it is now believed that the memory processing physically occurs in different brain areas. Explicit memories require the brain regions within the temporal lobe of the cerebral cortex, including the hippocampus, and implicit memories are primed in the specific sensory and motor systems that are recruited for whatever the particular task is (Society for Neuroscience (SfN), 2008). There are generally three main groups of memory classification: sensory memory, short-term memory, and long-term memory. One of the three "R's" - recall, recognition, and relearning - accesses memory. Recall involves trying to list as many details of a past event as possible; recognition isolates accurate details from all relevant facts, and; relearning involves memorizing details after they were supposedly forgotten.
- **Perception**, or the way information is received and interpreted, allows certain things to be known objects through association, but it does not tell about the

objects themselves, requiring mental organization, and interpretation of what is perceived, either through detection, recognition, or discrimination.

- **Problem Solving** references the mental process employed to devise a solution to any obstacle that prevents attaining a specified goal, with problem-solving, using three sequential methodologies: 1) examining what has been said about the problem; 2) experimenting with the problem, and; 3) working through the problem. Research evidences a unique characteristic of problem solving, that the process is not entirely open to consciousness, i.e. the “eureka” effect.
- **Reasoning**, generally viewed as a loose combination of mental processes focused on finding a more coherent view of an issue, is managed thinking, driven by either a specific goal or desired outcome. While it is often regarded as a subset of logic, feelings and sensation may affect the process and the logical structure abandoned. (Cognitive Science, 1994; Kearsley, 2008)

All of the above attributes and applications are transparent to the learning modality employed by the instructor that enables the student processing of information and logging it into their brain’s memory. While there are strengths and weaknesses associated with each modality, it is incumbent upon the instructor to ascertain which modality best adapts to the learning objective, and best accommodates the student needs based upon their predominate or preferred method for learning. The basic instruction/learning modalities are:

- Visual, or learning by seeing/observing;
- Auditory, or learning by hearing/listening, and;
- Kinesthetic, or learning by practicing/doing (Doyle, 2007).

The appropriate modality is critical to the success of instruction in any environment, but becomes increasingly important as education moves into the realm of the “virtual classroom” and distance learning. Reference schemes outlining the strengths and weaknesses of the modality applications are readily available to instructors, similar to that one included in the appendix. Thorough modality analysis by the instructor includes assessment of not only associated personality characteristics that aid in identifying a preference, but also selecting effective teaching techniques for each learning modality.

### **What is brain-based learning?**

“Brain-based learning is a combination of brain science and common sense.” (Hart, 2002)

In his book “Human Brain and Human Learning”, Leslie Hart argues that teaching without an understanding of how the brain learns is like “designing a glove with no sense of what a hand looks like.”

---

The brain and how it functions has been studied for over two thousand years. With the introduction of neuroscience, our perspective shifted to a more complex brain model, based upon definitive research including experiments, medical analysis, and laboratory studies. The use of double blind clinical studies - employing large, diverse groups of people - have gathered data that enables our comprehension of how human learning actually occurs, with the ongoing success of learning innovations being a joint effort of medical technology and psychological advances.

Logically, then:

- A) If classrooms are places of learning, and the brain is "the organ of learning," seemingly it must be understood and accommodated, and:
- B) If brain-based learning is a comprehensive approach to instruction based upon research in neuroscience, such that our brain learns naturally according to how it functions at varying stages of development, then;
- C) Providing a biologically driven framework for teaching and learning, while explaining recurring learning behaviors, would seem to be a "no brainer."

Yet, advances in education, with particular emphasis on learning and retention, have not occurred with the same vigor as our understanding and embrace of cognitive brain-based learning, particularly within its home base, the United States. The National Commission on Mathematics and Science Teaching for the 21<sup>st</sup> Century concludes that U.S. students are "devastingly far" behind the rest of the world (The National Commission on Mathematics and Science for the 21st Century, 2000). Proponents of the "passing fad" school regarding brain-based learning will be discussed in detail later in this paper.

Among the many supporters of Hart's approach to educating with the brain's functions and design in mind, however, are Renate Nummela Caine and Geoffrey Caine, authors of *Making Connections: Teaching and the Human Brain* (1991), *Unleashing the Power of Perceptual Change: The Potential of Brain-Based Teaching* (1997), and *Education on the Edge of Possibility* (1997). They have furthered the idea of brain-compatible learning by creating a list of twelve "brain/mind learning principles." These principles synthesize current research and present it in a form tactically useful to educators, which according to Renate Caine, have "enormous implications for schools...because so many neurological pathways critical for later life are laid down from age zero to age 3" (Poole C. , 1997). The Caines' belief is that the principles not only function as a foundation for brain-based learning, but additionally offer both guidelines and a framework for teaching.

Still, the Caines are concerned with prematurely over-estimating the principles' short-term impact, given the on-going nature of brain research. Their cautious approach emphasizes a fundamental and important dilemma for bridging neuroscience and teaching practices - achieving a balance between incorporating new research into the education process, and

---



the potential for drawing potentially irresponsible conclusions founded on shaky, yet unsubstantiated, scientific research.

In an attempt to resolve the dilemma, their "12 Brain/Mind Learning Principles" are based on a wide range of additional disciplines - cognitive psychology, sociology, philosophy, education, technology, sports psychology, creativity research, and physics – not just neuroscience. Further, they are the first to admit the principles are neither definitive nor closed to revision, contending that as more is discovered about the brain, educators will need to update their knowledge base and tactics.

In their current state, the principles still provide an integrated view of the learning process and the learner, in an effort to move us away from seeing the learner as a blank slate and toward an appreciation of the fact that body, brain, and mind are a dynamic unity (Weiss, 2001).

Following is Caine and Caine's complete list of the twelve brain/mind learning principles:

1. The brain is a complex adaptive system.
2. The brain is a social brain.
3. The search for meaning is innate.
4. The search for meaning occurs through patterning.
5. Emotions are critical to patterning.
6. Every brain simultaneously perceives and creates parts and wholes.
7. Learning involves both focused attention and peripheral attention.
8. Learning always involves conscious and unconscious processes.
9. We have at least two ways of organizing memory.
10. Learning is developmental.
11. Complex learning is enhanced by challenge and inhibited by threat.
12. Every brain is uniquely organized. (Caine, 1997)

Intuitively, three interactive teaching elements emerge from the principles, and while the scope of this paper does not include instruction methodologies, a review of tactics associated with brain-based pedagogy warrants discussion. The three learning tactics currently in use, being generally agreed upon because of our increased understanding of neurologically- based learning, are:

- **Orchestrated immersion**, or the creation of learning environments that immerse students in a learning experience. Examples of incorporating immersion techniques include the creation of classroom models that emulate "real life" exposure to the subject or topic, field trips to experience a process or environment, or emulated environments that replicate the mood or sensation of an experience.

- **Relaxed alertness**, which involves establishing a learning environment that works to eliminate fear and reproachment, while remaining challenging. With an observed definitive relativity to the Hawthorne Effect (Landsberger, 1958), it has been found that a relaxed tone in the classroom encourages "productivity," or in this instance, learning. The primary impact of this tactic involves accepting all students by endorsing their various learning styles, capabilities, and disabilities, seemingly much more proactive than other documented attempts at creating a similar environment with efforts that seem a bit far afield, such as aromatherapy - burning vanilla scented candles to calm students and peppermint scents to stimulate the senses.
- **Active processing**, concerns consolidating information such that it connects to some prior learning. The net effect is an increased learning coefficient with enhanced internalization, retention, and active processing. By orchestrating learning such that new information is linked to previously learned data, a foundation is established from which to initiate the internalization of new information, increasing both retention and learning efficiency. (Caine, 1997; Jensen, 1998)

Beyond the teaching practices employed in support of brain-based learning is the student conditions required for learning. Critical to the student's "upload" of information and learning are their individual "learning states," as affected by:

1. **Motivation** or anything that affects the state of the nervous system to determine behavior and is generally associated with a psychological drive or need to behave appropriately and accordingly.
2. **Interest**, which facilitates thinking processes and attention. If interest in a topic is lost or diminished, the brain moves on to thinking about something else, or "daydreaming."
3. **Transfer of training**, or the recognition that new learning profits from old learning because learning one thing generally enables learning another. The most current viewpoint regarding transfer of training is that both concrete and abstract knowledge can and is transferred from one situation to another, with the most important factor being the organization of prior knowledge.
4. **Sensory enriched environments**, which research indicates literally changes the structure and chemistry of the brain, enabling both greater retention and better individual performance, as exemplified by an increased thickness of the neocortex, with larger cell bodies and neuron nuclei, longer dendrites, and a pronounced increase in the area of synaptic contacts.

The largest issue facing educators today, and one on which a great deal of research has been focused, is the question of “Why do some students learn more than others, in identical classroom and school settings, and using the same teaching techniques?”

In that the learning process is highly individualized, even though classroom tactics are generally uniform and egalitarian, it would seem reasonable that affective reasons outside the classroom are the most likely candidates of differentiation, which can be classified into four broad categories (Figure 2).

<b>A Transactional Model of the Teaching/Learning Process</b>	
<b>Context</b>	All those factors outside of the classroom that might influence teaching and learning
<b>Input</b>	Those qualities or characteristics of teachers and students that they bring with them to the classroom experience
<b>Classroom Processes</b>	Teacher and student behaviors in the classroom as well as some other variables such as classroom climate and teacher/student relationships
<b>Output</b>	Measures of student learning taken apart from the normal instructional process.

**Figure 1 (Huitt, 2003)**

Taking the concept one-step further, Huitt employs systems theory to explore the teaching/learning process by incorporating the contextual environmental conditions that affect the student's ability to learn, as exemplified in Figure 3.

Concurrently, Marcia D'Arcangelo (2000) summarized twelve education design principles based upon brain-based learning. While focused on primary and secondary education scenarios, they nevertheless selectively translate easily between the actual and virtual classroom environment, reflecting both the skill and common sense associated with instruction (My best elementary school teachers were employing these tactics long before brain-based learning was more than a concept). They entail:

- Rich, stimulating environments, using student created materials at the elementary levels, subject-immersion materials at upper levels. Further changing the displays regularly.

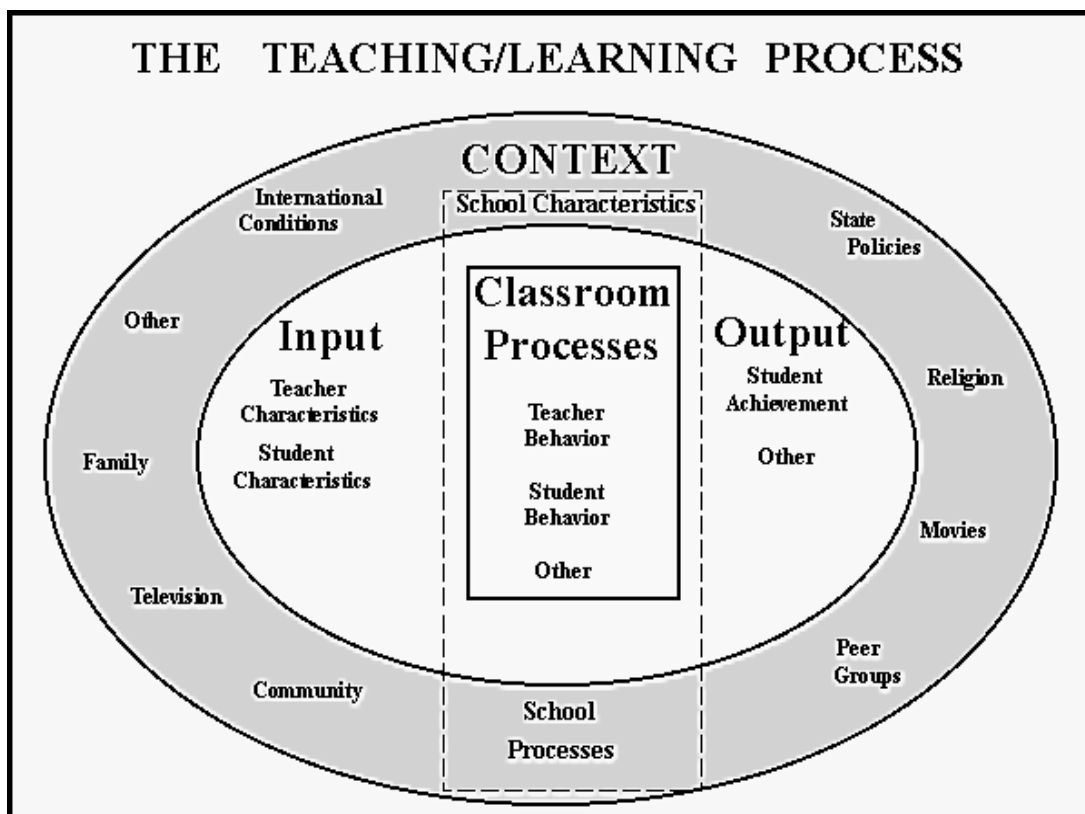


Figure 2

- Places for group learning, with relaxed furniture and couches available for casual discussion areas.
- Linking teaching opportunities in both indoor and outdoor spaces so students can move about using their motor cortex for more brain oxygenation.
- Insuring safe havens where threat is reduced, particularly in large urban settings.
- Creating a variety of environments with different lighting, and nooks and crannies for informal conversation.
- Have multiple resources available, providing for easily integrated learning activities. Multiple functions of learning and the prevention of boredom in dealing with the perpetually mundane is the goal.
- Flexibility, with regard to structure, information and materials. Learning is enhanced when students are doing what they desire to do at that moment, not when forced by arbitrary and capricious measures. A syllabus should serve as a guide, nothing more.
- Provisioning quiet areas for reflection and retreat from others to use intrapersonal intelligences.
- Providing for adequate personal space. Crowding subverts learning.
- Recognizing the community at large - locally, regionally, domestically and globally - as an optimal learning environment

- Remembering that the brain can grow new connections at any age, prompted by challenging, complex experiences with appropriate feedback.

### Is "Brain-Based" Learning: More Fiction than Fact?

"Another troubling trend, which seems to be emergent, is a great fascination with what's called "brain-based" learning. This is apparently a distortion of what cognitive scientists have learned about how children learn. There are scores of workshops being offered now to teachers and administrators on brain-based assessment, brain-based learning, and brain-based supervision. But the most advanced cognitive scientists today say that we don't know nearly enough about studies of the brain to be able to draw practical implications for the classroom. I think that this is yet another trend that may seem to offer easy answers to learning, instead of getting down to the business of preparing excellent teachers of mathematics and science and history and literature and foreign languages and the arts who can teach students what they need to learn during the time they're in school." - Diane Ravitch (Stossel, 2000)

The reality of instruction and learning is that often instructors' methodology decisions are a mix of theories from formal education, trial and error, craft expertise, and gut instinct. Many educators have come to believe that there is a problem with the concept of brain based learning ; that few, if any, reputable neuroscientists agree with the premise, and that the main evangelists for the cult are professional lecturers and new-age philosophers who have little or no formal background in the subject.

Foremost among its greatest doubters is Daniel T. Willingham, a professor of cognitive psychology at the University of Virginia, and columnist for American Educator. Dr. Willingham contends there are three great myths propagated by brain-based theory (Willingham, 2006):

- **School Is Designed for Left-Brained Students** – This was first conjectured almost thirty years ago when scientists were trying to characterize the strengths and weaknesses of each of the brain's two hemispheres. While the research was based on mere speculation, as the left- and right-brain distinctions gained popular appeal, the justification for the concept was further abandoned because of their seeming rationality in capturing commonly observed cultural differences among people. By the mid-1980s additional data of both greater quantity and quality indicated that there were actually no left-hemisphere or right-hemisphere tasks, but that both hemispheres contributed in some fashion to nearly all tasks in a normal brain (The one exception being language, which does appear to be localized in the left hemisphere). This theory was confirmed in the 1990s with

the advent of magnetic brain imaging, verifying that both hemispheres participate at some level in virtually every task.

- **Schools Are Designed to Suit Girls’ Brains** - The perennial myth that the United States’ educational system is biased toward girls over boys originated in the early 1990s after the American Association of University Women published *How Schools Shortchange Girls*. Their premise, as stated below, did affect education on numerous levels, from female focus academic curriculum – woman’s studies – to mandated athletic programs – Title VI.

“Research reveals a tendency, beginning at the preschool level, for educators to choose classroom activities that appeal to boys’ interests and to select presentation formats in which boys excel.” (AAUW, 1991)

Since 1991, research has demonstrated boys actually demonstrate substantially worse patterns of achievement over the long term than girls, prompting an argument that boys’ educational failings can be traced to anatomic and physiological differences. (Chiarella, 2006; Tyre, 2006; Connell, 2002)

One legitimate example of the confusion created by “brain-based-bias” concerns the difference in size of the hippocampus, which, on average, is larger in girls than boys. As outlined in the series’ first paper, the hippocampus supports both learning and memory and, based on the size difference, girls should have a better memory than boys. But the assumption that the bigger hippocampus causes the better memory is a common error within the methodology, because it is routinely assumed that a physical difference in the brain automatically equates to a cognitive difference. Thus, even if boys have a smaller hippocampus, their memory may not be worse because of a “physical handicap,” but quite simply because they are less interested in memorization than girls.

The complexity of the gender learning issue prevents deeper discussion in a paper of this length, but in a simplistic view, it may well be that while boys have some difficulties in school that girls do not, the research necessary to understand and resolve the issue is within the classroom setting, not neuroscience.

- **Young Children’s Brains Must Have Lots of Sensory Stimulation—and Classical Music Is Especially Important:** A major issue with the first part of this myth is its basis on studies of sensory deprivation in animals, performed by physiologists Torsten Wiesel and David Hubel in the 1960s. Their research demonstrated that kittens’ visual systems did not develop normally if deprived of certain types of visual stimulation, which the public projected as more stimulation is better.



Quite logically, the fact that deprivation results in a poorly developed sensory system does not equate with extra stimulation making the sensory system better or stronger.

The classical music part of this myth is based on an even weaker neurological hypothesis. The "Mozart Effect," as it has come to be labeled, was the result of a scientific paper that reported that spatial reasoning among college students increased after listening to Mozart, as compared to the control group who only experienced silence or instructions to relax (Rauscher, 1993).

Norman Weinberger, a leading neuroscientist on music and the brain, describes how the "Mozart Effect" became a social phenomenon in *On the Importance of Being Accurate*:

"...the "Mozart Effect" has gotten so bent out of shape, one can hardly recognize it. The symptoms are clear...A scientific paper is published. It is novel, potentially important with broad implications. Naturally, it receives attention by the media...But then come the oversimplifications. Not...exclusively from a careless media, but also from the fact that we all receive too much information and perhaps unconsciously boil down the complexities of reality into an easily remembered 'cognitive bite'" (1998).

Other noted authors have expressed similar dismay at the uptake and seeming importance attributed to brain based learning, for essentially the same reasons.

In *The Brain/Educator Barrier*, Kathryn Hirsh-Pasek and John Bruer contend that brain-based pedagogy became so pervasive with the public, both educators and nonprofessionals, due to a very successful public relations campaign in the mid-1990s focused on funding Early Head-Start. The basis of their argument for caution with regard to brain-based theory, even though they believe it has great potential for the future, is its lack of an attributable scientific foundation (Hirsh-Pasek, 2007).

Katherine Madigan, Executive Director of the National Council for Teacher Quality, puts the brain-based issue thusly:

"...once again, educators have taken a leap of faith rather than use good science, impeding the development of a professional knowledge base. The trouble is that some educators are extrapolating piecemeal from certain findings and creating curriculum specifications without actual research to back up their claims. They are hitting the streets with 'brain-based' learning kits and workshops. Using the term 'brain-based' has become fashionable, but unfortunately, it is only that -- a fashionable fad that may actually undermine serious research in a very complex

field. In fact, actual testing of brain-based theories in classrooms is almost non-existent."(Madigan, 2001)

In summary, the issues surrounding brain-based learning focus on several common themes espoused by its detractors:

1. Since neuroscientific research is based largely on motivations and questions intrinsic to the field of neurology and the study of the brain, results output is neither directly nor quantifiably translatable into equivalent educational practices.
2. In that most neuroscience studies of development and learning occur in the present, they tend to presumptively support generally accepted cultural interpretations about education rather than challenge them. Their objective is to explain and endorse the status quo, rather than challenge it.
3. Equal weight should be given to other areas of specialization within neuroscience which are equally relevant to understanding the brain's functionality in relation to learning opportunities, especially cognitive neuroscience, cognitive and developmental psychology, and social psychology.
4. It is important that developing educational practices be based on continuing and bi-directional communication between those involved in studies of the brain functionality and educational practitioners who develop learning applications. (Grobstein, 2007)

For neuroscience to add value to the learning process in the future, it must go beyond describing what is happening in the brain at any given moment and assuming a viable lesson plan can be drawn from such insight. A solid example concerns identified physical comfort conditions as they relate to the learning process. While it is of interest for the instructor to understand what happens within the brain when the classroom's temperature is uncomfortable, anyone who has stood before a class intuitively understands that if it is too hot or too cold, the ability of the students to focus on the material, and hence "learn" it, is seriously diminished. The added knowledge of what is functionally inhibiting the brain from accomplishing the learning process does not offer instructors any unique solutions to the problem that are not generally a result of common sense.

The greatest single issue for educators lies in attempts to optimize the interestingly vague outputs of neuroscientific research for classroom applications, or to transition from observing the brain to enabling a child in a classroom, which John Bruer refers to as the "neuroscience and education argument" (Bruer, 1997).

## Summary

---

The past two decades of research on the brain’s functionality has had considerable impact on instruction methodology. Indeed, the one belief always correct about the brain and its workings is that every time a new understanding of “how it works” is established, the brain will counter with an action or response, instantly dispelling “if-then” logic.

A perfect example of this concerns brain-based learning and its opportunities for identifying learning disabilities and the effects of brain damage, a concept fully endorsed by Willingham, Davis, and others (Davis, 2004).

A study concluded in 2003 found that among identical twins, the driving forces behind learning disabilities were not the result of specific genes within a specific area of the brain, but rather a coordinated competence of many aspects of the brain working together, not unlike general cognitive ability. Hence, while it would be beneficial if similar faults within the brain of identical twins tracked to reflect identical results, the reality is the unique attributes of each brain, specific to both process and interrelation capacity, is so unique as to preclude standardization of defects (Cookson, 2003).

Why are the advances in brain-based learning of great value to the field of international education?

One of the most viable applications of distance education is international education, allowing institutions to reach beyond their traditional base and provide a quality education experience to students across a variety of cultures. While international business expertise involves a substantial understanding and application of cross-cultural dynamics, brain-based learning relies on universal neurological functions, essentially a cross-cultural commonality. With such commonality, instructors and students are provided “a level playing field,” regardless of their cultural orientation and location, enhancing the opportunity for information absorption and retention.

Ultimately, an understanding of the brain and its processes will be fully mapped, further enabling the human interaction learning process, if not eliminate it all together, with the education process becoming a matter of input and “uploads.”

**Personality Characteristics of the Learning Modalities**

Visual	Auditory	Kinesthetic
<ul style="list-style-type: none"> <li>• Mind wanders during verbal activities</li> <li>• Has trouble following or remembering verbal instructions</li> <li>• Doodles</li> <li>• Prefers to observe rather than actively participate in group activities and discussions</li> <li>• Likes to read silently</li> <li>• Is neat and organized</li> <li>• Pays attention to detail</li> <li>• Has neat handwriting</li> <li>• Is a good speller</li> <li>• Easily memorizes by seeing pictures and diagrams</li> <li>• May have a "photographic memory"</li> <li>• Is usually quiet, shy, or reserved</li> </ul>	<ul style="list-style-type: none"> <li>• Is easily distracted</li> <li>• Quickly loses interest in visual demonstrations</li> <li>• Enjoys listening activities</li> <li>• Is active in group activities and discussions</li> <li>• Likes to be read to</li> <li>• Prefers reading aloud to silent reading</li> <li>• Listens to music while studying or doing homework</li> <li>• Has sloppy handwriting</li> <li>• Memorizes lists and sequences easily</li> <li>• Remembers faces</li> <li>• Is fairly outgoing</li> </ul>	<ul style="list-style-type: none"> <li>• Taps pencil or foot while thinking, studying, or writing tests</li> <li>• Enjoys doing experiments</li> <li>• Enjoys handling objects</li> <li>• Uses excessive hand gestures and body language</li> <li>• Makes physical contact with people when talking to them</li> <li>• Tends not to enjoy reading</li> <li>• Enjoys hands-on activities</li> <li>• Enjoys problem-solving</li> <li>• Is unorganized</li> <li>• Is a poor speller</li> <li>• Trouble memorizing lists, numbers, etc.</li> <li>• Is outgoing</li> <li>• Easily expresses emotions</li> </ul>

Depending on their preferred learning modality, different teaching techniques have different levels of effectiveness. Effective teaching requires a variety of teaching methods that cover all three learning modalities. No matter what their preference, students should have equal opportunities to learn in a way that is effective for them.

**Effective Teaching Techniques for Each Learning Modality**

Visual	Auditory	Kinesthetic
<ul style="list-style-type: none"> <li>• Guided Imagery</li> <li>• Demonstrations</li> <li>• Copying Notes</li> <li>• Highlighting Key Ideas in Notes/Textbooks</li> <li>• Flash Cards</li> <li>• Color Coding</li> <li>• Diagrams, Photographs, Charts, Graphs, Maps</li> <li>• Filmstrips, Movies, TV</li> <li>• Mind Maps, Acronyms</li> </ul>	<ul style="list-style-type: none"> <li>• Auditory Tapes</li> <li>• Reading Aloud</li> <li>• Oral Instructions</li> <li>• Lectures</li> <li>• Repeating Ideas Orally</li> <li>• Using Rhythmic Sounds</li> <li>• Poems, Rhymes, Word Association</li> <li>• Group Discussions</li> <li>• Music, Lyrics</li> <li>• TV</li> </ul>	<ul style="list-style-type: none"> <li>• Experiments/Labs</li> <li>• Plays, Acting Scenes Out, Role Playing</li> <li>• Games</li> <li>• Problem-Solving</li> <li>• Field Trips</li> <li>• Writing Notes</li> <li>• Making Lists</li> <li>• Props, Physical Examples</li> <li>• Associating Emotions with Concepts</li> </ul>

### Bibliography

- (AAUW), A. A. (1991). The AAUW Report: How Schools Shortchange Girls. Washington, DC: American Association of University Women Education Foundation.
- Bruer, J. (1997). Education and the Brain: A Bridge Too Far. *Educational Researcher* 26, no. 8, 4-16.
- Caine, G. &.C. (1997). Education on the edge of possibility. *Association for Supervision and Curriculum Development* .
- Chiarella, T. (2006, July). The Problem with Boys. *Esquire* , p. 94+.
- Cognitive Science. (1994, June). Retrieved January 29, 2008, from AAAI.org: <http://www.aaai.org/AITopics/html/cogsci.html#simon>
- Connell, D. &. (2002). The new gender gap. *Instructor* , 14-17.
- Cookson, C. (2003, September 10). National News British Association at Salford: Study of twins dashes learning disability hope. Retrieved March 4, 2008, from FT.com: <http://www.ft.com/cms/s.html>
- D'Arcangelo, M. (2000). How does the brain develop? A conversation with Steven Peterson. *Educational Leadership*, 58, 3; p. 68+.
- Davis, A. (2004). The Credentials of Brain-Based learning. *Journal of Philosophy of Education* , 21+.
- Hart, L. (2002). *Human Brain and Human Learning*. Black Diamond: Books for Educators.
- Hirsh-Pasek, K. &. (2007, September 7). The Brain/Education Barrier. *Science* , p. 1293+.
- Huitt, W. (2003, May). Educational Psychology Interactive: Teaching/Learning Process Model. Retrieved February 7, 2008, from Valdosta State University: <http://chiron.valdosta.edu/whuitt/materials/mdltlp.html>
- Jensen, E. (1998). Teaching with the Brain in Mind. *Association for Supervision and Curriculum Development* .
- Kearsley, G. (2008, January 1). Learning Concepts. Retrieved March 14, 2008, from Explorations in Learning & Instruction: The Theory Into Practice Database: <http://tip.psychology.org/concepts.html>
- Landsberger, H. (1958). *Hawthorne Revisited: Management and the Worker, Its Critics, and Developments in Human Relations in Industry*. Ithaca: NYS School of Industrial and Labor Relations.
- Madigan, K. (April, 2001). Buyer Beware: Too Early To Use Brain-Based Strategies. *Basic Education* .
- (The) National Commission on Mathematics and Science for the 21st Century. (2000). *Before It's Too Late*. Washington, DC: The U.S. Department of Education.
- Oracle Education Foundation. (2002). ThinkQuest. Retrieved January 16, 2008, from How we Learn: [http://library.thinkquest.org/C005704/content\\_hwl.php3](http://library.thinkquest.org/C005704/content_hwl.php3)

- Poole, C. (1997). Maximizing Learning: A Conversation with Renate Nummela Caine. Educational Leadership .
- Rauscher, F. S. (1993, December 9). Music and spatial task performance. Nature , p. 611+.
- Smith, M. (1999). Learning Theory. Retrieved February 7, 2008, from the encyclopedia of informal education: [www.infed.org/biblio/b-learn.htm](http://www.infed.org/biblio/b-learn.htm)
- Smith, M. (2007). The cognitive orientation to learning. Retrieved February 2, 2008, from the encyclopedia of informal education: <http://www.infed.org/biblio/learning-cognitive>.
- Society for Neuroscience. (2008). How do Facts Stick in our Mind? Retrieved March 20, 2008, from Society for Neuroscience.  
[http://www.sfn.org/index.cfm?pagename=brain\\_Backgrounders](http://www.sfn.org/index.cfm?pagename=brain_Backgrounders).
- Stossel, S. (2000, November). Hard Lessons: Diane Ravitch argues for a return to academic rigor in our nation's public schools. The Atlantic Monthly .
- Tyre, P. (2006, January 31). The Trouble with Boys. Newsweek , p. 42+.
- Weinberger, N. (Spring, 1998). On the Importance of Being Accurate. MuSICA Research Notes.
- Weiss, R. (2001). The Mind Body Connection in Learning. American Society for Training and development . Sep, 55, 9; p. 60+.
- Willingham, D. (2006, Fall). Ask the Cognitive Scientist: "Brain-Based" Learning: More Fiction than Fact. American Educator .
- Zambella, B. (1999). The MIT Encyclopedia of the Cognitive Sciences. Retrieved February 7, 2008, from Proquest:  
<http://proquest.umi.com/pqdweb?index+0&sid=1&srchmode=1&vinst=PROD&fmt=3&star>

### **Additional Reading**

- Allen, E. &. (2006). Making the Grade: Online Education in the United States, 2006. Needham, MA: Sloan Consortium.
- Cheng, C. &. Ko, C. (2004). Secure Internet examination system based on video monitoring. Internet Research. 14, 1; 48+.
- Creed, T. (1996). Extending the Classroom Walls Electronically. In W. &. Campbell, New Paradigms fo College Teaching. Edina, MN: Interaction Book Co.
- Dorland, W. (2000). Dorland's Illustrated Medical Dictionary. Elsevie.
- Doyle, T. (2007, May). Teaching and Learning Tips. Retrieved March 3, 2008, from Ferris State University Center for Teaching, Learning & Faculty Development:  
[http://www.ferris.edu/fctl/Teaching\\_and\\_Learning\\_Tips/Learning%20Styles/Learning Modalities.htm](http://www.ferris.edu/fctl/Teaching_and_Learning_Tips/Learning%20Styles/Learning Modalities.htm)
- Freudenrich, C. (2007, September). How Your Brain Works. Retrieved January 11, 2008, from How Stuff Works: <http://health.howstuffworks.com/brain.htm>

- Garber, D. (. (2003, August 29). Descartes, René. Retrieved February 18, 2008, from Routledge Encyclopedia of Philosophy:  
<http://www.rep.routledge.com/article/DA026SECT5>
- Grobstein, P. (2007, March). Brain and Education: Thinking about New Directions. Retrieved March 5, 2008, from serendip:  
[http://serendip.brynmawr.edu/sci\\_edu/education/brained.html](http://serendip.brynmawr.edu/sci_edu/education/brained.html)
- Gilman, R. (1984). The Learning Process. The Way of Learning. Summer, p, 17. Retrieved February 7, 2008, from <http://www.context.org/ICLIB/IC06/Gilman3.htm>.
- Gopnik, A. (2005). How We Learn. The New York Times. Retrieved January 16, 2008, from <http://www.nytimes.com/2005/01/16/education/edlife/EDSCIENCE.html>.
- Hazari, S. (2004). Strategy for Assessment of Online Course Discussions. Journal of Information Systems Education. Winter, 15, 4; ABI/INFORM Global, p. 349+
- Huntington's Outreach Project for Education at Stanford [HOPES]. (2004). The HOPES Brain Tutorial. Retrieved January 11, 2007, from <http://stanford.edu/group/hopes/sttools/hopes.html>.
- Katz, J. & Yablon, Y, (2003). Online university learning: cognitive and affective perspectives. Campus-wide Information Systems. 20, 2; ABI/INFORM Global, p. 48+.
- Luria, A. (1970, March). A.R. Luria on functional systems. Retrieved January 9, 2008, from Comnet: <http://www.comnet.ca/functsystems.htm>
- Poole, D., Mackworth, A., & Goebel, R. (1998). Computational Intelligence. Oxford, New York. Retrieved January 26, 2008, from University of British Columbia - Computer Science: <http://www.cs.ubc.ca/spider/poole/ci.html>
- Syverson, M. & Slatin, J. (2006). Evaluating Learning in Virtual Environments. Austin TX: Computer Education and Training Initiative.
- Tham, C. & Werner, J. (2005). Designing and Evaluating E-Learning in Higher Education: A Review and Recommendations. Journal of Leadership and Organizational Studies. 11, 2; ABI/INFORM Global, p. 15+.
- Thagard, P. (2007, April 30). Cognitive Science. Retrieved February 5, 2008, from Stanford Encyclopedia of Philosophy: <http://plato.stanford.edu/entries/cognitive-science>
- Valentine, D. (2002, Fall). Distance Learning: Promises, Problems, and Possibilities. Retrieved March 8, 2008, from Online Journal of Distance Learning Administration:  
<http://www.westga.edu/distance/ojdl/fall53/valentine53.html>
- Vince, R. & Martin, L. (1993). Inside Action Learning: An Exploration of the Psychology and Politics of the Action Learning Model. Management Education and Development. Autumn, 24, 3; p. 205+.
- Willingham, D. (2006). How Neuroscience Could Help...By Detecting learning Disabilities. American Educator. Fall.



Yohon, T. & Zimmerman, D. (2004). Strategies for Online Critiquing of Student Assignments. Journal of Business and technical Communication, Apr, 18, 2; ABI/INFORM Global, p. 220+.

---

## The Value of an Institution's Reputation in Higher Education

---

### **Benoît Lorel, Ph.D.**

Academic Director  
Professor of Ecoomics  
Institut Supérieur de Gestion (ISG)  
147 Avenue Victor Hugo  
75116 Paris, France  
Téléphone : +33 1 56 26 10 10  
Fax : +33 1 56 26 10 00

**Abstract:** Our paper contributes to explore the industrial organization of the educational sector in the context of competition between higher educational institutions to provide insight into the observed hierarchy of universities qualities. Based on their reputation capital, two universities choose entrance requirement optimally in order to attract students. We show that for sufficiently different reputation there will exist an asymmetric equilibrium where the higher reputation school sets a higher admission standard and otherwise, no equilibrium exists in pure strategies. The Stackelberg equilibrium either is the same as the asymmetric simultaneous-move equilibrium when reputations differ sufficiently or has the first-moving university set a low admission standard when its reputation is weak. Only in some cases does the Stackelberg equilibrium make sense in that neither university is worse off than in the simultaneous-move equilibrium, so that the leader-follower roles might be expected to emerge.

**Keywords:** Higher Education, Admission Requirement, Competition between Universities, Reputation

**Reference:** Reference to this paper should be made as follows: Lorel, B. (2009) "The Value of an Institution's Reputation in Higher Education", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Benoit Lorel, in Ph.D. at the University of Cergy-Pontoise and Academic Dean at the ISG, was always interested in issues of education, reflections enriched by his

international experiences, particularly in Brazil and Denmark. His research interests cover both educational systems and their efficiencies, policies of higher education institutions, or admission policies and their impact on economic and social activity (GDP growth, wage inequality, social mobility, and equality of opportunities, etc.).

---

## 1. Introduction

Questionable as it may be, the importance given to various international rankings is clearly increasing.<sup>1</sup> Each higher education institution seeks to promote its training and credibility through international agreements and accreditations.

This paper provides an industrial organization explanation to clarify the role of reputation on education enrolment. How does the universities' reputation capital affect the total number of graduates? When universities compete, how do they compete? These two questions echo the general theme of the paper.

An essential feature of the higher education market is that students are both inputs and customers for the services provided by university (Rothschild and White (1995)). This is even more important that the performance of universities positively depends on ability of their students. Competition among higher education providers has been the object of some academic interest. The first consideration of competition was related to welfare effects (Gary-Bobo and Trannoy (1998)) and how it affects the average ability level or the academic performance (Debande and Demeulemeester (1998), Del Rey (2001) and De Fraja *et al* (2001)). These papers analyze competition between identical higher education providers and concentrate on the education provision role of universities, leaving research and reputation out of the scope of their analysis. However, because of the signalling value of reputation, universities supply differentiated goods.<sup>2</sup> Therefore, education providers get involved in an accreditation process which aims to optimize the education process in order to graduate students and if students can choose which university to attend, universities will behave strategically in order to attract students, thus raising education quality. Or will they?

---

<sup>2</sup> See table 1 and 2 in appendix for the two main rankings.

<sup>2</sup> See for instance De Fraja *et al* (2005) and (2006), Costrell (2004), Gilboa and Justman (2005), Caucutt and Kumar (2003).

Hsieh and Urquiola (2006) argue that higher education providers respond to the competitive pressure, not by raising their productivity, but rather by choosing better students (via entrance examination).<sup>3,4</sup> Although this measure of achievement (of ability) is widely accepted as a proper basis for admissions, little literature exists and certainly no consensus on the best admission policy and how competition among education providers interact with such admission process.

This paper suggests a supply-side explanation based on the industrial organization of the educational sector. In a competitive context, attracting and keeping ablest students, teachers and researchers appears fundamental for high education institutions. That clearly depends on admission requirements which is also constrained to the university's reputation capital, built on past performance and the services they offer. The UK situation is illustrative on this respect: universities are publicly graded for the quality of both their teaching and research performance and the ranking largely publicized.<sup>5,6</sup> We therefore introduce in our model the possibility for universities to manipulate admission requirements in order to secure a high reputation capital. We argue that the stratification of national higher education system and more particularly the existence of a top university drives the higher education system, taken as a whole, to be less selective and therefore providing a rationale to what we observe.<sup>7</sup>

More specifically, the question we address is the following: when institutions compete on the "market for students" on the basis of the number and the quality of their graduates, what academic standards should they set? Should they establish their entrance examination sequentially and simultaneously? In a sequentially-move problem, under which assumption does exist equilibrium in the choice of roles, i.e. the leader-follower roles might be expected to emerge?

---

<sup>3</sup> We can think of these thresholds as the minimal score at the A-level (in the UK or in Australia), or as a national test, as in France, or national competition, as in Greece or Turkey.

<sup>4</sup> Webster (2001) utilizes principal component regression analysis to examine the relative contributions of many ranking criteria used to construct the U.S. News & World Report (USNWR) tier rankings of national universities. The main finding of this study is that the most significant ranking criterion is the average SAT scores of enrolled students. This result is significant since admission requirements are policy variables that indirectly affect, for example, admission applications, yields, enrolment, retention, tuition-based revenues, and alumni contributions.

<sup>5</sup> The National Students Survey and the Times Higher Education Supplement both provide a teaching quality ranking and the Research Assessment a ranking on the basis of research activity performance.

<sup>6</sup> Many other countries set such a ranked quality program for higher education institutions such as Research Quality Framework in Australia, or in Brazil. See also table 2 in appendix, the European Business Schools' ranking, made by the Financial Times

<sup>7</sup> See <http://www.globaled.us/wwcu/> for details on preconditions for access to higher education.

We therefore characterize the competition problem as a localization choice *à la* Hotelling, with different market organization such as the simultaneity or the sequentiality of the admission exams and the differentiation of universities by their reputation capital or by their ability to attract ablest students.

Interestingly, we show that if there is sufficient reputation asymmetry for one university to prefer to lead, then the Stackelberg equilibrium will not only coincide with the Nash equilibrium in choice of admission requirements but also be a Nash equilibrium in choice of roles (leader or follower), and it will be strictly preferred by both universities. Whatever the timing of entrance examination, the Nash solution is chosen by the two universities. The top university will set a high admission requirement, while the other will concentrate its effort on less able students taking care to avoid the worst while implementing a low admission threshold. In such condition, the top university performs better and the number of students in the economy is larger.

The paper is organized as follows: in the next section, we lay down the model, and describe the competition among higher education providers. Section 3 and 4 are devoted to the simultaneous and sequential competition. The fifth section summarizes the results and provides a discussion.

## 2. Exposition of the Model

Assume for the sake of simplicity only two universities ( $U_1, U_2$ ) compete on the tertiary education market and all young students are willing to pursue education. We normalize this population to unity. Further, the two universities "meet only once" in the market and determine their admission requirements ( $a_1, a_2$ ). We assume that the universities have exogenously given reputations that determine how many students choose the university conditional on satisfying the admission standard.

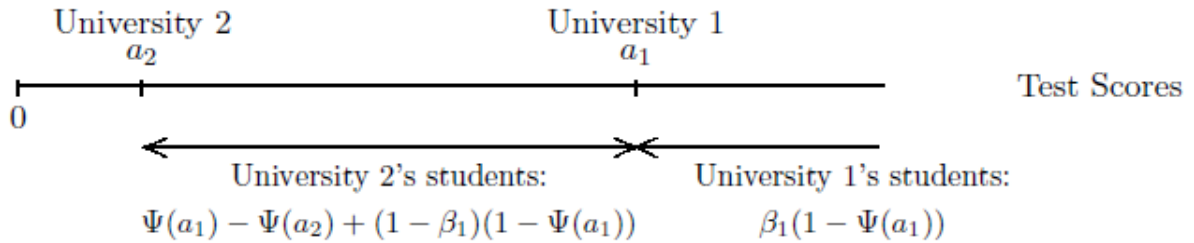
Obviously, high quality reputation will attract the best students and high quality students will contribute to secure the best reputation. Setting the highest admission requirement does not assure university of the ablest students, but only of a proportion  $\beta_i \in [0,1], \forall i=1,2$ , which represents a reputation index or a measure of the university's attractive power. It may interpret as the share for which students are inclined to go into the top university. Assuming  $\beta_1 + \beta_2 = 1$ , it allows cases where some students do not have a preference for either school and then attend the school with highest admission standard for which they qualify.

The idea is that if university  $i$  sets a threshold  $a_i \geq a_j, \beta_i$  of the students with ability above  $a_i$  go to the university  $i$ , leading to  $\beta_i (1-\Psi(a_i))$  students, with  $\Psi$  a cumulative distribution function of scores achieved by students (with density  $\psi$ ) which we assume increasing and

log-concave (with non-decreasing hazard rate). Alternatively, if university  $i$  sets a threshold  $a_i < a_j$ , all students with ability (scores) in between  $a_i$  and  $a_j$  have no choice and go to university  $i$ , and  $(1 - \beta_j)$  of those who could have entered  $U_j$  but chose otherwise for some unspecified reason ; the entering students in university's  $i$  is therefore  $\psi(a_j) - \psi(a_i) + (1 - \beta_j)(1 - \psi(a_j))$  and in that case, the total number of students of the economy is  $[1 - \Psi(a_j)]$ , which is determined by the threshold implemented by the less selective university.

The following graph 1 summarizes the setting with  $a_1 > a_2$ .

**Graph 1: Admission Requirement and Distribution of Students**



The graduation rate certainly depends on the average admitted students' ability (noted  $e_i$ ) and on the institution's academic performance. Let  $\pi(e_i)$  be the reduced form of the university  $i$ 's academic performance. Consistently, we assume that  $\pi'(e_i) > 0$  and  $\pi''(e_i) < 0$  with  $\pi(0) = \nu > 0$ . The university seeks to maximize the number of students who graduates, manipulating both the number of students and their average ability. The consequence is that they better perform in a high selective university.

Hence, for any given  $a_i, a_j \in [0,1]$ ,  $i \leq j$ , the university  $i$ 's graduation rate - or its payoff function - is  $R^i(a_i, a_j)$ , with

$$R^i(a_i, a_j) = \begin{cases} \overline{R}^i(a_i, a_j) := \beta_i(1 - \psi(a_i))\pi(\bar{e}_i) & \text{if } a_i > a_j, \\ \underline{\underline{R}}^i(a_i, a_j) := \beta_i(1 - \psi(a_i))\pi(\bar{e}_i) & \text{if } a_i = a_j, \\ \underline{R}^i(a_i, a_j) := [\psi(a_j) - \psi(a_i) + (1 - \beta_j)(1 - \psi(a_j))] \pi(\underline{e}_i) & \text{if } a_i < a_j. \end{cases} \quad (1)$$

with

$$\bar{e}_i = \beta_i \int_{a_i}^1 a_i \psi(a_i) da_i \quad \text{and} \quad \underline{e}_i = \int_{a_i}^{a_j} a_i \psi(a_i) da_i + \beta_i \int_{a_j}^1 a_j \psi(a_j) da_j \quad (2)$$

### 3. Simultaneous and Non-Cooperative Competition between Universities

In order to capture ablest students, the universities organize an entrance examination, each seeking to maximize the number of their graduates. We consider a simultaneous and non-cooperative competitive game between universities on the tertiary education market for students.

For exposition ease, let us focus on  $U_1$ 's strategy for  $a_2$  fixed. If  $a_1 > a_2$ , it faces a demand equal to  $\beta_1 (1 - \Psi(a_1))$  and its graduation function is therefore:

$$\bar{R}^1(a_1, a_2) = \beta_1 [1 - \Psi(a_1)] \pi(\bar{e}_1)$$

Let,

$$\bar{a}_1 \equiv \arg \max_{a_1} \bar{R}^1(a_1, a_2) \quad : \quad \bar{a}_1 = a^* \quad \text{is} \quad \frac{d\bar{e}_1}{da_1} \frac{\pi'(\bar{a}_1)}{\pi(\bar{a}_1)} = \frac{\psi(\bar{a}_1)}{1 - \Psi(\bar{a}_1)}$$

Observe that  $a_1$  is independent both its reputation index  $\beta_1$  and of  $U_2$ 's decision,  $a_2$ .

Similarly, if  $a_2 \geq a_1$ ,  $U_1$  faces a demand equal to  $[\Psi(a_2) - \Psi(a_1) + (1 - \beta_2)(1 - \Psi(a_2))]$  and its graduation corresponds to:

$$\underline{R}^1(a_1, a_2) = [\Psi(a_2) - \Psi(a_1) + (1 - \beta_2)(1 - \Psi(a_2))] \pi(\underline{e}_1)$$

The best-reply  $U_1$  is the solution of:

$$\underline{a}_1 \equiv \arg \max_{a_1} \underline{R}^1(a_1, a_2)$$

with

$$\underline{a}_1 = a_1(a_2) \quad \text{such that} \quad \frac{d\underline{e}_1}{da_1} \frac{\pi'(\underline{a}_1)}{\pi(\underline{a}_1)} = \frac{\psi(\underline{a}_1)}{[\Psi(a_2) - \Psi(\underline{a}_1) + (1 - \beta_2)(1 - \Psi(a_2))]}$$

In this case  $U_1$  gets some benefit from its competitor's threshold, since it can enrol a larger number of students, who are also abler. These both effects clearly improve its academic performance. Indeed, it is easy to show that

$$\frac{\partial R^1(a_1, a_2)}{\partial a_2} \equiv \underline{R}_2^1(a_1, a_2) > 0 \text{ and } \underline{R}_{1,2}^1(a_1, a_2) > 0$$

That is, the threshold levels are strategic complements and hence we can show that  $U_1$ 's admission requirement is increasing and non convex with  $U_2$ 's action:  $\underline{a}'_1(a_2) \geq 0$  and  $\underline{a}''_1(a_2) \leq 0$ .

We can characterize the best-reply maps of  $U_1$ . Fix the  $U_2$ 's threshold to  $a_2 \in [0, +\infty)$ . Observe that  $\bar{R}^1(a_1, a_2) \leq \underline{R}^1(a_1, a_2)$  if  $a_1 \leq a_2$ . Moreover, it can be checked that  $\underline{a}_1(a_2) \leq \bar{a}_1$  for all  $a_2$ . We are then led to consider three alternative cases, illustrated by graph 3 below. Let us first consider the case where,  $a_2 < \underline{a}_1(a_2)$ , then  $BR_1(a_2) = \bar{a}_1$  since  $\bar{R}^1(a_2, a_2) > \underline{R}^1(a_2, a_2)$  and  $R^1(\cdot, a_2)$  is strictly concave in  $a_1$ . We next consider the second possible case, when  $a_2 > \bar{a}_1$ , then  $BR_1(a_2) = \underline{a}_1(a_2)$ . The third possible case is when  $\underline{a}_1(a_2) < a_2 < \bar{a}_1$ . From what precedes, it follows that  $U_1$ 's best reply  $BR_1(a_2)$  to  $a_2$  is  $\bar{a}_1$  if  $\bar{R}^1(a_1, a_2) > \underline{R}^1(a_1, a_2)$ ,  $\underline{a}_1(a_2)$  if  $\bar{R}^1(a_1, a_2) < \underline{R}^1(a_1, a_2)$ ,  $\bar{a}_1$  or  $\underline{a}_1(a_2)$  if  $\bar{R}^1(a_1, a_2) = \underline{R}^1(a_1, a_2)$ . By the Envelope Theorem,  $\underline{R}^1(\underline{a}_1(\cdot), \cdot)$  is strictly increasing in  $a_2$ . Hence, it follows from the Intermediate Theorem that there exists a unique

$$\bar{a}_2 \text{ such that both } \bar{R}^1(\bar{a}_1, \bar{a}_2) = \underline{R}^1(\underline{a}_1(\bar{a}_2), \bar{a}_2).$$

**Lemma 1.**

The best-reply map of  $U_1$ ,  $BR_1(a_2)$  is given by:

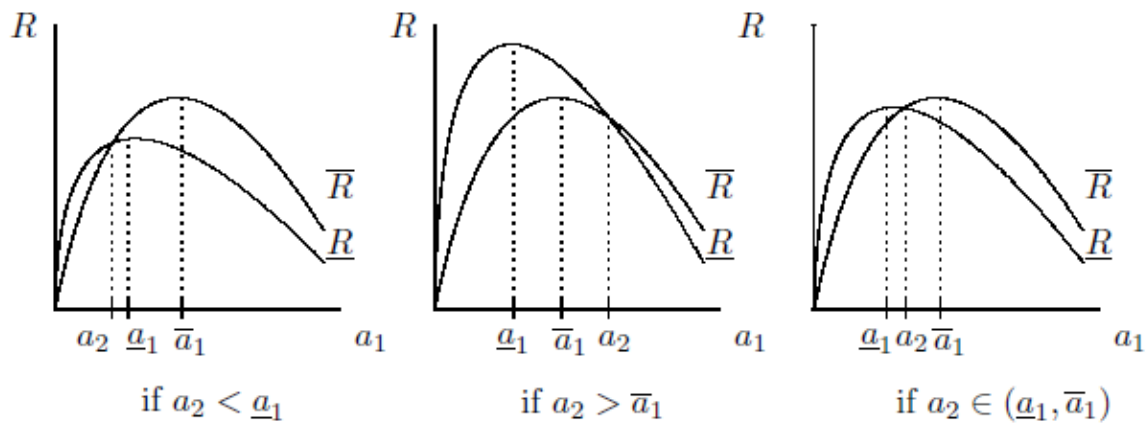
$$BR_1(a_2) = \begin{cases} \bar{a}_1 & \text{if } a_2 \in [0, \bar{a}_2) \\ \underline{a}_1 & \text{if } a_2 \in [\bar{a}_2, +\infty) \end{cases}$$

with  $\bar{a}_2$  such that  $\underline{a}_1(\bar{a}_2) = \bar{a}_2$ .

It is important to note that the best-reply map is upper semi-continuous, but not convex valued. Hence, equilibrium in pure actions might fail to exist.



Graph 3: Pay-Off Functions



**Proposition 1**

If  $\beta_i=1$ , there exists a unique asymmetric equilibrium

$$(\bar{a}_i, a_j |_{\beta=1}(\bar{a}_i))$$

If university  $i$ , thanks to its high reputation, captures all students with best scores (i.e.  $\beta_i=1$ ), it always sets  $\bar{a}_i$  and the university  $j$  plays  $\underline{a}_j(\bar{a}_i)$ . Indeed, if  $\beta_i = 1$ ,  $\underline{a}_j = \bar{a}_i$ , and  $\underline{a}_j(a_i)$  is such that

$$\frac{d\bar{e}_j}{da_j} \frac{\pi'(\bar{e}_j)}{\pi(\bar{e}_j)} = \frac{\psi(a_j)}{\Psi(a_i) - \Psi(a_j)}$$

**Proposition 2**

If  $\beta_1=\beta_2=1/2$ , there exists no symmetric equilibrium.

**Proposition 3**

If  $\beta_i \in [\bar{\beta}, 1]$ , there exists a unique asymmetric equilibrium where university  $i$  sets a threshold of  $\bar{a}_i$  and university  $j$  a threshold of  $\underline{a}_j(\bar{a}_i)$  where  $\bar{\beta}$  such that  $BR_j(\bar{a}_i) = \bar{a}_i$ .

Proof:

Determination of the Asymmetric Nash's Equilibrium:

- If  $U_1$  sets  $\bar{a}_1$ , then  $U_2$  implements  $\underline{a}_2(\bar{a}_1)$ .

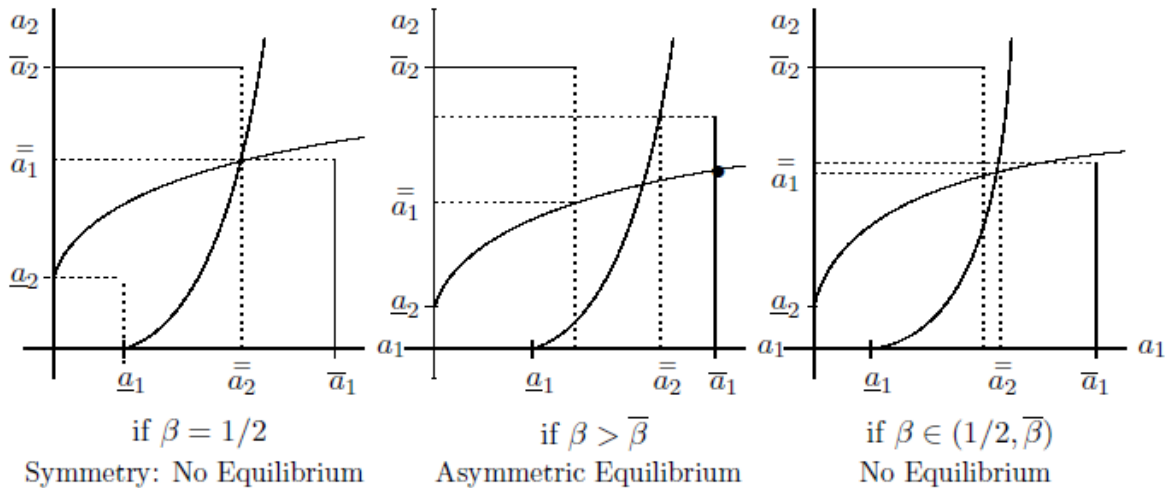
- If  $U_2$  sets  $\underline{a}_2(\bar{a}_1) < \bar{a}_1$ , then  $U_1$  plays  $\bar{a}_1$ . That is thus a Nash equilibrium
- - If  $U_2$  sets  $\bar{a}_2$ , then  $U_1$  implements  $\underline{a}_1(\bar{a}_2)$ .
  - If  $U_1$  sets  $\underline{a}_1(\bar{a}_2) > \bar{a}_2$ , then  $U_2$  plays  $\underline{a}_2[\underline{a}_1(\bar{a}_2)]$ . That is not a Nash equilibrium
- - If  $U_1$  sets  $\bar{a}_1$ , then  $U_2$  implements  $\underline{a}_2(\bar{a}_1)$ .
  - If  $U_2$  sets  $\underline{a}_2(\bar{a}_1) > \bar{a}_1$ , then  $U_1$  plays  $\underline{a}_1(\underline{a}_2(\bar{a}_1)) \neq \bar{a}_1$

Note then that university  $j$  is negatively affected by university  $i$ 's reputation. Indeed, an increase in university  $i$ 's reputation induces university  $j$  to reduce its admission requirement  $\left(\frac{da_j}{d\beta_i} < 0\right)$  in order to compensate the loss of high quality students by more students.

However, by diminishing its admission threshold, university  $j$  decreases its academic performance ( $\pi$ ), and faces a decrease in the graduation rate.

**Graphic 4 pictures the best-reply functions and the Nash Equilibria that can result.**

Graph 4: Best Reply and Nash Equilibria



**Corollary 1**

$\forall \beta \in \left(\frac{\beta}{2}, \frac{1}{2}\right) \cup \left(\frac{1}{2}, \bar{\beta}\right)$ , there exists no Nash equilibrium in pure actions.

The existence of a Nash equilibrium strongly depends on the value of the reputation parameter  $\beta_i$ . Indeed, if the two universities share more or less equally the tertiary education market, no Nash equilibrium exists. In the pursuit of academic performance, given its

reputation, the university's objective does not only consists to attract the best students (with the highest test scores), but also to escape the worst of them.

Hence, in order to implement the highest admission requirement, a university has to keep almost half of its market share  $\beta > \bar{\beta}$  for an asymmetric equilibrium to exist.

#### 4. Sequential and Non-Cooperative Competition between Universities

It is usually admitted that sequentiality avoids indetermination of equilibria. Temporal asymmetry (when entrance examination does not lie at the same time) allows the leader to limit the follower's action. To do this, it should accumulate more students than it would have done in a simultaneous equilibrium. However, under what circumstances the Stackelberg solution does seem reasonable and will universities agree on the choice of roles of leader and follower in the sequential model?

##### 4.1. Determination of the Equilibrium

Without lost of generality, assume  $U_1$ , the leader in the tertiary education market, and  $U_2$  the follower.  $U_1$  knows  $U_2$ 's reaction and its own reputation  $\beta_1$ . From previous results, the follower's best reply function will be:

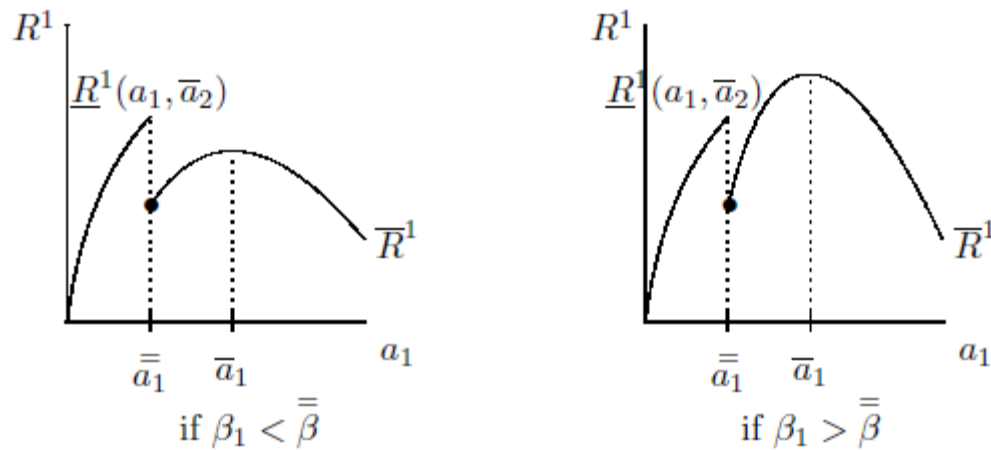
$$BR_2(a_1) = \begin{cases} \bar{a}_2 & \text{if } a_1 \in [0, \bar{a}_1] \\ \underline{a}_2 & \text{if } a_1 \in [\bar{a}_1, +\infty) \end{cases}$$

Taking this into account,  $U_1$ 's graduation becomes:

$$R^1(a_1, a_2) = \begin{cases} \bar{R}^1(a_1) = \beta_1[1 - \Psi(a_1)]\pi(\bar{e}_1) & \text{if } a_1 > \bar{a}_1 \\ \underline{R}^1(a_1, \bar{a}_2) = [\Psi(\bar{a}_2) - \Psi(a_1) + \beta_1[1 - \Psi(\bar{a}_2)]]\pi(\underline{e}_1) & \text{if } a_1 \leq \bar{a}_1 \end{cases}$$

This is illustrated in graph 5 below:

Graph 5: The Leader's Pay-Off Function



**Proposition 4**

There exists a  $\bar{\beta}$  such that  $\forall \beta_1 < \bar{\beta}$ , a unique Stackelberg Equilibrium exists that is defined by  $(\bar{a}_1 - \varepsilon, \bar{a}_2)$  with  $\varepsilon > 0$  where  $\bar{\beta}$  such that  $\bar{R}^1(\bar{a}_1) = \underline{R}^1(\bar{a}_1, \bar{a}_2)$ .

$\forall \beta_1 > \bar{\beta}$ , the Stackelberg Equilibrium coincides with the Nash Equilibrium  $(\bar{a}_1, \underline{a}_2(\bar{a}_1))$ .

In other words, if the leader university's reputation is low, it gains to set a weak selection threshold: indeed given its share  $\beta_1$  of ablest students, it concentrates its effort avoiding the worst students.

In the opposite case where the leader's reputation is high, it chooses to set the highest threshold and to act as if it was alone on the tertiary education market. As its graduation rate is independent of  $U_2$ 's admission requirement, the Stackelberg equilibrium coincides with the Nash equilibrium. The number of students it gets is large enough to get a large part of best of them.

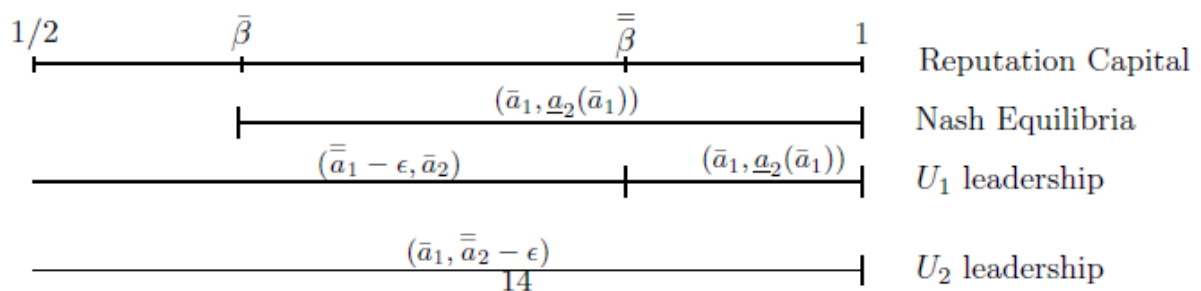
**4.2. Viability of Stackelberg Solutions**

Under what circumstances will universities agree on their roles of leader and follower in the sequential model?

We can construct a game in which each university announces independently its choice of role, as follower or leader, and then acts in a prescribed manner. If  $U_i$  chooses to lead, it commits itself to setting the leadership admission requirement; if it chooses to be a follower, it commits itself to follow its rival's decision.

Graph 6 depicts the different equilibria in choice of admission requirements, according to the choice of roles, depending on the value of  $\beta$ .

Graph 6: Solutions depending on the value of  $\beta$ .



If universities have similar histories, there is little reason to expect either a Nash or a Stackelberg solution to be generally viable. Indeed, we have shown for  $\beta < \bar{\beta}$  that no Nash equilibrium exists, but that if universities can choose their roles, two Stackelberg equilibria exist. However, each university will prefer that the other be the follower.

For  $\beta \in (\bar{\beta}, \bar{\bar{\beta}})$  we have shown that a Nash equilibrium exists. While,  $U_1$  is better off being leader (setting  $\bar{a}_2$ ),  $U_2$  prefers the Nash equilibrium (setting  $\underline{a}_2(\bar{a}_1)$ ), than being leader (setting  $\bar{a}_2$ ) or follower (setting  $\bar{a}_2$ ).

For  $\beta > \bar{\bar{\beta}}$ ,  $U_1$  is indifferent between the Nash equilibrium and the Stackelberg solution. It will always choose the strong role and setting  $\bar{a}_1$ . However,  $U_2$  will do better by adopting the weak role: it will opt for the Nash equilibrium which coincides to the Stackelberg solution, with  $U_1$  as leader:  $(\bar{a}_1, \underline{a}_2(\bar{a}_1))$ . In other words, in some specific market situations, the Stackelberg solution does seem to be reasonable. If there is sufficient asymmetry for one university to prefer to lead, then a Stackelberg solution will not only be a Nash equilibrium in choice of admission requirement but also in choice of roles and it will be strictly preferred by both universities.

## 5. Summaries and Discussions

Our results give a crucial role to the universities' reputation capital and therefore justify the increasing attention devoted to the national or international rankings of higher education providers. The diffusion of this information on the relative quality of higher education providers induces a large variety of admission requirements or entrance examination, as observed, and therefore of number of students who graduate, as a result of a competitive game between high educational institutions.

We show that symmetric (simultaneous-move Nash) equilibrium in pure strategies fails to exist if universities have equal reputation. However, for sufficiently different reputations, there will exist an asymmetric equilibrium where the higher reputation school sets a higher admission standard (and otherwise, no equilibrium exists in pure strategies). Interestingly, the Stackelberg equilibrium either is the same as the asymmetric simultaneous-move equilibrium when reputations differ sufficiently or has the first-moving university set a low admission standard when its reputation is weak. Only in some cases does the Stackelberg equilibrium make sense in that neither university is worse off than in the simultaneous-move equilibrium, so that the leader-follower roles might be expected to emerge.

## References

- Barro, R. J. and J. Lee (2000), International Data on Educational attainment: Updates and Implication. *WP Center for International Development*.
- Costrell, R.M. (1994), A Simple Model of Education Standards. *American Economic Review*, September, 4, pp.956-971.
- Debande, O. and J.-L. Demeulemeester (1998), Two-dimensional Competition between Institutions: an Application to Higher Education. *Mimeo, Université Libre de Bruxelles, Belgium*.
- De Fraja, G. and P. Landeras (2006), Could Do Better: The Effectiveness of Incentives and Competition in Schools. *Journal of Public Economics*, 90, pp.189-213.
- De Fraja, G., T. Oliveira and L. Zanchi (2005), Must Try Harder. Evaluating the Role of Effort in Educational Attainment. *WP University of Leicester*.
- Del Rey, E. (2001), Teaching versus Research: a Model of State University Competition. *Journal of Urban Economics*, 49 (2), pp.356-373.
- Epple, D and R. Romano (1998), Competition Between Private and Public Schools, Vouchers and Peer-Group Effect. *American Economic Review*, 88, pp.828-858.
- Ferreira, S.D. (2004), The Provision of Education and its Impacts on College Premium in Brazil. *Revista Brasileira de Economia*, 58 (2), pp.211-233.
- Gary-Bobo, R. and A. Trannoy (1998), L'Economie Politique Simplifié du 'Mammouth': Efficacité Sociale et Concurrence entre Universités. *Working Paper THEMA, Université Cergy-Pontoise*.
- Gilboa, Y. and M. Justman (2005), Academic Admissions Standards: Implications for Output, Distribution and Mobility. *Journal of The European Economic Association*, 3 (5), pp.1105-1133.
- Hsieh, C-T. and M. Urquiola (2006), The Effects of Generalized School Choice on Achievement and Stratification: Evidence from Chile's school voucher program. *Journal of Public Economics*, 90, pp.1477-1503.
- Institute of Higher Education, *Shanghai Jiao Tong University*  
<http://ed.sjtu.edu.cn/ranking.htm>

Kalaitzidakis, P., T.P. Mauneas, and T. Stengos (2001), Rankings of Academic Journals and Institutions in Economics. University of Cyprus *WP 2001-10* – <http://www.econ.ucy.ac.cy/papers/0110.pdf>

Martinez-Mora, F. (2006), The Existence of Non-Elite Private Schools. *Journal of Public Economics*, 90, pp.1505-1518.

McMillan, R. (2005), Competition, Incentives, and Public School Productivity. *Journal of Public Economics*, 89, pp.1133-1154.

OECD (2005), Education at Glance 2005 - <http://www.oecd.org/>

Spence, M. (1973), Job Market Signaling. *Quarterly Journal of Economics*, 87 (3), pp.355-374.

Wasmer, E. (2001), Measuring human capital in the labor market: the supply of experience in 8 OECD countries. *European Economic Review*, 45, pp.861-874.

Webster, T. (2001), A Principal Component Analysis of the U.S. News & World Report Tier Rankings of Colleges and Universities. *Economics of Education Review*, 20 (3), pp.235-44.



**Tables**

**Table 1: Academic Ranking of World Universities from  
Shanghai Jiao Tong University (2006)**

Ranking	Country	Top 20	Top 100	Top 200	Top 300	Top 400	Top 500	Population	GDP
1	USA	17	54	87	118	140	167	4.6%	28.4%
2	UK	2	11	22	33	37	43	0.9%	5.1%
3	Japan	1	6	9	12	20	32	2%	11.2%
4	Germany	-	5	15	22	36	40	1.3%	6.6%
5	Canada	-	4	8	16	19	22	0.5%	2.4%
6	France	-	4	6	12	17	21	0.9%	5%
7	Sweden	-	4	4	9	11	11	0.1%	0.8%
8	Switzerland	-	3	6	7	7	8	0.1%	0.9%
9	Netherlands	-	2	7	9	12	12	0.3%	1.4%
10	Australia	-	2	6	9	11	16	0.3%	1.5%

**Table 2: Ranking of European Master in Management and European Business School from  
Financial Times (2006)**

Ranking	European Master in Management	Country	European Business School	Country
1	HEC	France	HEC	France
2	London Business School	UK	London Business School	UK
3	ESCP-EAP	France	IMD	Switzerland
4	Grenoble Graduate School of Management	France	Instituto de Empresa	Spain
5	Ecole de Management de Lyon	France	Iese Business School	Spain
6	ESSEC	France	ESCP-EAP	France
7	EDHEC Business School	France	RSM-Erasmus University	Netherlands
8	London School of Economics	UK	Cranfield School of Management	UK
9	Stockholm School of Economics	Sweden	University of Bradford	UK
10	Audencia	France	INSEAD	France

The ranking of European Business School is calculated from the MBA, EMBA, Master in Management and the Executive Education.

---

## Comparative Investigation of Accreditation Agencies in Higher Education – Models Fostering Teaching Excellence

---

### **Dr. Chantal Ladias, Ph.D.**

Dublin Business School

Senior Marketing Lecturer

34/35 South William St.

Dublin 2, Ireland

[Chantal.ladias@dbs.ie](mailto:Chantal.ladias@dbs.ie)

**Abstract:** This paper reviews the three accreditation bodies ACBSP, AACSB and the EFM's EQUIS with the view to evaluate the best option for an Irish private business school involved in Higher Education. Desk research and comparative analysis have been used here to assess these agencies in order to recommend the best path of actions for a private Irish Business School. In our analysis we take the opportunity to introduce the RESCU model as a system we used in classrooms and in setting Learning Outcomes to promote multicultural diversity and a sense of ethics to encourage social responsibility and cross cultural communication.

**Keywords:** comparative analysis of accreditation agencies, RESCU model, learning outcome mapping,

**Reference:** Reference to this paper should be made as follows: Ladias, C. (2009) "Comparative Investigation of Accreditation Agencies in Higher Education – Models Fostering Teaching Excellence", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes:** Chantal Ladias holds a PhD from International School of Management and an MBA from Lake Erie College, USA and an undergraduate degree from Ecole Supérieure de Commerce in Paris, France. Chantal Ladias is a senior marketing lecturer at Dublin Business School, the largest private Irish third level institution with approximately 9,000 students. Chantal Ladias lectures mainly at postgraduate level in

Marketing Management with a concentration on global marketing. Her audience is very diversified as most classrooms are multicultural and varied in social and ethnic backgrounds. Chantal Ladias brings also in the classroom her experience as an international marketing research consultant.

Dr. Ladias has been a member of many accreditation teams as an administrator or a lecturer. She offers a critical point of view as she faced various ethical issues related to standards for quality of education as these refer to Irish, UK universities and US accreditations.

---

### **Introduction**

This paper reviews accreditation criteria and standards from three accreditation bodies; the ACBSP (Association of Collegiate Business Schools and Programs), the AACSB (Association to Advance Collegiate Schools in Business) in the United States and the EFM (European Foundation for Management Development) in Europe. Our discussion is meant to evaluate, compare and contrast these criteria with the view of discussing the different approaches these three institutions have taken towards meriting accreditation and suggest processes to foster academic excellence in an international market. All three accreditation agencies have different rationales embedded in their systematic processes as their target audiences vary. All agencies perceive quality of education as a priority but express it in different manners, as this is achieved through different processes emphasizing control of academia. However generally all accreditation agencies attempt to promote and measure quality of education delivered to students in Higher Education in the world. Their philosophies of education, their historical backgrounds or the current environments in which these three agencies operate differ. These differences have given birth to various approaches highlighting variations of standards for a “glocal”<sup>1</sup> approach to higher education where business schools are encouraged and empowered to take responsibility for academic leadership.

This paper is based on a desk research of various materials posted on three accreditation agencies’ websites: ACBSP, AACSB and EFMD. First we review each agency independently and then compare these differences and similarities. In order to frame our discussion for a more pragmatic approach, our analysis is based on the following assumption;

---

<sup>1</sup> [www.theglobalinitiative.org](http://www.theglobalinitiative.org) , accessed 26/6/09

*“If we were an administrator in a Private Business College in Ireland attempting to get accreditation for undergraduate and graduate business programs aimed at an international market, which agency would fit best our college, in this case Dublin Business School?”<sup>2</sup>*

After presenting our findings and analysis of the data we will recommend DBS the best-suited accreditation agency to develop its postgraduate and graduate programs.

### **Accreditation Criteria for the Association of Collegiate Business Schools and Programs (ACBSP)**

**ACBSP Mission Statement** remains closer to the heart of education and teaching. Its mission focuses on the virtues of teaching excellence. Words like *“supporting, celebrating, rewarding teaching excellence”*<sup>3</sup> are full of gentle enthusiasm for the learning process and the level of engagement teaching requires. ACBSP supports the right balance between teaching and research as its foundation stems directly from the Research/Teaching dilemma (too much teaching leads to little research). ACBSP accreditation philosophy is more attuned to the conflicts business schools may face when teaching and research conflict in a lecturer’s schedule. ACBSP has a more gentle, humanistic and realistic approach towards education. It is true that teaching has evolved over the years and thanks to information technology and the Internet, lecturers have been asked to take on a more administrative role to enhance their teaching methods, support administrative staff in order to save costs and improve efficiency. In Dublin Business School the tasks of a full time lecturer involves the following activities;

- Lecture 500 hours per year
- Planning Lecturing and Preparations
- Be available to students for feedback
- Organizing syllabus, course outlines and course work
- Organizing examinations and assessments
- Writing a marking scheme for each examination and assessment
- Controlling and marking according to the marking scheme
- Submitting marking and marking scheme to external examiner
- Double marking colleague’s examinations
- Supervising at least 10 Master’s theses a year.
- Managing Moodle site for each course delivered
- Linking with external examiner if issues arise

---

<sup>2</sup> [www.dbs.ie](http://www.dbs.ie) , Dublin Business School

<sup>3</sup> [www.acbsp.org](http://www.acbsp.org),

- Entering exam results in Prestige software
- Participating in Internal examination Boards
- Participating in External examination Boards
- Participating in Department course Boards
- Participating in the writing of Institutional review reports
- Participating in Programmatic reviews with the view of creating new courses

It is difficult in this schedule to find time for research! Is it even ethical to put undue pressure on faculty to produce research papers when their teaching load is maximized to save costs and increase revenue and increase profits. Some Irish academics are accusing colleges to act more like businesses<sup>4</sup>, "ignoring the nuances taking place in managing learning centers and not profit centers". If a government wants to truly move forward in third level education it needs to manage the balance between the costs attached to research and the quality of education delivered. Since Irish universities are self-accredited they do not need US accreditation or Irish Accreditation for that matter. However Higher Education institutions would require a more recognized EU or US accreditation, should these decide to compete in international markets. Of course, reintroducing college fees in Irish Higher Education would be another way to increase revenues but this would diminish equal access of education.

ACBSP recognizes these ethical dilemmas in education and emphasizes "*teaching excellence*" rather than research excellence. Its mission is to "develop, promote, recognize best practices ...for continuous improvement.." <sup>5</sup>.

The US Malcom Baldrige National Quality Award, the Missouri and the Kansas State Quality Award programs have inspired ACBSP accreditation process.

**Criteria for eligibility** are discussed below;

*"The New degree program needs to be operational, with enrolled students, for at least two years before it can be considered for accreditation"* <sup>6</sup>.

This could be a significant risk for business schools to take. Students and employers have no recognition for their degrees during that time. The School relies solely on the good faith of the first students who are willing to enroll without an accreditation reward. The students during that time have invested time and money in an education or a degree that may not be

---

<sup>4</sup> McConnell Daniel, "Unrest in academia as", Irish Independent, 22/10/06 accessed on <http://www.independent.ie/opinion/analysis/unrest-in-academia-as-136012.html>

<sup>5</sup> [www.acbsp.org](http://www.acbsp.org), accessed 26/6/09

<sup>6</sup> ACBSP, "standards and criteria demonstrating excellence in Baccalaureate/graduate degree schools and programs, Original doc rev C April 2006, page 7

accredited or recognized by an employer.

Another condition of accreditation<sup>7</sup> is that “*institutions must be accredited by their own regional body*”. The issue might be more complex for non-US accredited institutions in need of regional accreditation.

Overall ACBSP does not have any strong eligibility criteria we could identify through their documents and website. Its system is *an opened system taking a stakeholder approach*. The eligibility criteria are embedded in stronger business logic; if the school or the program is sustainable for two years then it is enough to be eligible for accreditation. The faith and good will of students in engaging into their learning process is enough to prove it is a viable business proposition.

We identified **6 general standards and criteria** in ACBSP documents (Ibid., p 13). Criteria 5 and 6 are dealt with depth and rigor.

- 1. Leadership:** ACBSP is looking for a sense of leadership in administrators and faculty where societal contributions are demonstrated. Ethical behavior and social contributions are stressed to encourage the social role of business in society.
- 2. Strategic Planning:** The setting of program performance must be set to encourage innovation and creativity (Ibid.,p15). The focus is on long-term and short-term action plans devised by the school with a statement of objectives with time frame.
- 3. Student and stakeholder Focus;** ACBSP is looking at some systematic procedures in place that would measure the quality of relationships between stakeholders and students with the school. Does the school/ program have a system recording of students and stakeholders’ expectations and are these expectations considered for future developments (Ibid.,p17)
- 4. Measurement and analysis of student learning performance.** Learning outcomes are strongly stressed because they shape students’ learning objectives and efforts as they clearly set out what students should study. This helps students in managing their efforts in their learning experience. There is triangular relationship between Learning outcomes, Contents and Assessment policy (see Diagram 1). Knowledge and even attitudes can be evaluated when set in accordance to the Learning Outcome Mapping System®. ACBSP recognizes a variety of Learning Outcomes relating to a wide range of skills, knowledge and attitudes. In DBS at Masters level the assessment policy is not to give more than 50% for course work. Unfortunately we do not recognize participation as a contribution, mainly due to the fact that some classes

---

<sup>7</sup> ACBSP, page 9

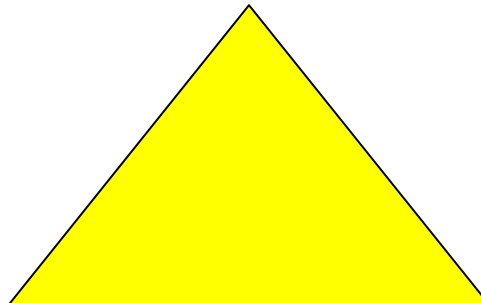
include 100 students and students may not have a chance to participate!

The construction of a course outline for a module is directly linked to learning outcomes and then to the assessment policy. Once the learning outcomes have been identified, the course contents need to be linked to the learning outcomes to identify the assessment policy. Each learning outcome should be assessed at least once through the module. As shown in the diagram below a triangular relationship is created between the learning objectives, the course contents and the assessment, so that students, academics and stakeholders are transparent about how to achieve these.



**Diagram 1: the Learning Outcome Mapping Program**

**Learning Outcomes**



**Syllabus Content**

**Assessment Types**

In DBS we also often use statistical data and software programs to determine the standard deviation of grades, the means and other statistical information to identify problems. Quantitative Information is submitted to double markers and external examiners. It is after this process that a self-evaluation takes place and teaching methods are reviewed at department meeting or with Head of Department if necessary.

**5. Faculty and Staff focus:** ACBSP is supporting efforts made by faculty to “*develop, evaluate, provide and promote an excellence in teaching*” (Ibid., p23). ACBSP requires a Human Resource plan to be developed in order to put in place an employment program. ACBSP recognizes the importance of faculty to deliver quality. ACBSP maintains faculty standards by promoting faculty development, intellectual leadership, depth and breath of knowledge, a reasonable ratio of part time vs. full time lecturers. As regards to qualifications (Ibid., p24) there should be a “mix of faculty” with the following quota;

- *For undergraduate programs:* 80% of credit hours taught by doctoral or professionally qualified faculty and at least 40% of the undergraduate credit hours in business are taught by doctoral faculty
- *For graduate programs:* 90% of credit hours taught by doctoral or professionally qualified faculty and 70% of the graduate credit hours in business are taught by doctoral faculty.

ACBSP evaluates faculty deployment to ensure academic leadership. A series of tables regarding *the workload* and *the deployment of faculty* must be established.

**ACBSP recognizes that faculty and staff play 9 roles** (Ibid., p28). But these functions

remain very vague and require more transparency. *This is a grey area where many unethical practices might take place for the sake of saving costs that might compromise the quality of education offered.*

*Staff development* includes a variety of activities such as seminars, symposia, short courses, workshops or enrichment activities (Ibid.p32). ISM (International School of Management in Paris<sup>8</sup>) for example should definitely position itself as a provider of staff development opportunities for English speaking professors looking for staff development activities in France.

In terms of scholarly and professional activities faculty members are expected to be involved in scholarly research as their publications support the fulfillment of their institution's mission. How one can a full time academic pursue another professional activities? Many employment contracts ban faculty to carry out other professional activities outside of their academic role. *Unless ACBSP like other accreditation agencies have access to these contracts how could they have a clear picture of the situation and college they are analyzing.* Their assessment is limited and superficial and lacks transparency as the institution and its faculty could easily pretend. ACBSP should gain the right to view employment contracts to assess workloads and duties. Accreditation agencies should discuss confidentiality with faculty on a one to one basis to draw a clearer picture and assess workload. Often faculty does not wish to blow the whistle on overworked and underpaid circumstances, as their days would be counted in academia. ACBSP addresses faculty overload issues but needs more transparency to improve their recommendations and education quality.

**6. Education and Business Process Management.** It is the second most important criteria in ACBSP. It focuses on the three following aspects; Education Design and Delivery, Management of Educational Support Processes and Business Operation Processes and Enrollment Management. Today's challenge in the world of education is to prepare students to interact and engage in a more global society with a more diversified workforce. A flexible and innovative approach is encouraged where curriculum should provide *"the development of intellectual curiosity and the creative capacity for independent thought and action"* (Ibid.,p36) supported by the general acquisition of knowledge.

### ***1. Education Design and Delivery***

- Education Design: The ACBSP reviews the manner new programs are introduced and how these are delivered. The Common Professional

---

<sup>8</sup> <http://www.ism.edu/> accessed 11/10/2009

Component (CPC) needs to be covered to meet the standards of teaching excellence for each module or per program (Ibid.p38). The diagram below clarifies the component elements per module;

**Diagram 2: Common Professional Component By Areas**

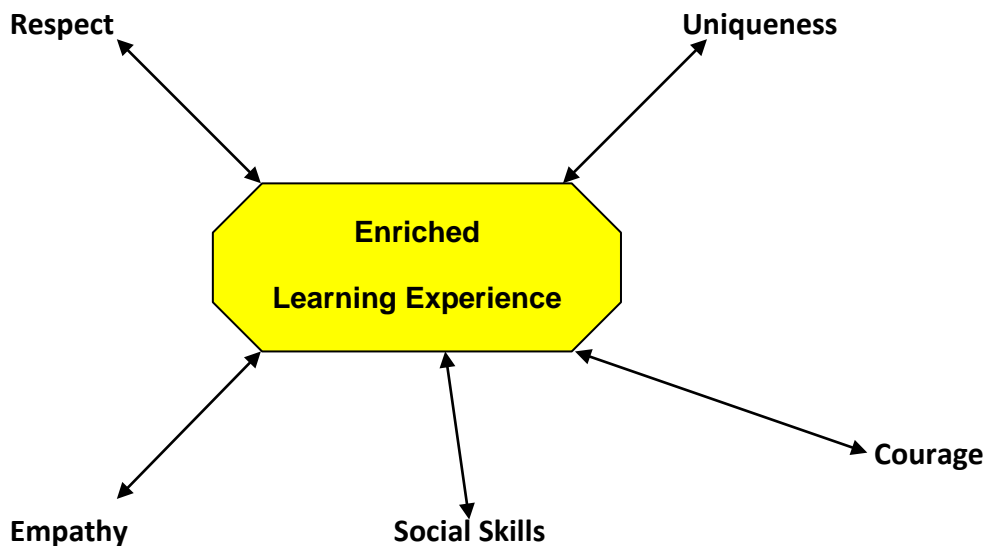
<b>Functional Areas</b>	<b>Business Environment</b>
<b>Marketing</b>	<b>Legal Environment of Business</b>
<b>Business Finance</b>	<b>Economics</b>
<b>Accounting</b>	<b>Business Ethics</b>
<b>Management</b>	<b>Global Dimensions of Business</b>

*Source: ACBSP brochure p.38*

*The syllabus* (Ibid.,p39) is a “teaching contract” between the student and the institution. It provides not only the course description but also the number of contact hours that are going to be attributed to CPC. Learning outcomes can then be easily linked to a variety of assessments. ACBSP encourages the development of intellectual curiosity and the capacity for creative and independent thought and actions (Ibid.p43). ACBSP standards measure students’ active learning using Problem-solving Skills, intellectual curiosity, Creative and Independent Thought and Action. Systematic observations and indicators must be used to evaluate the students’ retention and continuously improve programs and offerings (Ibid. p45).

Amongst these indicators and observations we would like to suggest The RESCU Approach © to assess a more ethical, socially responsible and global attitude for students to engage in. Diagram 3 below reverts to the indicators and virtues that students should exercise to enrich their learning experience.

**Diagram 3: The RESCU approach to enriched learning experience in the 21<sup>st</sup> century**



**Respect** refers to respect for others’ values and as a result an acceptance of differences and also similarities.

**Empathy** is linked to the empathy students experience for a situation with the possibility to kindly and courteously disagree or agree with other students when discussing and debating

**Social skills** to participate and discuss differences and also the ability to let go of differences no matter how important they are. Basically you may disagree but would you join me for a pint or a game of golf?

**Courage** to approach a conflictual situation and to become a whistleblower. Do not be governed by fears of future negative outcomes of decisions or disapprovals.

**Uniqueness** in feeling confident in the oral and written presentation of the argument and the value that one puts on the argument.

Encouraging a RESCU attitude could benefit the education systems and society as a whole as it would encourage educators and students to focus and develop in a multicultural society searching for more transparency, accountability and ethical standards.

## ***II. Management of Educational Support Service Processes and Business Operation Processes***

Institutions need to show evidence processes exist to support the *students' learning experience and independent learning*. Small educational institutions often are weak providing online academic databases such as EBSCO or Heritage in order to have a thorough academic research tool available to students. Other support systems are; Counseling, Advising, Placement of students in work environment, Library facilities, Computer facilities and office space.

### ***III. Enrollment Management***

Policies for admission, and retention figures need to be presented and justified as regards 1<sup>st</sup> year and transfer students. Drop out rates may be due to various factors that have not been clearly identified. Recently at a seminar in Liverpool Johns Moore University participants Faculty, administrators, program leaders, pastors and counselors reflected on the reasons behind dropout rates. Despite presentation of various researches in the US and the UK we could not identify any primary reason. Participants finally exchanged best practices to overcome weaknesses so that students could successfully achieve graduation.

**The costs** associated to the accreditation amount to about \$12,150 excluding expenses and these may vary a lot. It seems a reasonable cost considering the number of processes involved. A mentor assigned by ACBSP is to assist and support the institution to meet the accreditation requirements and set a plan of actions. The process is **a three-year process** during which two progress reports and many visits are required.

To synthesize ACBSP uses six comprehensive criteria to evaluate schools and its programs. **ACBSP approach is holistic and recognizes the dilemma generated between research and teaching activities.** ACBSP value proposition is based on teaching excellence in a global environment where Social Responsibility is a must. A series of measurements and quantitative approaches are used to assess students and learning performance. The last two ACBSP criteria "Faculty and Staff focus" and "education and Business Process Management" are the most scrutinized as they focus on faculty workload and activities as well as the design and delivery of courses. The ACBSP process remains rigorous and emphasizes the contributions of business to society, an idea Freeman has promoted since 1984<sup>9</sup>.

---

<sup>9</sup> Freeman, R. Edwards, *Strategic Management: a stakeholder approach*, Boston Pitman, 1984

<p style="text-align: center;"><b>Accreditation criteria for AACSB</b> <b>(Association to Advance Collegiate Schools in Business)</b></p>
---

AACSB is another accreditation agency recognized by CHEA (Council for Higher Education Authority). AACSB accreditation criteria are nearly one century old. The AACSB is five step-accreditation process;

1. Before You apply
2. Pre accreditation Eligibility
3. Pre accreditation process documents
4. Initial accreditation Process document
5. Maintenance of accreditation process document.

#### **Before the application**

Institution must establish *membership to AACSB* and become familiar with the accreditation criteria. These criteria were reset in 2003 to support **excellence in management education**. These are revised every year since 2003 to reflect the new challenges in global education<sup>10</sup>. There are 7 eligibility criteria<sup>11</sup>;

1. Membership to AACSB
2. Offering of degree programs as opposed two-year post secondary level.
3. Continuing resources available that should be maintained for the next five years.
4. All degrees are reviewed simultaneously
5. Diversity must be promoted in its business programs
6. Ethical standards must be set by the institution for all parties
7. Graduates must have been produced for the last two years.

A program can be excluded from accreditation based on three following criteria;

- a. **The level of participation of business programs/Independence:** where at least 50% of the program is at post grad level or 25% or more for an undergraduate program.
- b. **Branding/Distinctiveness:** Stakeholders can clearly distinguish the differences between programs in catalogues, brochures and announcements. The intent is to create clarity for the stakeholders by avoiding misrepresentation and confusion in the accreditation process. In DBS our brochures at times are

---

<sup>10</sup> AACSB International, "Eligibility procedures and Accreditation Standards for Business Accreditation", revised version January 2008, page 4

<sup>11</sup> AACSB International accreditation Application Form

confusing as the same programs are offered twice but validated by different accreditation bodies. Only since September 2009 DBS programs have gained double accreditation; UK universities and Irish government.

- c. **Control/Autonomy:** The institution seeking accreditation must be autonomous in areas such as faculty hiring, development and promotion, awarding degrees, student selection. AACSB want to be able to influence the learning process by making recommendations that will supersede the others. In the case of DBS, AACSB would have to discuss the issue that HETAC awards degrees in the private sector and there would be major conflict and barriers to enter the Irish market. However, University City Dublin is the only university in Ireland offering EQUIS and AACSB accreditation.

#### **AACSB criteria for accreditation**

AACSB outlines **21 criteria** for business accreditation<sup>12</sup> regarding three sets of standards; Strategic Management Standards, Participants Standards and Assurance of Learning Standards. These standards appear more rigorous and stricter than ACBSP standards.

#### **Strategic Management Standards (5 standards)**

- 1) A mission statement for the school to provide direction and is reviewed periodically
- 2) The mission should encourage intellectual contributions to knowledge and advance the practice of business and management.
- 3) The mission is to describe the students' target audience.
- 4) The school must specify intent and actions revealing institution's efforts for continuous improvements.
- 5) The financial strategies should provide sufficient resources to reach objectives

#### **Participants Standards should be put in place in the following areas (9 standards):**

- 6) Students admission
- 7) Student retention
- 8) Staff sufficiency to provide stability, continuity and support
- 9) Sufficient faculty with appropriate qualifications (Academic or Professional) to instruct.
- 10) Maintenance of faculty expertise

---

<sup>12</sup> AACSB, International, "Eligibility procedures and Accreditation Standards for Business Accreditation", revised version January 2008, page 16 to 20

- 11) Sufficient support demonstrated for faculty to maintain and improve the progression of faculty career.
- 12) Sharing of educational responsibilities between faculty, staff and administrators
- 13) Faculty development of their own knowledge and must operate with integrity and responsiveness towards students.
- 14) Students' responsibility is to act with integrity and remain engaged in their own learning process while contributing to the learning of others.

**Assurance of learning standards (7 standards)**

- 15) The systematic management of curricula differentiating the undergraduate from the graduate levels. At graduate level the learning experiences should include;
  - a. Ethical and legal responsibility
  - b. Financial theories, analysis, reporting and markets
  - c. Creation of value through marketing
  - d. Behavioral organization
  - e. Statistical analysis
  - f. Information technologies
  - g. Domestic and global economic environments of organizations
  - h. Other management knowledge that the school has identified.
- 16) Bachelor's degrees should concentrate on knowledge and skills where learning goals are clearly set
- 17) Bachelor's degrees must provide sufficient time and coverage to reach educational goals
- 18) At a master's level learning is more integrative and interdisciplinary. Students are expected to show capacities to lead, to apply knowledge in unfamiliar contexts and to adapt and innovate to solve problems even in unforeseen circumstances.
- 19) In specialized master level, the learning goals should be more specialized and include the application of knowledge in new and unfamiliar circumstances. The ability to adapt and innovate to solve problems and the capacity to evaluate and critique previous knowledge.
- 20) At a master's level, educational goals must be met to provide enough time, contents and students' efforts and enough interaction between faculty and students.
- 21) At Doctoral level the learning goals are focusing on the acquisition of



advanced knowledge, the development of practical research skills, the attention to the area of specialization, the preparation of teaching responsibilities and the dissertation and research.

**The AACSB accreditation fees** are higher than ACBSP for a new business schools looking for a program accreditation as these could amount to \$14,800 excluding expenses and only for one accreditation type (AACSB 2006).

**AQ and PQ:** Like for ACBSP there is a clear distinction between *Academic Qualification* with a doctoral degree (AQ) and *Professional Qualification* with professional activities such as consultancy or other experience (PQ). In Standard 10 document, “deploying Academic Qualified Faculty: an interpretation of AACSB Standards” Faculty are expected to be experts in subject matter or in the educational process and theory of learning as faculty remain active scholars. Faculty has an obligation and a responsibility to maintain an intellectual capital made of either academic or professional contributions. The intent of standards is clearly reflected in Table 3 (AACSB 2006) where a larger proportion of AQ faculty will lead to MBA and specialized Masters Programs and PhD program placing graduates in research schools.

In effect the AACSB standards require at least 50% of total faculty from AQ. If different the burden is on the school to proof the “overall high quality” standards for education. Again AACSB emphasis is on innovativeness and intellectual capital.

To summarize, AACSB standards are the most expensive and the toughest standards to meet for an Irish institution. In that respect only an Irish Public university with public funding could devote the administrative, staff, financial and intellectual resources and the academic drive to meet these standards. In effect, University City Dublin is the only Irish university with AACSB accreditation holding the “triple crown” of accreditations<sup>13</sup>.

For DBS AACSB fees and the cost for meriting accreditation would be too high. There could also be potential conflicts between the Universities of Wales and Liverpool as well as HETAC (Higher Education & Training Awards) accredited programs and AACSB.

---

<sup>13</sup> < <http://www.smurfitschool.ie/aboutsmurfit/rankingsandaccreditation/>> accessed 11/10/09

### The EFMD (European Foundation for Management Development) Accreditation

The European Foundation for Management Development (EFMD), located in Brussels, Belgium is a prestigious European accreditation body delivering a variety of accreditations in Higher Education. EQUIS and EPAS are considered the luxury brands of accreditation to merit for Business programs.

The EFMD manages **four main accreditations**; EQUIS, EPAS, CEL and CLIP.

- **EQUIS** (European Quality Improvement System) focus on raising standards of management education worldwide from Bachelor to PhD level.
- **EPAS** (EFMD Program Accreditation System) focus on international programs with a view to create benchmarking standards for international programs
- **CEL** (Certification of e-learning) accreditation is linked to technology-enhanced programs in the world.
- **CLIP** accreditation (Corporate Learning Improvement Process) is targeted at the corporate market and is aimed at improving standards of training and learning in corporate universities.

Here we will focus mainly on EQUIS and EPAS as these accreditations relate to our comparative analysis with AACSB and ACBSP in the USA.

EFMD was funded in 1972 with the mission **to promote and enhance excellence in management education**, a mission very similar to AACSB. Both agencies share similar points and have synergized in some respect. EFMD is a network of various stakeholders in Higher Education. Its approach is best fitted to the EU various modes of education and ways of doing business. EFMD embraces Freeman's stakeholders' theory and applies it to Higher Education<sup>14</sup> in the world. EFMD promotes strongly the contributions business education can make to improve society. Managers are to be assigned new social roles.

**The EFMD vocation is European and international education** whereas AACSB and ACBSP stem from an American system and are more applicable and related to national market with a view to export a know-how abroad. Because of the long history of accreditation AACSB and ACBSP have developed a portfolio of experiences and have devised systems to rigorously and deeply evaluate business schools and their programs.

EFMD is a newer organization in an old continent that views education seriously and as a means to advance society. Its mission is to create benchmarks in international Higher Education as it takes a leading role in promoting **the social role of management and**

---

<sup>14</sup> Freeman Edward, Strategic Management: a stakeholder approach, 1984

**harmonizing higher education in the world.** Because EFMD had to deal with a puzzle of European countries it acknowledges variations and cultural differences and applies a bottom up philosophy. EFMD accreditation process remains “a consultative process” with its key stakeholders.

**The 10 chapters** in EQUIS brochures correspond to the standard criteria discussed previously.

1. Context Governance and Strategy
2. Programs
3. Students
4. Faculty
5. Research and Development
6. Executive education
7. Contribution to the Community
8. Resources and Administration
9. Internationalization
10. Corporate Connections

The wording and the tone of the documents are investigative and less intrusive. EQUIS accreditation process seems *more like an inquest rather than a request*. Some new standards are given particular importance and are stressed quite intensively such as Corporate Connections (chapter 10), Contributions to the Community (chapter 7). The American accreditation agencies have a top-down approach to Higher Education where standards are set to be met. Because of its diverse European background EFMD mission has the experience of respecting, integrating and assimilating different ways of doing business and different “ways of doing education” as it integrates contexts in process. EQUIS and EPAS accreditations are considered “**quality improvement tools**” to insure continuous and consistent delivery of Quality Education in the world. EFMD synergetic approach is aimed at “**developing benchmarks**” for the improvement of education at Undergraduate, Postgraduate and Doctoral levels.

### **Internationalization?**

EQUIS accredited programs are present in 33 countries. On EFMD website approximately 125 EQUIS accredited schools are listed<sup>15</sup>. **The influence of France, French speaking countries and the UK** is significant as these two cohorts strongly dominate the listing of EQUIS accredited schools. The strong dominance of the French speaking countries includes

---

<sup>15</sup> [www.efmd.org/com](http://www.efmd.org/com)

not only France but also Belgium, Switzerland and to a certain extent Canada with the Quebec region. French-speaking Business Schools account for 26 schools out of the 125 EQUIS accredited schools in the world (see Table 1). French and UK business schools together account for approximately 30% of all accredited schools.

On the other hand the American accreditation agencies target primarily American institutions and their international presence is not as important compared to EQUIS. However **Strategic Partner Alliance** have been established between AACSB and EFMD to capitalize on future international accreditation opportunities.

**Table 1: Number of schools accredited by country of origins**

Country of origin	Number of schools accredited
UK	21
France	19
Belgium	4
Switzerland	3
Scandinavian countries	10
Canada	8
China	7
South America	7
China	7
Australia	6
Spain	5
USA	3
Germany/Austria	3
New Zealand	3
Netherlands	3
Italy	2
Portugal	2
Others	12

Source: EFMD

EQUIS is positioning itself as **the Global brand for European and international accreditation in Higher Education**. It is true that its experience in educational harmonization and its broad knowledge of diverse “ways of doing education” has positioned it as a unique model to be followed by innovative and creative business schools that will want to get away from the Milton Friedman’s approach where business should only be run in the interest of its owners.

The EFMD model deals with the challenges in the global harmonization and standardization of higher education. An OECD report<sup>16</sup> presents the possible market opportunities in international tertiary education;

- The global growth of tertiary education
- The increasing cost of tertiary education
- The increasing student mobility in tertiary education
- The need for harmonization if possible between countries delivering an English speaking education
- The drive to measure, compare and contrast quality

**EQUIS data sheet sets out 16 eligibility criteria.**

EQUIS accreditation process is operational, simple and straight- forward and holds the best model for international standardization. EQUIS requests information and justification under each topic. However there is a clear typology set out distinguishing various Masters (Type A, B or C Masters) in Guidelines and Position Papers<sup>17</sup>. Unlike ACBSP and AACSB no definite standards for part-time or full time Faculty are set. This might leave opportunities for unethical organizational behavior. The EQUIS documents are user friendly. The justifications requested are in-depth. The accreditation process is more transparent since EQUIS process manual includes templates used by the EFMD for Peer reviews (Annex 7), Students’ evaluations of the program and the school (Annex 5). The Institution going through the accreditation process is fully aware of the expectations to be met.

---

<sup>16</sup> Ischinger Barbara, “OECD Initiative on Assessing Higher Education Learning Outcomes”, OECD, presentation for CHEA International Commission, January 2008 accessed through ISM Blackboard,

<sup>17</sup> EFMD, “Guidelines and Position Papers: Supporting Material for the EQUIS and EPAS Accreditation System”

**Conclusions and recommendations to DBS**

**To conclude our desk research** we attempted to construct the following table with the view to compare and contrast each accreditation agency we discussed above;

**Table 2: Comparative analysis of the three accreditation bodies**

	<b>EFMD</b>	<b>ACBSP</b>	<b>AACSB</b>
	European Foundation for Management Development	Association of Collegiate Business Schools and Programs	Association to Advance Collegiate Schools in Business
<b>Eligibility Criteria</b>	Eligibility announced after Briefing visit: 16 criteria: <ul style="list-style-type: none"> <li>➤ External governance</li> <li>➤ Internal management</li> <li>➤ Autonomy</li> <li>➤ The program portfolio</li> <li>➤ Executive education</li> <li>➤ Subject or teaching areas/department</li> <li>➤ Faculty</li> <li>➤ Administrative staff</li> <li>➤ School’s research</li> <li>➤ Source of Funding</li> <li>➤ National Standing</li> <li>➤ Accreditation by other agencies</li> <li>➤ International reputation</li> <li>➤ Internationalization</li> </ul>	5 criteria: <ul style="list-style-type: none"> <li>➤ Institutional accreditation</li> <li>➤ Statement of mission/ institution</li> <li>➤ Statement of mission/ program</li> <li>➤ Public information</li> <li>➤ Accreditation of doctoral programs</li> </ul>	7 criteria defined: <ul style="list-style-type: none"> <li>➤ Member of AACSB International</li> <li>➤ Only for Bachelors, Masters and Doctoral programs</li> <li>➤ Sufficient resources to maintain degree programs. 1) Balance between participating and supporting. 2) Review of qualifications, development activities and Professional responsibilities. 3) Deployment of Aca.Q vs. Prof.Q faculty</li> <li>➤ All programs will</li> </ul>

	<ul style="list-style-type: none"> <li>➤ Links with Corporate</li> <li>➤ Facilities</li> </ul>		<p>be reviewed</p> <ul style="list-style-type: none"> <li>➤ Diversity in the business programs</li> <li>➤ Ethical behaviors expectations by staff and students</li> <li>➤ Production of graduates for at least 2 academic years</li> </ul>
<b>Rationale</b>	To embrace excellence in Management Education in the world through a stakeholder approach	Excellence in Teaching	Excellence in Management Education
<b>Quality</b>	Very high – Based on European benchmarking	Average -Based on Domestic market	High - Based on Domestic Market
<b>Fees excl. Expenses</b>	Up to €35,000 exc. Traveling costs	\$12,150 excluding traveling costs	\$ 13,800 only for business or accountancy to Initial review phase
<b>Criteria</b>	<p>10 criteria standards:</p> <ul style="list-style-type: none"> <li>➤ Context, governance, strategy</li> <li>➤ Programs</li> <li>➤ Students</li> <li>➤ Faculty</li> <li>➤ Research and Development</li> <li>➤ Executive Education</li> <li>➤ Contribution to the</li> </ul>	<p>6 Criteria standards:</p> <ul style="list-style-type: none"> <li>➤ Leadership</li> <li>➤ Strategic Planning</li> <li>➤ Student and stakeholder focus</li> <li>➤ Measurement of student learning performance</li> <li>➤ Faculty and</li> </ul>	<p>21 Criteria standards in mainly 3 areas:</p> <ul style="list-style-type: none"> <li>➤ Strategic Management standards (5 criteria)</li> <li>➤ Participants standards (9 standards)</li> <li>➤ Assurance of Learning Standards (7</li> </ul>

	<p>community</p> <ul style="list-style-type: none"> <li>➤ Resources and Administration</li> <li>➤ Internationalization</li> <li>➤ Corporate Connections</li> </ul>	<p>Staff focus</p> <ul style="list-style-type: none"> <li>➤ Educational and Business Process Management</li> </ul>	standards)
<b>Objectives</b>	Raise the quality of management education worldwide	To achieve excellence in teaching	
<b>Process</b>	7 stage process	3 stage process: Application, self study, Peer review	5 stage process
<b>Primary Target markets</b>	International Business schools dominated by French speaking and UK institutions	US Business Schools	US Business Schools and International Business Schools
<b>Faculty conditions</b>	N/A	50% of FTE * faculty with Masters or doctorate  90% of FTE faculty with Masters or be professionally qualified	
<b>Foundation</b>	1972	1988	1916
<b>Internationalization Process</b>	1972		1996
<b>Other Initiatives</b>	Global Responsible Leadership Initiative (GRLI)		Linked to EFMD for standards and international accreditation



\* FTE=Full Time Equivalent

### Recommendations

Following our desk research and the analysis of the data provided to us by the accreditation agencies we came to the conclusion that Dublin Business School (DBS) should adopt the ACBSP softer accreditation approach. DBS is a private college located in Dublin city center offering professional qualifications, undergraduate and postgraduate degrees. It is not a research-oriented institution and does not have the financial resources Irish public universities have in Ireland. DBS approach to education would better match ACBSP standards and philosophy of “teaching excellence” as its value proposition is “Excellence through learning”. We recommend DBS to pursue ACBSP accreditation to gain experience in dealing with the US accreditation bodies. Also DBS could gain recognition in the US markets and attract more US students looking for an Irish learning experience in their studies. In the mid to long-term EQUIS accreditation needs to be pursued. ACBSP accreditation would allow DBS to position itself in the world as a true global service provider of Higher Education. It would become more competitive in the international markets, targeting a truly global audience as students are searching for recognition by accredited bodies in Ireland and abroad. DBS would be a unique institution holding three accreditations from three English-speaking countries; the US, the UK and Ireland. Also costs associated to ACBSP accreditation award remain the most competitive<sup>18</sup>. The main challenge for the future will be for DBS to maintain and manage its multiple accreditation systems it has been awarded over the years and maintain the standards it has set for its excellence in teaching.

---

<sup>18</sup> ACBSP, “Costs Associated with the Accreditation Process for Baccalaureate/Graduate Degree Schools and Programs” accessed through ISM Blackboard, 10/6/09

## Bibliography

AACSB International accreditation Application Form

AACSB, International, "Eligibility procedures and Accreditation Standards for Business Accreditation", revised version January 2008

ACBSP, "Costs Associated with the Accreditation Process for Baccalaureate/Graduate Degree Schools and Programs" accessed through ISM Blackboard, 10/6/09

ACBSP, "standards and criteria demonstrating excellence in Baccalaureate/graduate degree schools and programs, Original doc rev C April 2006

Freeman, R. Edwards, *Strategic Management: a stakeholder approach*, Boston Pitman, 1984

Ischinger Barbara, "OECD Initiative on Assessing Higher Education Learning Outcomes", OECD, presentation for CHEA International Commission, January 2008 accessed through ISM Blackboard,

EFMD, "Guidelines and Position Papers: Supporting Material for the EQUIS and EPAS Accreditation System"

McConnell Daniel, "Unrest in academia as", Irish Independent, 22/10/06

Romero, Eric J, "AACSB accreditation: addressing faculty concern", Academy of Management Learning and Education, 2008, Vol 7., N.2

## Websites

<http://www.aacsb.edu/>

[www.efmd.org/com](http://www.efmd.org/com)

[www.dbs.ie](http://www.dbs.ie), Dublin Business School

<http://www.independent.ie/opinion/analysis/unrest-in-academia-as-136012.html>

<http://www.ism.edu/> accessed 11/10/2009

<http://www.smurfitschool.ie/aboutsmurfit/rankingsandaccreditation/>> accessed 11/10/09



**Dublin  
Business  
School**

*Excellence Through Learning*

# ACBSP Region 8 2009 Annual Conference

---

## **Comparative Investigation of Accreditation Agencies - Suggested Models to Foster Teaching Excellence**



# Our Methodology..

---

- ❑ Desk Research only!
- ❑ Based on ***DBS potential interest*** in additional accreditations
- ❑ ***Case Study approach....***
- ❑ ***“If Dublin Business School was interested in getting additional accreditation which agencies should DBS contact ?”***
- ❑ ***Matching and Patching approach!***



# Our objectives

---

- ❑ To understand the ***accreditation philosophies*** behind ACBSP, AACSB and EFM
- ❑ To find ***the best fit*** between DBS profile and an additional potential accreditation agency
- ❑ To suggest ***Models to foster excellence*** in Education (Patching...)



# Dublin Business School

---

- ❑ 10,000 students approximately
- ❑ Subsidiary of ***Kaplan and Washington Post***
- ❑ ***Largest*** private business schools in Ireland
- ❑ Competing with the best universities in Dublin; ***UCD, DCU, Trinity College...***
- ❑ ***UCD triple crown: EQUIS, AACSB, AMBA***
- ❑ ***International enrollment*** very high in post grad (up to in some courses 90%...)



# Dublin Business School

---

- ***Dynamic Global provider of education***
- ***Strategic Partnerships Alliances*** with other Business Schools with transfer students for a year gaining HETAC (Higher Education and Training Accreditation Council)
- Offerings:
  - ***Multiple accreditations***; HETAC (Irish), University of Wales and University of Liverpool John Moore
  - ***“Excellence through learning”***

# DBS competitive advantages...

---



- ❑ ***International Visa*** students allowed to work 20 hrs/week
- ❑ ***A learning culture*** with tech savvy students
- ❑ ***A cluster of MNC in ICT industry***; Google, Facebook, Intel, etc.
- ❑ ***Competitive fees***
- ❑ **Ireland** as a hospitable and friendly country to come and study...
- ❑ **City center location** - 6 campus convenience for Part timers



# Why another accreditation?

---



- International exposure and recognition***
- Attracting a Multicultural body of students***
- Increase in revenues and resources.....***
- Students demand quality and guarantees....***

# Comparative Analysis

	<b>EFMD</b>	<b>ACBSP</b>	<b>AACSB</b>
<b>Eligibility criteria</b>	16 criteria	5 criteria	7 criteria
<b>Rationale</b>	A global brand of EU universities- AACSB partnership	Excellence in teaching	Excellence in Management Education
<b>Fees excl. expenses</b>	Up to €37,050 (5y. Accreditation)	\$ 12,150 excl. traveling costs	\$13,800...Not clear
<b>History</b>	1972	1988 The youngest	1916

# Comparative Analysis

	<b>EFMD</b>	<b>ACBSP</b>	<b>AACSB</b>
<b>Schools accredited</b>	UK, France, China, Scandinavia, Canada	9 regions of which 7 in the US	Over 100 outside of US
<b>Types of accredited</b>	Universities	Private schools	Universities
<b>Philosophy</b>	Research	Teaching	Research

# Comparative Analysis

---

	<b>EFMD</b>	<b>ACBSP</b>	<b>AACSB</b>
<b>Criteria</b>	10 criteria	6 criteria	21 Criteria
<b>Objectives</b>	Raise the quality of management education worldwide	To achieve excellence in teaching	Excellence in Management education
<b>Process</b>	7 stages	3 stages 3 year process	5 stages
<b>Primary Targets</b>	EU	US International presence	US International presence

# ACBSP “Supporting, celebrating, rewarding teaching excellence”

---

- ❑ The new program needs to be **operational with enrolled students for at least two years** before it can be considered for accreditation
- ❑ Accreditation must be accredited **by their own regional body**
- ❑ **Open system** taking a stakeholder approach
- ❑ **6 criteria:** Leadership, Strategic Planning, Student and stakeholder Focus, Measurement and analysis of student learning performance, Faculty and Staff focus, Education and Business process Management

# AACSB

---

- ❑ **7 eligibility criteria** before the application...
- ❑ **21 Criteria** for accreditation...
- ❑ Fees are not clear
- ❑ Most expensive and the toughest standards to meet for an Irish institutions. Only UCD has met these standards in Ireland.
- ❑ **Potential conflict** with University of Wales, LJMU and HETAC

# EFMD

---

- ❑ **EQUIS**
- ❑ **EPAS** for international programs
- ❑ **CEL** Certification of e-learning
- ❑ **CLIP** Corporate Learning Improvement process
- ❑ Mission similar to AACSB “promote and enhance excellence in management education”
- ❑ Embrace the stakeholder approach
- ❑ European and International vocation
- ❑ Takes a leading role in promoting the social role of management and harmonizing education

# EFMD

---

- Bottom up approach
- 10 standard criteria= 10 chapters
  - Context governance and strategy
  - Programs
  - Students
  - Faculty
  - Research and Development
  - Executive education
  - Contribution to the community
  - Resources and administration
  - Internationalization
  - Corporate Connections



# EFMD

- ❑ Development of ***benchmarks*** and quality improvement tools
- ❑ Website is dynamic
- ❑ Presence in ***33 countries 130 EQUIS*** accreditations
- ❑ Meeting the need for ***global harmonization*** outlined in OECD (Ischinger, 2008)
  - **Global growth of tertiary sector**
  - **Increased student mobility**
  - **Increasing cost of tertiary education**
  - **Need for harmonization**
  - **The drive to measure, compare and contrast quality**

# Teaching/Research dilemma

---

- ❑ Research funded in universities
- ❑ ACBSP recognizes dilemmas as private institutions can't afford research...
- ❑ Research can be carried out in various forms - Applied research, etc.
- ❑ **Teaching excellence** rather than research excellence
- ❑ The issue “***develop, evaluate, provide and promote an excellence in teaching***”

# Other ethical dilemmas in accreditation

---



- Observations - Acting as if..
- Accreditation visits - stress
- Full time and Part time faculties: issues of commitment and control
- Trade off between Saving costs and maintaining quality and commitment
- The true picture?
- Honesty...

# Practicing and Teaching ethics

---

R

- Need for application of ethical standards in teaching***

E

- How to measure students level of ethics?
- How to encourage ethical thinking and ethical intelligence...***

S

- Objective vs. subjective....

C

- Issue of quantitative vs. qualitative
- Right brain vs. left brain....

U

- Students say they don't need ethics
- Do we listen to them?

# What students say about learning business ethics...

Can have a relationship without honesty in business	67 %
Value others' people beliefs	85 %
Use their own religious beliefs in business	69 %
Education does not influence their decisions	66 %
There is not enough teaching for ethics	64 %
Teaching ethics is not necessary	62 %

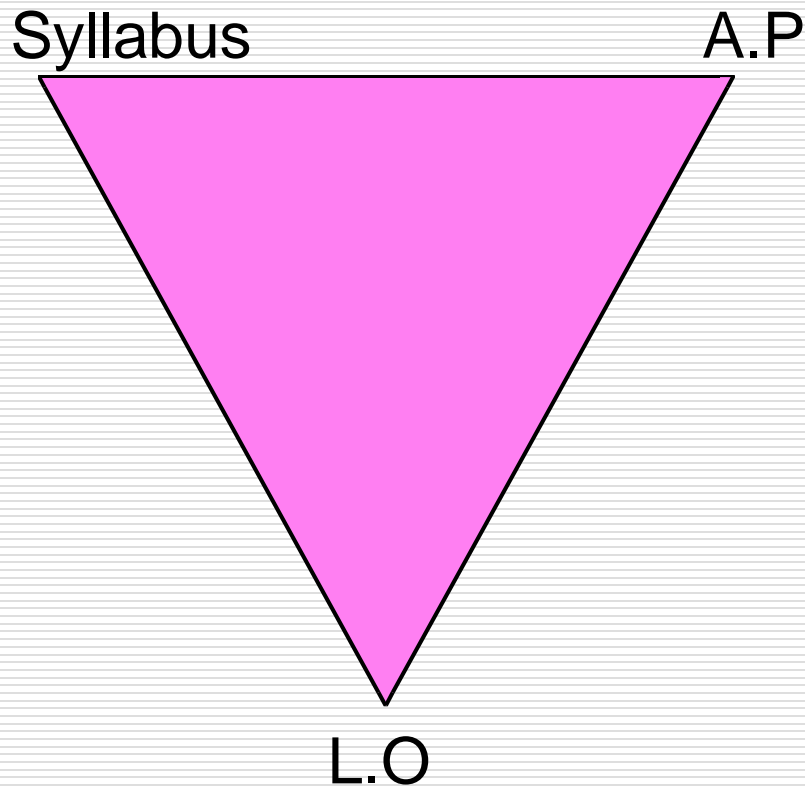
# How to enrich the learning experience... Virtues in practice

---

- **Respect**      ➤ **Respect** for other's values - acceptance of differences
- **Empathy**      ➤ **Empathy** possibility to kindly and courteously disagree with other students when debating
- **Social skills**      ➤ **Social skills** - Participate and discuss - disagree and still act socially
- **Courage**      ➤ **Courage** to approach conflicts and overcome fears and anxieties
- **Uniqueness**      ➤ **Uniqueness** in his/her style of contribution and feeling confident

# Using the RESCU approach

---



- Part of the Syllabus
- Part of the Grading Policy - 10%
- Peer evaluation in classrooms
- Group presentations
- Efforts need to be rewarded
- Others' Perceived Value of the contributions

# RESCU and cross cultural training

---



- ❑ Issue is that students in group prefer to stick together
- ❑ Cross cultural communication is minimized in group formation
- ❑ French together - Irish together, etc..
- ❑ Encouraging cross cultural teams is a challenge...
- ❑ More at undergrad than postgraduate



# When to use RESCU ?

---



- ❑ Undergraduate: cultural shock....
- ❑ Postgraduate are at different moral development
- ❑ Different level of motivation
- ❑ Locus of control; take responsibility for themselves
- ❑ Use at 4th year undergraduate or Postgraduate

# Where to practice RESCU in the Common Professional Component

<b>FUNCTIONAL AREA</b> Marketing Business Finance Accounting Management	<b>BUSINESS ENVIRONMENT</b> Legal environment of business Economics <i>Business Ethics</i> <i>Global Dimension of business</i>
<b>TECHNICAL SKILLS</b> Information Systems Quantitative Technics/Statistics	<b>INTEGRATIVE AREA</b> <i>Business Policy or comprehensive or Integrating experience</i>



Thank you for listening

[chantal.ladidas@dbs.ie](mailto:chantal.ladidas@dbs.ie)

[cladidas@mac.com](mailto:cladidas@mac.com)

---

## The Role of Emotions in Brain Based Learning

---

### **Kefalas Soteris, Ph.D. (cand.)**

Deputy Director  
Paralimni Technical School  
109 Akefalou Street  
5296 Paralimni, Cyprus  
[kefalas.soteris@cytanet.com.cy](mailto:kefalas.soteris@cytanet.com.cy)

**Abstract:** Learning is the process of acquiring knowledge, skills, attitudes and values, through study or experience that causes a change of behaviour. This will be persistent, measurable and specific allowing an individual to revise a prior mental construct, conceptual knowledge such as attitudes and values, or to formulate a new construct.

Emotion is a neural impulse that moves an organism to action in learning and which drives attention. This attention in turn drives learning. (Sylwester, 1994). Unregulated emotions in students are thought to be the cause of many forms of misbehaviour.

Emotions can affect learning, positively or negatively. When a learner experiences positive emotions, the learning process can be enhanced; when experiencing negative emotions, the learning process can be worsened, and even disabled.

**Keywords:** Emotion, Learning, brain based learning, education, higher education, excellence in education.

**Reference:** Reference to this paper should be made as follows: Kefalas, S. (2009) "The Role of Emotions in Brain Based Learning", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes:** Kefalas Soteris holds two Master's Degrees in Hospitality Management and International Management, from Sheffield Hallam and Pacific States University, and is now is reading for a PhD at the International School of Management (*Paris, New York, Shanghai, Tokyo*).

He has been teaching for 25 years full and part-time in public schools and colleges in Cyprus and currently, is Deputy Director and Pedagogical Consultant at Paralimni Technical School, Cyprus.

Kefalas, has edited six books on hotel and restaurant management, written and published many articles and given innumerable presentations on hospitality management and education.

---

## Introduction

Brain-based learning is an as an interdisciplinary answer to the question of “what is the most effective way of the brain’s learning mechanism” (Jensen, 1998). Caine and Caine (1995) define brain-based learning as “recognition of the brain’s codes for a meaningful learning and adjusting the teaching process in relation to those codes.”

Studies in the field of neurobiology have improved understanding of how the brain functions and how learning is formed. Educators who work in collaboration with neurobiologists integrate knowledge of the functions of the brain and adapt them to learning principles. Brain-based learning aims to enhance the learning potential and, in contrast to the traditional approaches and models, provides a teaching and learning framework for educators (Materna, 2000).

## The Principles of Brain-Based Learning

The principles of brain-based learning provide a theoretical framework for the effective learning and teaching process, seeking the best conditions in which learning takes place in the brain. Based in neurobiology, these principles guide educators to select and prepare learning environments. Caine and Caine list these principles as follows (1991, 1994):

1. *The brain is a parallel processor:* it can perform several activities at once. Renate and Geoffrey Caine (1991,1994) claim that thoughts, emotions, imagination and predispositions operate simultaneously and interact with the expansion of general social and cultural knowledge.
2. *Learning engages the entire physiology:* Everything that affects our physiological functioning affects our capacity to learn.

3. *The search for meaning is innate:* the search for meaning is survival oriented and basic to the human brain.
4. *The search for meaning occurs through patterning:* Patterning refers to the meaningful organization and categorization of information. The brain is designed to perceive and generate patterns, and it resists having patterns imposed.
5. *Emotions are critical to patterning:* What we learn is influenced and organized by emotions.
6. *The brain processes wholes and parts simultaneously:* There is evidence of brain laterality; however, the two hemispheres are inextricably interactive.
7. *Learning involves both focused attention and peripheral perception:* The brain absorbs information of which it is directly aware, but it also incorporates the one that lie beyond the field of attention.
8. *Learning involves both conscious and unconscious processes:* Signals that are peripherally perceived enter the brain without the learners’ awareness and interact at unconscious levels.
9. *We have two types of memory: spatial and rote:* The spatial memory system does not need rehearsal and allows for instant memory of experiences. The counterpart of the spatial memory system is a set of systems designed for storing relatively unrelated information. (rote)
10. *We understand and remember best when facts and skills are embedded in natural, spatial memory:* Spatial memory is generally best invoked through experiential learning.
11. *Learning is enhanced by challenge and inhibited by threat:* The brain downshifts under perceived threat and learns optimally when appropriately challenged.
12. *Each brain is unique:* we all have the same set of systems, but they are integrated differently in every brain.

The principles of brain-based learning propose that effective learning could occur only through practicing real life experiences. Learning becomes more expressive when the brain supports the processes in search of meaning and patterning. Accordingly, it enables the learners to internalize and individualize learning experiences. Therefore, it is essential that learners be encouraged to participate in the learning and teaching process actively and that teaching materials be chosen according to their learning preferences.

### Learning and Teaching Process in Brain-Based Learning

Brain-based classrooms are called “brain friendly places.” These classrooms are the learning environments where the brain’s functions and their roles in learning are regarded in terms of teaching and learning process. These classes also have an emotionally enriched environment where learners are immersed into challenging experiences. Finally, in brain-based classrooms, it is believed that learners are unique and that former knowledge serves as a baseline for new learning (Fogarty, 2002).

Learners are encouraged to gain some skills during the brain-based learning process. They learn not only how to use thinking in learning process but also about the thinking process itself. The teaching and learning process is formed in three important phases: *orchestrated immersion*, *relaxed alertness* and *active processing*.

**Orchestrated immersion:** Orchestrated immersion means to create learning environments that fully immerse learners in an educational experience. The idea is to take information off the page and blackboard to bring it to life in the minds of students. Orchestrated immersion provides learners with rich, complex experiences that include options and a sense of wholeness.

**Relaxed alertness:** Relaxed alertness means to try to eliminate fear in learners, while maintaining a highly challenging environment. Relaxed alertness is not the same as being calm and unchanging; it is a dynamic state that is compatible with great deal of change. Relaxed alertness ensures that students are being challenged within a context of safety. It also includes a personal sense of well-being that allows students to explore new thoughts and connections.

**Active processing:** Active processing means the consolidation and internalization of information by the learner in a way that is both personally meaningful and conceptually coherent. It is the path to understanding, rather than simply to memory. Active processing necessarily engages emotions, concepts and values.

## THE ROLE OF EMOTIONS IN BRAIN – BASED LEARNING

### The Physiology and Nature of Emotions

The body’s emotional system is a complex organization constantly evolving and adapting from birth and yet not without a tendency to making errors. It influences and largely defines basic personality and is highly resistant to change.

It is located principally in the brain and endocrine system, a system of glands that secrete and release hormones into the blood, which are instrumental in regulating metabolism, growth, development, puberty, tissue function, temperature and water balance and also play a part in determining emotions. The main—heart, lungs, stomach, and skin—are all affected by emotions, which are the glue that bonds and integrates brain and body.

Emotions are enmeshed in the body's neural network and affect all mental activity about twice as fast as rational thought. It is held that positive emotions enable us to recall things with greater clarity and to improve our ability to organize and collate our experience.

### **Specific Role of Emotions in Learning**

According to Eric Jensen (2008), the specific role of learning is to:

- Bind the learning
- Help educators to determine what is real, what we believe and feel
- Activate long-term memory on an intense and widespread chemical basis in both amygdaloid and peptide structures. (Amygdaloids are almond-shaped groups of nuclei located deep within the medial temporal lobes of the brain in complex vertebrates. Peptides—from the Greek *πεπτίδια*, "small digestibles"—are short polymers formed from an ordered linking of  $\alpha$ -amino acids. The link between one amino acid residue and the next is called an amide bond or a peptide bond.
- Help educators make faster decisions by using nonconscious and gut-level judgement
- Help educators make better-quality decisions by encouraging our values



## Aspects of Emotions

According to Newman, Dawn: <http://dneumann73.googlepages.com>, the following aspects of the emotions people have to understand before taking their appropriate decision towards other people: **"We must feel physiological changes in our body before we are aware of our actual feelings."**

According to the James-Lange theory, emotions are only felt after physiological changes within our bodies have been detected. For example, we experience physiological changes in our bodies that were brought about by an event. Only after these physiological changes occur (ie. increase in heart rate), will we know the emotion we are feeling (fear). For example, we are giving a presentation in front of a large audience. This event gets processed by the brain and stimulates physiological changes in the body (increase heart rate). These changes in the body get sent back up to the brain (eventually somatosensory cortex of the parietal lobe) and enable us to "feel" these changes within the body. Antonio Damasio reports that this information then gets sent to the front of the brain (the ventromedial prefrontal cortex) where it is associated with similar memories. By combining our physiological experiences with memories of similar events, we are able to determine the actual emotions we are feeling. **"We must feel an emotion within ourselves before we could perceive or understand that emotion is someone else."**

*Empathy:* Understanding the context of a situation and how we might feel in that situation, will help us to understand what others may be feeling. If we know what others are going through, and what they wanted, believed and expected to happen, we could assume what someone would be feeling, by knowing what we would feel like in a similar situation. By putting ourselves in someone else's shoes we could relate to their emotional experience and develop a better understanding for their actions/behaviors. BUT, more importantly, we could use this information to determine how we would want someone to react to us and then do that for the other person.

### Emotional Control

The ability to control our emotions is seated in the front part of brain (prefrontal cortex). The primitive part of our brains (the limbic system) automatically responds to an emotional stimulus or event. However, not every situation warrants an automatic response. We are "hard-wired" to automatically respond to certain threatening situations for survival. But other than that we have control over our responses to an emotional event. Once an emotional event gets is initially processed, it eventually winds up in the prefrontal cortex, the more civilized part of brain. Based on prior experiences, it will tell us if we are being rational

or not. It allows us to think through things, analyze them, and anticipates consequences of our behavior and predict how those consequences would make us feel. By anticipating consequences, it will either drive us to or away from a certain behavior - to approach or avoid). We must also weigh the pros and cons of immediate versus delayed gratification, because sometimes the immediate consequence could be a good one, e.g. getting drunk might initially make us feel good. However, the long term consequence might be a hangover, or worse resulting in our being discharged from employment because of our inability of being able to function adequately the next day. Or, in the extreme, causing an accident that ends with someone being killed.

## Emotion and Brain

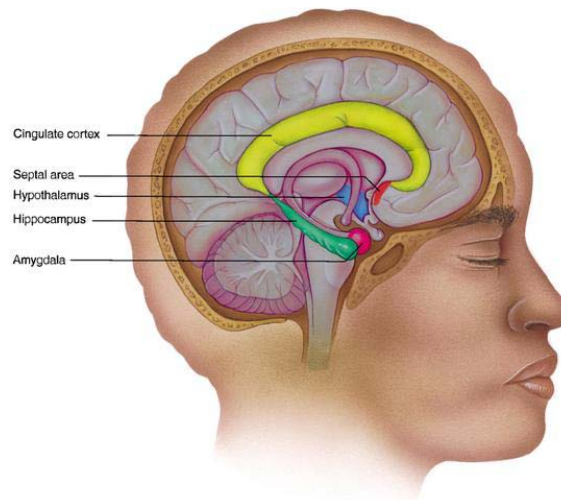
Human emotions originate in the brain, specifically in the limbic system which is an important component of learning. The limbic system is a small structure located in the middle of the brain between brainstem and cortex. The brainstem controls alertness and arousal and sends sensory messages to the cortex via the limbic system. Much of our thinking and learning takes place in the cortex. The limbic system consists of the following sections: *Amygdala, Hippocampus, Thalamus and Hypothalamus*.

**Amygdala Section.** This is the principal limbic system structure involved in processing the emotional content of behavior and memory. Its principal task is to filter and interpret sophisticated incoming sensory information in the context of our survival and emotional needs and then help initiate appropriate responses.

**Hippocampus Section.** It converts objective versions of events from short term to long term memory. Together, the hippocampus and the amygdala can shape memories, combining the emotional version of the amygdala with the more objective version of the hippocampus. Because of the effect of the amygdala on the memory, the emotional state of the learner will change the subjects' perception of the memory.

**Thalamus Section.** It observes external stimuli and tells the brain what is happening outside of the body. The thalamus can observe a stimulus outside the body and immediately transmit limited information to the amygdala, which can then trigger a quick, emotional outburst.

**Hypothalamus Section.** It informs the brain as to what is happening inside the body. When the thalamus records a stimulus, the brain will attempt to produce a reaction. When no reaction can be produced, the hypothalamus will trigger the **endocrine system** to release hormones. Cortisol, endorphins and adrenaline are hormones that affect human behavior and learning.



Retrieved from: <http://science.howstufworks.com/brain>

## The Aspects of Behaviorism and Cognitive Theories of Learning in Relation to Emotion

**Behaviorism Theory of Learning:** Behaviorism is an approach to psychology based on the proposition that behavior can be researched scientifically without recourse to inner mental states. It is a form of materialism, denying any independent significance for the mind. Although the behaviorist theory of learning stresses independence from emotion, it is possible that emotion unconsciously drives conditioning. For example, when a person is conditioned not to touch an electric fence, the conditioning may occur because previously, the subject had experienced pain when touching the fence. When given the opportunity to touch the fence again, cortisol is released in the body because the person knows that touching the fence will result in shock, an unpleasant experience. Conversely, when a subject responds to a stimulus which will result in a reward, endorphins levels may rise at the stimulus, in anticipation of the reward.

**Cognitive Theory of Learning:** One can also see how emotion would be affect cognition. For example, if a student has a learning experience that involved an emotion, either positive or negative, the amygdala would to some extent control that memory. The memory, affected by the amygdala would then be permanently incorporated into the learners' schematic knowledge of a subject area. This in turn will affect all other learning related to that subject. Learning can also be affected by emotion is in the area of attention to the subject. An increase in attention to learning during a learning episode is driven by emotion. When a learner is aroused by a topic, the endocrine system releases mild levels of adrenaline. This results in an increase in attention, which in turn will help students learn concepts more fully.

## Applications of Emotions in Classrooms

According to researchers, the teacher has to use these hormones to enhance learning for students. In general, the teacher can enhance learning by creating environments and using teaching so that the students experience a raised level of endorphins and adrenaline, and limit the instances of raised levels of cortisol.

**Raising Endorphin Levels.** Endorphins levels are raised through positive experiences and interactions and are also raised with exercise. Thus, the teacher can help students experience an increase of endorphins by making learning a positive experience for the students. That entails making the classroom environment pleasant, both physically and socially. The classroom room can be visually stimulating, well kept and organized, so that students get a feeling of well being upon entering the class. Teachers can also help create a positive social environment by playing music as the students enter the classroom, inquiring about their well being and congratulating them about any success they have had in their lives. The teacher should also advocate a healthy lifestyle for students, including regular exercise. Since positive social interaction with peers also increases endorphin levels, the teacher can teach using properly managed co-operative learning.

**Avoiding increases in cortisol.** To avoid possible increases of levels of cortisol in students, the teacher can create a safe environment for the students by not permitting negative comments in the classroom and keeping an eye on potential anti-social situations such as discrimination, harassment, and even bullying that could cause negative effects. The teacher can also allow students adequate time to complete assignments and avoid unannounced tests. Any co-operative learning done in the classroom must be monitored by the teacher to ensure fairness so that student cortisol levels are not raised by the group.

**Stimulating adrenaline levels.** To create student interest in learning, the teacher should try to maintain interest in the topics. This may be done by using real life tasks for lessons, having the students engage the physical body in the tasks and being animated in class. Students should also be given plenty of opportunity to discuss the lesson with the teacher and among themselves.

**Understanding learning and emotion.** If teachers are sensitive to how emotion relates to the learning process, they can help the students through the different stages of learning. It is important for teachers to realize that learning involves a range of emotions, both positive and negative. If students are experiencing a negative emotion during one of the learning stages, they might quit the task at that point, which will result in a negative memory imprint about the task. To avoid this, the teacher can support students educationally (through extra help)

and offer encouragement during the more frustrating parts of the task until they achieve a level of mastery, where they will once more experience positive emotions at having completed the task.

### An ideal model of learning process in relation with emotions

For the purpose of this study, the relationship of learning and emotion will be analyzed based on the following model (Kort, 2001), to demonstrate the different emotions that accompany the stages of learning. The learner moves anti-clockwise round the model from quadrants 1 to 4.

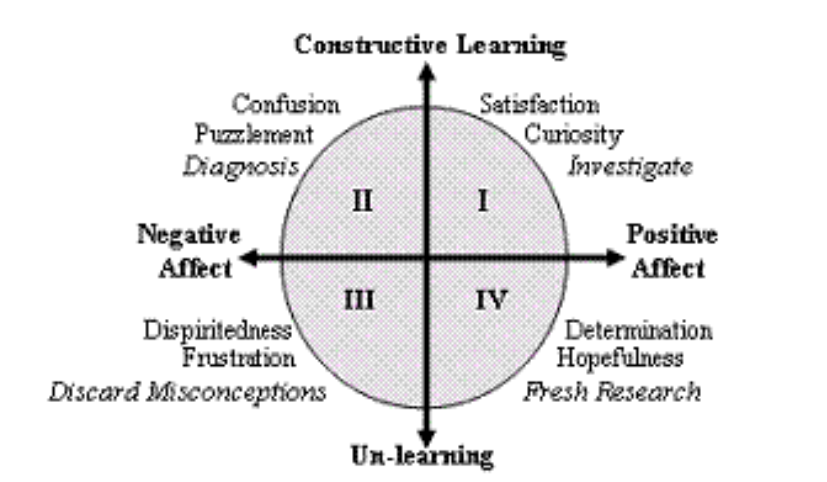


Figure 1. Learning

Axis	-1.0	-0.5	0	+0.5	+1.0	
<b>Anxiety-Confidence</b>	Anxiety	Worry	Discomfort	Comfort	Hopefulness	Confidence
<b>Ennui-Fascination</b>	Ennui	Boredom	Indifference	Interest	Curiosity	Fascination
<b>Frustration-Euphoria</b>	Frustration	Puzzlement	Confusion	Insight	Enlightenment	Euphoria
<b>Dispirited-Enthusiasm</b>	Dispirited	Disappointed	Dissatisfied	Satisfied	Thrilled	Enthusiasm
<b>Terror-Excitement</b>	Terror	Dread	Apprehension	Calm	Anticipatory	Excitement
<b>Humiliated-Proud</b>	Humiliated	Embarrassed	Self-conscious	Pleased	Satisfied	Proud

Figure 2. Emotions relevant to learning

Figure 1, attempts to weave together the emotion axes shown in Figure 2 with the cognitive dynamics of the learning process. The horizontal axis in Fig. 1 is an Emotion Axis. It could be one of the specific axes from Figure 2. The positive emotions are on the right; the negative emotions are on the left.

The vertical axis is termed the Learning Axis, and symbolizes the construction of knowledge upward, and the discarding of misconceptions downward.

Students typically start in quadrants 1 or 2, and movement is anti-clockwise round the model. Thus, from quadrant 1, a typical learning experience involves a range of emotions, moving the student around the model. They might be curious and fascinated about a new topic of interest, quadrant I, or they may be puzzled and motivated to reduce confusion, quadrant II. In either case, they are in the upper half of the model. If their focus is on constructing or testing knowledge, movement happens in this space as learning proceeds. For example, when solving a puzzle or a problem, the student gets an idea how to implement a solution and then builds its simulation. When the simulation fails, it is realized that some part of the idea does not work and needs to be deconstructed. At this point, it is not uncommon for the student to move down to quadrant III, in the lower half of the model where emotions may be negative and the cognitive focus changes to eliminating some misconception. As students consolidate their knowledge with awareness of a sense of making progress, they may move to quadrant IV. Getting a fresh idea propels them back into the upper half of the space, most likely quadrant I. Thus, a typical learning experience involves a range of emotions, moving the student around the model as they learn.

But, according to Eric Jensen (2008), a teacher, to be successful during the learning process, has to incorporate the following strategies to help learners understand the importance of their own emotions in the learning process:

**Role Model.** *Exhibit love of learning.* Teacher has to bring something to the class that they are in the process of learning about; something that really excites the students. They should build suspense, smile tell a true emotional story, show off a new DVD, introduce a favourite book or discuss a recently published one; maybe even bring a pet a pet to school or get involved in community work. Most important is to exhibit unbounded enthusiasm.

**Celebrate.** Throw a party; provide acknowledgements; incorporate team cheers, food, music, decorations and costumes. Show off student work such as when students are finished doing a group *mind map*—a diagram representing words, ideas, tasks, or other items linked to and arranged around a central key word or idea. Mind maps are used to generate, visualize, structure and classify ideas, and as aids in study, organization, problem solving, decision making. Share mind maps with other groups; tell the groups to find at least two things they

like about each other's mind maps. Do this in an atmosphere of celebration; have background music and provide some words of praise for a job well done.

**Controversy.** Set up, a dialogue, an academic decathlon, a game show or panel discussion. For example, theatre and drama can create strong emotions as well. The bigger the production and the higher the stakes, the more emotions will be engaged. Even planning on this scale evokes stress, fun anxiety, anticipation suspense, excitement and relief.

**Physical Rituals.** There are innumerable examples of classroom rituals that can inspire and engage emotions. A few examples include clapping patterns, cheers, chants, movements, or theme songs. Incorporate arrival and departure rituals that are fun, quick, and frequent to prevent boredom.

**Introspection.** Teachers have to incorporate assignments that require journaling, small-group discussions, story swapping, surveys interviews and other reflection tasks. Use people and issues to engage students personally. Ask students to write or talk about a current event that has drawn attention. Help them make personal connections between current events, the current curriculum and their own lives.

## Implications of Emotions for Teaching and Learning

### Teaching

Educators can use the power of emotion to affect learning (Wolfe, 2006). Emotions serve as filters anticipating threats to the self-image protecting self-esteem. Emotionally, the freedom to learn is heavily dependent on emotions experienced while learning, a framework that educators have some control over. Trusting the person offering new information or the belief that current experiences will not be harmful to learners' ability to transform and absorb fresh knowledge.

Learning, as an adaptive filter, is powerful and sensitive. Meaningful learning occurs after emotional factors facilitate personal transformation. Some emotions have a positive effect on learning, and others block the learning process. No list of these emotions and their effects exists due to the individual construction of emotion and feeling, but we can speculate. Emotions such as anxiety or fear could have positive effects, while other emotions, like anger or arrogance, could have negative effects. Some emotions blind us to evident deficiencies, allowing others to take advantage of our kindness. Identifying, analyzing, and managing emotion takes more than emotional intelligence. Emotional awareness requires a deeper understanding of the subconscious dimensions of emotional organization and the flow that keeps emotions dynamic in our life (Gabriel & Griffiths, 2002).

Educators should give thought to current paradigms when teaching. The right answers in class are often praised, but what about the courageous answer or genuinely personal response? A deeper reflection on how to create the adequate emotional tone to facilitate learning is necessary to overcome the challenges of apathy, passiveness, or stress commanding attention in learning environments. The blending of emotions and learning in the classroom promotes secure, emotionally engaging environments that challenge and test as well as encourage knowledge acquisition.

### **Eliciting Positive Emotions and Boosting the Emotional Content of what you are teaching**

According to Elder Janet, the teachers have to use the following positive emotions in order to enhance better teaching:

- Use material that has a high emotional content.
- Discuss people's and literary characters' motivations
- Set realistic, but high, expectations.
- Use framing and positive wording; give students a reason to say YES! at the beginning of class.
- Smile; incorporate humor, pleasure, and celebrations.
- Offer personal attention, acts of caring, and recognition.
- Involve students in cooperative learning activities; foster friendships.
- Create an atmosphere of safety, security, and belonging.
- Use music.
- Give students opportunities to stretch and move.
- Use games, friendly competition, and other enjoyable activities.
- Incorporate storytelling, myths, legends, parables, and metaphors.
- Try role-playing, skits, and debates.
- Introduce novelty and high contrast.
- Incorporate suspense, cliffhangers, and things left open-ended and unresolved.
- Create positive stress.
- Structure appropriate challenges and problems to solve.
- Give students the locus of control; whenever possible, offer them a choice.
- Point out to students the relevance of what they are learning.
- Have them practice in real-life situations and contexts.
- Provide instruction via multiple pathways.



- Include rubrics for self-assessment, such as computer-assisted instruction, that provide non-punitive feedback.

*Learning experiences that elicit positive emotions cause students to want more of those types of experiences.*

## **Decreasing Negative Emotion in Classroom**

According to Akil, Hida. PhD, Professor neuroscience and psychiatry, teachers have to decrease negative emotions while teaching in order to have a better atmosphere in the classroom:

- Have students pause for a moment of deep breathing.
- Encourage students to reflect on and talk about their emotions, and to listen to classmates' feelings.
- Monitor the class's mood.
- Show appropriate emotions yourself.
- Begin wherever students are.
- Give students a 5-minute brain break.
- Establish positive procedures that preempt negative emotions from occurring.
- Be proactive.
- Teach students strategies for coping with stress.
- Teach students to challenge negative beliefs and automatic, negative self-talk.
- Avoid
- Sarcasm and put-downs.
- Threats and humiliation.
- Unrealistic deadlines, compelling rewards, unfair demands.
- Competition that's not friendly and good-natured.
- Withdrawal of attention.
- Disruptive student behavior that stresses other students

**"Giving (young people) a biological perspective on (the brain) is empowering and comforting. It is a nonjudgmental way of helping people understand more about themselves."**

## Learning

Emotion is the framework students use to make meaning, allowing for the expression of personal values as well as an understanding of surrounding cultural meaning systems (Lutz, 1998). The meanings we associate with experience inform us about the self and broader social world; how we feel about an experience is reflective of value systems and personal perspectives of society (Denzin, 1984). Emotion refers to the self, and understanding its dynamics allows for the development of self-knowledge. Understanding the emotional effect of learning allows us to more holistically reveal our inner beings to the outside world.

Although emotion and learning are symbiotic in the cognitive experience, the two constructs are just as vital in creating the settings in which learning will take place. Anecdotal experiences show that adult students can feel uniquely threatened within the walls of a classroom. A sense of vulnerability and fear can permeate the learning lens, blocking or delaying significant pieces of the learning experience.

Educators should give thought to the types of environment they create and to the emotionality of the classroom. Settings low in emotional awareness that fail to produce a sense of engagement do not fully develop the student’s potential. From the constructivist perspective, classroom settings allow ideas to interact in the mind and with the environment, creating value and meaning. Students must feel safe to interact, experiment, and explore new topics and constructs (Shuck).

Here are some examples of the kinds of skills and attributes that teachers help to develop in students during their learning process:

### **Self-awareness**

Students need to be able to recognize feelings and put a name on them. They must learn to be aware of, and understand, the thoughts and feelings that lie behind their actions and their effects. They should also be able to identify their strengths and limitations.

### **Managing emotions**

Strong emotions, such as anxiety and stress, can overwhelm our ability to think and make good decisions. This explains why in tests and examinations candidates often misread questions or express themselves poorly. The same is true in other aspects of life such as selection interviews where anxiety and stress can adversely affect performance. Students need to be able to recognize the effects of these emotional states and develop coping strategies.

### **Empathy**

Students to learn how to recognize and understand the feelings of others around them. They need to be become effective listeners and be able to distinguish between what others do or say and personal reactions and judgments.

### **Self-motivation**

To become effective learners, students need to develop a strong sense of self worth and confidence in their abilities. They need to learn to take responsibility for their own learning and performance and demonstrate persistence and resilience in the face of obstacles or setbacks.

### **Working with others**

It is important for students to develop the ability of working well within groups and teams. They must learn to value the contributions of other people, while encouraging their participation in problem solving and decision-making. They need to be able to accept responsibility, recognize the consequences of decisions and follow through on commitments.

## **Classroom Applications**

Some general principles of emotions and their applications to the classroom according to Sylwester, R (1994):

1. *Schools should focus more on metacognitive activities that encourage students to talk about their emotions, listen to their classmates' feelings, and think about the motivations of people who enter their curricular world. Most students already know quite a bit about the complexity of emotions and the ways they and others experience them (Saarni and Harris 1991), although they may not be able to articulate what they know. For example, the simple use of why in a question turns the discussion away from bare facts and toward motivations and emotions.*
2. *Educators should seek to develop forms of self-control among students that encourage nonjudgmental, no disruptive venting of emotion that generally must occur before reason can take over. We all can recall past incidents that still anger us because we were not allowed to freely express our feelings before a decision was imposed on us. Integrating emotional expression in classroom life is not difficult. For example, educators has to use material that has a high emotional content, discuss student's and literacy characters' motivations so that to draw attention into the class with simple*

reason to release the tension. If that doesn't work, sing a song. In other words, when trying to solve a problem, continue the dialogue with continuous emotional input.

3. *Memories are contextual.* For example, school activities that draw out emotions simulations, role playing, and cooperative projects, may provide important contextual memory prompts that will help students recall the information during closely related events in the real world. For instance, in High Schools in Cyprus tend to practice earthquake training in an unannounced, emotionally charged setting: in the event of an earthquake, students will have to perform in that kind of setting.
4. *Activities that emphasize social interaction and that engage the entire body tend to provide the most emotional support.* For example, educators have to let the students use games, friendly competition, incorporate storytelling, field trips, cooperative learning, and debates. Although we have long known that such activities enhance student learning, we tend to think of them as special rewards, and so withdraw them when students misbehave, or when budgets are tight, eliminate them altogether.
5. *Emotionally stressful school environments are counterproductive because they can reduce students' ability to learn.* Self-esteem and a sense of control over one's environment are important in managing stress. Highly evaluative and authoritarian schools may promote institutional economy, efficiency, and accountability, but also heighten nonproductive stress in students and staff.

In short, support enhanced learning and retention through emotions:

- Use simulations, role plays, and other experiential activities. Make projects memorable.
- Promote the activation of both thinking and feeling.
- Employ activities that decrease stress (humor, games).
- Increase social rapport through peer-learning, discussions and dialogues.
- Provide opportunity for emotions to be expressed. Celebrate achievements.

## CONCLUSION

According to Lawson, emotions and learning occur in the brain. Learning means acquiring knowledge or skills: learning requires thinking. Our thoughts influence how we feel. How we feel influences how we think. The connections between emotion and learning are bi-directional and complex. When we think about a happy incident our mood improves. When we think about an angry incident, we are likely to feel angry. Also, being in a happy mood causes us to think happy thoughts; being in a sad mood brings sad and negative memories and images to mind. There is much research to support that our current mood influences the way we think, perceive events, remember and make decisions. Being optimistic makes us think more positively, be more creative and see and remember neutral events as positive.

Because we cannot see our emotions directly, we look to our behavior and that of others to infer how we feel. So our emotions are determined by our interpretation, or what we think about what we see. For example, if someone bumps into us while we are waiting in a line, if we decide that the person who bumped us did this deliberately, we would react with anger. If we conclude that the person tripped on something on the floor, we would not get angry or take defensive action. Also what we expect to happen influences our emotional reaction. If we expect to enjoy a movie, we probably will. If someone told us that we would not like it, we likely won't. Our expectations become our reality and are remembered as such.

### **Emotion is a primary catalyst in the learning process**

- *If the learner is confident, learning increases.*
- *If the learner believes in the teacher, learning increases.*
- *If the learner thinks the subject is important and valuable, learning increases.*
- *If the learner believes it will be fun, learning increases.*

All of these involve emotion, and if a teacher, you have enormous control over them. This is what it means to win students' hearts and minds. It is our task to do both - Pat Wolfe, Ed.D., educator, consultant, & Author.

## BIBLIOGRAPHY

**Akil, Hida**, PhD, Professor neuroscience and psychiatry, University of Michigan; Past President, Society for Neuroscience

**Caine, R.N. & Caine, G. (1991,1994)**. Making Connections: Teaching the Human Brain. Innovative Learning Publications.

**Caine, R.N. & Caine, G. (1995)**. Reinventing schools through brain-based learning. Educational Leadership, 52, 43-47.

Making Connections: Teaching the Human Brain. Innovative Learning Publications.

**Denzin, N. (1984)**. On understanding emotion. San Francisco: Jossey-Bass.

**Fogarty, R. (2002)**. Brain compatible classrooms. (2<sup>nd</sup> Edition). IL: Skylight Professional development

**Gabriel, Y., & Griffiths, D. (2002)**. Emotion, learning and organizing. The Learning Organization, 9(5), 214 -221.

**Elder, J.** Emotion and Learning: Capitalizing on Emotion, the "Elephant" in the Classroom

**Jensen, E. (1998)**. Introduction to brain compatible learning. CA: The Brain Store Inc.

**Jensen Eric (2008)**. Brain Based Learning: The new paradigm of Teaching. 2<sup>nd</sup> Edition. Corwin Press.

**Kort B, Reilly, R, &Richard, R.W. (2001)**. An effective Model of Interplay between emotions and learning: Reengineering Educational Pedagogy-Building a Learning Companion, Massachusetts Institute of Technology

**Lawson, Candy**, Ph.D. The connections between Emotions and Learning. Center for Development and Learning. A Nonprofit Organization Dedicated to increasing School Success for all Children.

**Learning and Education:** <http://wik.ed.uiuc.edu/index.php/>

**Lutz, C. (1998)**. Unnatural emotions: Everyday sentiments on a micronesian atoll and their challenges to western theory. Chicago: University of Chicago Press.

**Materna, L.E. (2000)**. Impact of concept-mapping upon meaningful learning and metacognition among foundation-level associate degree nursing students. From <http://proquest.urmi.com/pqdweb?did=728371591&sid=1&Fmt=2&clientId=41947&RQT=309&VName=PQD>

**Neumann, Dawn:** <http://dneumann73.googlepages.com>

**Shuck, B. Albornoz, C.& Winberg, M.** Emotions and their effect on Adult Learning: A Constructivist Perspective

**Sylwester, R. (1994).** How emotions affect learning in Educational Leadership 52, 2: 60-66.

**Wolfe, P. (2006).** The role of meaning and emotion in learning. New Directions for Adult and Continuing Education, 110, 35-41.

---

## An Assessment of Business Accreditation Organizations and Standards

---

### **Dawn E. Bowden, Ph.D.**

International School of Management, Paris, France

Product Strategist, Jumpstart Innovations, Silverthorne, CO, USA

Address: 561 County Road 1012; Silverthorne, CO 80498

Phone: (970) 724-9290

Mobile: (303) 818-1560

Email: dawn.bowden@gmail.com

**Abstract:** There are numerous institutional accrediting bodies worldwide but only a limited number of specialized accreditation bodies focused on business school and program accreditation. This paper provides a review of three organizations that accredit business schools and programs both domestically in the United States and internationally. These include the Association to Advance Collegiate Schools of Business (AACSB), the Association of Collegiate Business Schools and Programs (ACBSP), and the European Foundation for Management Development (EFMD). There is an ongoing debate as to whether accreditation, and which one, best serves the students, faculty, institution, government, and the public. Thus, this review culminates with a discussion of the key differences, similarities, and the relative suitability of the different accrediting bodies for constituents and the future of programmatic business accreditation.

**Keywords:** AACSB, ACBSP, accreditation, business education, EFMD

**Reference:** Reference to this paper should be made as follows: Bowden, D.E., (2009) "An Assessment of Business Accreditation Organizations and Standards", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Dawn E. Bowden, Ph.D., is the principal of Jumpstart Innovations, an organization that partners with organizations worldwide to improve the health and well-being of communities and individuals. Dr. Bowden's work includes teaching, research, and management of projects in innovation, strategic marketing, change management, and health care delivery. She holds a Ph.D. from the International School of Management in Paris, France and serves as adjunct faculty for universities in the United States and Europe for both marketing and management disciplines. Dr. Bowden is a member of the



Women Business Leaders of the U.S. Health Care Industry Foundation, the International Foundation of Employee Benefit Plans, and serves on the Board of Directors for the Colorado Chapter of the American Marketing Association.

---

## Introduction

Accreditation is a process that verifies competency and credibility through quality assurance and quality improvement efforts. Accreditation also verifies that higher learning is adhering to high quality standards based on the latest research and professional practice. The Council for Higher Education Accreditation (2008b) offers the following definition for accreditation:

***"Accreditation is a process of external quality review used by higher education to scrutinize colleges, universities and educational programs for quality assurance and quality improvement."***

The overarching objectives for accreditation are quality, accountability, and improvement. These objectives require that institutions ensure that higher learning meets high quality standards based on the latest research, professional practice, and needs of students, faculty, government, organizations, and the public. To assure quality, institutions must develop and use evidence of student learning outcomes (CHEA, 2006a, pp. 1 – 2). According to the Council for Higher Education Accreditation, an outcome is the result of "attendance at a higher education institution or participation in a particular course of study". This contrasts to a "student learning outcome" that is defined as "the particular levels of knowledge, skills, and abilities that a student has attained at the end of engagement in a particular set of college experiences" (CHEA, 2006c, p. 1).

Evidence of student learning can be gathered through numerous approaches and venues. This evidence must involve a direct examination of student levels of attainment (e.g. performance in external or licensure examinations, portfolios of student work over time, samples of representative student work generated for course assignments, comprehensive examinations or assignments, etc.). The unit of analysis for student learning outcomes can include a variety of levels of aggregated data. For example, an analysis for student learning outcomes can be gathered on the individual student, specified groups or aggregations of students, courses or groups of courses, programs or schools within an institution, or institutions (CHEA, 2006c, pp. 1 – 2).

The accreditation process establishes the quality status of an institution but more importantly, it is focused on continuous improvement. An institution has an opportunity to gain the award of accreditation. However, the greater benefit for the institution and the students is the identification of weaknesses, to subsequently allow for improvement and achievement of a higher level of quality. The challenge for an institution is to create a culture with a commitment to improve and that takes advantage of the time investment into the process (CHEA, 2007). Through a self-study and peer reviews, the process can be used to promote improvements.

These objectives for quality, accountability, and improvement aid governments in determining the amount of federal and state support that will be provided to higher education (CHEA, 2006c). Institutions, programs, and faculty also use this information to improve teaching and learning while students and prospective students use the information to decide which institutions or programs to attend. Education must garner support from the public and this also requires evidence of student learning outcomes.

Achieving excellence in higher education requires achieving a balance between teaching and research. Accreditation must align with what this balance is for each individual institution and the mission of the school or program. This requires determining how teaching and research effectiveness are fostered and measured in relation to the school's mission. Debate has ensued regarding the applicability and appropriateness of business program accreditation, and the focus on publication (versus teaching) that is assumed to be the equivalent of research. For example, the AACSB accreditation practices institutionalized the practice and requirement of publications in certain levels of journals (Fay, Ferrara, & Stryker, 1993). This has since been adjusted in the AACSB accreditation practices, but there is still an ongoing issue of whether accreditation practices are achieving the ultimate objectives of quality assurance and quality improvement in higher education.

There have been an increasing number of institutions receiving specialized business program accreditation (Roller, Andrews, & Bovee, 2003). An evaluation of three of the specialized accreditation organizations can facilitate a greater understanding of the accreditation process, the eligibility requirements of accrediting bodies, and the applicability of standards to achieving a high level of quality in both teaching and research practices. The three accrediting bodies that will be reviewed include the Association to Advance Collegiate Schools of Business (AACSB), the Association of Collegiate Business Schools and Programs (ACBSP), and the European Foundation for Management Development (EFMD).

## Business Accreditation Organizations

### *AACSB International*

*"AACSB International advances quality management education worldwide through accreditation and thought leadership" (AACSB International, n.d. c).*

The Association to Advance Collegiate Schools of Business (AACSB) is the original business accreditation organization and was established in 1916. It is located in Tampa, Florida and accredits schools and colleges of business in the United States and internationally. The AACSB is recognized by the Council for Higher Education (CHEA) and formally recognized by the U.S. Department of Education (USDE) (CHEA, 2008a). It's original focus tended to be on institutions that were large and research-oriented. However, in 1991, the AACSB adopted new mission-based standards which expanded the option for accreditation to institutions with teaching-oriented missions. In 2003, a revised set of standards relevant to all business programs globally was approved by members (AACSB International, n.d. f).

AACSB International promotes its longevity in providing specialized business accreditation. Additionally, by accrediting less than 5% of the business schools worldwide, AACSB International is creating an elite distinction relative to the other specialized business accrediting bodies (AACSB International, 2009). In many business and educational circles, AACSB International accreditation is considered the highest standard of achievement for business schools.

### *ACBSP*

*"ACBSP develops, promotes, and recognizes best practices that contribute to continuous improvement of business education and accredits qualified business programs" (ACBSP, 2009).*

The Association of Collegiate Business Schools and Programs (ACBSP) was established in 1988 in Overland Park, Kansas. The ACBSP accredits schools, colleges, and programs of business in the U.S. and internationally. It is recognized by the Council for Higher Education (CHEA) and formally recognized by the U.S. Department of Education (USDE) (CHEA, 2008a).

This accrediting body was formed with the intention of making it easier for institutions with a teaching-oriented mission to receive business accreditation. The ACBSP did have a very regimented approach to accreditation, similar to AACSB, but had a stronger focus on teaching versus research. Since its inception, it has adopted an accreditation process based on Malcolm Baldrige quality standards but very few institutions have attempted it. Most noteworthy of the ACBSP's efforts is the development of an accreditation program for 2-year

business programs. Greater than half of the ACBSP accredited programs are at 2-year colleges (Roller, Andrews, & Bovee, 2003).

### *EFMD*

*“EFMD acts as a catalyst to promote and enhance excellence in management development in Europe and worldwide” (EFMD, n.d.).*

Founded in 1972, the European Foundation for Management Development (EFMD) is a global non-profit organization focused on continuous improvement of management development and serves as a globally recognized accreditation body for business schools and programs (EFMD, n.d. a). The mission of EFMD is comprised of three elements:

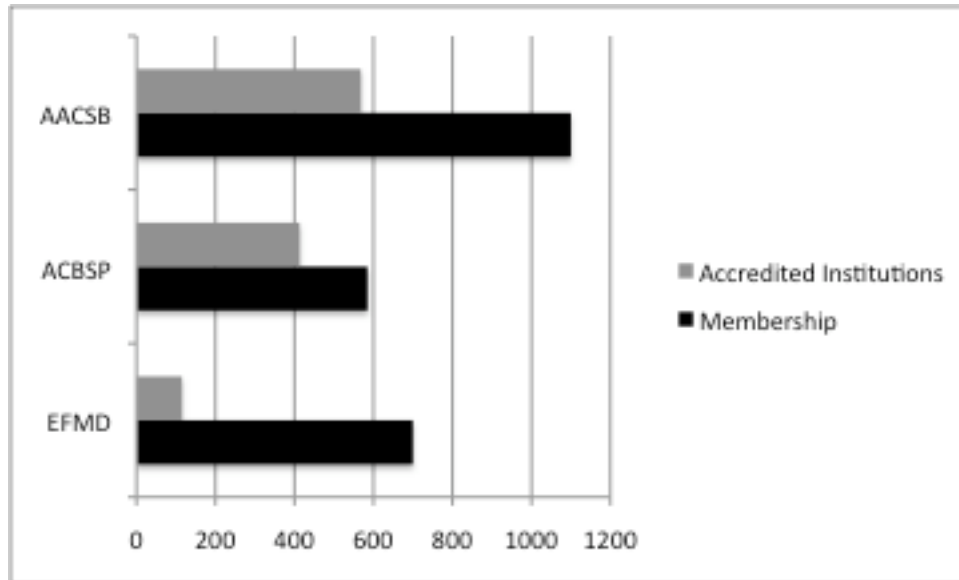
1. To be a networking organization that provides the linkage between business schools and corporations.
2. To help members with continuous quality improvement through EQUIS, EPAS, and CLIP.
3. To act as an advocate for members and the management education professions through interfaces with institutions such as the European Commission, UN Global Compact, UNDP, and the World Bank/IFC.

The EFMD is noted for its series of accreditation programs including the European Quality Improvement System (EQUIS) which accredits programs and degrees up to the Ph.D. The EFMD also offers the EFMD Program Accreditation System (EPAS) that focuses on programmatic accreditation, accreditation for technology enhanced learning (CEL) to raise technology-enhanced learning programs, and the Corporate Learning Improvement Process (CLIP) which is an institutional certification for internal corporate universities and learning organizations.

EQUIS assesses institutions as a whole and strives to achieve a balance between academic quality and professional relevance for, and application to, the corporate world (EFMD, n.d. c). Most recently, the EFMD has developed quality improvement methods for business schools and corporations to emphasize the linkages between research, education, and innovation while producing information that is relevant to corporate needs (Straub, 2007). This includes an expanded definition of research that includes research, development, and innovation (RDI) (Report of the Management Education Task Force to the AACSB International Board of Directors, 2002).

Each of these organizations has a membership consisting of institutions and individuals worldwide. Figure 1 provides a snapshot of the membership and actual accredited institutions within each organization.

**Figure 1: Membership and Accredited Institutions**



Source: AACSB International, 2009, n.d. e; ACBSP, 2009; EFMD, n.d. a.

In addition to institutional membership, some of the accrediting bodies report their individual membership data. The ACBSP has 6,400 individual members while the EFMD has over 20,000 management development professionals involved in the network (ACBSP, 2009; EFMD, n.d. b). Despite the more recent emergence of the ACBSP and the EFMD, a significant proportion of the membership and accredited institutions are affiliated with these accrediting bodies.

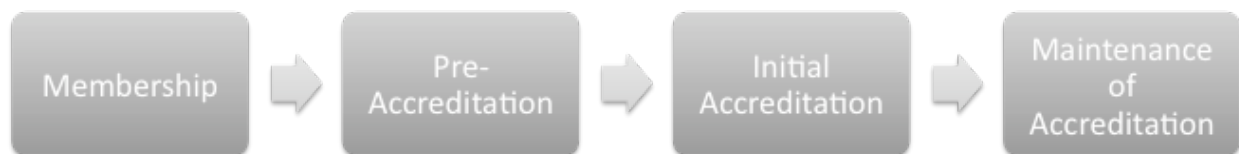
### Process

Each of the accrediting bodies has defined a process for accreditation that begins with some version of a prequalification or evaluation of eligibility. The timeframe for the processes vary slightly between the organizations as does the terminology used for describing the process. However, upon a more detailed review of the processes, there are no significant differences found between the three accrediting bodies. Each accrediting body process is comprised of minimum eligibility requirements, submission of a self-study or self-assessment, engagement of a peer review group, site visits, award determination, and a maintenance or reaffirmation period. This approach has proven affective for each of the organizations and ensures that the appropriate institutions are engaged in the accreditation at the outset of the process and that the likelihood of success is improved once an institution has progressed through the initial stages.

### *AACSB International*

AACSB International commences the process with the minimum eligibility requirements and membership. Pre-Accreditation can take up to five years while the initial accreditation process takes two years, for a total of a seven-year cycle (AACSB International, n.d. b). The process includes a pre-accreditation committee (PAC) and an initial accreditation committee (IAC). These committees are aligned with the stage of the process that the institution is in (AACSB International, n.d. b). During the first two years of the accreditation process, the accreditation plan (AP) is developed. In the remaining five years, the AP is implemented (AACSB International, n.d. b). Maintenance of accreditation consists of a five-year process in which a strategic plan (SP) is developed and implemented (AACSB International, n.d. d). The high-level process for AACSB accreditation is outlined in Figure 2 (below). The development of a self-assessment or self-study, completion of a site visit, peer review, and a final determination of award occur within these stages.

**Figure 2: The AACSB Accreditation Process**

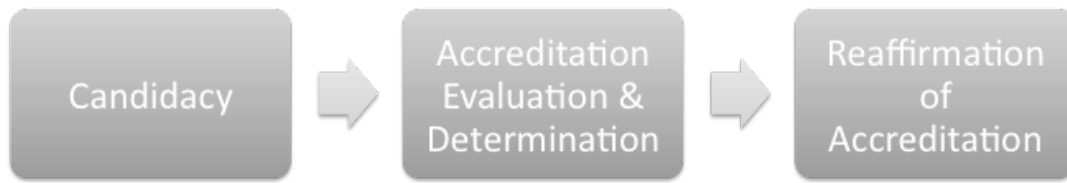


Source: AACSB International, n.d. a.

### *ACBSP*

The ACBSP process for accreditation begins with Candidacy and meeting the minimum eligibility requirements. The Candidacy process can range from a few months to as many as five years based on the modification to current practices and systems that may be required (ACBSP, 2007). If an outcomes assessment is present, the expected timeframe is 18 months (ACBSP, 2008b). If an institution is unable to complete the accreditation process within five years of beginning candidacy or file for an extension of candidacy, the institution will be dropped from candidacy (ACBSP, 2008b). Figure 3 (below) outlines the high-level process for the ACBSP accreditation. The ACBSP process includes development of a self-assessment or self-study, assignment of a mentor, completion of a site visit, peer review, and a final determination of award.

**Figure 3: The ACBSP Accreditation Process**

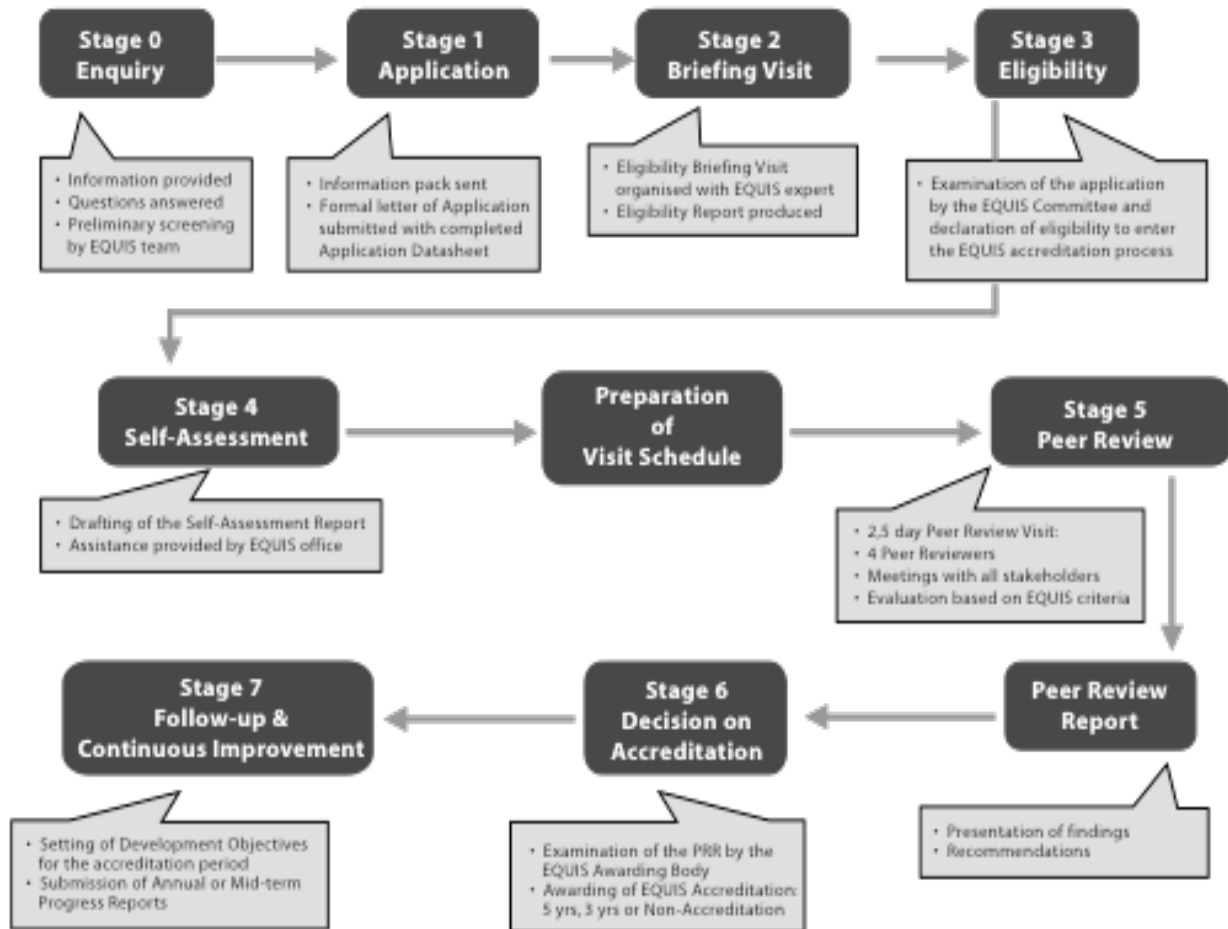


Source: ACBSP, 2007.

### *EFMD*

The high-level process for the EFMD accreditation is outlined in Figure 4 (below). The EFMD EQUIS process also includes development of a self-assessment or self-study, completion of a site visit, peer review, and a final determination of award. The EFMD provides an initial screening of all applications as part of the Enquiry stage in the accreditation process. The key categories that are considered are based on the Standards and Criteria for actual accreditation and are included in the formal application for eligibility (EFMD, 2009b).

Figure 4: The EFMD Process – EQUIS Accreditation



Source: EFMD, n.d. b.

### The Accreditation Framework

The standards and criteria established by each of the accrediting bodies provide the framework and guide for institutions to prepare for accreditation evaluation and to improve the likelihood of success through compliance with the accreditation standards. The final outcome is not just achieving the accreditation award, but to assure quality and continuously improve to deliver the desired outcomes.

#### *Preliminary Eligibility Requirements*

Each of the specialized accrediting bodies has eligibility requirements established or have identified organizational characteristics that determine whether an institution can be considered for accreditation. The EFMD has several accreditation programs, each with



specific eligibility requirements. For the purpose of this comparison, the EQUIS accreditation programs will be reviewed. The eligibility requirements for the targeted programs are highlighted in Table 1 (below).

**Table 1: Preliminary Eligibility Requirements**

AACSB	ACBSP	EFMD
<ul style="list-style-type: none"> <li>▪ The institution must be a member of AACSB.</li> <li>▪ The institution must offer degree-granting programs.</li> <li>▪ The degree programs in business must sustain excellence and continuous improvement.</li> <li>▪ All degrees programs in business offered by the institution at all locations will be reviewed at the same time. Exclusions of programs are determined on an individual basis and are based on criteria established relative to participation/independence, branding/distinctiveness, and control/autonomy of the program.</li> <li>▪ The institution must demonstrate diversity in the business programs that is consistent with its mission and cultural context.</li> <li>▪ The institution must establish ethical behaviors.</li> <li>▪ A majority of business graduates must be from programs that have produced graduates during two consecutive years (i.e. recently introduced degree programs would not be eligible).</li> </ul> <p>(AACSB International, 2008)</p>	<ul style="list-style-type: none"> <li>▪ The institution must be an institutional member of ACBSP.</li> <li>▪ The institution must be accredited by one of the six regional accrediting bodies or located in and approved/recognized by a country other than the U.S.</li> <li>▪ The application must be authorized in writing by the chief executive office of the institution.</li> <li>▪ The institution must have offered a degree in business for at least two years.</li> <li>▪ The institution must have the necessary approval to confer degrees.</li> <li>▪ The institution must have a publicly stated purpose appropriate to a college or university that has been approved by the institution's governing body.</li> </ul> <p style="text-align: center;">(ACBSP, 2007)</p>	<ul style="list-style-type: none"> <li>▪ The institution must be a member of EFMD and remain a member during any accreditation period.</li> <li>▪ The institution is a degree awarding institution.</li> <li>▪ A mission that is appropriate for higher education must be in place.</li> <li>▪ There must be a primary focus on education for general management or business administration.</li> <li>▪ The institution must have autonomy in the management of its academic staff and budget and in the design and running of programs.</li> <li>▪ Academic staff must cover the principal management disciplines.</li> <li>▪ At least 3 classes must have graduated in the main degree program.</li> <li>▪ The institution must be operational for at least 10 years.</li> <li>▪ The institution must be able to demonstrate institutional stability if major structural change have occurred.</li> </ul> <p style="text-align: center;">(EFMD, 2009b)</p>

### Standards and Criteria

Each of the specialized business accrediting bodies has a different categorization of standards for accrediting business institutions and programs. Figure 5 (below) provides the framework that each uses as a platform for their accreditation process.

**Figure 5: Categories of Standards**

AACSB International	ACBSP	EFMD
<ul style="list-style-type: none"> <li>• #1 - Strategic Management</li> <li>• #2 - Participant Standards: Students/ Faculty</li> <li>• #3 - Assurance of Learning Standards</li> </ul>	<ul style="list-style-type: none"> <li>• #1 - Leadership</li> <li>• #2 - Strategic Planning</li> <li>• #3 - Student and Stakeholder Focus</li> <li>• #4 - Measurement and Analysis of Student Learning and Performance</li> <li>• #5 - Faculty and Staff Focus</li> <li>• #6 - Educational and Business Process Management</li> </ul>	<ul style="list-style-type: none"> <li>• #1 - Context, Governance, and Strategy</li> <li>• #2 - Programs</li> <li>• #3 - Students</li> <li>• #4 - Faculty</li> <li>• #5 - Research and Development</li> <li>• #6 - Executive Education</li> <li>• #7 - Contribution to the Community</li> <li>• #8 - Resources and Administration</li> <li>• #9 - Internationalization</li> <li>• #10 - Corporate Connections</li> </ul>

Source: AACSB International, 2008; ACBSP, 2007; EFMD, 2009a, 2009b.

Within each of these categories of standards, each organization has detailed standards and criteria in which institutions must satisfy. For example, AACSB International has 19 separate standards within the 3 overarching categories. These standards provide specific parameters for #1 – Strategic Management (mission statements, mission appropriateness, student mission, continuous improvement objectives, financial strategies); #2 - Participant Standards (student admission, student retention, staff sufficiency and student support, faculty sufficiency, faculty qualifications, faculty management and support, aggregate faculty and staff educational responsibility, individual faculty educational responsibility, and student educational responsibility); and #3 – Assurance of Learning Standards (management of curricula, undergraduate and graduate learning goals, undergraduate and graduate educational level, master’s level general management learning goals) (AACSB International,

2008). Appendix A provides an expanded view of the standards and criteria for each of the accrediting bodies.

At first glance, it may appear that there are significant differences in the scope and content of each of the accrediting bodies. However, at the highest level and even with minor differences in the nomenclature used, the standards from each accrediting body can be grouped into the following general categories:

- Strategic Management & Governance;
- Student Focus;
- Staff & Faculty Qualifications, Development & Scholarly Activity;
- Assurance of Learning Standards; and
- Process Management.

For the purpose of this review, these general categories will be used to assess each of the frameworks used by the accrediting bodies.

#### Strategic Management & Governance

A key element of this category is the development, maintenance, and use of a mission statement for management of the higher education program. AACSB includes several criteria that require that the institution align the mission statement with the student population and that the mission is appropriate to higher education for management (AACSB International, 2008). Further, strategic management in the AACSB International standards include continuous improvement objectives and the existence of financial strategies to provide resources for achieving the mission and supporting strategies and actions (AACSB International, 2008).

In the same way, ACBSP (Standard #1 and #2) and the EFMD (Standard #1) outline requirements for the school to have a clearly articulated mission, an integrated organization for management of activities based on processes, and a defined strategy that reflects its market positioning (ACBSP, 2008a; EFMD, 2009a). Each of the accrediting bodies includes continuous improvement, communication planning and strategies, and inclusion of multiple stakeholders in the process of planning and governance. Also included in the evaluation of strategic planning and mission is the understanding of financial, societal, and technological needs and impacts.

#### Student Focus

The focus on the students is covered in AACSB International Standard #2, ACBSP Standards #3 and #4, and EFMD Standards #3. Each includes student recruitment, admission, retention,

and support. Assessment of the student progress is a significant component included in the standards and criteria defined for the “student” sections of each accrediting bodies standards. However, this student focus is evident within the objectives of other standards and criteria not only within the “student” sections of the frameworks utilized by the accrediting bodies. The prominence of criteria to meet student needs throughout suggests that the accreditation processes for AACSB International, ACBSP, and the EFMD are rightly focused on the key member in the value chain – the student.

#### Faculty Qualifications, Development, & Scholarly Activity

AACSB International Standard #1 and #2, ACBSP Standard #5, and EFMD Standard #4 cover standards and criteria for faculty. Each accrediting body details criteria for faculty contributions to learning and pedagogical research, practice-oriented, and discipline-based research and scholarship. Again, each of the accrediting bodies reviews similar standards and criteria. Evaluation of hiring, deployment, development, observation practices, and scholarly and social activity is included. The assessment of faculty is also based on a leveling system. AACSB International evaluates faculty based on participating or supporting roles and whether the faculty are academically or professionally qualified. ACBSP uses doctorate or professionally qualified faculty with a focus on a mix between academic and practical experience. The EFMD uses the term “core faculty” and non-core faculty to delineate levels (AACSB International, 2008; ACBSP, 2008a; EFMD, 2009a). The objective for the accrediting bodies is to ensure that there is an effective mix of faculty to ensure continuous innovation and improvement.

#### Assurance of Learning Standards

The assurance of learning is achieved through AACSB International Standard #3, ACBSP Standard #4, and EFMD Standard #2. There is a common thread of assuring learning standards even beyond the standards just listed. As a main objective for institutions, learning is in the forefront of almost every standard and criteria devised. This includes measurement of stakeholder satisfaction, learning goals, content, learning methodology success, student learning and performance, and alignment of curricula with degrees offered.

#### Process Management

Process management and establishment of protocols are covered in many of the standards and criteria for each of the organizations. There are requirements for general operating process for strategic planning, student and faculty recruitment and retention, program development, continuous improvement, etc. AACSB International and ACBSP have separate sections in their framework for standards and criteria relative to process. The EFMD incorporates the process-related questions, standards, and criteria throughout the framework versus as a separate section. It is likely that the rationale for the separate

sections for process within the AACSB International and ACBSP framework is due to the roots of these institutions and the initial focus on process and the constituents served.

### **Key Differences**

The most striking finding after reviewing the standards and criteria is the inherent similarities between the accrediting bodies. Each has a value proposition it espouses which is consequently creating its position in the accrediting body marketplace. The standards and criteria do not necessarily provide or even aim to offer this differentiation. The processes, costs, standards, and criteria are all very similar.

Even the philosophies are converging. A focus on finding the balance between teaching and research, assuring continual improvement, tying accreditation to the mission of the institution, an international scope, and creating a link between academic programs and the corporate and business world were all at one time unique points of differentiation for one of the accrediting bodies. As the accreditation organizations have evolved, so have their standards to include many of the points of contention or differences that existed between the three bodies. There are some key differences to highlight, though they are not numerous. Table 2 outlines the major differences between AACSB International, ACBSP, and EFMD.

**Table 2: Unique Features of the Accrediting Bodies**

AACSB International	ACBSP	EFMD
<ul style="list-style-type: none"> <li>▪ Unique to AACSB is the detailed requirements and basis for judgment defined for <b>faculty qualifications</b> including the Academically Qualified (AQ) faculty and the Professionally Qualified (PQ) faculty. There is a defined requirement, or quota, for how many at each level must be utilized to maintain AACSB International accreditation.</li> <li>▪ Many of the standards and criteria are more <b>stringent and directed</b>. For example, scholarly activities and publishing criteria are more detailed and include peer-reviewed contributions. There is a focus on what is produced versus the process alone.</li> <li>▪ Strong focus on <b>research excellence</b> as is evidenced by Standard 5.8 and Criteria 31, 34, and 35.</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Common Professional Component (CPC)</b> requirement for curriculum design to ensure the appropriate coverage of topical areas within the business core courses.</li> <li>▪ Though all 3 accrediting bodies have <b>strategic planning</b> included in their standards, ACBSP has more detailed requirements and a specific standard for this area.</li> <li>▪ All 3 accrediting bodies have criteria for process development, management and improvement. ACBSP has established a <b>separate standard (#6) for process management</b>.</li> <li>▪ <b>Associate Degree accreditation</b>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Has explicitly included <b>criteria for internationalization</b> in the majority of the standards (see Appendix A criteria highlighted in blue).</li> <li>▪ Has explicitly included <b>criteria for linkages to the corporate world</b> in the majority of the standards (see Appendix A criteria highlighted in blue).</li> <li>▪ <b>Contribution to the community</b> is called out as a separate standard with supporting criteria.</li> </ul>

Source: AACSB International, 2008; AACSB International Accreditation Coordinating Committee & AACSB International Accreditation Quality Committee, 2006a/ 2006b; ACBSP, 2008a; EFMD, 2009a.

Again, the most compelling finding of this review is that the differences are minor between the accreditation organizations. Overall, AACSB International does not break down its standards and criteria to the degree that ACBSP or EFMD does. However, this does not limit the depth, breadth, or specificity that is covered in the AACSB International standards as the majority are matched and included relative to ACBSP and EFMD. Through the standards and criteria defined in their relative frameworks, each are meeting the accreditation goals for quality assurance and quality improvement for the benefit of the key stakeholders: students, faculty, businesses and organizations, government, and the public.

The rationale behind the differences outlined for the EFMD standards and criteria is worth a special note. The EFMD is European-based and aims to truly serve an international audience of institutions that are governed by many different types of regulatory bodies and governments. Consequently, the EFMD needed to find a niche in accreditation that met the unique needs of the international community while still competing with U.S.-based accrediting bodies AACSB International and ACBSP that are inherently based on the U.S. higher education system. The incorporation of the internationalization and corporate connections elements throughout the standards and requirements has successfully provided a uniqueness that is relevant worldwide. A focus on the community is an element that also takes center stage for many societies and their supporting institutions. A focus on the community responds to the needs of a powerful constituent in many regions of the world – the general public.

### **Identifying the Best Accreditation**

Selection of an accrediting body for specialized business accreditation based only on the standards and criteria may be limiting for institutions. Accreditation is a long-term relationship that requires alignment of the philosophy and approach of the accrediting body with the motivations of the institution seeking accreditation. In some cases, AACSB accreditation may be a better fit than ACBSP accreditation while for other business schools, the accreditation offered by EFMD is most appropriate. Despite many similarities in assessment of curriculum, faculty qualifications, assurances, staff and faculty development and scholarly activity, and processes, each accrediting body serves a unique purpose and offers points of differentiation to benefit the unique needs of the institutions and its constituents.

This comparative analysis of the AACSB, ACBSP, and EFMD confirm that there is relative uniformity of program goals. Roller, Andrews, and Bovee (2003) came to similar conclusions in the comparisons of AACSB, ACBSP, and IACBE (International Assembly of Collegiate Business Education). They suggested that the entrance of new accrediting bodies might change the competitive landscape, creating a more dynamic and differentiated approach to



business accreditation. Their findings supported this to some extent. Awareness of competition by deans varied based on the current accreditation or non-accreditation held at their respective institutions. Deans of AACSB-accredited schools were aware of competition from ACBSP, but not IACBE, while deans from non-accredited schools and those accredited by the ACBSP and IACBE were aware of competition effect from all accrediting bodies (Roller, Andrews, & Bovee, 2003).

The most prestigious of the associations was determined to be the AACSB due to its longevity in the field and promotion of excellence in research. This excellence in research was not considered a detraction from teaching excellence by AACSB-accredited institutions. However, non-AACSB institutions perceived the AACSB emphasis on excellence in research as interfering with excellence in teaching (Roller, Andrews, & Bovee, 2003). Julian and Ofori-Dankwa (2006) also confirmed that AACSB, ACBSP, and IACBE were similar in process, despite major differences in the emphasis placed on scholarship, research, and teaching. They posed that accreditation processes and standards are more conducive to environments with continuous change versus turbulent environments requiring flexible change, though rebuttals to this are found in the research as well (Romero, 2006; Zammuto, 2006).

### **The Future for Business School Accreditation**

Business school accreditation has been successfully established over the past 100 years as a means to ensure quality in higher education. However, as the educational systems continue to evolve worldwide, accrediting organizations must consider enhanced and alternative strategies to meet the needs of the constituents involved in and benefiting from the process. The public need and demand for relevant information is increasing and the traditional hierarchical approach is outdated (Dickeson, 2006). These enhanced strategies must initially focus on providing accurate, timely, and relevant information. Current accreditation plans can be further developed to provide information on the results of institutional and programmatic review (CHEA, 2006c, p. 9). Most importantly, accreditation needs to answer the questions that are pertinent to the most important consumer in the value chain—the student (e.g. who does the university accept, what are the chances of getting a degree, how much will it cost, will credits transfer, and who hires students after completion) (Davies, 2007).

Julian and Ofori-Dankwa (2006) prompted further discussion on the topic of accreditation practices and benefits through an assessment of the utility of the accreditation process. They suggest that current accrediting bodies and the relative processes and standards are no longer appropriate for the new competitive landscape that is becoming increasingly global, encompasses non-traditional business school environments such as distance-learning and corporate universities, and has increasing uncertainty of funding. However, Zammuto (2008)

counters that despite the variety of business education environments that are concurrently maturing and emerging, accreditation can provide a framework and assurance of quality for constituents. The challenge will be directed to business schools to identify the most relevant accreditation product and to respond to the accreditation process and requirements in a way that serves their constituents.

Accreditation must also focus on results and quality versus process, inputs, and governance and be performed in a timelier manner. Additionally, accreditation efforts could be more beneficial if there is a shift from inputs and processes to performance outcomes. This would entail comparisons among institutions, encourage innovation and continuous improvement, and require institutions to benchmark and report on measurable progress relative to national and international peers. Most importantly, this continues the drive towards a more public and transparent accreditation process (A Report of the Commission Appointed by Secretary of Education Margaret Spellings, 2006, pp. 21 – 25). Development of an international accreditation framework focused on performance outcome measures, new process standards, and continuous improvement would be a natural next step.

Designing accreditation standards to guide curricula development can provide an additional incentive and structure to ensure that business schools deliver on the competencies that businesses value in graduates. Abraham and Karns (2009) found that businesses and business schools are in agreement regarding the competencies necessary for producing successful managers. However, despite this agreement in the competencies that must be developed and taught, these competencies are not emphasized in the curricula.

Alignment of accreditation standards to produce effective curricula to meet business needs, a focus on outcomes versus process alone, and thoughtful selection of the appropriate accreditation organization to support the business school's specific objectives are strategies for ensuring that accreditation facilitates the achievement of excellence in business education. Business accreditation will need to continue to evolve as business education continues to reinvent itself to best meet the needs of the majority of its constituents.

### **Conclusion**

Accreditation has many advantages for the institutions, the students, and the organizations that employ those students upon graduation. Commitment of an institution to an accrediting body is a long-term endeavor that must be carefully determined. A close analysis of the AACSB International, ACBSP, and EFMD show minor differences in the accreditation standards and criteria but differences in their philosophies and approaches to accreditation. These differences have resulted in a healthy competition between the accrediting bodies and the institutions to assure and improve quality in higher education.

Accreditation programs will not always meet every constituents needs. However, this competition drives the achievement of strict requirements and improvement of the overall level of performance. This is a healthy dynamic for all constituents – the students, faculty, institutions, accrediting bodies, business and employers, government, and the general public. The task at hand for universities and accrediting bodies will be to ensure that the academic excellence that is achieved is ultimately producing graduates that are prepared for employment.

## References

- AACSB International. (2008). *Eligibility Procedures and Accreditation Standards for Business Accreditation*. Unpublished manuscript. Retrieved May 7, 2009, from Association to Advance Collegiate Schools of Business Web site: <http://www.aacsb.edu>
- AACSB International. (2009, April). *Accredited Schools*. Retrieved May 7, 2009, from AACSB International Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. a). *The Accreditation Process*. Retrieved May 5, 2009, from Association to Advance Collegiate Schools of Business Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. b). *Preaccreditation - Initial Accreditation Timeline*. Retrieved May 5, 2009, from Association to Advance Collegiate Schools of Business Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. c). *Member Services* [Mission Statement and End Statements]. Retrieved May 6, 2009, from The Association to Advance Collegiate Schools of Business Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. d). *Maintenance of Accreditation Timeline*. Retrieved May 7, 2009, from Association to Advance Collegiate Schools of Business Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. e). *About Us*. Retrieved May 7, 2009, from AACSB International Web site: <http://www.aacsb.edu>
- AACSB International. (n.d. f). *Accreditation*. Retrieved May 8, 2009, from AACSB International Web site: <http://www.aacsb.edu>
- AACSB International Accreditation Coordinating Committee, & AACSB International Accreditation Quality Committee. (2006a). *Deploying Academically Qualified Faculty: An Interpretation of AACSB Standards*. Unpublished manuscript. Retrieved May 5, 2009, from <http://www.aacsb.edu>
- AACSB International Accreditation Coordinating Committee, & AACSB International Accreditation Quality Committee. (2006b). *Deploying Professionally Qualified Faculty: An Interpretation of AACSB Standards*. Unpublished manuscript. Retrieved May 5, 2009, from <http://www.aacsb.edu>
- Abraham, S. E., & Karns, L. A. (2009, July/August). Do Business Schools Value the Competencies That Businesses Value? *Journal of Education for Business*, pp. 350-356.
- ACBSP. (2007, January). *The Accreditation Process for Baccalaureate/Graduate Degree Schools and Programs*. Retrieved from Association of Collegiate Business Schools and Programs (ACBSP) Web site: <http://www.acbsp.org>

ACBSP. (2008a, May). *ACBSP Standards and Criteria for Demonstrating Excellence in Baccalaureate/Graduate Degree Schools and Programs*. Retrieved May 9, 2009, from Association of collegiate Business Schools and Programs Web site: <http://www.acbsp.org>

ACBSP. (2008b, August). *The Process for Obtaining Accreditation: Baccalaureate/Graduate Degree Schools and Programs*. Retrieved May 9, 2009, from Association of collegiate Business Schools and Programs Web site: <http://www.acbsp.org>

ACBSP. (2009). *About ACBSP*. Retrieved May 7, 2009, from Association of Collegiate Business Schools and Programs Web site: <http://www.acbsp.org>

A Report of the Commission Appointed by Secretary of Education Margaret Spellings. (2006). *A Test of Leadership: Charting the Future of U.S. Higher Education*. U.S. Department of Education. Retrieved from <http://www.ed.gov/about/bdscomm/list/hiedfuture/index.html>

CHEA. (2006a, January 23). *Recognition of Accrediting Organizations: Policy and Procedures* (CHEA Board of Directors, Ed.). Retrieved May 4, 2009, from Council for Higher Education Accreditation Web site: <http://www.chea.org>

CHEA. (2006c, December). *Accreditation and Accountability: A CHEA Special Report*.

CHEA. (2007, December). *Presidential Guidelines Series*. Retrieved from Council for Higher Education Accreditation Web site: <http://www.chea.org>

CHEA. (2008a, July). *Recognized Accrediting Organizations*. Retrieved May 4, 2009, from Council for Higher Education Accreditation Web site: [http://www.chea.org/pdf/CHEA\\_USDE\\_AllAccred.pdf](http://www.chea.org/pdf/CHEA_USDE_AllAccred.pdf)

CHEA. (2008b, October). *Fact Sheet #1: Profile of Accreditation*. Retrieved May 4, 2009, from Council for Higher Education Accreditation Web site: [http://www.chea.org/pdf/fact\\_sheet\\_1\\_profile.pdf](http://www.chea.org/pdf/fact_sheet_1_profile.pdf)

Davies, G. K. (2007, January 30). *Five Simple Questions: Accreditation as if People Matter*. Speech/Remarks presented at Council for Higher Education Accreditation Annual Conference, Washington, D.C.

Dickeson, R. C. (2006). *The Need for Accreditation Reform*. Retrieved from U.S. Department of Education Web site: <http://www.ed.gov/>

EFMD. (2009a, January). *EQUIS Standards & Criteria*. Retrieved May 8, 2009, from The European Foundation for Management Development Web site: <http://www.efmd.org>

EFMD. (2009b, January). *The EQUIS Process Manual*. Retrieved May 9, 2009, from The European Foundation for Management Development Web site: <http://www.efmd.org>

EFMD. (n.d. a). *About Us*. Retrieved May 8, 2009, from The European Foundation for

Management Development Web site: <http://www.efmd.org>

EFMD. (n.d. b). *Frequently Asked Questions*. Retrieved May 8, 2009, from The European Foundation for Management Development Web site: <http://www.efmd.org>

EFMD. (n.d. c). *What is EQUIS?* Retrieved May 8, 2009, from The European Foundation for Management Development Web site: <http://www.efmd.org>

Fay, J. R., Ferrara, W. L., & Stryker, J. P. (1993, December). The Quest for Quality in Business Schools. *Management Accounting*, 75(6), pp. 48-50.

Julian, S.D. & Ofori-Dankwa, J.C., (2006). Is Accreditation good for the Strategic Decision Making of Traditional Business Schools? *Academy of Management Learning & Education*, 5(2), pp. 225-233.

Lowrie, A. & Willmott, H., (2009), Accreditation Sickness in the Consumption of Business Education: The Vacuum in AACSB Standard Setting. *Management Learning*, 40(4), pp. 411-420.

Report of the Management Education Task Force to the AACSB International Board of Directors. (2002, August). *Management Education at Risk*. AACSB International.

Roller, R. H., Andrews, B. K., & Bovee, S. L. (2003, March/April). Specialized Accreditation of Business Schools: A Comparison of Alternative Costs, Benefits, and Motivations. *Journal of Education for Business*, 78(4), pp. 197-204.

Romero, E.J. (2008). AACSB Accreditation: Addressing Faculty Concerns. *Academy of Management Learning & Education*, 7(2), pp. 245-255.

Straub, R. (2007, March 19). The 'living laboratories; of business Richard Straub of the European Foundation for Management Development Research explains why work in the field of management must be applicable to the corporate world. *Financial Times*, p. 8.

Zammuto, R. F. (2008). Accreditation and the Globalization of Business. *Academy of Management Learning & Education*, 7(2), 256-268.

## Appendix A: Expanded View of Standards & Criteria

AACSB International	ACBSP	EFMD
<p><u>#1 – Strategic Management</u></p> <ul style="list-style-type: none"> <li>▪ Mission Statement</li> <li>▪ Mission Appropriateness</li> <li>▪ Student Mission</li> <li>▪ Continuous Improvement Objectives</li> <li>▪ Financial Strategies</li> </ul> <p><u>#2 – Participant Standards: Students/Faculty</u></p> <ul style="list-style-type: none"> <li>▪ Student Admission</li> <li>▪ Student Retention</li> <li>▪ Staff Sufficiency and Student Support</li> <li>▪ <b>Faculty Sufficiency</b></li> <li>▪ <b>Faculty Qualifications</b></li> <li>▪ <b>Faculty Management and Support</b></li> <li>▪ <b>Aggregate Faculty and Staff Educational Responsibility</b></li> <li>▪ <b>Individual Faculty Educational Responsibility</b></li> <li>▪ Student Educational Responsibility</li> </ul> <p><u>#3 – Assurance of Learning Standards</u></p> <ul style="list-style-type: none"> <li>▪ Management of Curricula</li> <li>▪ Undergraduate Learning Goals</li> <li>▪ Undergraduate Educational Level</li> <li>▪ Master’s Level General Management Learning Goals</li> <li>▪ Specialized Master’s Degree Learning</li> </ul>	<p><u>#1 – Leadership</u></p> <ul style="list-style-type: none"> <li>▪ Creation of values that link with performance expectations</li> <li>▪ Foster Legal and Ethical Behavior</li> <li>▪ Continuous evaluation for improvement</li> <li>▪ Impacts on Society</li> <li>▪ Ethical Business Practices</li> <li>▪ Regulatory and Legal Compliance</li> </ul> <p><u>#2 – Strategic Planning</u></p> <ul style="list-style-type: none"> <li>▪ Formal Process Established</li> <li>▪ Faculty and Staff Participation</li> <li>▪ Plan and Timetable Established</li> <li>▪ Short-Term and Long-Term Action Plans Established</li> <li>▪ Performance Measures for Tracking Progress on Action Plans</li> <li>▪ Inclusion of Human Resource Plans</li> <li>▪ Communication of Plan</li> </ul> <p><u>#3 – Student and Stakeholder Focus</u></p> <ul style="list-style-type: none"> <li>▪ Targeted Student Segments for Programs</li> <li>▪ Methods to Determine Student and Stakeholder Requirements</li> <li>▪ Continuous Review and Improvement of Learning Methods</li> <li>▪ Information Dissemination Process</li> <li>▪ Attract and Retain Students</li> <li>▪ Process to Enhance Student Performance and Meet/Exceed Learning Expectations</li> </ul>	<p><u>#1 – Context, Governance, and Strategy</u></p> <ul style="list-style-type: none"> <li>▪ Environment</li> <li>▪ Institutional Status</li> <li>▪ Governance</li> <li>▪ Mission, Vision, and Values</li> <li>▪ Strategic Positioning</li> <li>▪ Strategic Direction and Objectives, Strategic Planning</li> <li>▪ Quality Assurance</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Connections</b></li> </ul> <p><u>#2 – Programs</u></p> <ul style="list-style-type: none"> <li>▪ The Program Portfolio</li> <li>▪ Program Design</li> <li>▪ Program Content</li> <li>▪ Skills Acquisition</li> <li>▪ Program Delivery</li> <li>▪ Student Assessment</li> <li>▪ Program Evaluation</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Relevance</b></li> <li>▪ Societal Relevance</li> </ul> <p><u>#3 – Students</u></p> <ul style="list-style-type: none"> <li>▪ Target Profiles and Criteria for Selection</li> <li>▪ Course Preparation and Progression</li> <li>▪ Support and Counseling Services</li> <li>▪ Personal and Professional Development</li> <li>▪ Ethics and Values</li> <li>▪ Career Placement and Support</li> <li>▪ Alumni Relations</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Links</b></li> </ul> <p><u>#4 – Faculty</u></p> <ul style="list-style-type: none"> <li>▪ Faculty Size, Qualification, and Composition</li> </ul>

AACSB International	ACBSP	EFMD
<ul style="list-style-type: none"> <li>Goals</li> <li>▪ Master’s Educational Level</li> <li>▪ Doctoral Learning Goals</li> </ul>	<ul style="list-style-type: none"> <li>▪ Student/Stakeholder Satisfaction/Dissatisfaction and Feedback Process</li> <li><u>#4 – Measurement and Analysis of Student Learning and Performance</u> <ul style="list-style-type: none"> <li>▪ Selection and Use of Information and Data</li> <li>▪ Selection and Use of Comparative Information Data</li> <li>▪ Selection and Use of Information Results</li> <li>▪ Continuous Process Improvement: Student Learning and Performance</li> </ul> </li> <li><u>#5 – Faculty and Staff Focus</u> <ul style="list-style-type: none"> <li>▪ Human Resource Planning</li> <li>▪ Employment</li> <li>▪ Faculty Deployment</li> <li>▪ Faculty Size and Load</li> <li>▪ Faculty Evaluation</li> <li>▪ Faculty and Staff Development</li> <li>▪ Faculty Operational Procedures, Policies, and Practices</li> <li>▪ Scholarly and Professional Activities</li> </ul> </li> <li><u>#6 – Educational and Business Process Management</u> <ul style="list-style-type: none"> <li>▪ Education Design</li> <li>▪ Degree Programs</li> <li>▪ <b>Common Professional Component (CPC)</b></li> <li>▪ Curriculum Design</li> <li>▪ Other Business-Related Programs</li> <li>▪ Graduate Programs</li> <li>▪ Education (Design and Delivery) Evaluation</li> <li>▪ Education Support Processes</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Faculty Management</li> <li>▪ Faculty Development</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Links</b></li> <li><u>#5 - Research and Development</u> <ul style="list-style-type: none"> <li>▪ <b>Research Activities</b></li> <li>▪ Development and Innovation</li> <li>▪ <b>International Features of R&amp;D</b></li> <li>▪ <b>Links Between R&amp;D and the Corporate World</b></li> </ul> </li> <li><u>#6 - Executive Education</u> <ul style="list-style-type: none"> <li>▪ Positioning within the School</li> <li>▪ Product Portfolio</li> <li>▪ Marketing and Sales</li> <li>▪ Participant Management</li> <li>▪ Program Quality and Impact</li> <li>▪ Faculty</li> <li>▪ Research and Development</li> <li>▪ <b>Internationalization</b></li> </ul> </li> <li><u>#7 - Contribution to the Community</u> <ul style="list-style-type: none"> <li>▪ Community Outreach</li> <li>▪ Extra-curricular Student Activities</li> <li>▪ Services to the Management Education Profession</li> <li>▪ <b>Corporate Responsibility</b></li> </ul> </li> <li><u>#8 - Resources and Administration</u> <ul style="list-style-type: none"> <li>▪ Physical Facilities and the Learning Environment</li> <li>▪ Financial Resources</li> <li>▪ Financial Management Systems</li> <li>▪ Information and Documentation Facilities</li> </ul> </li> </ul>



AACSB International	ACBSP	EFMD
	<ul style="list-style-type: none"> <li>▪ Business Operation Processes</li> <li>▪ Results of Educational Support Service Processes and Business Operation Processes</li> <li>▪ Enrollment Management</li> <li>▪ Admissions Policies and Procedures</li> <li>▪ Articulation Process</li> <li>▪ Graduate Program Articulation Admissions Policy</li> <li>▪ Academic Policies for Probation, Suspension, and Readmitting</li> <li>▪ Academic Policies for Recruiting, Admitting, and Retaining Students</li> <li>▪ Results</li> <li>▪ Improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Computing Facilities</li> <li>▪ Marketing and Public Relations</li> <li>▪ Administrative Services and Staff</li> <li><b>#9 – Internationalization</b></li> <li>▪ <b>Internationalization of the Student Body</b></li> <li>▪ <b>Internationalization of the Faculty</b></li> <li>▪ <b>Internationalization of Programs</b></li> <li>▪ <b>Network of International Relationships</b></li> <li>▪ <b>Linkages to the International Corporate World</b></li> <li>▪ <b>International Dimension of Research and Development Activity</b></li> <li><b>#10 - Corporate Connections</b></li> <li>▪ <b>Interface with the Corporate World</b></li> <li>▪ <b>Processes for Interfacing with the Corporate World</b></li> <li>▪ <b>Flow of Funding from Corporate Sources</b></li> <li>▪ <b>Key Relationships with Corporate Partners</b></li> <li>▪ <b>International Features of Relationships with Corporate Partners</b></li> </ul>

Note: Items highlighted in **BOLD** are points of differentiation between the accrediting bodies.

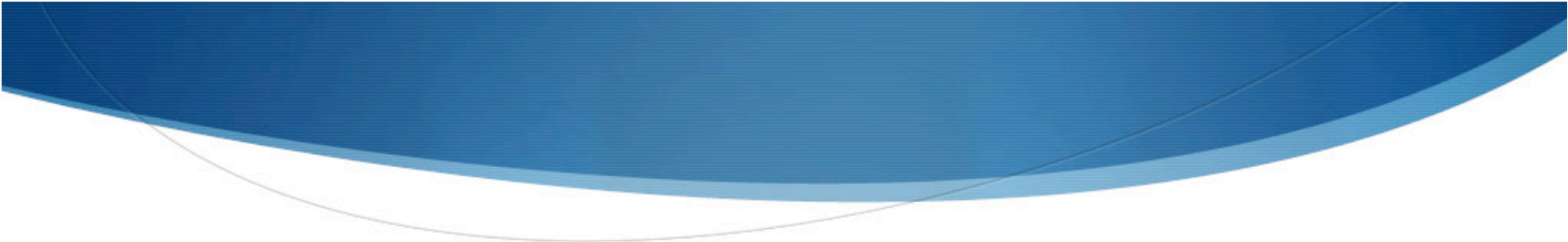
Source: AACSB International, 2008; ACBSP, 2008a; EFMD, 2009a

# An Assessment of Business Accreditation Organizations and Standards

Dawn Bowden, Ph.D.  
International School of Management, Paris

*Region 8 Annual Conference:  
Recognizing Excellence in Education*





*"Accreditation is a process of external quality review used by higher education to scrutinize colleges, universities and educational programs for quality assurance and quality improvement."*

*(The Council for Higher Education Accreditation, 2008)*

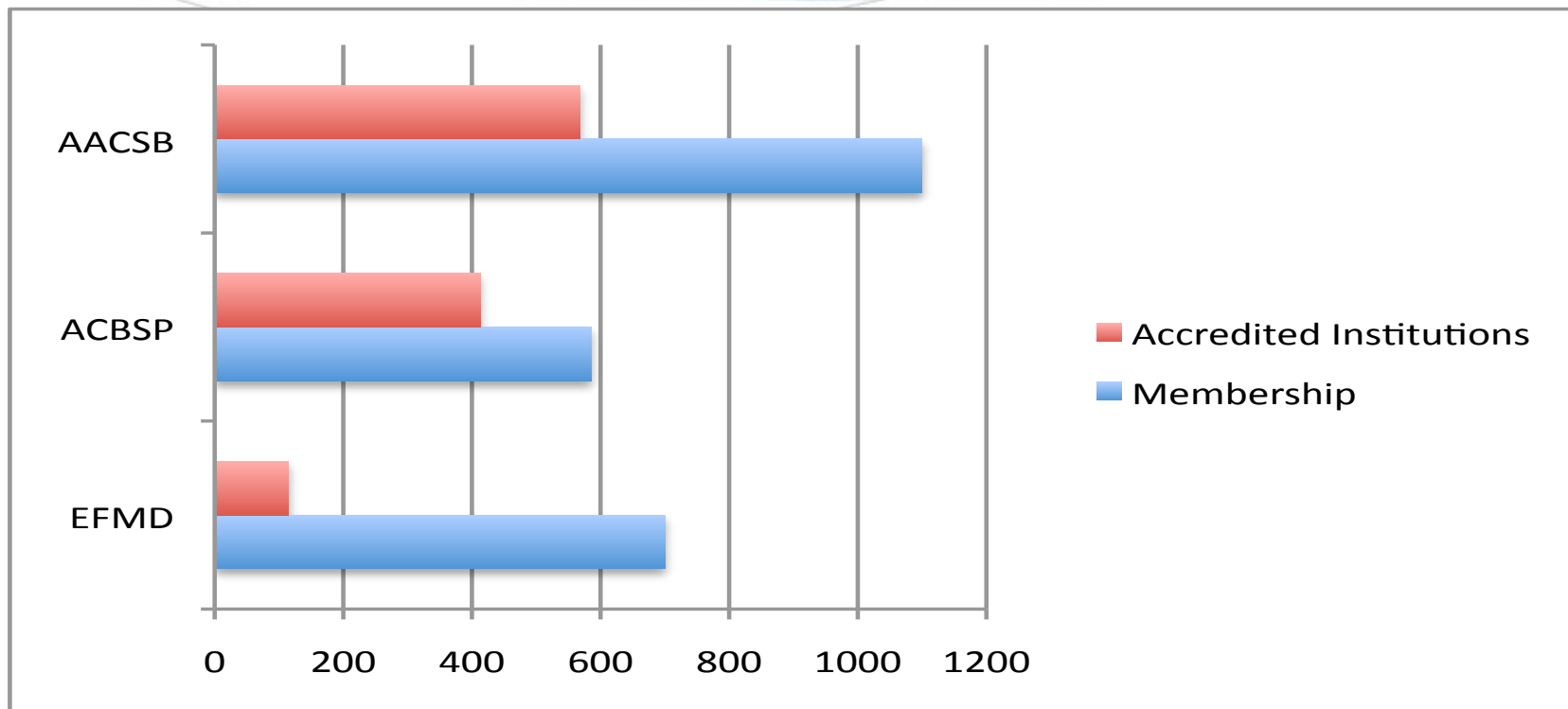
# Business Accreditation Organizations



# Programmatic Business Accreditations

- ◆ Association to Advance Collegiate Schools of Business (AACSB International)
- ◆ Association of Collegiate Business Schools and Programs (ACBSP)
- ◆ European Foundation for Management Development (EFMD)

# Membership and Accredited Institutions

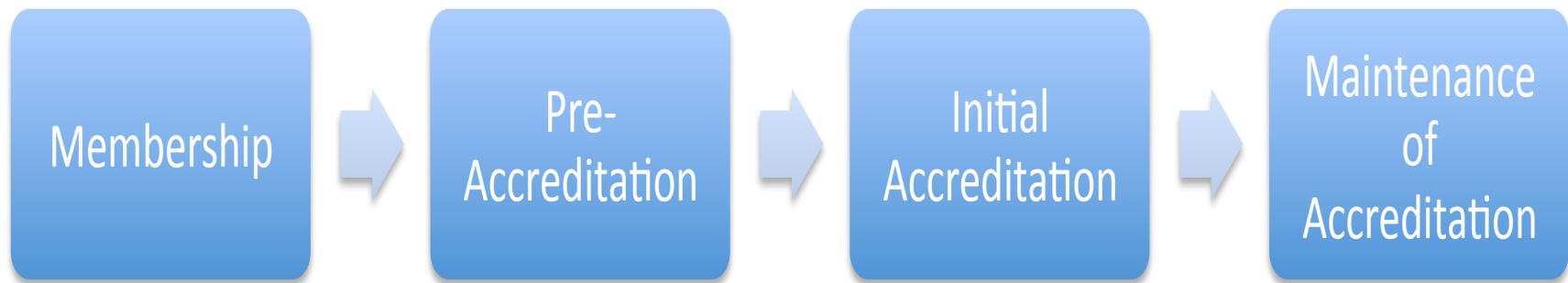


# The Processes





# AACSB





# ACBSP

Candidacy

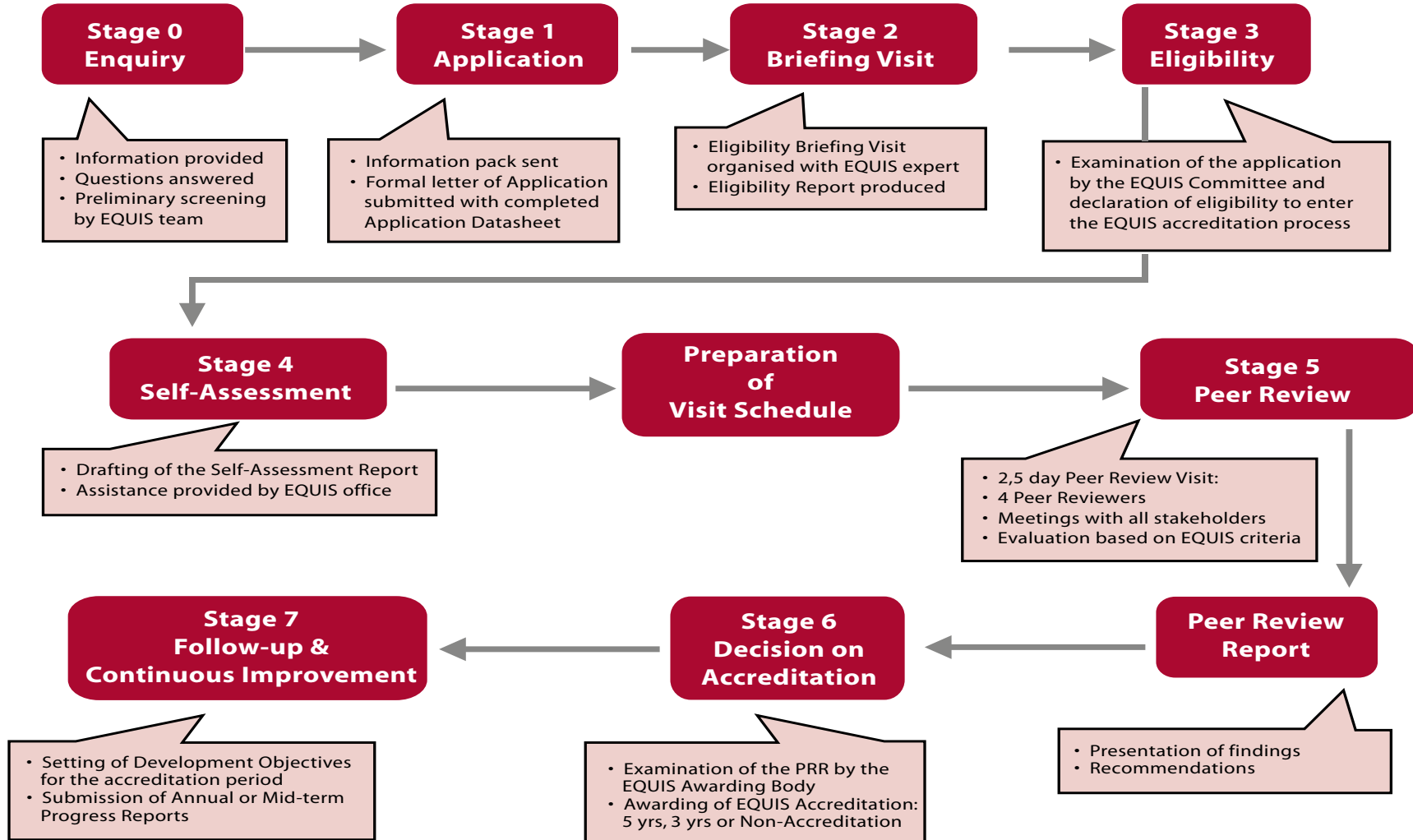


Accreditation  
Evaluation &  
Determination



Reaffirmation  
of  
Accreditation

# EFMD



# The Accreditation Framework



# AACSB

## AACSB

- The institution must be a member of AACSB.
- The institution must offer degree-granting programs.
- The degree programs in business must sustain excellence and continuous improvement.
- All degrees programs in business offered by the institution at all locations will be reviewed at the same time. Exclusions of programs are determined on an individual basis and are based on criteria established relative to participation/independence, branding/distinctiveness, and control/autonomy of the program.
- The institution must demonstrate diversity in the business programs that is consistent with its mission and cultural context.
- The institution must establish ethical behaviors.
- A majority of business graduates must be from programs that have produced graduates during two consecutive years.

# ACBSP

## ACBSP

- The institution must be an institutional member of ACBSP.
- The institution must be accredited by one of the six regional accrediting bodies or located in and approved/recognized by a country other than the U.S.
- The application must be authorized in writing by the chief executive office of the institution.
- The institution must have offered a degree in business for at least two years.
- The institution must have the necessary approval to confer degrees.
- The institution must have a publicly stated purpose appropriate to a college or university that has been approved by the institution's governing body.

# EFMD

## EFMD

- The institution must be a member of EFMD and remain a member during any accreditation period.
- The institution is a degree awarding institution.
- A mission that is appropriate for higher education must be in place.
- There must be a primary focus on education for general management or business administration.
- The institution must have autonomy in the management of its academic staff and budget and in the design and running of programs.
- Academic staff must cover the principal management disciplines.
- At least 3 classes must have graduated in the main degree program.
- The institution must be operational for at least 10 years.
- The institution must be able to demonstrate institutional stability if major structural change have occurred.

# Categories of Standards

## AACSB International

- #1 - Strategic Management
- #2 - Participant Standards: Students/Faculty
- #3 - Assurance of Learning Standards

## ACBSP

- #1 - Leadership
- #2 - Strategic Planning
- #3 - Student and Stakeholder Focus
- #4 - Measurement and Analysis of Student Learning and Performance
- #5 - Faculty and Staff Focus
- #6 - Educational and Business Process Management

## EFMD

- #1 - Context, Governance, and Strategy
- #2 - Programs
- #3 - Students
- #4 - Faculty
- #5 - Research and Development
- #6 - Executive Education
- #7 - Contribution to the Community
- #8 - Resources and Administration
- #9 - Internationalization
- #10 - Corporate Connections



# Key Differences





# General Categories for Assessment

- ◆ Strategic Management & Governance
- ◆ Student Focus
- ◆ Staff & Faculty Qualifications, Development & Scholarly Activity
- ◆ Assurance of Learning Standards
- ◆ Process Management

# Unique Features

AACSB International	ACBSP	EFMD
<ul style="list-style-type: none"> <li>▪ Unique to AACSB is the detailed requirements and basis for judgment defined for <b>faculty qualifications</b> including the Academically Qualified (AQ) faculty and the Professionally Qualified (PQ) faculty. There is a defined requirement, or quota, for how many at each level must be utilized to maintain AACSB International accreditation.</li> <li>▪ Many of the standards and criteria are more <b>stringent and directed</b>. For example, scholarly activities and publishing criteria are more detailed and include peer-reviewed contributions. There is a focus on what is produced versus the process alone.</li> <li>▪ Strong focus on <b>research excellence</b> as is evidenced by (e.g. Standard 5.8 and Criteria 31, 34, and 35).</li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Common Professional Component (CPC)</b> requirement for curriculum design to ensure the appropriate coverage of topical areas within the business core courses.</li> <li>▪ Though all 3 accrediting bodies have <b>strategic planning</b> included in their standards, ACBSP has more detailed requirements and a specific standard for this area.</li> <li>▪ All 3 accrediting bodies have criteria for process development, management and improvement. ACBSP has established a <b>separate standard (#6) for process management</b>.</li> <li>▪ <b>Associate Degree accreditation</b>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Has explicitly included <b>criteria for internationalization</b> in the majority of the standards (see Appendix A criteria highlighted in blue).</li> <li>▪ Has explicitly included <b>criteria for linkages to the corporate world</b> in the majority of the standards (see Appendix A criteria highlighted in blue).</li> <li>▪ <b>Contribution to the community</b> is called out as a separate standard with supporting criteria.</li> </ul>



*Let's explore an expanded view of the Standards &  
Criteria....*

*(See Appendix A)*

# The Future of Accreditation



# Where do we go from here?

- ◆ Is there a “best” or... just the “most appropriate”?
- ◆ Uniformity
- ◆ Teaching vs. Research
- ◆ Continuous Improvement!!!



Thank you!



# Appendix



**Appendix A: Expanded View of Standards & Criteria**

AACSB International	ACBSP	EFMD
<p><b>#1 – Strategic Management</b></p> <ul style="list-style-type: none"> <li>▪ Mission Statement</li> <li>▪ Mission Appropriateness</li> <li>▪ Student Mission</li> <li>▪ Continuous Improvement Objectives</li> <li>▪ Financial Strategies</li> </ul> <p><b>#2 – Participant Standards: Students/Faculty</b></p> <ul style="list-style-type: none"> <li>▪ Student Admission</li> <li>▪ Student Retention</li> <li>▪ Staff Sufficiency and Student Support</li> <li>▪ <b>Faculty Sufficiency</b></li> <li>▪ <b>Faculty Qualifications</b></li> <li>▪ <b>Faculty Management and Support</b></li> <li>▪ <b>Aggregate Faculty and Staff Educational Responsibility</b></li> <li>▪ <b>Individual Faculty Educational Responsibility</b></li> <li>▪ Student Educational Responsibility</li> </ul> <p><b>#3 – Assurance of Learning Standards</b></p> <ul style="list-style-type: none"> <li>▪ Management of Curricula</li> <li>▪ Undergraduate Learning Goals</li> <li>▪ Undergraduate Educational Level</li> <li>▪ Master’s Level General Management Learning Goals</li> <li>▪ Specialized Master’s Degree Learning Goals</li> <li>▪ Master’s Educational Level</li> <li>▪ Doctoral Learning Goals</li> </ul>	<p><b>#1 – Leadership</b></p> <ul style="list-style-type: none"> <li>▪ Creation of values that link with performance expectations</li> <li>▪ Foster Legal and Ethical Behavior</li> <li>▪ Continuous evaluation for improvement</li> <li>▪ Impacts on Society</li> <li>▪ Ethical Business Practices</li> <li>▪ Regulatory and Legal Compliance</li> </ul> <p><b>#2 – Strategic Planning</b></p> <ul style="list-style-type: none"> <li>▪ Formal Process Established</li> <li>▪ Faculty and Staff Participation</li> <li>▪ Plan and Timetable Established</li> <li>▪ Short-Term and Long-Term Action Plans Established</li> <li>▪ Performance Measures for Tracking Progress on Action Plans</li> <li>▪ Inclusion of Human Resource Plans</li> <li>▪ Communication of Plan</li> </ul> <p><b>#3 – Student and Stakeholder Focus</b></p> <ul style="list-style-type: none"> <li>▪ Targeted Student Segments for Programs</li> <li>▪ Methods to Determine Student and Stakeholder Requirements</li> <li>▪ Continuous Review and Improvement of Learning Methods</li> <li>▪ Information Dissemination Process</li> <li>▪ Attract and Retain Students</li> <li>▪ Process to Enhance Student Performance and Meet/Exceed Learning Expectations</li> <li>▪ Student/Stakeholder</li> </ul>	<p><b>#1 – Context, Governance, and Strategy</b></p> <ul style="list-style-type: none"> <li>▪ Environment</li> <li>▪ Institutional Status</li> <li>▪ Governance</li> <li>▪ Mission, Vision, and Values</li> <li>▪ Strategic Positioning</li> <li>▪ Strategic Direction and Objectives, Strategic Planning</li> <li>▪ Quality Assurance</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Connections</b></li> </ul> <p><b>#2 – Programs</b></p> <ul style="list-style-type: none"> <li>▪ The Program Portfolio</li> <li>▪ Program Design</li> <li>▪ Program Content</li> <li>▪ Skills Acquisition</li> <li>▪ Program Delivery</li> <li>▪ Student Assessment</li> <li>▪ Program Evaluation</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Relevance</b></li> <li>▪ Societal Relevance</li> </ul> <p><b>#3 – Students</b></p> <ul style="list-style-type: none"> <li>▪ Target Profiles and Criteria for Selection</li> <li>▪ Course Preparation and Progression</li> <li>▪ Support and Counseling Services</li> <li>▪ Personal and Professional Development</li> <li>▪ Ethics and Values</li> <li>▪ Career Placement and Support</li> </ul>



AACSB International	ACBSP	EFMD
	<p>Satisfaction/Dissatisfaction and Feedback Process</p> <p><u>#4 – Measurement and Analysis of Student Learning and Performance</u></p> <ul style="list-style-type: none"> <li>▪ Selection and Use of Information and Data</li> <li>▪ Selection and Use of Comparative Information Data</li> <li>▪ Selection and Use of Information Results</li> <li>▪ Continuous Process Improvement: Student Learning and Performance</li> </ul> <p><u>#5 – Faculty and Staff Focus</u></p> <ul style="list-style-type: none"> <li>▪ Human Resource Planning</li> <li>▪ Employment</li> <li>▪ Faculty Deployment</li> <li>▪ Faculty Size and Load</li> <li>▪ Faculty Evaluation</li> <li>▪ Faculty and Staff Development</li> <li>▪ Faculty Operational Procedures, Policies, and Practices</li> <li>▪ Scholarly and Professional Activities</li> </ul> <p><u>#6 – Educational and Business Process Management</u></p> <ul style="list-style-type: none"> <li>▪ Education Design</li> <li>▪ Degree Programs</li> <li>▪ <b>Common Professional Component (CPC)</b></li> <li>▪ Curriculum Design</li> <li>▪ Other Business-Related Programs</li> <li>▪ Graduate Programs</li> <li>▪ Education (Design and Delivery) Evaluation</li> <li>▪ Education Support Processes</li> <li>▪ Business Operation Processes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Alumni Relations</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Links</b></li> </ul> <p><u>#4 – Faculty</u></p> <ul style="list-style-type: none"> <li>▪ Faculty Size, Qualification, and Composition</li> <li>▪ Faculty Management</li> <li>▪ Faculty Development</li> <li>▪ <b>Internationalization</b></li> <li>▪ <b>Corporate Links</b></li> </ul> <p><u>#5 - Research and Development</u></p> <ul style="list-style-type: none"> <li>▪ <b>Research Activities</b></li> <li>▪ Development and Innovation</li> <li>▪ <b>International Features of R&amp;D</b></li> <li>▪ <b>Links Between R&amp;D and the Corporate World</b></li> </ul> <p><u>#6 - Executive Education</u></p> <ul style="list-style-type: none"> <li>▪ Positioning within the School</li> <li>▪ Product Portfolio</li> <li>▪ Marketing and Sales</li> <li>▪ Participant Management</li> <li>▪ Program Quality and Impact</li> <li>▪ Faculty</li> <li>▪ Research and Development</li> <li>▪ <b>Internationalization</b></li> </ul> <p><u>#7 - Contribution to the Community</u></p> <ul style="list-style-type: none"> <li>▪ Community Outreach</li> <li>▪ Extra-curricular Student Activities</li> <li>▪ Services to the Management Education Profession</li> <li>▪ <b>Corporate Responsibility</b></li> </ul> <p><u>#8 - Resources and Administration</u></p>

AACSB International	ACBSP	EFMD
	<ul style="list-style-type: none"> <li>▪ Results of Educational Support Service Processes and Business Operation Processes</li> <li>▪ Enrollment Management</li> <li>▪ Admissions Policies and Procedures</li> <li>▪ Articulation Process</li> <li>▪ Graduate Program Articulation Admissions Policy</li> <li>▪ Academic Policies for Probation, Suspension, and Readmitting</li> <li>▪ Academic Policies for Recruiting, Admitting, and Retaining Students</li> <li>▪ Results</li> <li>▪ Improvement</li> </ul>	<ul style="list-style-type: none"> <li>▪ Physical Facilities and the Learning Environment</li> <li>▪ Financial Resources</li> <li>▪ Financial Management Systems</li> <li>▪ Information and Documentation Facilities</li> <li>▪ Computing Facilities</li> <li>▪ Marketing and Public Relations</li> <li>▪ Administrative Services and Staff</li> <li><b>#9 – Internationalization</b> <ul style="list-style-type: none"> <li>▪ <b>Internationalization of the Student Body</b></li> <li>▪ <b>Internationalization of the Faculty</b></li> <li>▪ <b>Internationalization of Programs</b></li> <li>▪ <b>Network of International Relationships</b></li> <li>▪ <b>Linkages to the International Corporate World</b></li> <li>▪ <b>International Dimension of Research and Development Activity</b></li> </ul> </li> <li><b>#10 - Corporate Connections</b> <ul style="list-style-type: none"> <li>▪ <b>Interface with the Corporate World</b></li> <li>▪ <b>Processes for Interfacing with the Corporate World</b></li> <li>▪ <b>Flow of Funding from Corporate Sources</b></li> <li>▪ <b>Key Relationships with Corporate Partners</b></li> <li>▪ <b>International Features of Relationships with Corporate Partners</b></li> </ul> </li> </ul>

Note: Items highlighted in **BOLD** are points of differentiation between the accrediting bodies.

Source: AACSB International, 2008; ACBSP, 2008a; EFMD, 2009a

---

## Complex Experiences for Powerful Learning

---

### **Professor Jeffrey Klein, Ph.D. (Cand.)**

International School Management  
External Programs Academic Director  
88, Blvd. de la Tour Maubourg  
75007 Paris, France  
Email : jeff.klein@ism.edu

**Abstract:** Brain based learning places students at the center of lesson design. Educators strive to develop deep connections between subject material and student experience. Primary attention is placed on complex experience, the rich variety of input available to stimulate learning. Integrating physical movement, sensory capabilities, and emotions to the learning process contributes to success. Critical thinking skills and new memory can only be developed by considering the connection between the learner and subject material.

**Keywords:** Brain-based learning, complex experiences, guided experiences, emotions, physiology, neurons, relaxed alertness, social, organizing knowledge

**Reference:** Reference to this paper should be made as follows: Klein, J. (2009) "Complex Experiences for Powerful Learning", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Jeffrey Klein is a Ph.D candidate in Business Administration at ISM. He holds an MA from Middlebury College and the University of Oxford, a BA from the University of Utah and has attended Harvard University's specialized program on university admissions. He is the External Programs Academic Director for ISM and an educational and careers consultant. A former silk importer and mountain climber in Nepal and India, he was a partner in High Adventure Travel (HAT) in the 1980's before he turned his attention to consulting and teaching.

## Introduction

Critical to powerful learning experiences are strong neuronal connections in the brain. *Complex experiences* (Caine & Caine, 2009) by means of a natural process involving perception and action have been shown to achieve the strongest connections. Complex learning is part strategy and part principle and is a way of defining the ideal conditions for learning.

Complex experience requires learning activities that are original and varied, and followed by feedback. Also necessary is a degree of freedom for the learner to make choices, based on situations in which the student faces questions and responds to the same information through a variety of stimuli. This kind of learning is best organized when the assessment and objectives are a natural part of the experience rather than a threat.

Focusing on this aspect of brain-based learning involves many core principles: meaning comes through patterning, understanding occurs best when information is naturally embedded, the brain takes in both wholes and parts simultaneously, and that learning is a physiological process (Caine & Caine, 2009). This paper will explore these principles that make up complex learning and their links to the classroom. It will also establish the means by which educators can enable students to engage in higher-order thinking and problem solving.

## Immersion Learning

Immersing the student in experiences that engage the executive functions of the brain requires skillful planning. Caine & Caine (2009) refer to this as “orchestrated immersion” and implies three basic approaches: the learning environment must offer a multitude of resources, appropriate feedback with examples of what the students are aiming for, and complex challenges that involves students at several stages of performance.

With building strong connections in the brain as the benchmark for effective teaching, immersion learning must also engage direct and sensory experience, make available to students opportunities to connect with prior knowledge, and stimulate questions. Educators can refer to these aspects of immersion learning as a way to measure the level of which the activities they are developing will have good potential for meaningful learning.

## Relaxed Alertness

The ideal emotional state for learning, relaxed alertness (Caine & Caine, 2009), consists of maintaining an environment of low threat and high challenge. In this state, as a result of

positive interchanges between the educator and the student, the learner feels confident and interested and is not impacted by fears of any type.

Relaxed alertness is both of these qualities; learners in this state are relatively at ease as well as engaged by the topic at hand. This provides the basis for making important inquiries and engaging the executive functions of the mind (Caine & Caine, 2009). Students in this state are challenged and excited (alertness) but also feel capable and confident (relaxed). They are also focused and ready to listen, as opposed to feeling distracted and tense. Caine & Caine (2009) assert “at the heart of the work of educators is creating opportunities for students to have experiences that will develop relaxed alertness”.

Knowing how to assess whether or not relaxed alertness is present begins with looking at the confidence level in the classroom (Caine & Caine, 2009). For example, educators can witness the way in which students work together: groups formed based on an area of interest or simply friendship, ideas volunteered or forced dialogue, students give feedback freely and accept suggestions. A second area in which educators can assess for relaxed alertness is the level of competence students feel: they seek out the teacher for feedback, debate issues, and respond to questions in meaningful ways. Educators must also look at themselves and consider if they have listened effectively to students, maintained high expectations, and pointed out areas for improvement. These applications will reveal the level of relaxed alertness in the classroom and enable educators to make adjustments as needed.

Stress as defined by the hormones it releases is helpful to the learning process when it is maintained at a reasonable level, but in large amounts it affects the brain, body, and immune system negatively (Caine & Caine, 2009). Great deals of stress are found in situations of fear and helplessness, or not knowing what to do or how to respond.

Perry (2003) organized mental states into five different levels: calm, arousal, alarm, fear, and terror. Perry’s idea of “calm” is what Caine & Caine would call “relaxed alertness”. In this state, the learner can think in abstract ways and has a sense of time. Conversely, as people begin to feel less and less comfortable, they move farther away from this optimal state of learning. Arousal is the state most of us find ourselves in and it is based on thought processes that rarely go beyond the simple concrete information we are presented. Reflective thinking is difficult to access in this state. In the alarm state, people sense some sort of danger and respond with a great deal of emotion. In addition, in the alarm state, people are focused only on the next few minutes. Fear, the fourth mind state according to Perry, is mostly reactive and most people have limited choice over their thinking. They see

things only in the next seconds or minutes. In the fifth state, terror, the individual cannot really think and their reactions are often out of control.

These five different “states” of mind underline the fact that there is only one in which the individual is most ready for learning and that is the first: when the learner is calm, relaxed, and engaged. Educators must, therefore, be mindful to create such an environment in which the students feel a strong sense of self-confidence as well as interest. Instructors must have a sense of their own conduct and attitude in the classroom if they intend to reduce threat and raise relaxed alertness. An effective classroom is created, and it cannot be done without reducing stress and developing a climate in which students listen and feel comfortable to discuss their questions and opinions.

### **The Brain/Mind Is Social**

Our relationships with those around us, including belonging, being recognized, and listened to, all contribute to a sense of relaxed alertness. Caine & Caine (2009) emphasize this view through the learning principle that the brain/mind is social, and students learn more effectively when their need for relationships is engaged. Neuroscience research shows (Detweiler, Rothman, Salovey, & Steward, 2000) that social interactions are capable of influencing the flow of chemicals that control sleeping, eating, and mating (and related to stress, health, and disease). In the classroom, these relationships are part of achieving relaxed alertness, and can be developed through practicing three basic principles: aiming for authenticity, maintaining positive communication channels, and empowering students to feel capable and confident (Caine & cCaine, 2009).

Instructors must therefore take stock of the actual situation in the classroom in terms of how well students connect with each other and express themselves in meaningful ways. Teachers must also provide opportunities for students to experience success and failure, the latter because it enables students to stretch themselves and grow from it. The confidence that results from this gives them the desire to master new challenges. As well, educators need to listen effectively in order to increase a student’s sense of self-worth.

### **Guided Experience**

Learning activities that are student-centered can be described as guided experiences. Learning in this way practices relaxed alertness, active engagement, and organized immersion (Caine & Caine, 2009). This sets the appropriate tone for positive and effective teaching and learning.

Motivation for learning can be stimulated through appealing to students’ interests for a particular activity. Engaging them in a participatory event, the “global experience” (Caine & Caine, 2009), unites their desire to learn and gives them a sense of what is ahead. By the same token, the understanding they have towards what they are aiming to learn can be a powerful motivator (Hidi & Renninger, 2004). Moreover, the global experience initiates in the student a feeling towards the subject material. This takes into account the social and emotional element to learning as these dimensions impact learning in significant ways.

Students can make meaning from posing and answering questions that result from the global experience. The educator, as the expert, is poised to respond and guide students. Helping them to process knowledge by generating student-centered questions results in “elaborate, longer lasting, and stronger representations of the knowledge” (Craik & Lockhart, 1972). The opportunity for students to make connections with the subject material and through engaging with peers and the instructor is important. It enhances the ability to retrieve and use these concepts and skills when the occasion arises (Craik & Lockhart, 1972).

Synthesizing new skills and learning can be facilitated by real world experience. Having students engage with or witness people practicing the skills at hand can have a significant impact on student learning. When they interact with real problems, students see the decision-making that goes into the process and are more likely to have more positive learning outcomes.

### **Connections and Complex Tasks**

Educational practices that emphasize the need to name and understand the details comes at the expense of losing track of the broader connection between the details. Competency in small parts is easy to develop and gives us self-confidence but does not enable connections to broader meaning. Student interaction can be influenced significantly when they are encouraged to ask the bigger questions related to the meaning of these individual parts. Without the sense of how things link to each other, students often lose interest and knowledge is not retained. (see Figure 3, appendix)

Mastering skills requires an understanding of the relationships between the activities at hand (Anderson et al, 1989). Educators can most help students by creating situations in which they work on using the basic skills in combination with real-world scenarios. Students need to have practice in not just performing the basic skill areas but also looking at and reflecting on how these areas connect to each other and the larger world. This can result in important gains in the ability to complete complex tasks. When students are able to identify the contexts and types of skills that a situation calls for, they are able to transfer and use the

knowledge more successfully. Not learning the interconnectedness and applications of knowledge results in a weak ability to synthesize skills when most needed.

The guided experience, as described previously, leads to the student initiated questions and discussions that enable students to understand connections between individual skills and applications to the world. In order to arrive at the point in which students are looking for and making connections, educators must present to students the types of learning situations that evoke insight and feeling towards a subject (Caine & Caine, 2009).

It is essential for educators to keep in mind that as students are encouraged to develop their own questions, it will ultimately lead to the richest rewards and higher skill development. Designing activities that will generate the highest levels of interest, as demonstrated by students seeing the connections to their lives, will ultimately lead to the strongest and most meaningful skill development.

### **Physiology in Learning**

Educators need to take into consideration not only the types of activities that will engage the learner’s brain/mind, but also how the body can be stimulated towards helping the brain/mind to process knowledge.

All of the sensory processors (eyes, ears, nose, etc.) have direct influence on brain learning. Integrating the arts, therefore, can have a positive impact on imparting knowledge because it activates the senses. It is most successful when the senses are engaged in natural ways such that the activity is grounded in the real world. Students are more likely to practice the skill when it involves in a natural way all of their senses, physical movement, social articulation, and decision making (Caine & Caine, 2009).

The interconnections of the body and the brain/mind, as demonstrated by Fuster (2003), show that there is a clear relationship between decision-making as related to the motor cortex and body movement. Some research asserts the idea that knowledge is actually structured in the body (Lakoff & Johnson, 1999). The implications for educators are clear: the emotions, senses, and body are intertwined with learning and the best teaching and learning will make use of all of the physiology and mind. The more all of these are coordinated naturally in a lesson plan, the higher the gains in student learning.

### **Physiology and Lesson Plans**

In order to put in motion all of the physiognomy, which promotes higher student learning, educators need to consider how they can promote hands-on experience as part of the lesson. These experiences will engage the executive functions of the brain as well as



stimulate the senses. When students sit at their desks all day, the body and the great potential for successful learning experiences is ignored. Physical movement, on the other hand, can stimulate energy and feelings towards a subject.

Getting students out of their desks and engaging with the skills as much as possible will evoke all of the senses. It also gives students encouragement to interact with their environment. It is important that questions and interaction are promoted; in this way, students feel involved in developing their skills. As they feel more comfortable with the subject, they will become more creative (Caine & Caine, 2009) and see the broader links among the individual parts.

Questions initiated by the student will make for a positive experience and lay the foundation for maximum learning. Preparing the way with global experiences that engage all of the senses stimulates their curiosity and motivation to learn. As students are guided towards finding the answers through hands-on contact and interaction with their peers, they are excited by the connections they can apply to the outer world. Their mastery of skills leads to them think creatively about the meaning of this new material. Instructors that encourage students throughout each step of this process will enable students to reach high standards of learning.

### **Organizing Knowledge for Meaning**

The brain is wired to receive and interpret patterns for meaningful use. It will also cast aside information which does not resonate with previous experiences. Researcher Robin Fogarty (1997) finds the human brain to be similar to a filter in how it lets go of many sources of information. Pat Wolfe (2006) describes the pathway that neurons follow in developing a new memory:

*First the sensory stimuli hit the neurons in the appropriate sensory cortex. These crude sensations are then relayed through the thalamus and sent to the sensory association area of the neocortex where they are put together into objects we recognize. Next (and almost simultaneously) the information is sent to the amygdale for emotional evaluation and to the frontal cortex for content evaluation. On the basis of its analysis of physical features of the stimuli, the brain begins to construct meaning.(see Figure 1, appendix)*

In more basic terms, the brain looks at whether or not the information is coherent and, second, whether or not it is meaningful to the learner. A key component is excitement for the learner; positive emotions will signal to the brain that the information is valuable, and

new memory, therefore, is more likely to occur. As Restak (1995) asserts, the brain discards information that is meaningless or has no direct impact on the learner. Hence, in order for information to be retained, it must carry some level of personal meaning. The brain will assess the potential of the emotional connection and personal meaning as presented by the information, and this can derive only from patterns of experience.

Hart (1978) actually finds confusion a “stimulating tool” for learning. The neocortex in the brain is designed to search and create patterns. When presentation of information is linear, the brain perceives this as boring and is less engaged. Thus, the brain prefers learning situations in which there many inputs of information. Botella and Erickson (1992) confirm that “all people learn through random, personalized, complex real life patterns that defy description except in the most reductionist terms”.

Caine & Caine (2009) see this process as the primary function of education, that all teaching and learning is about “increasing the patterns students can use, recognize, and communicate.” Naturally, this begs the question for educators of how they can link new information to previous experiences in meaningful ways such as to excite the learner and stimulate the neurological process that will make it possible for students to receive and store knowledge.

### **Individual Skills and Broad Concepts**

Getting learners to see the larger meaning of things is linked to developing executive functions of the brain (Caine & Caine, 2009). It should be noted, however, that when students move from the concrete to the abstract it occurs only when they see the relationships as represented in personal meaning. Educators must make frequent references to the individual skills and their applications to the broader context of things. If student interest is awakened often enough, they will practice looking for abstract and broad links. And, ultimately, what matters most is students reaching the high standards, which are never linked to concrete details. Student performance, rather, is connected to complex problem solving skills that evoke emotions.

The National Center for Education Statistics (2003) reports show that educators of students that perform well always reach for broad, conceptual learning and not just the concrete details. Kolb (1984) has identified four principal areas of learning that lead to higher level thinking: gathering data, reflection, creating abstractions and theories, and actions (see Figure 2, appendix). When teaching occurs only at this first level, *gathering data* as defined by Kolb, students will take in only facts and not see the pattern it has to larger concepts or applications. As instructors teach using gathering data and reflection, Kolb’s first two levels, students will begin to understand concepts. At this stage, they also start to use abstract

thinking. At the highest level of teaching, students will use all four areas of Kolb’s learning principals. They will go beyond thinking in abstract terms and move to metaphors and look for ways to apply the concrete skills.

Educators are responsible for designing lesson plans that take students through all four steps of Kolb’s learning principles. They need to do this by going beyond the simple presentation of facts. Continuous attention to the broader concepts, grounded in real world applications, and guiding students towards finding the resources that will answer their questions will enable them to reach high standards of learning.

### **Emotions in the Learning Process**

Only recently have researchers been able to demonstrate that learning is also a physiological experience. Linking the behavioral world to the brain, neuroscientists Damasio (1999) and Pert (1997) have shown that all thoughts and actions are accompanied by emotion. One study also looks at the connection to the business world by showing the interplay of thought and emotion involved in economic decision making (Sanfey, Rilling, Aronson, Nystrom, & Cohen, 2003).

Students are most in position to learn when the activity they are presented elicits emotions appropriate to the situation. Although researchers do not always agree on the variety of emotions, we can at least distinguish between positive and the negative emotions. Clearly, positive emotions play a positive role in our lives and negative ones are painful and, often for learning, even harmful. In the classroom, emotions aid in memory retention; decreasing threat or fear through a lesson that students find motivating is one way to increase chances that students will retain the material being presented.

At the same time, the brain needs a certain degree of stress in the form of challenge. Caine & Caine (2009) suggest that the brain learns best when confronted with a balance of high challenge and low threat. Key to this is that the brain needs some level of difficulty in order to generate the emotions that are necessary for learning. This stress motivates a survival instinct in the brain, but too much of it actually shuts down the process. Important to generating positive emotions is the learning environment, which is influenced by factors that are “at the heart of relaxed alertness”(Caine & Caine, 2009): the opportunity to make choices and follow work that is of personal interest (the decision making gives pleasure); having the chance to work with other people or groups and change contexts. Emotions have a deep and lasting impact on the ability to learn, and educators must accept this fact by developing the proper context for learning and their ability to set the right emotional tone for the classroom.

### The Educator’s Influence

Teaching has long been referred to as the “noble” profession because educators have tremendous influence on students. Ideally speaking, when instructors recognize their role in the context of their influence, they design their lesson plans according to how students will respond to particular teaching situations.

Mindful of what students already know, educators that value the relationship they have with their students will use guided experiences that push students to master the concrete details, reflect on its use, and look for ways it can be applied in the real world. Instructors need to be flexible about how well students handle each of these steps. Learning does not always go as expected and there may be moments in which students require the educator to return to a concrete skill in order to master it more fully and be able to apply it. In this case, the teaching also reflects real life situations in which we go forward and sometimes backwards in making progress.

Educators that are adept at adjusting to students’ abilities are comfortable with their teaching subject and will allow students to pose questions and answers. Instructors need to guard against being inflexible, especially when students have surpassed the expectations or not met them. It’s critical that educators revise their goals and standards on a regular basis; raising the standards, even if just a bit, is the only way that students will improve their higher level thinking skills.

Caine & Caine (2009) emphasize certain teaching practices as key to successful professional development and suggest the need to focus on student-centered teaching as much as possible. The personal qualities are as essential as subject expertise; instructors must show patience and the desire to build positive relationships with students.

Good teaching also requires educators to focus on new ways that students can demonstrate their skills. If student groups change frequently, so do the dynamics of the classroom, and this can impact the way students learn. Experienced educators will adapt and change strategies for assessment according to the classroom dynamics. Hart (1978) argues that “learning is inhibited and diminished by tightly, logically planned presentations.” Only with flexibility to identify real life situations and challenges can instructors and students expect to achieve high standards.

### **Conclusions**

Complex experiences enable students to achieve their potential. These experiences are a rich combination of the concrete details and knowledge combined with real world situations. Presented in an encouraging manner, complex experiences engage the executive functions of the brain. As students involve themselves fully through such processes, they are motivated in natural ways to learn. The enthusiasm -the emotions, to a greater or lesser extent- generated by complex experiences lead students to have a connection with the subject. All of these conditions are necessary to build a new memory.

Engaging all of the senses, too, has an impact on learning. Body movement and all of the sensory perceptions are involved in decision-making; the more these are engaged, the more chances for creating a satisfying learning experience and achieving high standards. If the learning activity can be carried out in natural conditions, grounded in real world situations, gains in student learning will be higher than when it is limited to sitting quietly in a desk all day, studying theory with text books and worksheets.

Just as life, learning is not a linear process. New meaning occurs through trial and error. The brain prefers a variety of input and actually searches for and organizes information into meaningful patterns. Information that carries personal meaning for the student activates the neurological process for learning. Learning by doing aids the development of patterns by giving large inputs of stimulation to the brain. Gains in knowledge and skill development in the learner are possible when the educator recognizes that patterns and understanding are experience-dependent.

Methods such as discouraging or making threats inhibit learning. Maintaining a balance of high challenge and low threat has implications for educators. They must seek ways to develop the optimal mind state for learning known as relaxed learning. Educators do not need to become psychologists, but they need to have the skills to develop activities that will stimulate the brain and emotions in appropriate ways.

### **Recommendations**

With an understanding of how the human brain responds to new information in the form of complex experiences, educators can design learning activities according to what works best for the brain, rather than what works best for the educator. The research of neuroscientists, cognitive psychologists, and others confirms it is not “luck” or “good students” that make for quality learning experiences. The task for educators is to find the strategies that will make the most impact on each student.

A learning environment with at least 3-4 different ways to receive new information, practice, and test out is essential. The arts, such as drawing out and labeling, should not be ignored. Simulations in the form of role plays and active field work can make the experience more personal and concrete.

The brain responds well to multisensory input. Videos, music, and physical movement engage the body's physiology. Students should be encouraged to test their learning with the instructor and in group format. A well-paced lesson includes paying careful attention to student energy levels and shifting the activity at appropriate times.

In order to promote pattern-making in the brain, instructors must relate previous knowledge with the topic at hand. Arranging for special contacts with experts in the field enables students to learn in a new context and make personal connections. Themes and group project work are important methods for developing deeper personal connections to the material.

Students need to be encouraged to go beyond facts and concrete details and work towards applying concepts to broad, global situations. A good blend of very specific information with opportunity for widening it to generalized applications can promote longer-lasting new memory and stronger skill development. Embedding the material in real world situations enables students to generate strong personal connections.

The brain is always seeking meaning. Personal interest enables students to experience a sense of excitement and satisfaction, which stimulates positive emotions. Educators need to develop lesson plans which engage the students' interest enough so that the skills will be stored in the memory. Students are more able to process and retain information when personal interest in the activity runs high. The brain/mind is a social one and needs a mixture of individual and group contexts in order for it to respond optimally.

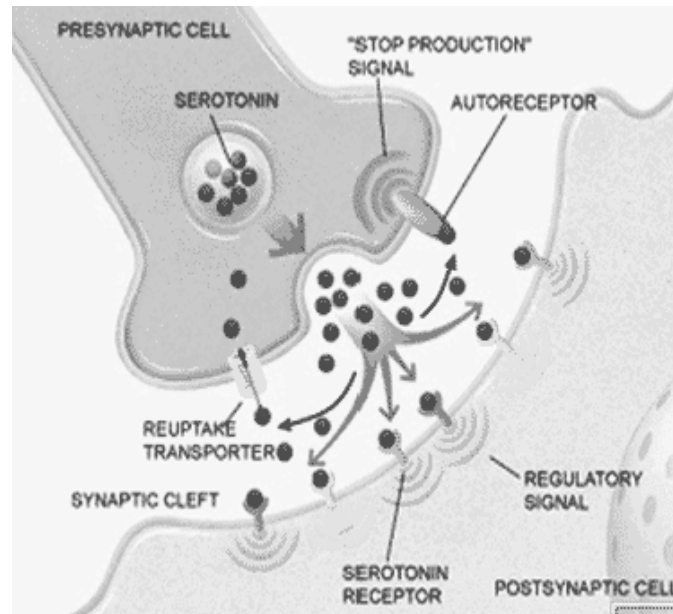
**Appendix**

**Figure 1: Comparison of Conventional Teaching and Guided Experience**

<b>conventional teaching</b>	<b>guided experience</b>
teacher-centred/focused - theoretical	learner-centred/focused - really doing it
prescribed fixed design and content	flexible open possibilities
for external needs (organisation, exams, etc)	for internal growth and discovery
transfers/explains knowledge/skills	develops knowledge/skills/emotions via experience
fixed structured delivery/facilitation	not delivered, minimal facilitation, unstructured
timebound measurable components (mostly)	not timebound, more difficult to measure
suitable for groups and fixed outcomes	individually directed, flexible outcomes
examples: powerpoint presentations, chalk-and-talk classes, reading, attending lectures, exam study, observation, planning and hypothesising, theoretical work, unreal role-play.	examples: learning a physical activity, games and exercises, drama and role-play which becomes real, actually doing the job or task, 'outward bound' activities, teaching others, hobbies, pastimes, passions.

source: [http://www.businessballs.com/experiential\\_learning.htm](http://www.businessballs.com/experiential_learning.htm)

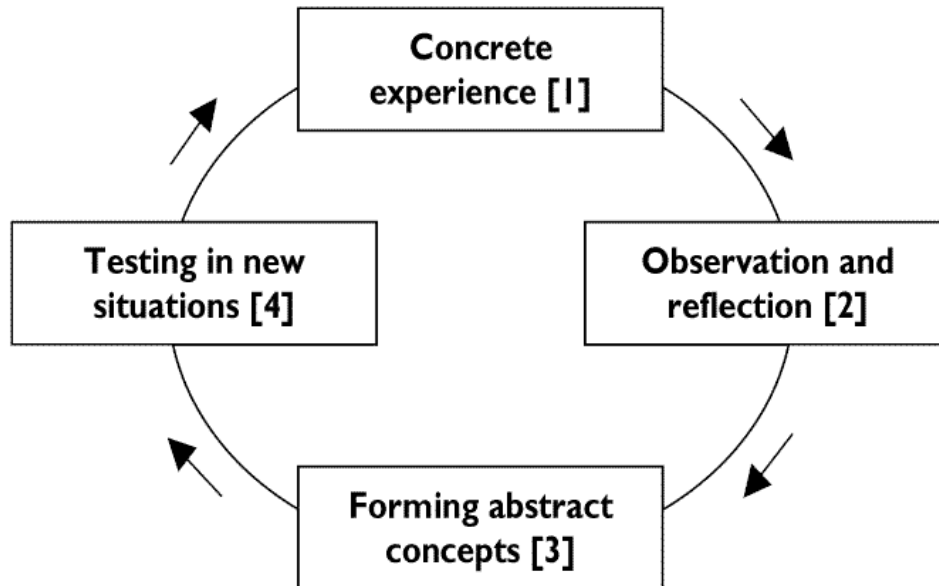
Figure 2: Synaptic Operation



source: <http://www.akri.org/cognition/phymem.htm>



Figure 3: Kolb's Experiential Learning Circle



source: <http://www.infed.org/biblio/b-explrn.htm>

**Bibliography:**

Anderson, J. R., Conrad, F. G., Corbett, A. T. (1989). *Skill acquisition and the LISP tutor*. Cognitive Science, 13(4), 467-505.

Botella, J. & Eriksen, C.W. (1992). *Filtering Versus Parallel Processing in RSVP Tasks*. Perception and Psychophysics 51.4: 334-43.

Caine, M., & Caine, R. (2009). *12 Brain/Mind Principles for Learning*. Thousand Oaks, CA: Corwin Press, pp. 113-188.

Craik, F. I. M., & Lockhart, R. S. (1972). *Levels of processing: A framework for memory research*. Journal of Verbal Learning and Verbal Behavior, 11, 671-684.

Damasio, A. (1999). *The feeling of what happens: Body and emotion in the making of consciousness*. New York: Harcourt Brace.

Detweiler, J., Rothman, A., Salovey, P., & Steward, W. (2000, January). *Emotional states and physical health*. American Psychologist, 55(1), 110-121.

Hidi, S. & Renninger K.A. (2004). *Interest, a motivational variable that combines affective and cognitive functioning*. In D. Y. Dai & R. J. Sternberg (Eds.), *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development* (pp. 89-115). Mahwah, NJ: Erlbaum.

Fogarty, R. (1997). *Brain Compatible Classrooms*. Arlington, IL: Skylight Training and Publishing, pg.3.

Fuster, J.M. (2003). *Cortex and mind. Unifying cognition*. New York: Oxford University Press.

Hart, L. (1978). *Human Brain and human learning*. New York: Longman.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Englewood Cliffs, N J: Prentice-Hall.

Lakoff G and Johnson M (1999) *Philosophy in the Flesh*. New York: Basic Books.

National Center for Education Statistics (2003). *Summary data on teacher effectiveness, teacher quality, and teacher qualifications*. Available from <http://ncate.org/resources/factsheet>

Perry, B. (2003). *Young children's self-regulated learning and contexts that support it*. Journal of Educational Psychology, 90(4), 715-729.

Pert, C. (1997). *Molecules of Emotion*. New York: Scribner.

Restak, R. (2001). *The Secret Life of the Brain*. Washington, D.C.: Joseph Henry Press.

Wolfe, P. (2006). *The role of meaning and emotion in learning*. *New Directions for Adult Education*, pp.35-41.

**International School of Management  
Institut Supérieur Européen de Gestion  
ACBSP Region 8 Conference  
November 26-29, 2008**

**« Recognizing Excellence in Business Education »**

---

**« Complex Experiences for  
Powerful Learning »  
Jeffrey Klein, Ph.D candidate**



# Strong Neuronal Connections

---

- Critical to powerful learning experiences
  - Benchmark for effective teaching
  - Places brain/mind at very center of teaching
  - Learning based on biology is natural
  - Learning is « psycho-physiological »
    - (Caine & Caine, 2009)



## Critical Thinking Skills & New Memory

---

- Can only be developed by considering the connection between the learner and the subject material
- Relaxed alertness: conditions for learning
- Orchestrated Immersion in Complex Experience: challenge and immersion
- Active Processing: feedback and reflection  
(Caine & Caine, 2009)



## Some Considerations

---

- Each competency seems to be obvious but...
- Gateway to deeper understanding
- Principles are not separate
- Provides a general framework to guide decisions about teaching



## Highest Levels of Learning

---

- Processes that engage the whole brain
- Cannot be done through memorization only
- Needs opportunity for student-centered decision-making (Goldberg, 2001)
- Derives from students asking questions that are driven by the current situation
- Capitalizes on the student's need to know and results in answers of meaning to the individual.





## Relaxed Alertness (Caine & Caine, 2009)

---

- Optimal state of mind for learning
- Low threat...High challenge
- Relaxed...Engaged
- Foundation for taking risks



## State of Mind (Siegel, 1999)

---

- Total pattern of activations in the brain
- States are temporary
- Possible to become a trait or part of the personality
- This can occur with relaxed alertness
- Gives students a head start for learning
- Implications for instructors



## Traits Based on Physiology

---

- Brain ability to change depends on synaptic connections
- Synapses involved are changed by experience
  - Traits develop through social interactions that occur over time
  - Genetic studies note that 50% of personality traits develop from school experiences and peer relationships



## Core Benefits of Relaxed Alertness

---

- Self-Efficacy: free from self-doubt
- Resilience: overcome obstacles
- Develops self-confidence and motivation
- Helps overcome the confusion when confronted with new material
  - All of these are only possible with good student-instructor relationships
  - This is your « mojo »




# Resilience & Self-Efficacy

---

- *Very critical to* develop these qualities in students and important for:
  - Hardship at school or work  
Failure or difficulty can increase resilience
  - Personal Characteristics  
Flexibility, reaction to uncertainty and motivation

# The Effect of Mind States on Learning (Perry, 2003)

---

- Mind States
    - Calm, Engaged  
Relaxed Alertness
    - Arousal
    - Alarm
    - Fear
    - Terror
  - Types of Learning
    - Abstract  
Relaxed Alertness
    - Concrete
    - Emotional
    - Reactive
    - Reflexive
- 



# Implications for Instructors

---

- Think relationship
- Use a 360° assessment on yourself.  
Look at how you learn.
- Listening is critical...leads to the real teaching and learning



# Student Sociability

---

- All individuals have a contact urge
- Relationships are key to learning at work and at university
- Students learn more effectively when their need for relationships is engaged
- Engage students' need for social interaction





## Social Interactions (Damasio, 2005)

---

- Relationships impact growth of synaptic connections in our brain cells
- Thoughts come from making sense of dialogues
- The feelings that come from social interactions cause better thinking processes
- Classrooms with social interaction as a natural process develops links of the emotional and cognitive parts of the brain



# Implications for the Instructor

---

- When possible have students work in small groups or teams
- Vary the way interaction occurs: real time, multiple, dyadic relationships
- Place value on ability to improvise and respond directly to student reactions and questions rather than tightly scripted lesson plans



## Rich Learning Environments (Fuster, 2003)

---

- Builds neuronal connections in the brain
- Engages both perception and action
- Activate the mind and body with:
  - Novelty
  - Variety
  - Immediate feedback
  - Opportunity for student choices



## Complex Experiences (Caine & Caine, 2009)

---

Involves all of the following:

- Attention
- Perception
- Dynamic Memory
- Motivation
- Emotion
- Relationships
- Learner engages in real time applications



# Complex Experiences

---

- Project-based learning
- Multiple relationships to enable multiple possibilities for learning
- Models current reality of business world in which relationships are multi-level, multiple-dyadic
- Students connect with what they know and recognize
- Supplemented by instructor-led processes to ensure students learn
- Plenty of questioning and summarizing



## Global Experiences (Caine & Caine, 2009)

---

- Unites student desire to learn
- Initiates a feeling in the student toward the material
- Innovative presentations
- Simulations
- Enticing Situations
- Video clips
- Moral or ethical dilemmas



## Making Connections

---

- ❑ Interaction increases when students link broad questions to individual parts
- ❑ Create situations in which students work on skills in real world situations
- ❑ Can relate in important gains in ability to complete complex tasks
- ❑ Student initiated questions will lead to highest skill development
- ❑ Implications for designing curriculum that will generate student interest



# Physiology in Learning

---

- All sensory processors have an impact on learning
- Students are more likely to practice skills that involve all of their senses
- Sitting at desks all day, the body is ignored in learning processes
- Physical movement can stimulate feelings and energy towards a subject
- Getting students out of their desks will enable them to interact with their environment





# Filtering Information

---

- Brain is wired to receive and interpret information for meaningful use
- The brain evaluates information based on coherence and meaningfulness
- Excitement signals to the brain the information is valuable



# Information Retention

---

- Must carry some level of personal meaning for information to be retained
- *Confusion* can be a stimulating tool for learning
- Brain is wired to search for and create patterns
- *Linear* presentation of information is perceived as boring by the brain
- Brain prefers multiple inputs of information
- People learn through random, personalized, complex, real life patterns



# Active Processing

---

- Powerful learning comes from questions generated by students themselves
  - Teach students to ask critical questions
  - Help students observe and assess their own work
  - Encourage students to check facts and details and test beliefs and conclusions



## Transfer of Learning (Haskel, 2000)

---

- Applying memorized information is sometimes difficult in dynamic situations
- Unpredictable factors make static knowledge difficult to use
- Ability to integrate static knowledge with new contexts is critical to student learning
- Most of what is learned comes from action and practice in real-world situations



# Self-Learning

---

- Students must reflect on their experiences: dialogue with themselves in important situations and ask what happened? Why did it happen? What does it mean to me? What did it do to me? (Drucker, 2005)
- Internal dialogue is learned through external dialogue with others (Vygotsky, 1978)



# Conclusions

---

- Complex experiences builds strong neuronal connections
  - Enthusiasm generated by complex experiences helps create new memory
  - Skill development is experience-dependent
  - Active processing is probably most necessary element but often least appreciated
  - The more all of the senses are involved, the higher chances for achieving high standards



# Recommendations

---

- We are all students...inside the learning situation
- Instructors must become skilled observers of student learning to inform their curriculum planning (what's working, not working)
- Being confused is a contributor to learning; allow mistakes to happen or new material to develop without knowing where it will end
- Embed the material in real world situations, often based on students' personal ideas and interests
- Emphasize dialogue so that students develop ability to adapt to real time and response flexibility

---

## Optimizing Education Through Brain Based Learning

---

### **Amanda McKinney, FSA, MAAA, Ph.D. (cand.)**

Assistant Vice President Profitability Management, Bermuda  
One Sun Life Executive Park, Sun Code 1267, Wellesley Hills, MA  
01890, USA

[Amand.mckinney@sunlife.com](mailto:Amand.mckinney@sunlife.com)

**Abstract:** This paper discusses some of the key principles of brain-based learning and their use in optimizing the learning process. The paper describes the significance of an environment which is both challenging and safe for effective learning. The impact of physiology on learning is discussed and how the integration of mind and body in education enhances the learning process. The paper outlines the impact our environment, both primary and peripheral, and social interactions have on our ability to learn and the important role emotions play in facilitating or obstructing growth and learning. Patterning and its impact on attention, meaning, memory and learning is described. Finally, the paper outlines methods for optimizing the learning process through brain-based learning techniques.

**Keywords:** Brain-based learning; embodied cognition; plasticity; executive functions of the brain; implicit learning; explicit learning; peripheral perception; downshifting; perseveration; relaxed alertness; higher-order thinking

**Reference:** Reference to this paper should be made as follows: McKinney, A. (2009) "Optimizing Education Through Brain Based Learning", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Amanda McKinney has bachelor and honors degrees in both actuarial science and statistics, a Masters degree in financial mathematics, with a thesis on long-term foreign currency option pricing, and is currently a PhD student at ISM. Amanda's work experience includes quantitative analysis in investment banking and actuarial analysis in insurance and reinsurance



companies in Johannesburg, London and Boston, and teaching at Oxford University, England, where she lectured on financial mathematics. She is a qualified actuary through the American Society of Actuaries and currently works for the Canadian company Sun Life Financial, where she is responsible for managing the profitability of their offshore life and annuity business.

---

### Brain Based Learning

History has seen a debate between empiricism, which believes knowledge is obtained through experience and rationalism, which attributes the source of knowledge to reason<sup>1</sup>. Recent research on brain-based learning and cognition has highlighted the impact our environment, including our internal emotional state and the external community in which we live, has on our how we gather, process and store knowledge. However, the innate search for meaning and relevance in our experiences, and the impact this has on our ability to retain, recall and apply knowledge; suggests that reason also plays a significant role in our ability to learn. In the following paper we discuss the impact our environment has on learning, focusing on the principles of brain-based learning<sup>2</sup>.

Our brains are composed of a vast number of independent networks with an ability to change structure and chemistry in response to the environment, known as ‘plasticity’. We process incoming information through these networks; where, how and what we learn is influenced by previously stored information. However, even though there are a multitude of specific modules with specific functions impacting thought, memory, emotion, physical health, time, environment and our interactions with others; they are not entirely separated in the brain, creating an interconnected system in which each function is influenced and affected by many others<sup>3</sup>.

Brain-based learning is a comprehensive approach to instruction based on how current research in neuroscience suggests our brain learns, naturally. The theory is based on what we know about the structure and functioning of the brain at various stages of

---

<sup>1</sup> Robinson, D. N. (2009, May). Rationalism versus Empiricism in Cognition, Chapter 3. Teaching the Human Brain, ISM Ph.D Program.

<sup>2</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

<sup>3</sup> Weiss, R. P. (2000, July). Brain-based Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

development. It includes an eclectic mix of techniques that stress the connection of learning to the real life experiences of students. The core principles directing brain-based education include the belief that the brain is a parallel processor; it perceives whole and parts simultaneously; information is stored in multiple areas of the brain and retrieved through multiple memory and neural pathways; learning engages the whole body; human’s search for meaning is innate; the search for meaning takes the form of patterning; emotions are critical to patterning and drive attention, meaning and memory; meaning is more important than just information; learning involves focused and peripheral attention; spatial and rote memory exist and facts embedded in natural spatial memory are understood best; the brain is social; complex learning is enhanced by challenge and inhibited by stress; every brain is unique and learning is developmental. Interactive teaching elements emerge from these principles, including, orchestrated immersion, which maintains that students learn best when immersed in the learning experience; relaxed alertness, which suggests that learning is optimized in an environment where fear is removed and the student is safely challenged and active processing, which proposes that students consolidate and internalize information by actively processing it<sup>4</sup>.

In brain-based education, a key element to learning is the ‘environment’, which includes the physical setting of the classroom, the mood of the learning environment and the physical and emotional state of the student. These factors are contained in five of the twelve principles described in the book ‘12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain’, (Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J., 2009), namely:

- 1.1 Principle One: All learning engages the physiology.
- 1.2 Principle Two: The brain is a social brain.
- 1.3 Principle Five: Emotions are critical to patterning.
- 1.4 Principle Seven: Learning involves both focused attention and peripheral perception.
- 1.5 Principle Eleven: Learning is enhanced by challenge and inhibited by threat<sup>5</sup>.

Research into the functioning of the brain indicates that during high-stress situations information takes the primary pathway through the thalamus and amygdala and moves to the cerebellum; allowing for the memorization of isolated facts, but blocking higher-

---

<sup>4</sup> Spears, A. and Wilson, L. (2009, May). Brain-Based Learning – Highlights. The CELT Center, [http://www.uwsp.edu/education/celtProject/innovations/Brain-Based%20Learning/brain-based\\_learning.htm](http://www.uwsp.edu/education/celtProject/innovations/Brain-Based%20Learning/brain-based_learning.htm).

<sup>5</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

order critical thinking and the executive functions of the brain. In situations where we have a sense of control, physiology shifts, the primary path is through the hippocampus and cortex, and access to higher-order functioning, analytical thinking and reflection exists<sup>6</sup>.

Analysis indicates that the brain-mind naturally organizes information into categories, a task known as patterning, and in forming a pattern, the brain uses both focused attention and peripheral perception. A lot of what is used by our brains to create patterns is contextual and obtained from our peripheral awareness. The amygdala is the section of the brain most concerned with emotions, and while extreme emotions can interfere with decision making, appropriate emotions may enhance the learning and thinking process. Emotions engage meaning, which involves goals, beliefs and biases, and is a necessary ingredient in the learning process. Therefore, emotions drive attention, meaning and memory. When a student feels supported and safe a slight increase in dopamine occurs, releasing the right amount of acetylcholine; which stimulates the hippocampus allowing for improved verbal functioning, flexible thinking, creativity, decision making and social interaction. A sense of relevance and meaning is created when we connect rote memory with personal ordinary experiences, improving our ability to recall information. Finally, humans are drawn to novelty and learning happens more easily when emotional buy-in occurs. We are driven by intrinsic motivation, which is grounded in our beliefs and values and concerned with our personal desires and wants and extrinsic motivation, based on rewards for fulfilling other people’s agendas<sup>7</sup>.

In the following section I will discuss the impact each of these five brain-based learning principles has on a student’s ability to learn, suggesting ways in which educators can adapt the learning environment to enhance a student’s capacity to absorb, retain, recall and apply acquired information.

### **1.1 Principle One: All Learning Engages the Physiology**

The brain is able to function on many levels and in many ways simultaneously, as a parallel processor, where thoughts, emotions, imagination and physiology operate concurrently and interactively with the environment<sup>8</sup>. This multifaceted functioning is dependent on physiology and requires a healthy body to be fully effective. The physical

---

<sup>6</sup> Weiss, R. P. (2000, July). Brain-based Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

<sup>7</sup> Weiss, R. P. (2000, July). Brain-based Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

<sup>8</sup> Caine, R. N. and Caine, G. (1997). Mind/Brain learning Principles. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

health of a child, including sufficient sleep and adequate nutrition, impacts brain functioning, while fatigue compromises the brain’s memory functions<sup>9</sup>.

The body, brain and mind operate as an integrated system, and therefore there needs to be sensory engagement, physical movement and actions for a concept or skill to be mastered. Scientists refer to ‘embodied cognition’ as the fact that knowledge is structured in the body. The link between people is impacted by physiology and senses and during learning, the senses are engaged, emotions are felt and the physical environment is absorbed as information is assimilated, organized and categorized by the brain<sup>10</sup>. Perception, memory and categorization are connected, supported by the ecological approach and neurobiological evidence which suggest memory is a re-categorization mechanism impacted by the internal and external environment in which we experience learning<sup>11</sup>. Life experiences, including educators and the contexts in which they instruct, participate in rewiring the student’s body and brain. How and what we learn shapes who we are, how we view the world and how we make decisions<sup>12</sup>.

Our capacity to learn is affected by everything that influences our physiological functioning. Nutrition, relaxation, exercise and stress management must be incorporated into the learning process for optimal results. Habits and beliefs, which are often difficult to reshape, are part of our personalities and will color our learning experience. Natural development of the body and brain also impacts learning and healthy children may differ up to five years in their developmental cycle, which will impact the way in which they absorb and process information. Therefore, teachers should not expect equal performance in the classroom based on chronological age. Drugs, both prescription and recreational, have an impact on the physiological body and brain and will alter a student’s capacity to engage their executive brain functions. It is therefore important where possible, for teachers be aware of the presence of drug use by their students, both for medical and recreational reasons<sup>13</sup>.

---

<sup>9</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

<sup>10</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 9. Corwin Press.

<sup>11</sup> (2009, May). Human Memory: A Case Study, Chapter 15. Teaching the Human Brain, ISM Ph.D Program.

<sup>12</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 9. Corwin Press.

<sup>13</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

Teachers can incorporate this brain-based learning principle in their classroom by linking vocabulary with physical action, using movement and rhythm to facilitate memory and including arts and crafts exercises that relate to the topic being taught. More advanced topics can be taught using technology such as power point presentations and videos, brainstorming in groups, telling stories and building projects. The objective is to guide students to the resources and allow them to explore methods for including them in the learning experience. Team exercises where students experience working with students from other disciplines, managing time and taking ownership of the exercise will encourage development of the executive functions of the brain. School should be viewed as an extension of the student’s life, where the material they are studying is relevant. This will encourage engagement and enthusiasm and optimize the learning experience<sup>14</sup>.

### **1.2 Principle Two: The Brain is a Social Brain**

During the first two years outside the womb, a baby’s brain is the most pliable, impressionable and receptive that it will ever be. A child’s brain will be shaped by their interactions with the environment and interpersonal relationships, as their identity depends in part on finding a way to belong<sup>15</sup>. If the brain organizes itself on the basis of experience, known as plasticity, then caring and responsible adults can have a significant impact on children. Language, beliefs, state of mind and access to higher-order learning are influenced and affected by the way humans relate to each other. Relationships and interactions with others have the capacity to change the way the synaptic connections in the brain cells develop, influencing the flow of chemicals that govern sleeping and eating and which are related to stress and health. The thoughts that are generated by making sense of relationships and the feelings generated by social interactions, exchanging ideas and developing understanding cause better thinking processes which lead to improved memory and learning. Humans develop in tandem with the significant humans around them, stressing the importance of a healthy social environment with emotionally stable adults and peers. Humans are wired for survival and depend on communities, cities and families for their survival. They learn from observing the world around them, through mirror neurons which demonstrate that behavior is picked up from observing and being in the presence of others. Without a healthy social environment and stable emotional interactions with others from which to learn, children will become what their environment models, which may include uncaring adults, violent behavior on television

---

<sup>14</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 9. Corwin Press.

<sup>15</sup> Caine, R. N. and Caine, G. (1997). Mind/Brain learning Principles. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

and aggressive peers. Children who lack stable and healthy relationships and appropriate social connections are more likely to become addicted to drugs and alcohol and perform poorly in school<sup>16</sup>.

Communities help shape and convince members that they have a valuable contribution to make to society, improving their sense of self worth and confidence. Through interactions with others, humans learn whether they are good at something, likeable, creative or humorous. Children develop into caring, confident and connected adults by way of example, as caring adults offer them boundaries and guidance. These interactions help develop the neo-cortex and executive functions of the brain as humans learn to ‘read’ others and moderate their emotional responses and interact with social intelligence. They learn to engage the orbito-frontal cortex of the brain that gives them the ability to accurately assess external events and link them with appropriate actions. Development of the pre-frontal cortex allows students to develop collective problem solving skills and to challenge their own thinking. Students with well developed social skills appear to do better academically, seem to take goals more seriously and value school more. If the brain organizes itself on the basis of experience, known as plasticity, then caring and responsible adults can have a significant impact on children and their development<sup>17</sup>.

In a learning environment, relationships that include authenticity, communication and empowerment for the students, allow the individual to take risks, explore further and develop critical thinking skills. These characteristics can be introduced into the classroom to facilitate the development of the executive functions of the brain. Authenticity is obtained through discussing issues that are relevant to the students and developing the student’s sense of well-being and independence. Authentic people have a sense of inner authority and of being of value to the community. Clear communication extends to the tone and manner of conversing, demonstrating empathy and respect for others. In clear communication, there are opportunities for silence to reflect and think. Engaging with students outside of the classroom, such as during sports events and social gathering helps facilitate this level of open, lucid communication. Empowerment is achieved through mutual respect and support for one another as each explores their full potential.

---

<sup>16</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 4. Corwin Press.

<sup>17</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 4. Corwin Press.

Teachers, who provide students with sufficient opportunities to experience both success and failure, allow students to recognize learning as a process which takes time<sup>18</sup>.

In the classroom, the objective is to improve communication skills, empower the students and teach them to be authentic. Creating a low threat, but challenging community of self-regulated learners, who support and respect each other, will aid in the development of the executive functions of the brain. This is achieved through a flexible schedule with time to reflect and opportunities for students to question. Mistakes must be seen as stepping stones to deeper understanding, not catastrophes. Evaluations should be student specific and focus on the strengths of the individual. This brain-based learning environment may be created by constructing a relaxed alertness in the classroom, through the mood and seating; encouraging group activities in class that are relevant to the everyday life of the students; challenging students to take charge of their own learning goals and explore their personal passions; posing open ended questions that require students to research and contemplate the answer; encouraging students to express their feelings appropriately and taking the time to get to know students outside of the classroom. Teachers who practice active listening and focus on the tone of their language encourage the use of ‘I’ messages, where the focus is on the speaker not the listener, promoting ownership and self-efficacy in their students. Finally, teachers who apply this same approach to their own learning and development will support this approach and behavior in their students<sup>19</sup>.

### **1.3 Principle Five: Emotions are Critical to Patterning**

There is a strong link between emotion and reasoning and research in neuroscience indicates that the same parts of the brain are used to process emotions and memories<sup>20</sup>. What we feel at a particular time is coded with the content and context of what we are experiencing, coloring our learning experience<sup>21</sup>. Physiologically, everything we absorb passes through the thalamus, which routes information to different parts of the brain. Initially, information passes through the emotion-arousal system for evaluation. This evaluation determines whether the information is benign or threatening. The information

---

<sup>18</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 4. Corwin Press.

<sup>19</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 4. Corwin Press.

<sup>20</sup> Weiss, R. P. (2000, November). Emotion and Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

<sup>21</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 6. Corwin Press.

feedback loop originates in long term memory. Our brains decide to keep or discard the information at this stage; and then once unconscious emotional arousal reaches a certain point it becomes a conscious feeling. Thus, emotion activates attention, which drives learning, memory and problem solving; the executive functions of the brain. However, not all emotion enhances learning, only appropriate emotion, which signifies a safe but challenging environment, enhances our feelings of self confidence and improves our ability to make decisions and learn<sup>22</sup>.

Our mind-set, emotions, self-esteem, personal biases, expectations and need for social interaction influence what and how we learn and the organization of information in our brains. Emotions and cognition cannot be separated. Emotions are also crucial to memory as our ability to store and recall information is facilitated by the emotions connected with those memories<sup>23</sup>. Memory is broadly defined as the persistent effect of experience and can be divided into weight-based, or long-term and action-based, or short-term, memory. Priming is the action of processing information from previous experiences based on duration, content and similarity<sup>24</sup>. The inability to control emotions means that they are continually present and influencing our experiences, memory and learning<sup>25</sup>.

Emotions may be negative, creating a painful experience, or positive, generating a pleasurable experience. Learning is optimal when there is a mild increase in positive feelings, brought about by everyday events. An environment that supports competence and confidence enhances a student's memory, problem solving and decision making abilities, social skills and verbal fluency. Negative emotions inhibit the executive functions of the brain and encourage behavior such as perseveration, where a short-term survival response overpowers the higher level functions of the brain<sup>26</sup>. Emotions and thoughts shape each other and emotions color meaning. Researchers believe that there is no memory without emotion<sup>27</sup>. The result is that our learning is influenced and organized by emotions, expectations, personal biases, prejudices, self-esteem and our social

---

<sup>22</sup> Weiss, R. P. (2000, November). Emotion and Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

<sup>23</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

<sup>24</sup> (2009, May). Chapter 9: Memory. Teaching the Human Brain, ISM Ph.D Program.

<sup>25</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

<sup>26</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 6. Corwin Press.

<sup>27</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.



interactions. We therefore need an appropriate emotional environment to achieve effective learning<sup>28</sup>.

Creating a positive environment of relaxed alertness can be achieved by allowing students the freedom to choose the subject they focus on, based on personal interest, and the structure of the context, working alone or in a team. However, a range of emotions is likely to occur in students over time and educators must be equipped to deal with these, firstly by helping students experience positive emotions regularly and secondly by developing the skills necessary to encourage competence, confidence and a feeling of purpose from any beginning emotional state. Introducing positive emotions such as joy, enthusiasm and wonder into the classroom can be achieved through games and play, which are associated with joy in children; via puzzles and novelties, which excite and enthuse students and by way of inspiring stories, which create a sense of awe<sup>29</sup>.

However, what actually presents itself in the classroom is often outside of the educator’s control and it is their job to help students find self-awareness and personal understanding. Students engage in automatic responses, which they seldom understand themselves and young children may need to have their sense of safety reassured before they can process their behavior. Extracting adolescents from their survival state requires active listening and paraphrasing to assist them in accessing their reasoning capabilities. Establishing feelings of competence and confidence in a student will assist them in reaching emotional stability and encourage them to rely on and challenge themselves; it will help diffuse emotional reactions and avoid emotional encounters. Inviting students to share their opinions, allowing them to work towards the solution on their own and encouraging them to perform and succeed will build the executive functions of their brains<sup>30</sup>.

In the classroom, teachers should be genuine with their emotions. Developing a sense of trust and understanding with the students will allow teachers to be open about emotional issues and confrontations. Students should be allowed the necessary time to process their emotions and should feel safe enough to openly discuss them with the teacher. The steps in this process are acknowledging or identifying an issue when it

---

<sup>28</sup> Caine, R. N. and Caine, G. (1997). *Mind/Brain learning Principles*. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

<sup>29</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). *12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain*, Second Edition, Chapter 6. Corwin Press.

<sup>30</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). *12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain*, Second Edition, Chapter 6. Corwin Press.

arises; processing the issues by discussing the facts, applying reasoning and logic and clarifying rights and responsibilities; shedding light on future actions to handle the situation more effectively in the future and adapting behaviors to minimize the likelihood of a future occurrence. This process reflects on beliefs and behaviors and requires higher-order thinking, metacognition, reasoning and decision making skills and finally, reviewing what transpired, so learning can occur. During this process, it is helpful to remember that the process will be affected by the emotional tone of the teacher; the choice of words such as negotiation rather than conflict resolution and the use of threats, which may adversely impact the student’s feeling of security. Finally, in order to teach emotional competence, it is essential for the teacher to demonstrate it<sup>31</sup>. Therefore, as educators, we need to develop our own emotional intelligence and practice it openly in the classroom and beyond, where we create an atmosphere of mutual respect, support and acceptance. Sometimes the most influential experiences of our childhoods are fleeting moments or chance encounters, usually instinctive in nature, which leave a deep impression on our minds and help define our future<sup>32</sup>.

#### **1.4 Principle Seven: Learning Involves both Focused Attention and Peripheral Perception**

In the early years, children learn from everything and in essence we become our childhood experiences. Therefore, environment is vital, both inside and outside the classroom. Initially, it is the home environment that shapes a child’s experiences, but as they move into the world, their interactions with the community expand their knowledge and understanding of the world, influencing their beliefs, prejudices and self-esteem<sup>33</sup>.

Our brains absorb information of which we are directly aware as well as information that is beyond our immediate focus. Peripheral information is extremely important in creating the context by which our brains categorize and organize information. This is important both in terms of the unconscious signals educators send while teaching, as well as the wider environment in which learning occurs<sup>34</sup>.

---

<sup>31</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 6. Corwin Press.

<sup>32</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

<sup>33</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

<sup>34</sup> Caine, R. N. and Caine, G. (1997). Mind/Brain learning Principles. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

A related topic is the belief that learning occurs both implicitly and explicitly. Explicit learning is conscious, directed and goal oriented learning that develops from age eleven months on through the lifetime of the student. However, for explicit cognitive and executive systems to develop; there must be some level of implicit information-processing system already in place. Implicit learning, such as early childhood language and socialization learning, operates independently of awareness; is subsumed by neuro-anatomical structures different from those serving explicit (declarative) learning; results in either abstract or concrete memories; displays little variation between individuals and is not significantly impacted by age and development. The impact of external motivation and the flexibility of implicit learning are still unknown, but studies indicate that its characteristics are likely to differ from those of explicit learning<sup>35</sup>. Both implicit and explicit learning will be affected by a child’s internal condition, including emotional and physiological state and the external environment, including the community and physical environment in which the learning occurs<sup>36</sup>.

Humans can only learn if they are paying attention and attention is guided by novelty, interest, emotion and meaning. Attention is vital to memory, but context supports learning and memory by supplying the brain with the necessary information to categorize and organize the information it is receiving. Humans are immersed in their surroundings, constantly bombarded by sensations of sounds, sight and smell; with our brains continuously selecting what to attend to and what to ignore. Attention is focused where novelty; strong emotions; personal meaning and familiar patterns exist. However, when humans feel threatened, they will focus their attention on the source of the threat, distracting their attention from learning. Although explicit attention and memory may be directed based on these criteria, peripheral perception is believed to enter and form the implicit memory, highlighting the importance of the teacher’s state of mind and the learning environment on the student’s ability to learn effectively. The peripheral environment should guide the learner’s attention and support the learning process<sup>37</sup>.

The interrelationship between learning and peripheral perception means that it can be intentionally organized to facilitate learning<sup>38</sup>. Enhancing the learning experience through

---

<sup>35</sup> Reber, A. S., Allen, R. and Reber, P. J. (2009, May). Implicit versus Explicit Learning, Chapter 14. Teaching the Human Brain, ISM Ph.D Program.

<sup>36</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

<sup>37</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 14. Corwin Press.

<sup>38</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

peripheral perception may be achieved by organizing the classroom such that relevant and interesting information, which is regularly updated, is visually accessible from different locations. Decorate the classroom with posters, artifacts and items that will generate interest and discussion, and link subjects through themes that tie topics together. However, it is important that the enhancements be relevant and regularly updated, to maintain their novelty, but not be distracting to the students. This approach may be extrapolated to allow students to include their own perspective on the topic through displays and sharing discussions<sup>39</sup>.

The effective use of observation allows a student to capitalize on attention. A student’s observation skills can be enhanced and their sensory awareness expanded, increasing the quantity and quality of information they gather, by asking them to describe in detail the things that they see. Expanding their context may be done through videos and questioning, encouraging them to enquire and investigate. Helping students to understand concepts, recognize mannerisms and identify hidden agendas will assist in developing the executive functions of the brain, including reasoning, logical thought and analytical thinking. This promotes a greater insight into topics of learning and generates a level of interest and personal connection for the students which can be expanded on through role playing and debates<sup>40</sup>.

Finally, the physical environment also affects the student’s peripheral perception, impacting their ability to learn. Items to consider include the temperature of the room, ratio of living plants to concrete inside and outside the buildings, and the variety of art works on display. Other important factors which will have an impact on the atmosphere of the environment and influence the student’s ability to learn are the presence and type of music that may be played at the school, the tone of communication used by teachers and students, the scheduling of periods of learning and relaxation and the level of comfort portrayed by the environment. All these factors will contribute to the peripheral perception of the students, either enhancing or inhibiting their learning experience<sup>41</sup>. The signals sent by the teacher’s inner state, including muscular tension, posture and eye

---

<sup>39</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 14. Corwin Press.

<sup>40</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 14. Corwin Press.

<sup>41</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 14. Corwin Press.

movement, will also set the tone and mood in the classroom. It is therefore important for teachers to be sincere and authentic in their actions and to portray the appropriate level of emotion in each situation, inside and outside the classroom. This approach will provide the students with a suitable role model on which to model their behavior<sup>42</sup>.

### **1.5 Principle Eleven: Learning is Enhanced by Challenge and Inhibited by Threat**

Current studies indicate that early childhood development has a significant impact on the way children learn. Neurological pathways laid down during the first three years of life affect the way children interact with formative experiences during later developmental stages; affecting children's beliefs about themselves and the world, which continue into adulthood. Children whose lives are threatened by malnutrition, child abuse, poverty or violence are programmed to live in anticipation of such experiences. Living with extreme threat causes their brains to develop perceptual loops where the brain will search for signals in their environment which replicate their own experiences. Their brains are not programmed to help them cope in a healthy way. When humans feel threatened, they downshift their thinking and their behavior choices become limited, leaving them helpless, without the ability to look for possibilities or to take risks and challenge things. Downshifting is a psychological response to threat and is accompanied by a feeling of helplessness or fatigue, when a person experiences fear or anxiety<sup>43</sup> and a lack of self-efficacy. There appear to be two types of downshifting; situational and long-term. Situational is characterized by limited personal meaning, rewards and punishment are externally controlled and work is relatively unfamiliar with little support provided. Long-term includes a sense of rejection and abandonment and is accompanied by chronic fatigue. In a down shifted state, responses become automatic and often exaggerated, our ability to consider subtle environmental queues is reduced; humans are unable to access the higher-level functions of the brain or to engage in creative, complex reasoning or effectively interact with others<sup>44</sup>. Many children come to school in a downshifted state due to threats in their home environment<sup>45</sup>. However, although downshifting is often triggered by extreme experiences, there is evidence to suggest that the current traditional system of education, where teachers are in charge of everything and there is no input from the students, triggers a similar downshifting reaction in many students,

---

<sup>42</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

<sup>43</sup> Poole, C. (1997, March, Vol. 54, No. 6). Maximizing Learning: A Conversation with Renate Nummela Caine. *Educational Leadership, the Journal of ASCD*.

<sup>44</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 6. Addison-Wesley, Innovative Learning Publications.

<sup>45</sup> Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization, <http://www.talkingpage.org/artic011.html>.

threatening their opportunity for higher-order learning. Downshifting does however allow for successful memorization, as under threat the brain perseverates; but creativity and forging connections is incompatible with this type of stressful environment<sup>46</sup>.

The brain/mind learns optimally, making the maximum number of connections, when it is appropriately challenged in a safe environment that encourages risk taking<sup>47</sup>. The aim of the educator is to create a relaxed alertness in the classroom, where the atmosphere is low threat but high challenge. Children must feel safe to take risks if they are to think critically. The aim of the educator is to encourage self-efficacy and a healthy self-esteem in students. Optimal learning occurs when students are given an opportunity to actively process what they have learned through embedding facts and skills in everyday life experiences. This can be achieved through collaborative learning where both the student and the teacher have a responsibility, time parameters are flexible and coherence prevails. Classrooms are characterized by questioning and analysis and teachers and students interact and learn together. The focus is on commonalities while celebrating diversity<sup>48</sup>.

While moderate levels of the stress hormone cortisol can enhance learning, highly stressful situations cause the body to release excessive amounts of cortisol which directs resources towards the reflective brain, responsible for survival behavior, reducing the resources available for higher-order functioning<sup>49</sup>. Researchers identified two types of stress, one of pervasive threat accompanied by a sense of helplessness and the other accompanied by a sense of resolution and challenge. Two different effects of stress exist: one that continually weakens the system and another that causes sudden debilitation in a crisis situation. However, the solution also includes two options, the first suggests an ongoing and continuous degree of relaxation that contains cortisol emission at acceptable levels; the second is excitement that accompanies an appropriate degree of challenge<sup>50</sup>.

---

<sup>46</sup> Poole, C. (1997, March, Vol. 54, No. 6). Maximizing Learning: A Conversation with Renate Nummela Caine. *Educational Leadership, the Journal of ASCD*.

<sup>47</sup> Caine, R. N. and Caine, G. (1997). Mind/Brain learning Principles. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

<sup>48</sup> Poole, C. (1997, March, Vol. 54, No. 6). Maximizing Learning: A Conversation with Renate Nummela Caine. *Educational Leadership, the Journal of ASCD*.

<sup>49</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 3. Corwin Press.

<sup>50</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 6. Addison-Wesley, Innovative Learning Publications.

Mind states have been classified into five categories calm, where feelings of competence and confidence allow access to higher order brain functions in the cortex and neocortex; arousal, where brain functions are driven from the limbic area and focus on concrete information not higher-order thinking; alarm, which directs activity to the midbrain which emphasizes reflexive and concrete actions; fear which stimulates the brain stem and midbrain resulting in automatic or stimulus-response actions and terror, where the brain stem is driving automatic reactions. Although some arousal is necessary to engage the student, optimal learning occurs when an individual is in an engaged but relaxed state. Humans learn better in a supportive, empowering and challenging environment<sup>51</sup>.

In situations where a threat is perceived, children are more likely to resort to territorial programming and behavior may become primitive or aggressive. Peer pressure may be overwhelming, impacting behavior, dress code, attitudes and academic performance. A resistance to the new or unknown may occur as well as intolerance for uncertainty and delayed gratification. Delayed gratification and long time horizons have been shown to correlate with success, so focusing on immediate gratification may compromise long-term learning goals. This phenomenon is not unique to students and teachers must be aware of falling prey to similar stimuli which result in inappropriate behavior towards others<sup>52</sup>.

In a classroom setting, it is important for the teacher to be able to recognize students who are in a fearful state. A common manifestation of this is perseveration, when attention has been hijacked and responses are those of someone who is emotionally and mentally challenged. This situation can be identified by out of character behavior by the student, and should be addressed through patience and calmness, allowing the student time to relax and re-establish trust before moving on with the discussion. It is the role of the educator to assist students in gaining control of their emotions and learning to manage stressful situations effectively. A practical approach may be to play soothing music, encourage students to breathe deeply in stressed situations, use brief exercise breaks to help ease tension and highlight the importance of a balanced diet<sup>53</sup>. It is also

---

<sup>51</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 3. Corwin Press.

<sup>52</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 6. Addison-Wesley, Innovative Learning Publications.

<sup>53</sup> Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapter 3. Corwin Press.

important for a teacher to exhibit the same relaxed and alert demeanor they expect from their students; this supports the process and environment<sup>54</sup>.

Downshifting also drives students towards extrinsic motivation, which focuses on memorization skills and aims to please others. Creativity and reflective learning is supported by intrinsic motivation which is centered on an individual's interests and goals. These findings connect with the characteristics of taxon and locale memory systems. Taxon learning involves acquiring fixed routes and is motivated by extrinsic rewards and punishments. Locale learning is motivated by an innate need to understand an experience and involves generating personal maps through personal and intellectual meaning. Research also indicates that extrinsic motivation may inhibit intrinsic goals, particularly for more complex tasks. This may be a result of the narrow approach taken to address an extrinsically motivated task, which ignores tangential information in the interest of completing the specific task as soon as possible. Therefore, an education system centered on extrinsic rewards may result in students with reduced creativity and self-efficacy<sup>55</sup>.

Research suggests that the optimal condition for learning is one of relaxed alertness. A relaxed nervous system is essential for effective functioning of the body and mind. Also, a sense of safety must exist for students to be open and authentic in the classroom. However, evidence also suggests that learning is enhanced by intrinsic motivation, driven by creativity and challenge. This atmosphere may be achieved by encouraging students to develop self-discipline and take ownership of their learning, fostering positive social bonding, creating an environment of hope and expectancy within a playful setting, but maintaining respect between students and teachers, with a sense of connection and cohesion<sup>56</sup>.

---

<sup>54</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 7. Addison-Wesley, Innovative Learning Publications.

<sup>55</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 6. Addison-Wesley, Innovative Learning Publications.

<sup>56</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 6. Addison-Wesley, Innovative Learning Publications.



## 2.0 Conclusion

Instinct, emotion and reasoning operate as a unified whole in humans<sup>57</sup>, this highlights the importance of the internal, emotional and physical state of the learner and external, location and atmosphere of the learning environment, and their impact on learning.

Research indicates that a state of relaxed alertness is optimal for effectively absorbing information that can be organized and efficiently retrieved at future times. The difference between memorization of surface knowledge and expansion of natural knowledge is important and the shift towards higher-order thinking is essential for effective learning and development of the student. The goal is for students to reach a state of self-motivation, where learning is driven by the student's innate quest for meaning. Creating a low threat, high challenge environment facilitates this quest, allowing students the opportunity to explore knowledge safely and to discover the meaning it holds for them in their everyday life. The role of the teacher is to guide students along their journey into power, providing them with the expertise they need to direct them and the security they require to explore on their own and learn from their mistakes<sup>58</sup>.

The goal of educators is not to give students photographic memories; it is to equip them with the tools that will allow them to improve their intelligence, creativity and imagination<sup>59</sup>. Research indicates that the social environment in which we learn impacts our performance. Therefore, students should be allowed to select their working group partners, minimizing the potential for 'reactance', where students under-perform due to a perceived lack of control. Low morale will negatively impact performance and activities should be designed to improve self confidence and boost the morale of under achievers. The need for social acceptance should be factored into group work as students seek conformity and resist deviance. Structuring team work with these points in mind will minimize the potential for 'process loss', where poor group dynamics negatively impact performance<sup>60</sup>.

---

<sup>57</sup> Bapi, R. S. (2009, April). Triune-Brain Inspired Unifying View of Intelligent Computation. Centre for Neural and Adaptive Systems, School of Computing, University of Plymouth, Plymouth, United Kingdom.

<sup>58</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 10. Addison-Wesley, Innovative Learning Publications.

<sup>59</sup> Weiss, R. P. (2000, October). Memory and Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

<sup>60</sup> Houldsworth, C. and Mathews, B. P. (2000). Group Composition, Performance and Educational Attainment. ISM PhD Program: Teaching the Human Brain: Training & Development; London.

Orchestrated immersion addresses how best to expose students to information to optimize learning. Compelling experiences which are exciting, novel, challenging and meaningful will make an impression on the student, enhancing the learning experience. Immersion is the concept of bringing learning to life through mediums which engage the student's senses, body and mind, creating a holistic experience which is difficult to forget. Multi-sensory experiences are optimal, using props, stories, physical outings and media to bring the topic to life. Subjects should be linked to facilitate the connectedness of learning in all areas. The learning experience should be flexible, allowing for spontaneity and opportunities for students to work in groups and question and discuss. Concepts should be presented in a manner that is relevant to the students, allowing them to relate personally to the information and establish its meaning to them. Communication is key and students should be given the time to analyze and consider before taking time to reflect and absorb<sup>61</sup>. Allowing students the time to reflect and contemplate provides the brain with the necessary time to actively process the information, categorizing and organizing it in the brain. Active processing involves emotions, concepts, values and meaningfulness and does not occur at specific times during a lesson, it is a continuous process of assimilating new information into the existing database of knowledge in a manner that facilitates future recall and use. This process of reflexive learning, where the student personalizes the acquired information, optimizes the learning experience by providing personal meaning and context for the student, enabling him to recall and make use of the information at some future time<sup>62</sup>. Introducing an orchestrated immersion approach to learning will increase the student's natural knowledge and improve the development of his executive brain functions<sup>63</sup>.

Some of the key items to address in moving towards a brain-based learning approach include the following: are the students involved and challenged, is there evidence of creativity, is lesson content being made relevant through links to everyday life and providing students with the personal meaning they require, is there a continuity between subjects that ties the whole learning experience together, does the motivation for learning extend beyond the classroom, does the physical and emotional setting of the learning environment support the learning experience, is the group atmosphere appropriate, is there sufficient flexibility in the lesson structure to allow students the time to process, question and reflect on the knowledge they are receiving, are

---

<sup>61</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 9. Addison-Wesley, Innovative Learning Publications.

<sup>62</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 11. Addison-Wesley, Innovative Learning Publications.

<sup>63</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 9. Addison-Wesley, Innovative Learning Publications.

evaluations flexible enough to evaluate the student’s performance holistically and ultimately, do the students feel connected, empowered and enthused. Achieving the majority of these goals will create a learning environment that is deigned around brain-based learning, optimizing the education process for the students<sup>64</sup>.

---

<sup>64</sup> Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapter 12. Addison-Wesley, Innovative Learning Publications.

**References:**

Bapi, R. S. (2009, April). Triune-Brain Inspired Unifying View of Intelligent Computation. Centre for Neural and Adaptive Systems, School of Computing, University of Plymouth, Plymouth, United Kingdom.

Caine, R. N. and Caine, G. (1994). Making Connections: Teaching and the Human Brain, Chapters 6, 7, 9, 10, 11 and 12. Addison-Wesley, Innovative Learning Publications.

Caine, R. N. and Caine, G. (1997). Mind/Brain learning Principles. The 21<sup>st</sup> Century Learning Initiative, Promoting a vision, knowledge, experience and a network.

Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J. (2009). 12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain, Second Edition, Chapters 3, 4, 6, 9 and 14. Corwin Press.

Houldsworth, C. and Mathews, B. P. (2000). Group Composition, Performance and Educational Attainment. ISM PhD Program: Teaching the Human Brain: Training & Development; London.

Poole, C. (1997, March, Vol. 54, No. 6). Maximizing Learning: A Conversation with Renate Nummela Caine. Educational Leadership, the Journal of ASCD.

Reber, A. S., Allen, R. and Reber, P. J. (2009, May). Implicit versus Explicit Learning, Chapter 14. Teaching the Human Brain, ISM Ph.D Program.

Robinson, D. N. (2009, May). Rationalism versus Empiricism in Cognition, Chapter 3. Teaching the Human Brain, ISM Ph.D Program.

Sonoma County Department of Education (2008). The Twelve Principles of Brain-Based Learning. The Talking Pages Literacy Organization,  
<http://www.talkingpage.org/artic011.html>.

Spears, A. and Wilson, L. (2009, May). Brain-Based Learning – Highlights. The CELT Center,  
[http://www.uwsp.edu/education/celtProject/innovations/Brain-Based%20Learning/brain-based\\_learning.htm](http://www.uwsp.edu/education/celtProject/innovations/Brain-Based%20Learning/brain-based_learning.htm).

Weiss, R. P. (2000, July). Brain-based Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

Weiss, R. P. (2000, November). Emotion and Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

Weiss, R. P. (2000, October). Memory and Learning. ISM PhD Program: Teaching the Human Brain: Training & Development; Alexandria, VA.

(2009, May). Human Memory: A Case Study, Chapter 15. Teaching the Human Brain, ISM Ph.D Program.

(2009, May). Chapter 9: Memory. Teaching the Human Brain, ISM Ph.D Program.

# Optimizing Education Through Brain-Based Learning

Amanda McKinney

November 28<sup>th</sup>, 2009

# Empiricism vs. Rationalism

- Empiricism
  - Knowledge gained through experience
  - Impact of environment on learning
- Rationalism
  - Knowledge gained through reason
  - Innate search for meaning

# The Brain

- Structure and chemistry
- Plasticity
- Interconnectedness
  - Emotions, memory, physical health, environment, time, etc
- Current and past



# Brained-based Learning<sup>1</sup>

- Links neuroscience and learning
- All stages of life and learning
- Orchestrated emersion
- Relaxed alertness
- Active processing

12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain', (Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J., 2009)

# Principles of Brained-based Learning<sup>1</sup>

- Principle 1: All Learning Engages Physiology
- Principle 2: The Brain is Social
- Principle 5: Emotions are Critical to Patterning
- Principle 7: Learning Involves Focused Attention and Peripheral Perception
- Principle 11: Learning is enhanced by Challenge and Inhibited by Threat

12 Brain/Mind Learning Principles in Action: Developing Executive Functions of the Human Brain', (Caine, R. N., Caine, G., McClintic, C. and Klimek, K. J., 2009)

# Principle 1: All Learning Engages Physiology

- Body, brain and mind are an integrated processor
- Embodied cognition
- Memory is a re-categorization process
- Learning is impacted by all elements affecting our physiological functioning

# Principle 1: All Learning Engages Physiology contd.

- Incorporating Principle 1 in teaching:
  - Brainstorming
  - Case studies
  - Project work in multi-disciplinary teams
  - Field work and on-site assignments

# Principle 2: The Social Brain

- Relationships and interactions impact the formation of synaptic connections
- Educators and authority figures act as mentors for students
- “It takes a village” to educate
- Executive brain function development

# Principle 2: The Social Brain contd.

- Incorporating Principle 2 in teaching:
  - Empowering students
  - Relaxed alertness
  - Authentic communication and actions
  - Flexible and safe work environment
  - Teach self-efficacy and ownership



# Principle 5: Role of Emotions in Patterning

- Emotion and memory linked in the brain
- Long-term/weight based memory
- Short-term/action based memory
- Appropriate emotion enhances learning
  - Relaxed alertness
- Inappropriate emotion inhibits learning
  - Perseveration

# Principle 5: Role of Emotions in Patterning contd.

- Incorporating Principle 5 in teaching:
  - Positive and safe learning environment
  - Stimulating and challenging environment
  - Genuine and trusting relationship
  - Demonstrating emotional competence
  - No action is too small to be noticed



# Principle 7: Focused Attention and Peripheral Perception

- Peripheral information creates context
- Learning is both explicit and implicit
- Learn when paying attention

# Principle 7: Focused Attention and Peripheral Perception contd.

- Incorporating Principle 7 in teaching:
  - Organize the classroom to be stimulating, but not distracting
  - Interactive learning engages all aspects of learning and enhances executive brain function development
  - Physical environment

# Principle 11: Challenge vs. Threat

- Relaxed alertness
  - Low risk
  - High challenge
  - Downshifting and perseveration
- Active processing of information

# Principle 11: Challenge vs. Threat contd.

- Incorporating Principle 11 in teaching:
  - Relaxed alertness
  - Schedule that allows processing time
  - Teach self-discipline and ownership
  - Fun and exciting

# Conclusion

- Role of a teacher:
  - Assist students in becoming independent contributing members of society
  - Guide students in their development
  - Encourage ownership
  - Enhance development of executive brain functions
  - Foster self-efficacy
- Not about the subject it's about the student



**Thank you**

**Q & A**

---

## Fundamentals in Analyzing and Teaching Case Studies with an Example

---

### **Andrej Lengyel, Ph.D.**

47. Northgate Road

Crawley, West Sussex

RH10 1YA, United Kingdom

Email: [Alengyel@hotmail.co.uk](mailto:Alengyel@hotmail.co.uk)

[Alengyel178@googlemai.com](mailto:Alengyel178@googlemai.com)

Mobile: + 0044 754 037 8755.

**Abstract:** This article presents the fundamentals of case study methodology and teaching. After elaborating the methods in analyzing cases, the paper will present Toronto Chemical Ltd as an example of case study to show how critical analysis was carried out to understand the role and the place of case study methodology in scientific research. Thus, both the advantages and the limits of this research method are discussed and the step-by- step procedure is presented and then exemplified in a quantifiable context.

**Keywords:** case study research, trend analysis, simple modified exponentials, Gompertz function, exponential smoothing, Socratic Method, hypothetic deductive method, structured controversy, problem based learning, and UNCLE

**Reference:** Reference to this paper should be made as follows: Lengyel, A. (2009) "Fundamentals in Analyzing and Teaching Case Studies with an Example", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Andrej Lengyel is a communications professional and market analyst with over 9 years of experience in corporate and consulting environments as well as in military fields. His background includes, marketing and sales communication materials, direct marketing, collaborating with Government, military and Diplomatic staffs.

After finishing his business school he was called in by the Army where he completed the military Commanding school with Excellency. He received his Master degree of Business Administration from the Robert Kennedy College (Switzerland), and is currently working on his PhD thesis at International School of Management.

At present, Andrej works for BAA (British Airport Authority) Marketing team at London Gatwick Airport, working on various marketing projects.

Andrej took part in a number of Governments training exercises held by State Actors such as the European Security and Defence College and the Royal Military Academy in Brussels as well as in the OPCW (Organisation for the Prohibition of Chemical Weapons) in The Hague.

---

### **Introduction**

This paper reflects on Case Study and Case Study Methods. The paper illustrates the best way to start a Case study, which is by gathering quantitative data, where all figures should be checked and examined for accuracy and should be computed and inserted into the material. Once the material had been checked, matters concerning people and relationship can be followed.

Additionally, the paper discusses the main principles of case study, which reflected on the idea that by examining cases, student will discuss cases with their fellow students and will learn that decision making is often a confrontational activity involving people with different points of view. One reason for using the case-study method is for the student to learn how to function effectively in that type of decision-making environment. The paper takes into account seven stem approaches in analyzing a case, which could make the case study analysis easier and can increase students learning benefits.



## **1. Means of gathering data for case study**

The first step in case study research is to establish a firm research focus to which the researcher can refer over the course of study of a complex phenomenon or object. Each object is likely to be intricately connected to political, social, historical, and personal issues, providing wide ranging possibilities for questions and adding complexity to the case study. To assist in targeting and formulating the questions, researchers conduct a literature review. This review establishes what research has been previously conducted and leads to refined, insightful questions about the problem. Moreover, during the design phase of case study research, the researcher determines what approaches to use in selecting single or multiple real-life cases to examine in depth and which instruments and data gathering approaches to use. It should be noted that, when using multiple cases, each case should be treated as a single case. Tools to collect data can include surveys, interviews, documentation review, observation, and even the collection of physical artifacts. Throughout the design phase, researchers must ensure that the study is well constructed to ensure construct validity, internal validity, external validity, and reliability. Researchers moreover, need to anticipate key problems and events, identify key people, prepare letters of introduction, establish rules for confidentiality, and actively seek opportunities to revisit and revise the research design in order to address and add to the original set of research questions. Furthermore, researchers should carefully observe the object of the case study and identify causal factors associated with the observed phenomenon. Renegotiation of arrangements with the objects of the study or addition of questions to interviews may be necessary as the study progresses. Case study research is flexible, but when changes are made, they are documented systematically. Throughout the evaluation and analysis process, the researcher should remain open to new opportunities and insights. Researchers should categorize, tabulate, and recombine data to address the initial propositions or purpose of the study, and conduct cross-checks of facts and discrepancies in accounts. Specific techniques include placing information into arrays, creating matrices of categories, creating flow charts or other displays, and tabulating frequency of events. A different technique is to use multiple investigators to gain the advantage provided when a variety of perspectives and insights examine the data and the patterns. Another technique, the cross-case search for patterns, keeps investigators from reaching premature conclusions by requiring that investigators look at the data in many different ways. Cross-case analysis divides the data by type across all cases investigated. One researcher then examines the data of that type thoroughly. When a pattern from one data type is corroborated by the evidence from another, the finding is stronger. When evidence conflicts, deeper probing of the differences is

necessary to identify the cause or source of conflict. And finally, techniques for composing the report can include handling each case as a separate chapter or treating the case as a chronological recounting. Some researchers report the case study as a story.

In contrast, a protocol (Yin, 1989) is a major tactic in increasing the reliability of case study research and is intended to guide the investigator in carrying out the case study, and is essential if one is using a multiple case design, and suggests the following sections for the protocol:

- (1) Overview of the project;
- (2) Field procedures;
- (3) Case study questions; and
- (4) Guide for the case study report.

Moreover, Eisenhart (1989) points out the importance of field notes as a means of accomplishing the overlap of data analysis with data collection, which is a prominent feature of research to build theory. Field notes could involve both observation and analysis, preferably separated from one another, and one could prepare for making useful field notes by designing a practical log. What is more, Yin (1989), distinguished six sources of evidence that can be the focus of data collection for case studies and these are: documents, archives, interviews, direct observation, participant observation, physical artifacts. Additionally, to maximize the benefits from the six sources of evidence, Yin (1989) proposed following three principles of data collection: using multiple sources; creating a case study database; and maintaining a chain of evidence. When used properly (systematic research), these principles can help to deal with the problems of establishing the construct validity and reliability of a case study (Figure 1: for anticipating research quality-tests). Besides, Eisenhart (1989) stated some tactics for cross-case pattern searching namely: (1) select categories or dimensions, and then look for within-group similarities coupled with intergroup differences (extension: use 2x2 or other solid design to compare several categories at once, or moving to a continuous measurement scale permitting graphing); (2) select pairs of cases and then list similarities and differences between each pair (extension: group cases in threes or fours for comparison); and (3) divide data by data source (variation: split data in groups of cases, focusing on one group of cases initially, later focusing on the remaining cases).

<sup>ii</sup>Qualitative research focuses on people's experiences and the meanings they place on the events, processes and structures of their normal social setting. Such research

provides a holistic view, through the participants' own words and perceptions, of how they understand, account for and act within these situations (Miles and Huberman, 1994) (Figure 2: for qualitative research framework).

<sup>iii</sup>Another solution to the subjectivity of qualitative research data is triangulation. According to Patton (1989), there are four types of triangulation: (1) Data Triangulation: the use of a variety of data sources in a study, such as different times, places, and subjects; (2) Investigator Triangulation: the use of one or more researchers or evaluators; (3) Theory Triangulation: the use of multiple perspectives or competing theories to interpret a single set of data; and (4) Methodological Triangulation: the use of multiple data collection methods to study a single problem. Moreover, methodological triangulation often results in a research study that combines qualitative and quantitative (quall-quant) techniques. Patton (1989) stated that this type of triangulation can be achieved by a variety of quall-quant mixes in a study's design (experimental or naturalistic), data measurement (quantitative or qualitative), and analysis methods (statistical or content). Subsequently, deductive research, including qualitative, quantitative, or quall-quant designs, can confirm theories, leading to prediction and explanations. Furthermore, qualitative measurements consist of detailed descriptions of situations, events, people, interactions, and observed behaviors; direct quotations from people about their experiences, attitudes, beliefs, and thoughts; and excerpts or entire passages from documents, correspondence, records, and case histories.

## **2. Systems to analyze data for case study**

<sup>iv</sup>Case analysis consists of three coexisting flows of activity: (1) data reduction, (2) data display, and (3) conclusion drawing or verification. Thus, data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written-up field notes. Whereas data display refers to organized, compressed assembly of information that permits conclusion drawing and action; while conclusion drawing and verification relates to the emerging or inducting of meanings from the data and testing for their plausibility, their sturdiness, and their validity. These three streams are presented as interconnected before, during and after data collection in parallel form, to make up the general domain called "analysis"

<sup>v</sup>Alternatively, the one may start the case analysis with either known problems or find the problems. In either case, the issues must be identified, defined and placed in context. The researcher should understand the capabilities of the company and test them against the facts. Moreover, a good plan should be structured in the following way: (1) Introduction

and Background - this session should introduce the facts, situation and context of the case. (2) Summary of Pertinent Facts - this section of the case analysis should present a summary of the facts and circumstances of the case. It should emphasize what has changed, differences in the environment, and trends and drivers. (3) Summary of Issues - this section should present the issues and highlight how the issues converge to affect the performance of the organization. (4) Analysis and Assessment - This section should provide a comprehensive analysis of the facts, issues and problems of the company, and (5) Recommendations - this section should provide a description of the strategies and action steps.

In addition, a post-study data analysis should begin with a thorough reading of all of the collected data and the establishment of a rudimentary coding system (Bogdan & Biklen, 1998; Creswell, 1998; Glesne, 1999).

<sup>vi</sup>In contrast, in searching for error the researcher should meticulously examine the exhibits and figures and look for typos and errors. Likewise, there are three types of problems and these are (1) corrective, which is related to a deteriorated situation, that the analysis and remedial advice is expected to rectify; (2) progressive, which are concerned with the common service tasks of taking existing conditions and improving them; and (3) creative where it may only be that management believes that the enterprise is capable of achieving greater potential than at present.

Furthermore, the researcher should look for data that can be analyzed into trends. While individual quantities can be important, trends indicate the organization's progress. Additionally, to analyzing the trend the analysis should be based on the assumption that: Trend component + cyclical or seasonal component + an irregular or incidental factor.

Another analysis method is called the Simple Modified Exponential, and here the various methods available to establish the three parameters  $a$ ,  $b$ , and  $r$ , the one selected is the 3-point method, so-called, because the data are divided into three equal parts, or sets, and an average found for each set. It is not necessary to have three exactly equal sets but the guiding principle is that sufficient numbers of terms are include in each set. A different model that takes into account capacity constraints is the Gompertz. When death rates are plotted on a logarithmic scale, a straight line known as the Gompertz function is obtained and its slope indicates the rate of actuarial ageing. The differences in longevity between species are the result primarily of differences in the ageing rate and are therefore expressed as differences in slope of the Gompertz function.

Additionally, generally increasing or decreasing movements of a set of data is called a secular trend. It is a trend over several periods and may be simple or complex. A simple trend is a linear trend: increasing or decreasing by a fairly constant amount periodically. A complex trend is multiplicative, increasing or decreasing by a constant ratio. Population trends are examples of complex trends. Whereas a seasonal trends is the quarterly sales and monthly averages for each quarter indicate a degree of seasonal variation.

One more method is called Exponential smoothing, where the researcher try to smooth the peaks and troughs. One method is to devise a new series of smoothed figures for the trend by applying a smoothing device to the existing data. A percentage, call it X of the first figure in the series is added to a percentage say, Y of the second figure to give a new smoothed figure. Percentage X is taken of this new figure and added to the percentage Y of the third figure in the series and so on until a new smoothed series has been obtained. Another method of smoothing is to tabulate the data, add successively several terms together and take the successive averages. The number of terms added together should include both high and low figures. With quarterly data, summing successively in fours will usually smooth out low and high quarters.

<sup>vii</sup>On the contrary, in quantitative data, all figures should be checked to see if they make sense. If percentages are given in the case, these must be examined for accuracy but if not given they should be computed and inserted into the material. Once the numbers have been examined, a start can be made on matters concerning people and relationships; (Figure 3: for Schematic representation of case analysis). Additionally, Quantitative and qualitative analyses should be taken from facts and inferences in the case until the area of conjectural analysis is reached; this is where assumptions are introduced, however, potential decisions should not be formulated too quickly. Likewise, the work situation can be divided into two sections: the machinery, plant, equipment, tools, etc, or the procedures, methods, and ways of doing things. Similarly, people can be divided into individuals and groups. In contrary, the first task in analyzing a situation is to locate the source of the problem. Until the cause of the problem has been located, any decisions to put it right may be ineffective. All decisions have two dimensions: quality and acceptance. If acceptance of the decision is made the primary aim, concern for quality of the decision is a major worry. On the other hand, the ‘best’ decisions are those that will be the most effective and are a combination of their quality and acceptance. Thus, the mathematical formula for quality decision is:  $\text{Effective decision} = \text{quality} \times \text{acceptance}$ . Where the decision-taker considers that a problem is located will influence the type of decision to be taken (Figure 4: for decision located problem diagram).

Then again, in case study analysis can be carried out by using an "inside-out" approach i.e. by describing the primary research process for the project, and the people concerned in carrying it out and then gradually expand it to the management and support processes and the intra- and extra-organizational context, interviewing those people who are connected to the sample project. Besides, in relation to Yin (1989), the quality of any given design can be judged according to the following four tests: construct validity; internal validity (for explanatory or causal studies only, and not for descriptive or exploratory studies); external validity; and reliability; (Figure 5: for case study tactics for four design tests).

### **3. Ways to teach Case Study**

<sup>viii</sup>One reason for using the case-study method is for the student to learn how to function effectively in that type of decision-making environment. Moreover, by using an organized seven-step approach in analyzing a case will make the entire process easier and can increase the students learning benefits. These seven steps are as follow:

- (1) To understand fully what is happening in a case, it is necessary to read the case carefully and thoroughly; then, read the case again more slowly, making notes as you go.
- (2) Try to identify the most important problems and separate them from the more trivial issues. After identifying what appears to be a major underlying issue, examine related problems in the functional areas (for example, marketing, finance, personnel, and so on).
- (3) Seek to identify the firm's goals will provide a guide for the remaining analysis.
- (4) Identify the constraints to the problem. Typical constraints include limited finances, lack of additional production capacity, personnel limitations, strong competitors, relationships with suppliers and customers, and so on.
- (5) Even when solutions are suggested in the case, you may be able to suggest better solutions.
- (6) The next step is to evaluate each alternative in light of the available information; and finally,
- (7) Develop a plan for effective implementation of your decision.

<sup>ix</sup>In addition, cases can be taught in various ways like:

- (1) Using discussion format, where students are usually presented with decision or appraisal cases. Here, the instructor's job is to identify, with the student's help, the various issues and problems, possible solutions, and consequences of action. The instructor asks probing questions and the students analyze the problem depicted in the story with clarity. This strong directive questioning approach is often called the Socratic Method. The instructor, acting as inquisitor, judge, and jury, tries to extract wisdom from his student victim. On the other hand, you can have an almost nondirective class discussion. The instructor can practically stay on the sidelines while the students take over the analysis.
- (2) By using a debate format, where a good format for the debate is to follow the procedure of moot court competition. Two teams of students each prepare written briefs on both sides of the issue and are prepared to argue either side. Just before the actual debate, they draw lots or flip a coin to see which side they must argue. The debate itself starts with the pro side presenting for five minutes. Then a member of the con side speaks five minutes. There is a five-minute rebuttal by a second speaker on the pro side, followed by a five-minute rebuttal on the con side. This is then followed by three-minute summaries by each side. In a classroom setting where some members of the class are not participating in this particular debate, it is valuable to permit questions from the audience and to ask them to evaluate the content and presentation of the debate.
- (3) Another way of teaching cases is by using a public hearing format, which allows a variety of people to speak and express different views. Public hearings are structured so that a student panel, role-playing as a hearing board, listens to presentations by different student groups. Typically, the hearing board (for example, Environmental Protection Agency) establishes the rules of the hearing at the outset (for example, time to speak, order of presenters, rules of conduct, regulations and criteria governing their decision-making). This is followed by individuals or groups role-playing particular positions. Members of the panel often ask follow-up questions of the presenters. After all of the presentations are completed, the panel makes its decision or recommendation.
- (4) An alternative way of teaching can be by, using a trial format in which, there are two opposing sides each represented by an attorney, with witnesses and cross-examination. There were two methods to get student involvement. First, prior to the trial, the students are asked to work in teams to develop two position papers, one favoring the extreme environmental stand and the other the extreme logging interest stand. These should be short (two-page) outlines listing the key

arguments on each side. These papers should be turned in at the time of the trial. Second, at the end of the trial, all students should be asked to write two-minute reaction papers. They should respond to two questions: Which plan did they prefer to resolve the issue and why. These papers should be collected as they leave the class.

- (5) An added method is by using a problem based learning format, where a typical case passes through several stages. Here, in their first meeting, the instructor presents a short written account of the patient with some symptoms and background. The faculty and students together try to identify the points they think they understand and determine those terms, tests, procedures, symptoms, etc., for which they need more information. At the end of this meeting, students agree on how each will divide up the responsibilities to search for the needed information in the libraries. In the second meeting, students discuss their findings and share opinions. Their search for the correct diagnosis narrows down. By the end of the class meeting, the students have determined what new information they need to uncover and go their separate ways to find it. At the third meeting, students share their thoughts, data, and understanding. They try to reach closure on the diagnosis and treatment. This is the last step in the process and generally students will not find out the "real" answer to the problem. Therefore, in this learning, the knowledge and understanding of the case comes from the search for answers, not from "the answer" to a particular case.
- (6) A further method in case study is by using a scientific research team format, in which the essence of most scientific research is the case method. Scientists are likely to use some version of the hypothetic-deductive method where they ask questions, make hypotheses, make predictions, test predictions by observation and experiment as they collect data, compare the results with their predictions, and make evaluations and draw conclusions.
- (7) A final method is carried out by using a team learning format, in which the team learning involves setting up the class in permanent heterogeneous small groups of students (four to seven students per group). The syllabus of the course is typically subdivided into learning units, perhaps five to 10 in number. Each learning unit is approached in the following ways: (1) Individual reading assignments are given and read. These assignments cover the essential facts and principles of the unit. (2) A short (15-minute) multiple choices and true or false test covering the central points of the reading are given to individual students. (3) Then small groups of students immediately take the same test together. (4) Both individual and group



tests are scored in the test. (5) The groups of students discuss their answers using textbooks and may make written appeal to the instructor. (6) The instructor clarifies points about the test and reading. It should be noted that steps 2-6 generally occur in one class period. (7) Students now apply the facts and principles they have learned from the reading to a problem or case.

<sup>x</sup>In spite of this, another way of teaching cases can be done by using a Structured Controversy. Structured controversy is a teaching technique that uses the strengths of conventional debate and ends with two sides seeking ways to resolve the conflict through compromise. Moreover, Johnson, Johnson, and Holubee (1992) summarize the major steps used in structured controversy in the classroom, and these are: First, a controversial topic is proposed by the instructor. Second, students are coupled in pairs (teams) to research literature and prepare arguments for either the pro or con side of the issue. Third, opposing teams meet and give their "best case" arguments to one another, courteously debating the issue. Fourth, the opposing teams reverse their roles presenting the opposite view as convincingly as possible. Fifth, the opposing teams abandon their advocacy roles and write a compromise report. Sixth, all individuals in the class take written tests based on the material and receive bonus points if all members of their compromise team score over a set criterion. And finally seventh, the teams give a 10-minute oral report on their compromise to the class with all team members participating. When using this technique, the instructor must be sure to give clear instructions in order to get good written and oral responses. Students must understand how to write individual position papers on the pro and con sides of arguments and the proper rules of debate conduct. Furthermore, at the beginning of class, after brief introductory remarks by the instructor, teams of four or five students should be rapidly assembled. After this, the instructor should split the class in half, perhaps by drawing an imaginary line down the center of the room. Teams to the left of the line are assigned the pro-side of the argument and teams to the right are assigned the con-side. The instructor then tells each side's of the teams to decide upon three of their best arguments (assertions and evidence). This should take about 20 minutes. The instructor working at the chalkboard or overhead projector asks one of the teams from the pro-side to mention its first assertion and evidence. After that the instructor writes this down rapidly in an abbreviated form, and then he asks for comments from the con-side of the room. The first job of the instructor is to keep the discussion focused on the assertion and evidence on the board. The second job is to see that the advocacy role is not taken so seriously that students begin to deliver impassioned speeches to the jury. The third job is to look for opportunities to help develop particular points about key issues. This should be done

by asking appropriate questions rather than stopping the discussion and delivering a mini-lecture. The instructor after that asks the teams to leave aside their advocacy roles. Then the students are instructed to come up with at least one suggestion for a compromise between the two sides. After a five-minute discussion, the instructor should list these on the board either with or without soliciting comment by other teams.

<sup>xi</sup>A different learning method is called a Problem Based Learning (PBL), where <sup>xii</sup>“the principal idea behind PBL is that the starting point for learning should be a problem, a query, or a puzzle that the learner wishes to solve”. The Common Features of PBL is in the learning which is initiated by the “problem.”; also the cases or “problems” are based on complex, real-world situations. Moreover, all information needed to solve problem is not initially given, and students identify, find, and use appropriate resources. Additionally, students work in permanent groups (Figure 6: for the “classic” PBL cycle).

<sup>xiii</sup>A different method of E-learning system namely UNCLE (using notes for a case-based learning environment) is viewed as a process that allows workers to advance from novices to experts through three levels of knowledge acquisition: know-what, know-how, and know-why. Combining these perspectives, it is understood that know-what (introductory knowledge) is the concept-based domain content that is pre-packaged, generalized, and simplified by subject domain experts. Know-what is often conveyed by signs and symbols in the form of books, manuals, and codes of practice and thus becomes explicit in an organization. Know-how (advanced knowledge) translates know-what into action-oriented skills. It represents process-based knowledge of solving complex, domain- or context-dependent problems, which depends on operational skills rather than abstract rules. Know-why (expertise) contains richly interconnected knowledge structures that can only be constructed through the accumulation of experiences (Jonassen, 1992) (Figure 7; 8; and 9: for Stages of knowledge acquisition). Moreover, UNCLE learners can acquire knows-what by reading materials in Learning Basic Concepts and taking tests for self-assessment and expert feedback. Once learners finish reading a section of root cause and decision analysis (RC&DA), they can click on the test button to take either a multiple-choice or short-answer test. After taking the test, learners are able to check online answers for feedback. Before UNCLE shows the answers, a copy of the test result should be sent to the online facilitator by e-mail for evaluation and input. Once learners have a grasp of the basic concepts, they advance to know-how by conducting case analyses. Case analyses allow learners to apply know-what in learning basic concepts and practice their know-how. Furthermore, UNCLE was designed to follow a logical sequence for learning based on the knowledge advancement model: (1) read the material; (2) complete the test; and (3) conduct a case analysis. The majority of the participants should

finish reading all sections before proceeding to take tests and should finish all tests before proceeding to conduct case analyses.

#### **4. Case Study Example of the Toronto Chemicals Ltd.**

##### **Introduction**

<sup>xiv</sup>**Toronto Chemical Ltd (TCL)** was established in Canada in 1998, and was producing a chemical additive called ADDIT. ADDIT is used in water softening plants for commercial boilers feed water. Many companies install water softening equipment in their boiler systems, which is eventually a chemical process that removes hardening chemicals from the water before it is fed into the boiler.

##### **The Facts**

The Chicago Chemical Company (CCC), in 1950's developed PURAFAX; which was an additive that dispersed the water softening compound, lengthened its life, and reduced the time and effort required to regenerate the softeners. The advertisements for PURAFAX were placed in trade and technical journals. PURAFAX is sold from \$2.00 to \$2.5 a pound. The rest of CCC's sales were for a slime-control agents and fungi-control chemicals. The CCC's financial statement for 1997 indicated sales of \$225 million with an asset of \$120 million.

On the other hand, TCL is a wholly owned subsidiary of Washington Lerke Inc. (WLI), a large chemical and allied group with annual sales of \$ 3 Billion. WLI has plants in the States and subsidiary firms in nine countries. The total Asset of WLI is over \$ 2.1 Billion with the largest operations in Canada where TLC's turnover is \$240 million.

##### **The Narrative**

You have been asked to advise Toronto Chemical Ltd (TCL) on their Production and development of ADDIT, taking into consideration ADDIT's sales forecast, its likely demand at various prices, costing and amortization of any new machinery acquired. You also have to construct a thorough financial analysis of current and future profit and loss account including characteristics of possible marketing segments at PURAFAX with present users and non-users.

### **Secure Expansion**

Market research has indicated that a large potential market exists for ADDIT, headed by Madeleine Morris, in Canada especially in Montreal. <sup>xv</sup>This market research has been based on the current Canadian Market for water softeners additive, which showed a market for 2710 tons of water softener additives. Additionally, there were three benefits associated with ADDIT and these were as follow:

1. The major chemical component in ADDIT could be extracted from a widely available waste product, which also gave TCL cost advantage over CCC who had based their PURAFAX on an expensive chemical.
2. The formulation of ADDIT included a powerful anti-rust ingredient that practically eliminated the rusting process within the water system, whereas PURAFAX did not contained an anti-rusting agent, and
3. ADDIT is a liquid, whereas, PURAFAX is a powder that had to be added to the waste feed system daily.

### **The Company's Market**

Sales are made to wholesalers, and farmers both in States and in Canada, where one gallon of ADDIT is added to 100 gallons of water, which produces a 20 % of saving. On average market uses about \$2000 to \$100000 worth of water softeners chemical annually. ADDIT would save from \$1600 to \$80000 ( $\$2000 - 20\% = \$1600$ ; and  $\$100000 - 20\% = \$80000$ ).

An estimated Canadian market is 2700 tones of PURAFAX, which equals to \$13.5 million, but the potential for water softener additive was about \$40.5 million (i.e.  $\$13.5 \times 3 = \$40.5$ )

Additionally, an average usage of softeners additive is about 500kg for one year per large production plans.

TLC's sales organization is divided into six product groups each headed with a manager and specialist sales people. One salesman provides about 10 % of total sales, and to market ADDIT; TLC employed two new sales people, which equals to a 20% of expected total sales. These salesmen are also experienced in the water treatment field. The two salespeople would work from the Montreal office and cover Quebec and Ontario. The rest of the Canada would be handled by distributors.

### Cash injection needed

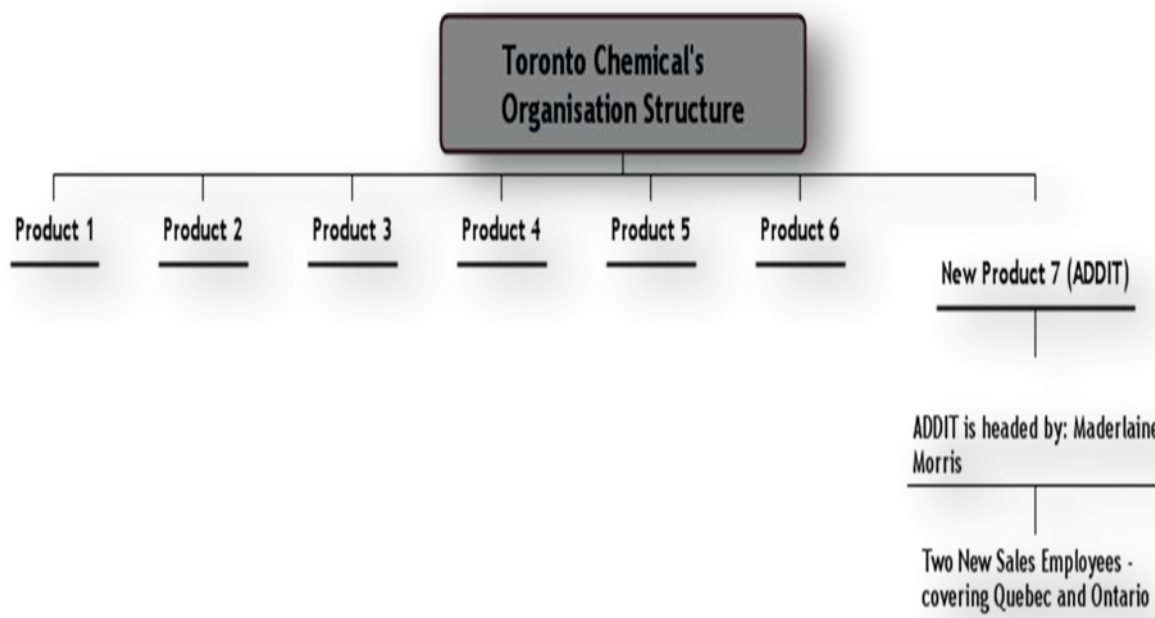
The Case stated that, because of potential demand in Canada especially in Montreal, where there are already have a wholesaler and business network, and they could increase their turnover up to: \$ 13,500,000 per year and are of the opinion that they should expand.

However, a regular addition of ADDIT to water softener chemicals required a storage tank with automatic dispenser to be filled to the plant, which would cost of \$500, but the customer would pay \$250 for the dispensing equipment and the rest would be paid by the TLC.

### Competitive environment

ADDIT's major competitor would be PURAFAX and the Anti-rusting additive market. The current market size of PURAFAX is estimated at 2710 Tones, which equals to 5420000 Gallons. ADDIT is estimated at 25038 Tones = 6000000 Gallons and the Anti-rusting additive is estimated at 67251 Tones, which is 16120061 Gallons. Thus, the total market for water softener Chemicals is estimated to be at 201493 Tones, i.e. 4829771 Gallons.

<sup>xvi</sup> Toronto Chemical's organization structure



A recovery strategy was also considered which concentrated on the following activities:

- Cost reduction activities in all departments, these could increase the profitability and improve cash flow.
- More highly focused marketing efforts were needed for the three years, as well as consider the costs of storage tanks
- Diversification by new product or by acquisition. Madeleine should consider a takeover plan in the Canada, and
- Reduction of assets as currently producing more than they could sell.

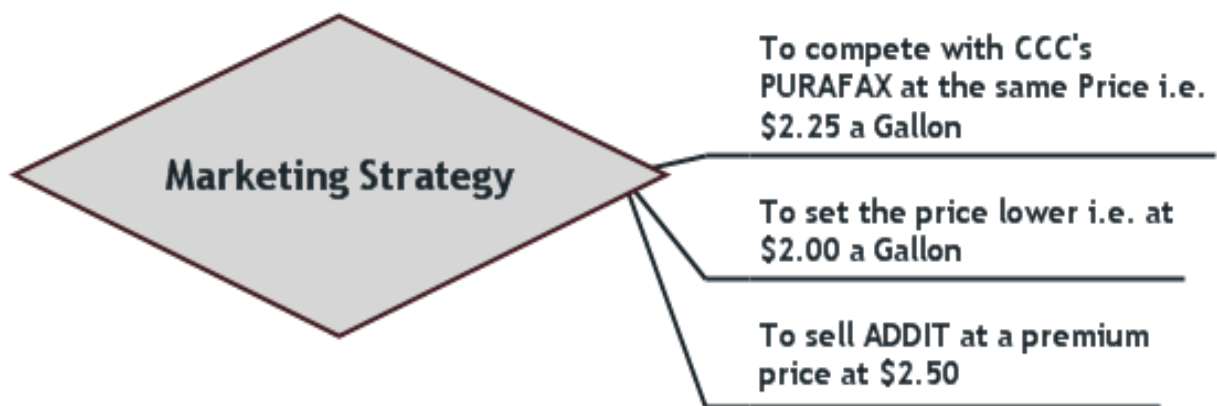
### **1. How the Case is to be used**

Delegates should be put into small groups and given an a week to prepare the group’s presentation to be made in plenary session, advising Toronto Chemical Corporation on their ADDIT’s visions of making profit and expansion to Canada.

They must indicate ADDIT’s appropriate entry price, market share and indicate possible response from their competitors like the CCC. The delegates should also consider how much extra working capital will be needed for marketing; amortization of \$75000 and submit a projection plan for three years in advance.

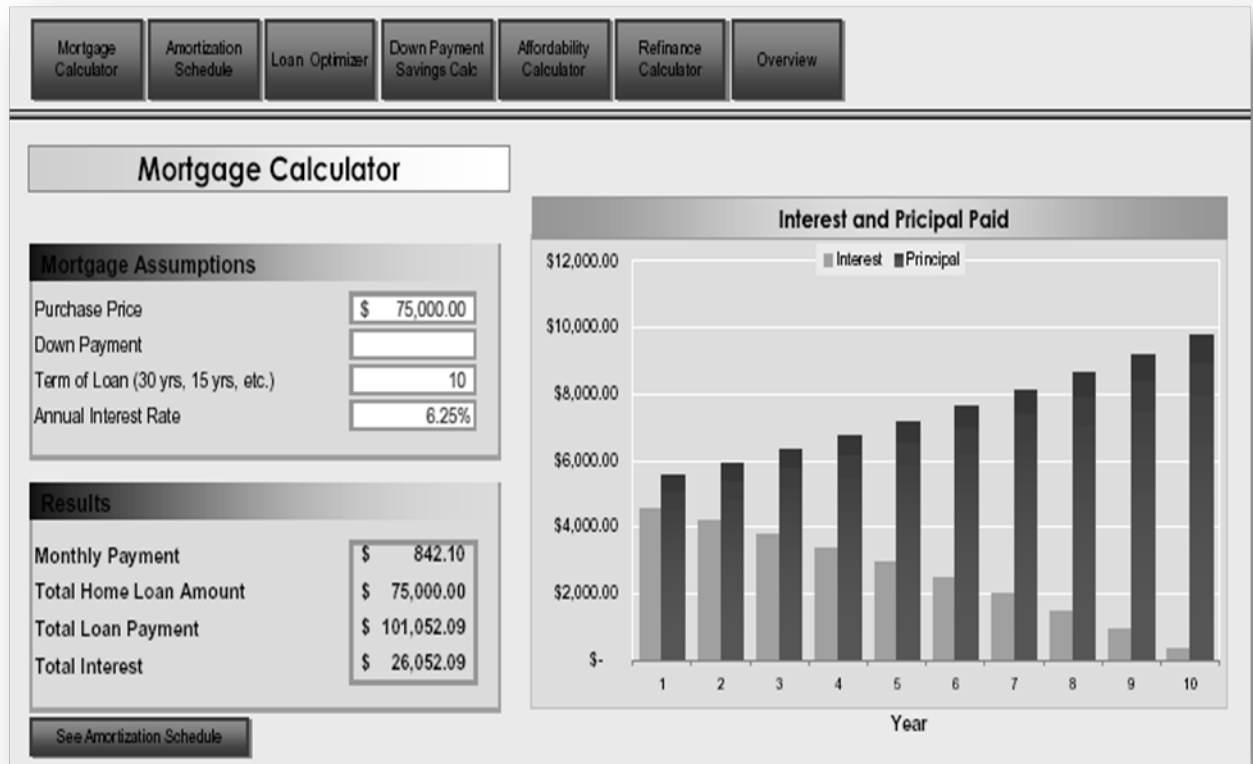
### Toronto Chemicals Ltd pricing strategies

1. TCL sells ADDIT at \$2.25 per Gallon, which would be the same as CCC's PURAFAX, thus entering into competition, but would make it easier for customers to understand it.
2. ADDIT is priced lower than PURAFAX at \$ 2.00, which would force CCC to also lower their product price. TCL, however, would not be able to keep such a low price for long time as their production cost would escalate to an uncontrollable level; and finally
3. ADDIT is sold at a premium rate at \$2.50 a Gallon, which would also mean that this would create a higher margins and lower volume to recover overheads.



## 2. The Analysis

<sup>xvii</sup> Amortization of \$ 75000 for 10 years





Mortgage Calculator

Amortization Schedule

Loan Optimizer

Down Payment Savings Calc

Affordability Calculator

Refinance Calculator

Overview

---

Yearly Amortization Schedule

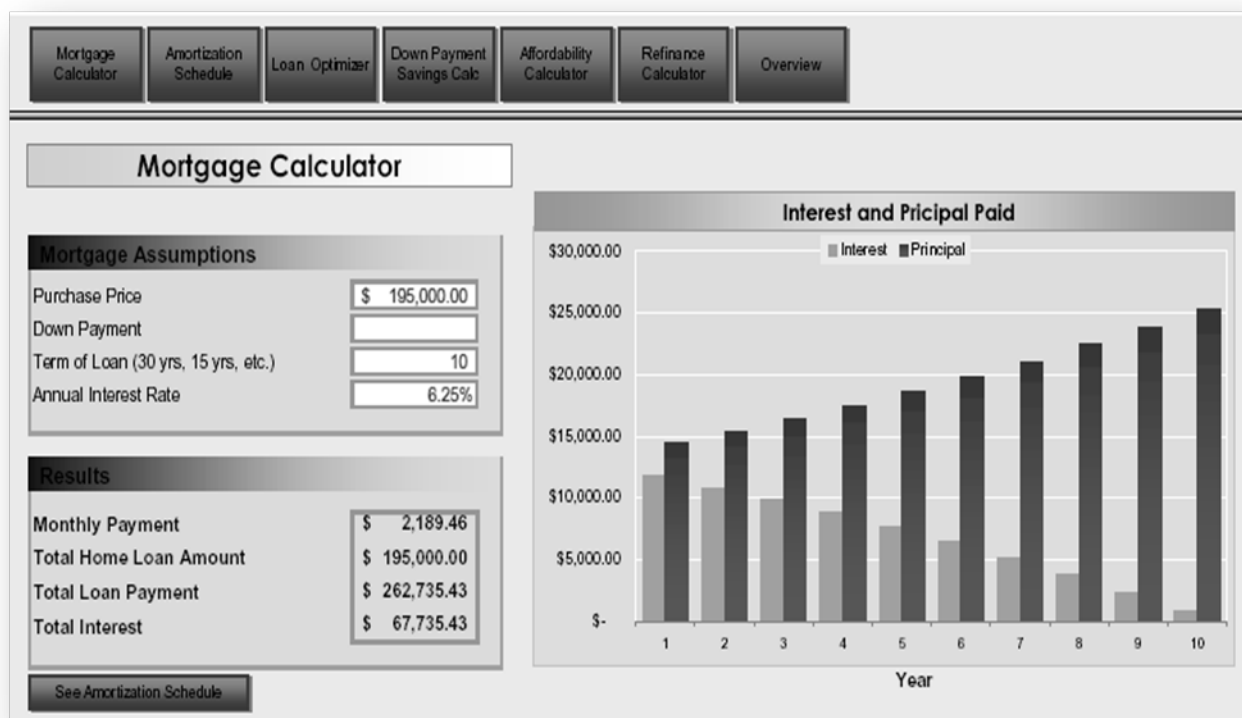
See Mortgage Calculator

Monthly Amortization Schedule

Year	Beginning				Ending Balance
	Balance	Mortgage Pmt	Interest Paid	Principal Paid	
1	\$ 75,000.00	\$ 10,105.21	\$ 4,529.58	\$ 5,575.63	\$ 69,424.37
2	\$ 69,424.37	\$ 10,105.21	\$ 4,170.94	\$ 5,934.26	\$ 63,490.11
3	\$ 63,490.11	\$ 10,105.21	\$ 3,789.24	\$ 6,315.97	\$ 57,174.14
4	\$ 57,174.14	\$ 10,105.21	\$ 3,382.99	\$ 6,722.22	\$ 50,451.92
5	\$ 50,451.92	\$ 10,105.21	\$ 2,950.60	\$ 7,154.61	\$ 43,297.31
6	\$ 43,297.31	\$ 10,105.21	\$ 2,490.40	\$ 7,614.80	\$ 35,682.51
7	\$ 35,682.51	\$ 10,105.21	\$ 2,000.61	\$ 8,104.80	\$ 27,577.90
8	\$ 27,577.90	\$ 10,105.21	\$ 1,479.30	\$ 8,625.90	\$ 18,952.00
9	\$ 18,952.00	\$ 10,105.21	\$ 924.47	\$ 9,180.74	\$ 9,771.26
10	\$ 9,771.26	\$ 10,105.21	\$ 333.95	\$ 9,771.26	\$ (0.00)
11	\$ (0.00)	\$ 10,105.21	\$ (294.56)	\$ 10,399.77	\$ (10,399.77)
12	\$ (10,399.77)	\$ 10,105.21	\$ (963.49)	\$ 11,068.70	\$ (21,468.46)

Month	Beginning				Ending Balance
	Balance	Mortgage Pmt	Interest Paid	Principal Paid	
1	\$ 75,000.00	\$ 842.10	\$ 390.63	\$ 451.48	\$ 74,548.52
2	\$ 74,548.52	\$ 842.10	\$ 388.27	\$ 453.83	\$ 74,094.70
3	\$ 74,094.70	\$ 842.10	\$ 385.91	\$ 456.19	\$ 73,638.51
4	\$ 73,638.51	\$ 842.10	\$ 383.53	\$ 458.57	\$ 73,179.94
5	\$ 73,179.94	\$ 842.10	\$ 381.15	\$ 460.96	\$ 72,718.98
6	\$ 72,718.98	\$ 842.10	\$ 378.74	\$ 463.36	\$ 72,255.63
7	\$ 72,255.63	\$ 842.10	\$ 376.33	\$ 465.77	\$ 71,789.86
8	\$ 71,789.86	\$ 842.10	\$ 373.91	\$ 468.20	\$ 71,321.66
9	\$ 71,321.66	\$ 842.10	\$ 371.47	\$ 470.63	\$ 70,851.03
10	\$ 70,851.03	\$ 842.10	\$ 369.02	\$ 473.08	\$ 70,377.94
11	\$ 70,377.94	\$ 842.10	\$ 366.55	\$ 475.55	\$ 69,902.40
12	\$ 69,902.40	\$ 842.10	\$ 364.07	\$ 478.03	\$ 69,424.37

Investment for new plant of \$195000



This investment of \$195000 is carried by the TCL, rather than by ADDIT's group. ADDIT is paying rent charge of 21.5% (i.e. a \$5.00 per m2 = \$ 1741 per month).

The company's investment into ADDIT shoved some negative profit due to high level of operation castings. Although TCL's ADDIT selling their product at \$2.25 delivered a Compound Growth Rate of 23% in the first year but slumped rapidly at subsequent years only to a 0.17%, this was due to a strong competitive environment, and sudden Global market saturation, as an effect of rising oil and food prices. Strategically the TCL's group continued to advance and compete in the water softener market and extend its business both in Canada and in the States. An approximate cash flow projection using the facts, supposition and conjectures is made for the following three years financial statement.

### Price Elasticity of Demand

The ADDIT shows an inelastic demand with a coefficient of elasticity below unity.

Assuming 0.25, the likely demand would be:

	Price	Quantity
<b>Below</b>	\$2.25	7,500,000
	<b>\$2.25</b>	<b>6,000,000 (Assumed)</b>
<b>Above</b>	\$2.25	4,500,000

The Likely Demand would be:

	Price	Quantity
<b>Below</b>	\$2.00	6750000
	<b>\$2.25</b>	<b>5400000 (Assumed)</b>
<b>Above</b>	\$2.50	4050000

Coefficient of Demand is: =  $\frac{\text{Proportionate Change of Quantity}}{\text{Proportionate Change of Price}}$

$$= 1350000 / 0.25$$

$$= \underline{\underline{5,400,000}}$$

CCC would most likely maintain its product's price for a while promoting is as a superior product with long historical success, while ADDIT is a new product and customers would be cautious in purchasing the product at the beginning. The reputation of ADDIT will grow faster after consumer's mouth-to-mouth promotion of the product.

The CCC’s possible price response would be:

**If TCL Prices at:**

<b>Probability that CCC would price at:</b>		<b>\$ 2.50</b>	<b>\$ 2.25</b>	<b>\$ 2.00</b>
<b>\$ 2.50</b>		65%	25%	10%
<b>\$ 2.25</b>		25%	75%	85%
<b>\$ 2.00</b>		10%	0%	5%
	<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

If TCL uses predatory pricing i.e. sets its product at \$2.00 per gallon, CCC’s would not be able to follow, as manufacturing of PURAFAX is more expensive, and does not contain antitrust additive, thus CCC would have to consider moving their product abroad, but TCL would not be able to continue with the \$2.00 per gallon prices as would have to endure losses. An ideal solution for TCL would be to offer their product at \$2.25, which would still have an enormous impact on the CCC’s production; this could in theory lead to a consideration to either purchase CCC or merge.

**Market Share**

Assuming that TCL will obtain 10% of the market if they have a price similar to CCC we estimate:

TCL’s price Compared with CCC’s	TCL’s estimated market share
Price Lower	12.5 %
Price Same	10.0 %
Price Higher	7.5 %

**ADDIT’s Financial Analysis for the first three years:**

**International Council of Business Schools and Programs Annual Conference Proceedings,  
ISSN 1948-920X; Volume 1, Number 1; Paris, France, November 2009.  
"Recognizing Excellence in Business Education"**

<b>ADDIT's Expected Forecast at \$2.00 p/Gall</b>					
<b>Projected</b>			with 4% inflation	with 4% inflation	
<b>Months</b>		1	12	24	36
Population increase	0	Months	2,008	2,009	2,010
<b>Product's Life Cycle in demand</b>		Months	0% Increase	0% increase	0% increase
Factory capacity in Gallons produced (1.2		500,000	6,000,000	6,000,000	6,000,000
<b>New investment fo</b>	150,000				
<b>Expected sales on</b>	-	500,000	6,000,000	6,000,000	6,000,000
Profit		500,000	12,000,000	12,000,000	12,000,000
tax 33% per year	0.33	330,000	<b>3,960,000</b>	<b>3,960,000</b>	<b>3,960,000</b>
<b>Product Price and</b>	<b>2.00</b>				
net profit		670,000	8,040,000	8,040,000	8,040,000
Inflation	0.04	26,800	321,600	321,600	321,600
<b>Balance Sheet</b>	<b>End 0</b>		<b>End 1</b>	<b>End 2</b>	<b>End 3</b>
<b>Sales</b>					
Labour Cost		6,667	80,000	83,200	83,200
Costs of Two Labour Technicians		8,333	100,000	104,000	108,000
Costs of Madelaine Mouse's Salary		8,333	100,000	104,000	108,000
<b>Avertisement</b>					
Marketing and Expense Contribution		45,000	540,000	405,000	385,000
<b>Manufacturing Costs</b>					
Cost of Raw Materie	1.2	600,000	7,200,000	7,488,000	7,776,000
Distribution costs 4%	4.0	624,000	7,488,000	7,787,520	8,087,040
<b>Dispensing Equipment \$250 per customer</b>					
customer	650				
TCL	250	13,542	162,500	169,000	175,500
<b>Administration</b>					
Administrative Overheads		10,000	120,000	124,800	129,600
Factory Overheads		5,000	60,000	62,400	64,800
<b>ARE</b>			-	1,000	1,040
<b>Capital</b>	17,079,817	-			
<b>New Investment</b>					
New Plant 3000m2 :	195,000				
Rent Charge 21.5%	0.22	1,747	41,925	43,602	45,279
<b>Amortisation over 10 years</b>					
Amortisation of new	75,000	73	876	911	946
<b>NRF of (\$ 75000) =</b>	1.22	7,594	<b>91,125</b>	<b>94,770</b>	<b>98,415</b>
<b>Total Cost</b>			<b>15,893,301</b>	<b>16,373,433</b>	<b>16,964,405</b>
Profit		-	3,893,301 -	8,333,433 -	8,924,405
<b>Contribution Sales ratio</b>		0.22	2.65	2.73	2.83
<b>Margin of Safety</b>		11	134	134	134
<b>ROE</b>	-	0.02 -	0.23 -	8,333 -	8,581
<b>Break Even Revenue</b>	-	170,000 -	2,040,000 -	2,040,000 -	2,040,000
<b>ROTL</b>	-	0.02 -	0.23 -	8,333 -	8,581
<b>Cash Flow</b>	-	324,442 -	3,893,301 -	8,333,433 -	8,924,405
<b>Price Canabilisation Process</b>					
Profit after Price Cai	0.05 -	16,222 -	<b>194,665 -</b>	<b>416,672 -</b>	<b>446,220</b>
Discount factor calci	0.90				
NPV		312,663	3,751,961	3,751,961	3,751,961
Initial investment		3,973,325	47,679,903	49,120,299	50,893,215
Compound Annual Growth Rate (CAGR)			30%	0%	0%
NPV	-	<b>3,660,662 -</b>	<b>43,927,942 -</b>	<b>45,368,338 -</b>	<b>47,141,254</b>

**International Council of Business Schools and Programs Annual Conference Proceedings,  
ISSN 1948-920X; Volume 1, Number 1; Paris, France, November 2009.  
“Recognizing Excellence in Business Education”**

ADDIT's Expected Forecast at \$2.25 p/Gall					
Projected			with 4% inflation	with 4% inflation	
Months	1	12	24	36	
Population increase	0	Months 2,008	2,009	2,010	
Product's Life Cycle in demand	Months	0% Increase	8% increase	2% increase	
Factory capacity in Gallons produced (1.2 x 5 = 6)	250,000	6,000,000	6,000,000	6,000,000	
New investment for Production	150,000				
Expected sales on Maximum Capacity	225,000	5,400,000	5,832,000	5,948,640	
Profit	1,012,500	12,150,000	13,122,000	13,384,440	
tax 33% per year	0.33	334,125	4,009,500	4,330,260	4,416,865
Product Price and net Income	2.25				
net profit		678,375	8,140,500	8,791,740	8,967,575
Inflation	0.04	27,135	325,620	351,670	358,703
<b>Balance Sheet</b>	<b>End 0</b>	<b>End 1</b>	<b>End 2</b>	<b>End 3</b>	
<b>Sales</b>					
Labour Cost		3,333	80,000	83,200	80,000
Costs of Two Labour Technicians		4,167	100,000	104,000	108,000
Costs of Madelaine Mouse's Salary		4,167	100,000	104,000	108,000
<b>Avertisement</b>					
Marketing and Expense Contribution		45,000	540,000	405,000	385,000
<b>Manufacturing Costs</b>					
Cost of Raw Material per gallon	1.2	600,000	7,200,000	7,488,000	7,776,000
Distribution costs 4%	4.0	624,000	7,488,000	7,787,520	8,087,040
<b>Dispensing Equipment \$250 per customer</b>					
customer	650				
TCL	250	6,771	162,500	17,550	179,010
<b>Administration</b>					
Administrative Overheads		10,000	120,000	124,800	129,600
Factory Overheads		5,000	60,000	62,400	62,400
<b>ARE</b>			-	1,000	1,000
<b>Capital</b>	17,079,817	-			
<b>New Investment</b>					
New Plant 3000m2 at \$ 65per m2	195,000				
Rent Charge 21.5%	0.22	1,747	41,925	43,602	45,279
<b>Amortisation over 10 years</b>					
Amortisation of new Machinery with Inflation of 4%	75,000	73	876	911	946
<b>NRF of (\$ 75000) = (1.05)<sup>4</sup></b>	1.22	3,797	91,125	91,125	91,125
<b>Total Cost</b>		<b>1,324,442</b>	<b>15,893,301</b>	<b>16,221,983</b>	<b>16,962,275</b>
Profit	-	646,067	7,752,801	7,430,243	7,994,700
<b>Contribution Sales ratio</b>		0.11	1.31	1.24	1.27
<b>Margin of Safety</b>		2.79	67	67	67
<b>ROE</b>	-	0.04	0.45	0.44	0.47
<b>Break Even Revenue</b>		334,125	4,009,500	4,330,260	4,416,865
<b>ROTL</b>	-	0.04	0.45	0.44	0.47
<b>Cash Flow</b>	-	646,067	7,752,801	7,430,243	7,994,700
<b>Price Canabilisation Process</b>					
Profit after Price Canbilisation	0.25	161,517	1,938,200	1,857,561	1,998,675
Discount factor calculated for three years	0.90				
NPV		316,572	3,798,860	4,074,206	4,148,549
Initial investment		3,973,325	47,679,903	48,665,949	50,886,825
Compound Annual Growth Rate (CAGR)			23%	0.64%	0.17%
NPV	-	3,656,754	43,881,043	44,591,743	46,738,276

**International Council of Business Schools and Programs Annual Conference Proceedings,  
ISSN 1948-920X; Volume 1, Number 1; Paris, France, November 2009.  
"Recognizing Excellence in Business Education"**

ADDIT's Expected Forecast at \$2.50 p/Gall					
Projected			with 4% inflation	with 4% inflation	
Months	0	1	12	24	36
Population increase	0	Months	2,008	2,009	2,010
Product's Life Cycle in demand		Months	0% Increase	15% increase	5% increase
Factory capacity in Gallons produced (1.2 x 5 = 6)		500,000	6,000,000	6,000,000	6,000,000
New investment for Production	150,000				
Expected sales on Maximum Capacity		337,500	4,050,000	4,657,500	4,890,375
Profit		843,750	10,125,000	11,643,750	12,225,938
tax 33% per year	0.33	278,438	3,341,250	3,842,438	4,034,559
Product Price and net Income	2.50				
net profit		565,313	6,783,750	7,801,313	8,191,378
Inflation	0.04	22,613	271,350	312,053	327,655
<b>Balance Sheet</b>	<b>End 0</b>	<b>End 1</b>	<b>End 2</b>	<b>End 3</b>	
<b>Sales</b>					
Labour Cost		6,667	80,000	83,200	86,400
Costs of Two Labour Technicians		8,333	100,000	104,000	108,000
Costs of Madelaine Mouse's Salary		8,333	100,000	104,000	108,000
<b>Avertisement</b>					
Marketing and Expense Contribution		45,000	540,000	405,000	385,000
<b>Manufacturing Costs</b>					
Cost of Raw Material per gallon	1.2	600,000	7,200,000	7,488,000	7,488,000
Distribution costs 4%	4.0	624,000	7,488,000	7,787,520	8,087,040
<b>Dispensing Equipment \$250 per customer</b>					
customer	650				
TCL	250	13,542	162,500	169,000	175,500
<b>Administration</b>					
Administrative Overheads		10,000	120,000	124,800	129,600
Factory Overheads		5,000	60,000	62,400	64,800
<b>ARE</b>				1,000	1,040
<b>Capital</b>	17,079,817	-			
<b>New Investment</b>					
New Plant 3000m2 at \$ 65per m2	195,000				
Rent Charge 21.5%	0.22	1,747	41,925	43,602	45,279
<b>Amortisation over 10 years</b>					
Amortisation of new Machinery with Inflation of 4%	75,000	73	876	911	946
<b>NRF of (\$ 75000) = (1.05)<sup>4</sup></b>	1.22	7,594	91,125	91,125	91,125
<b>Total Cost</b>		<b>1,324,442</b>	<b>15,893,301</b>	<b>16,373,433</b>	<b>16,679,605</b>
Profit	-	759,129	9,109,551	8,572,121	8,488,227
<b>Contribution Sales ratio</b>		0.13	1.57	0.11	1.36
<b>Margin of Safety</b>		5.58	67	67	67
<b>ROE</b>	-	0.04	0.53	0.50	0.50
<b>Break Even Revenue</b>		278,438	3,341,250	3,842,438	4,034,559
<b>ROTL</b>	-	0.04	0.53	0.50	0.50
<b>Cash Flow</b>		1,324,442	15,893,301	16,373,433	16,679,605
<b>Price Canabilisation Process</b>					
Profit after Price Canbilisation	0.10	75,913	910,955	857,212	848,823
Discount factor calculated for three years	0.90				
NPV		536,548	6,438,579	7,404,366	7,774,584
Initial investment		3,973,325	47,679,903	49,120,299	50,038,815
Compound Annual Growth Rate (CAGR)			23%	1.17%	0.41%
NPV	-	3,436,777	41,241,324	41,715,933	42,264,231

**International Council of Business Schools and Programs Annual Conference Proceedings,  
ISSN 1948-920X; Volume 1, Number 1; Paris, France, November 2009.  
“Recognizing Excellence in Business Education”**

---

<b>Unit Sold</b>	<b>Total sales</b>	<b>Price Sold</b>	<b>NPV</b>	<b>price</b>	<b>Total Sales Rank</b>	<b>Total NPV Rank</b>
ADDIT at \$2.05 per Gallon	6,000,000	2.02	-£43,927,942	3	1	3
ADDIT at \$2.25 per Gallon	5,400,000	2.25	-£43,881,043	2	1	2
ADDIT at \$2.50 per Gallon	4,050,000	2.50	-£41,241,324	1	1	1

Average price per unit	2.25
Expected beta	0.5



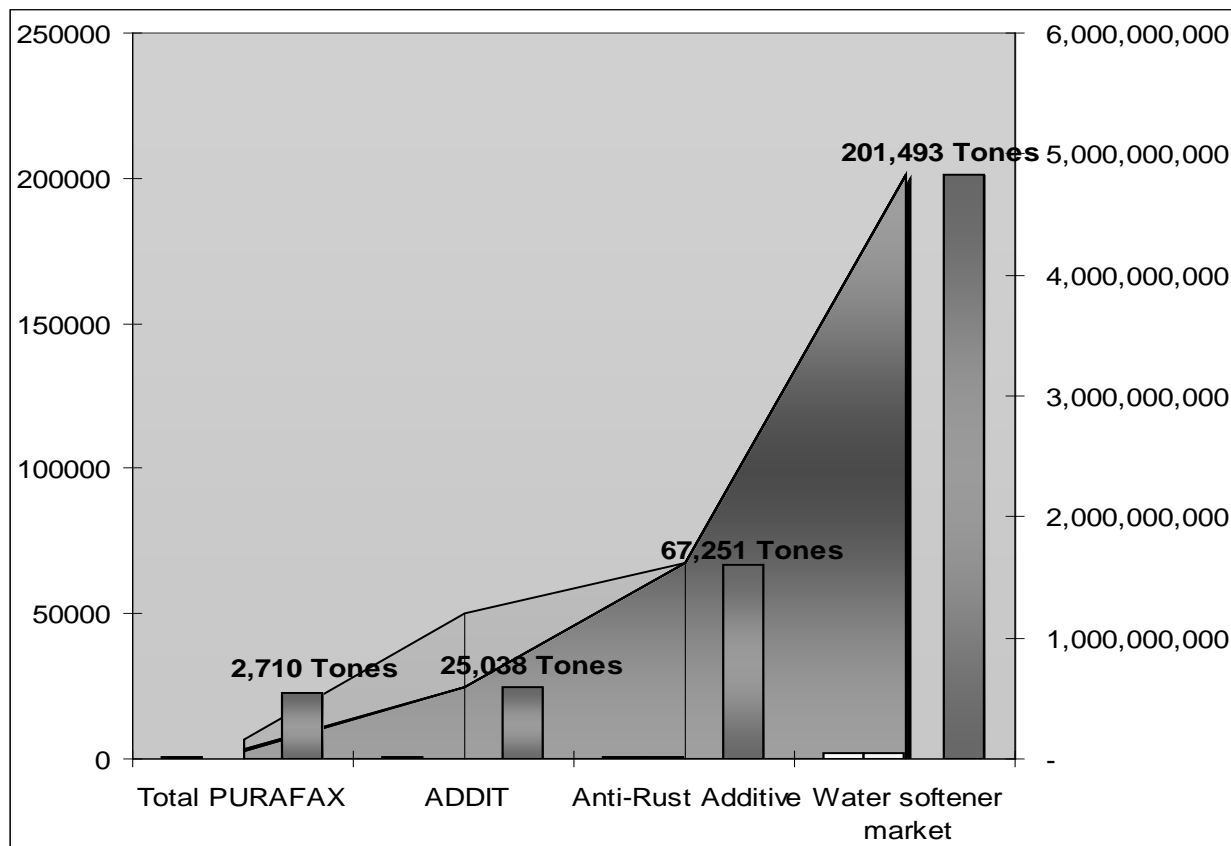
**Canadian Market for Water Softener Additives 2008 (Appendix 1):**

<sup>xviii</sup> From mass to volume conversion

	Pounds (lb)	Gallon (Gal)	US Short Ton	Kilogram	Liters
Ponds (lb)	<b>1.00</b>	0.12	0.0005	0.45	0.45
Gallon (gal)	8.35	<b>1.00</b>	0.00417 3	3.79	3.79
US Short Ton	2000.00	239.70	<b>1.00</b>	907.20	907.2 0
Kilogram (kg)	2.21	0.26	0.00110 2	<b>1.00</b>	1.00
Liters (l)	2.21	0.26	0.00110 2	1.00	<b>1.00</b>
Price in Dollars per mass/ volume	<u><b>0.10</b></u>	<u><b>0.84</b></u>	<u><b>201</b></u>	<u><b>0.22</b></u>	<u><b>0.22</b></u>

	<u>in Pounds (lb)</u>	<u>Gall</u>	<u>US Short Ton</u>	<u>Kilogram (kg)</u>	<u>Price in \$</u>
<b>ADDIT with \$150000 investment for production</b>	50,070,000	6,000,000	25,035	22710000	13500000

**Total Canadian Water Softener Market**



<sup>xix</sup> **Price elasticity of demand**

Specify 2 points for the downward sloping linear demand function

Price	Quantity
2	6000000
2.25	5400000

# points used for various plots

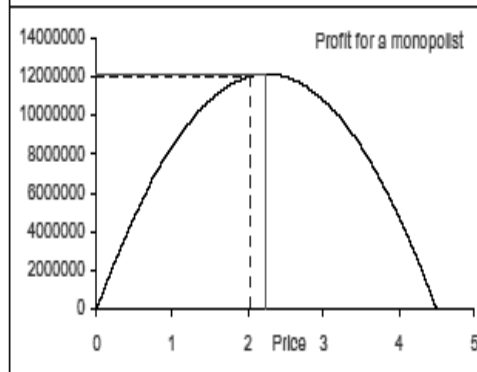
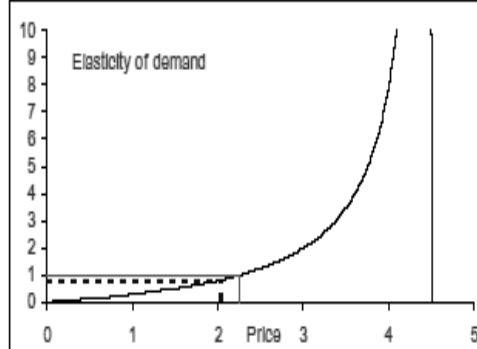
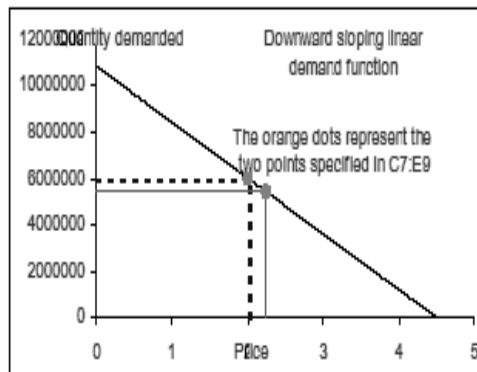
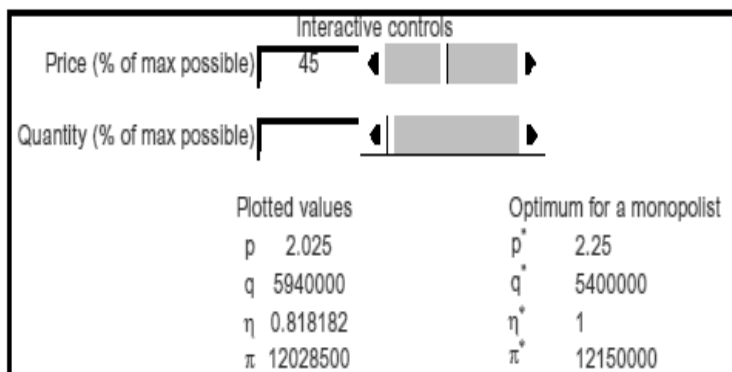
100
-----

The resulting demand function in the form of  $q = a - b \cdot p$

a	b
10800000	2400000

Price and quantity limits

Pmin	0	Qmax	10800000
Pmax	4.5	Qmin	0



The chart demonstrates the relationship between the demand function, the price elasticity and the monopolist’s profit. In the chart, the solid line represents the optimum decision by a monopolist. The dotted line represents the current selection made through the “Interactive Control”. From the charts we can see that at optimum price for the unit would be \$2.25 and the quantity of units sold would be around 5400000.

Figure 1: Anticipating Research Quality-Tests

Test	Case-Study tactics	Anticipated for data collection/Analysis
<b>Construct Validity</b>	Use of multiple sources of evidence Establish chain of evidence  Have key informants review draft case study report	Interviews (asking the same questions of different people); documents (business plans, NPD procedures; quality handbook); some observation Interviews → Transcriptions → clusters report → feedback report → case description in thesis → within case analysis → cross analysis Key informants plus management review feedback report; key informant alone will review case description for thesis
<b>Internal validity</b>	Note that the character of the study is not explanatory! Therefore these issues are relevant in later stages of the research (when actually building the theory)	Following Eisenhardt’s (1989) advice: shaping hypotheses (searching for “why” behind relationships) and comparison with similar literature will build internal validity
<b>External Validity</b>	Use replication logic in multiple case studies	Two cases polar type
<b>Reliability</b>	Use case study protocol developed case study database	“Big list” and mini-cases questionnaire archive boxes

**Figure 2: Qualitative Research Framework: Pilot Project**

Examples of qualitative questions and suggested types	Approach to data collection	Outputs (From data collection and analysis)
How do elderly people (users) feel about the new service? <b>[meaning]</b>	Recording of in-depth interviews	Users perceptions of the way the service has affected their quality of life – a measure of the perceived improvement in service
What are users’ expectations of the service? <b>[descriptive]</b>	In-depth interviews Observation during visits Focus groups Participant observation	Identification of user expectations including expectation mis-match- unrealistic expectations may explain any negative comments
What are the differences in the service that the users have noticed pre-and –post-project implementation and over the life of the project? <b>[process]</b>	Interviews Focus Groups	Identification of the changes in performance as perceived by those receiving the service – the extent to which relationships are better, whether the service is prompt, relevant and coherent
How do members of the team interact with the client? <b>[descriptive, process]</b>	Observation Recording dialogue	Assessment of how team members are providing quality of care and appropriate level of service – the effect of the different working practices of the professions represented on the service given, and whether it is beneficial. The aspects of the process which offer job satisfaction to the team members and why

Figure 3: Relevant Situation for Different Research Strategies

Strategy	Form of research question	Required control over behavioral events?	Focuses on contemporary events?
Experiment Survey	How, Why,	Yes	Yes
	Who, What and Where, How Many, How Much	No	Yes
Archival analysis (e.g. economic study)	Who, What and Where, How Many, How Much	No	Yes/No
History	How, Why	No	No
Case Study	How, Why	No	Yes

**Note:** “What” questions, when asked as part of an exploratory study, pertain to all strategies

**Source:** Yin (1989, p.17)

Figure 4: Decision Located Problem

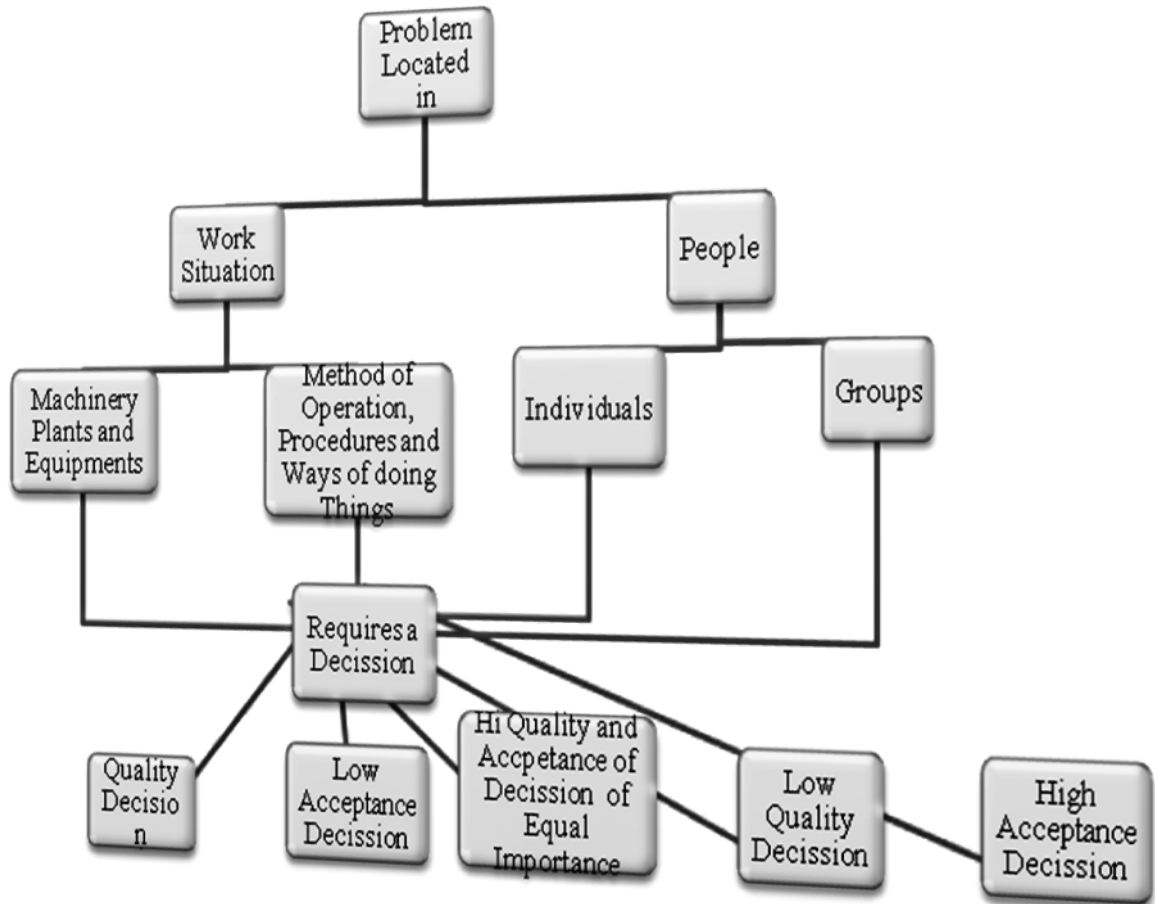


Figure 5: Case Study Tactics for Four Design Tests

Test	Case-study tactics	Phase of research in which tactic occurs
<b>Construct Validity</b>	Use of multiple sources of evidence	Data Collection
	Establish chain of evidence	Data Collection
	Have key informants review draft case study	Composition
<b>Internal Validity</b>	Do Pattern Matching	Data Analysis
	Do Explanation building	Data Analysis
	Do time-series analysis	Data Analysis
<b>External Validity</b>	Use replication logic in multiple case studies	Research design
<b>Reliability</b>	Use case study protocol	Data Collection

Source: Yin, 1989



Figure 6: The "Classic" PBL Cycle

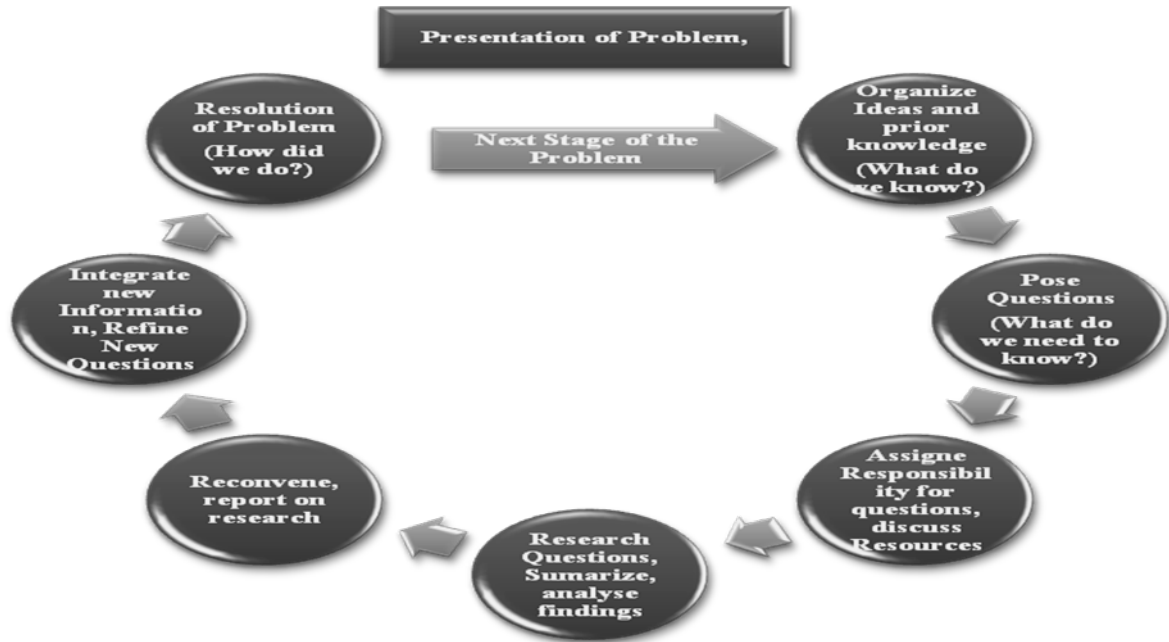
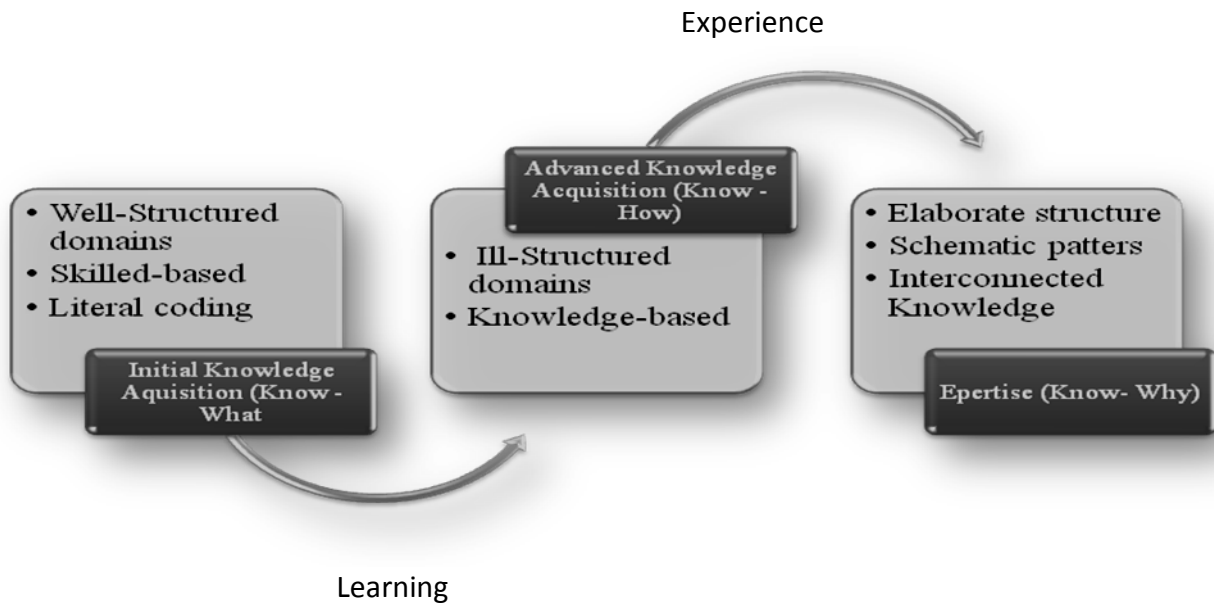
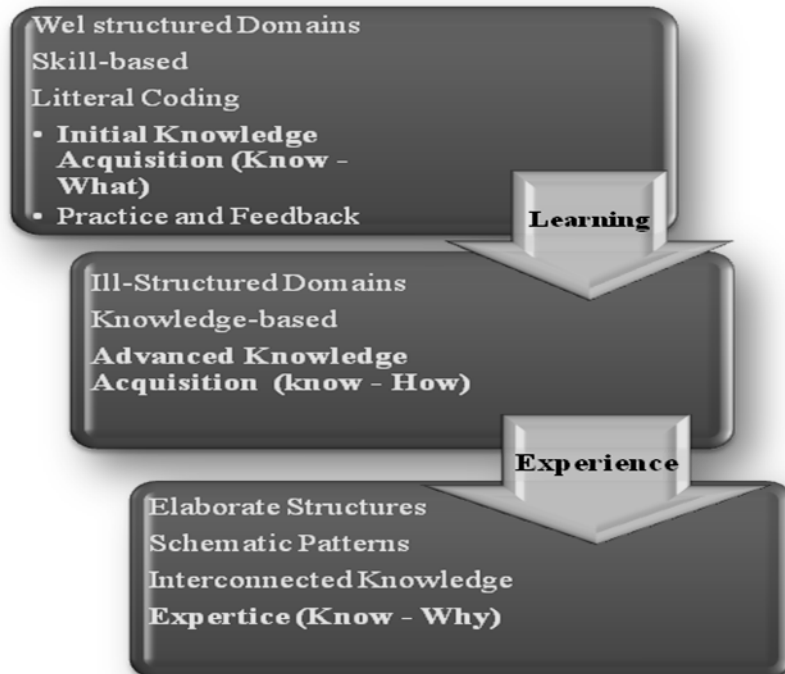


Figure 7: Stages of Knowledge Acquisition



Source: Jonassen (1992, p.387)

Figure 8: Stages of Knowledge Acquisition



Source: Jonassen (1992, p.387)

Figure 9: Knowledge Advanced Model

	Novice	→	Expert	→
Category	<b>Know-what</b> (Concept Based)		<b>Know-how</b> (Process-Based)	
Learning Methods	Comprehension and Feedback		Practice and Apprenticeship	
Learning Activities	Reading, Q&A Lecturing, and Self-assessment		Simulation and Case Studies	
	↕		↕	
	<b>Knowledge Bases</b>			

**Bibliography:**

- I. <sup>i</sup> The Case Study as a Research Method; Uses and Users of Information -- LIS 391D.1 -- spring 1997, Prof. Len Rogers
- II. <sup>ii</sup> Managers and research: The pros and cons of qualitative approaches Management Learning; Thousand Oaks; Jun 2000; Denise Skinner; Clare Tagg; Jacky Holloway

**International Council of Business Schools and Programs Annual Conference Proceedings,  
ISSN 1948-920X; Volume 1, Number 1; Paris, France, November 2009.  
“Recognizing Excellence in Business Education”**

---

- III. <sup>iii</sup> Qualitative Research in Business Communication: A Review and Analysis; The Journal of Business Communication; Urbana; Oct 1995; Tucker, Mary L; Powell, Karen Sterkel; Meyer, G Dale
- IV. <sup>iv</sup> Qualitative case study research: The case of a PhD; Research Project on Organizing and Managing New Product Development Systems; Management Decision; London; 2001; Petra C de Weerd-Nederhof
- V. <sup>v</sup> Case Analysis Method; A Structured Approach for Understanding Cases; Professor Michael A. Mische
- VI. <sup>vi</sup> Case Study Paper No 2; Trend analysis by: Prof. Len Rogers
- VII. <sup>vii</sup> Introduction to case analysis; Case study Paper No: 1; by Prof. Len Rogers
- VIII. <sup>viii</sup> Ph.D. Program: Case Study Development and Application; Introduction to the Case-Study Method (Adapted from: Seperich, G.J, M.J. Woolverton, J. G. Beierlein and D. E. Hahn, eds., Cases in Agribusiness Management, Gorsuch Scarisbrick, Publishers, Scottsdale, AZ 1996)
- IX. <sup>ix</sup> National Center for Case Study Teaching in Science: Case Studies in Science; A Novel Method of Science Education; Clyde Freeman Herreid; [www.ublib.buffalo.edu/libraries/projects/cases/](http://www.ublib.buffalo.edu/libraries/projects/cases/)
- X. <sup>x</sup> What Makes a Good Case? Some Basic Rules of Good Storytelling Help Teachers Generate Student Excitement in the Classroom; Clyde Freeman Herreid
- XI. <sup>xi</sup> Problem Based Learning; Katayoun Chamany; Science Technology & Society Program, Eugene Lang College; [chamanyk@newschool.edu](mailto:chamanyk@newschool.edu)
- XII. <sup>xii</sup> Problem Based Learning by: Boud D. (1985) PBL in perspective. In “PBL in Education for the Professions,” D. J. Boud (Ed); p. 13.
- XIII. <sup>xiii</sup> Designing a Case-Based E-learning System: What, How and Why; Journal of Workplace Learning; Bradford; 2002; Feng-Kwei Wang; Prof. Peter Horn
- XIV. <sup>xiv</sup> Case Study Development and Application, Assignment 2, by Prof. Len Rogers
- XV. <sup>xv</sup> Notes; Canadian Market for water softener additive 2000: British Columbia (500 tons); Alberta (450 tones); Saskatchewan (150 tones); Manitoba (250 tones); Ontario (900 tones); Quebec (280 tones), and Maritimes (180 tones); TOTAL 2710 tones
- XVI. <sup>xvi</sup> Visual Mind 8 (software)
- XVII. <sup>xvii</sup> Mortgage calculator software form: [www.simpleplanning.com/](http://www.simpleplanning.com/)
- XVIII. <sup>xviii</sup> Volume to Mass converter: [www.convert-me.com/en/convert/weight2volume/](http://www.convert-me.com/en/convert/weight2volume/)
- XIX. <sup>xix</sup> Price elasticity of demand, software

---

## The E-Learning Model

---

### **Kefalas Soteris, Ph.D. (Cand.)**

Deputy Director  
Paralimni Technical School  
109 Akefalou Street  
5296 Paralimni, Cyprus  
[kefalas.soteris@cytanet.com.cy](mailto:kefalas.soteris@cytanet.com.cy)

**Abstract:** E-learning is a means of education that incorporates self-motivation, communication, efficiency, and technology. Owing to the fact that there is limited social interaction, students must keep themselves motivated. The isolation intrinsic to e-learning requires students to communicate with the instructor frequently to accomplish their assigned tasks. E-learning is efficient as it eliminates distances and subsequent commutes. Distance is eliminated because the e-learning content is designed with media that can be accessed from properly equipped computer terminals in any location.

With its unique features e-learning is an experience that leads to comprehension and mastery of new skills and knowledge, just like its traditional counterpart. The paper discusses the types of e-learning, the advantages and disadvantages, instructional strategies for e-learning, delivery methods and assessment of e-learning.

**Keywords:** Means of Communications, Learning Class Structure, Forms of Technologies, Management Education, Assessment.

**Reference:** Reference to this paper should be made as follows: Kefalas, S. (2009) "The Elearning Model", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1, pp.

**Biographical Notes:** Kefalas Soteris holds two Master's Degrees in Hospitality Management and International Management, from Sheffield Hallam and Pacific States

University, and is now is reading for a PhD at the International School of Management (*Paris, New York, Shanghai, Tokyo*).

He has been teaching for 25 years full and part-time in public schools and colleges in Cyprus and currently, is Deputy Director and Pedagogical Consultant at Paralimni Technical School, Cyprus.

Kefalas, has edited six books on hotel and restaurant management, written and published many articles and given innumerable presentations on hospitality management and education.

---

## What is E-Learning?

### 1.1 History of E-Learning

E-Learning has been developed since the early 80's with the incorporation of distance learning and computer based training. Distance learning evolved from a static model that was in vogue long before the variety of innovative and dynamic models of today and was a popular concept for many years. Students are now able to study by themselves with their computer, CD-ROMs and solid-state storage devices that permit easily reliable access to data. Recent developments in the use of the Internet have enabled the development of educational methods based on the Internet (Internet Based Training) and methods based on the World Wide Web (Web Based Training). Thousands of on-line courses have been developed, creating opportunities to combine interactive communication among students and tutors with the advantages of distance learning, reduction of costs, increased flexibility and personalized applications. There is an inherent risk in such courses, that the excessive growth of Internet material will have an impact on the teaching profession, which will need to adapt to the new form of learning. It is also observed that the number of those who leave before completing the training courses on the Internet is high. There is a contradiction here: either threatened by the new methodology, if successful, or not, if this fails. Only time will tell and show.

## 1.2 Definition

According to World Wide Learn, “E-Learning is an umbrella term that describes learning done at a computer, usually connected to a network, giving us the opportunity to learn almost anytime, anywhere.”

E-Learning is unlike any other form of education - and it is widely accepted that e-Learning can be as rich and as valuable as the classroom experience or even more so. With its unique features e-Learning is an experience that leads to comprehension and mastery of new skills and knowledge, just like its traditional counterpart.

According to Mathew, e-learning is a means of education that incorporates self-motivation, communication, efficiency, and technology. Because there is limited social interaction, students must keep themselves motivated. The isolation intrinsic to e-learning requires students to communicate with each other and the instructor frequently to accomplish their assigned tasks. E-learning is efficient as it eliminates distances and subsequent commutes. Distance is eliminated because the e-learning content is designed with media that can be accessed from properly equipped computer terminals, and other means of Internet accessible technology.

## 1.3. Types of Learning

The different types of e-learning are based on:

- Means of communication
- Schedule
- E-learning class structure
- Forms of Technologies

### 1.3.1 Means of Communication

There are several different means for individuals to communicate with each other and their instructor. E-learning can be conducted solely through on-line applications. In other cases, if distance is not a factor, some face-to-face communication can be included to create *blended e-learning*. Blended e-learning includes elements of web interaction and in-person interaction. Technology broadens the definition of *face-to-face* as there can be the use of two way video, and two way audio. Introducing these elements of participation create a blended e-learning experience.



### 1.3.2 Schedule

E-learning can be either Synchronous or Asynchronous. Synchronous means that real-time communication is implemented, such as video conferencing, teleconferencing, and on-line chat programs. Asynchronous indicates that other means of communication are utilized that do not require real time responses. Examples of asynchronous e-learning include; e-mail, list serves, threaded discussions, blogs, and on-line forums.

### 1.3.3 E-Learning Class Structure

E-learning class structure addresses how the instruction is administered. E-learning can be self-paced, instructor-led, or self-study with an expert. Self-paced instruction is administered by giving the learner the materials she needs to complete the training/instruction. Instructor-led training affords the learner a guide to implement the instruction. Self-study with an expert is a combination of self-paced and instructor-led. As in self-paced, the learner is responsible for staying on task and on schedule, however as in instructor-led, there is interaction with an authority figure that checks the learners' progress.

### 1.3.4 Forms of Technologies

In its original form, teachers using distance education traveled to remote sites and taught a class, or corresponded with students through mail, telephone, or fax machine. Individualized study has been a method of reaching the remote student for some time. Detailed course instructions are sent to the learner who performs the assigned tasks and returns the completed work to the teacher for evaluation and reassignment if necessary.

Technology has raised the quality of individualized distance instruction. The use of various forms of electronic media increases time effectiveness and improves the delivery of information. Video, audio, and computer-based applications may enhance the product received by the independent learner. Electronic delivery may use synchronous communication, in which class members participate at the same time, or asynchronous communication where participants are separated by time.

Video/audio models of distance education include broadcast television, cable television, satellite, microwave, fiber optics, and audio graphics. The most widely used format is broadcast and cable television (Parrott, 1995). However, developments in satellite and fiber optic systems have produced other successful programs. The interactive capability of many of these networks has produced a distance classroom that is nearly identical to a regular classroom. Teachers and students can interact through both two-way video and one-way video with two-way audio systems. The recent development of Desktop Video Conferencing

(DVC) which brings interactive video capability to the desktop computer further enhances learning opportunities.

The linking of computer technology through using the Internet or CD-ROM with television transmission provides a potentially new dimension to distance education. This technique can link university professors to high school teachers, or to physically disabled students, in a distance setting (McLean, 1996).

Another form of interaction is the use of computer conferencing. This method utilizes asynchronous communication in such forms as an e-mail list group, an Internet discussion group, or other types of conferencing software. Asynchronous methods of communication are especially appealing to the learner who has difficulty scheduling specific time- and place-bound course work.

#### **1.4 Advantages and Disadvantages of E-Learning**

##### **1.4.1 Advantages of E-Learning (Benefits)**

E-learning is beneficial to education, corporations and to all types of learners. It is affordable, saves time, and produces measurable results. E-learning is more cost effective than traditional learning because less time and money is spent traveling. Since e-learning can be done in any geographic location and there are no travel expenses, this type of learning is much less costly than doing learning at a traditional institute (Loughney and Kristy).

Flexibility is a major benefit of e-learning. E-learning has the advantage of taking class anytime anywhere. Education is available when and where it is needed. E-learning can be done at the office, at home, on the road, 24 hours a day, and seven days a week. . E-learning also has measurable assessments which can be created so the both the instructors and students will know what the students have learned, when they've completed courses, and how they have performed.

Students like e-learning because it accommodates different types of learning styles. Students have the advantage of learning at their own pace. Students can also learn through a variety of activities that apply to many different learning styles learners have. Learners can fit e-learning into their busy schedule. If they hold a job, they can still be working with e-learning. If the learner wishes or needs to indulge in learning at night, this is readily accomplished. Learners can sit at home in their pyjamas if they wish and undertake the learning they desire.

E-learning encourages students to peruse through information by using hyperlinks and sites on the worldwide Web. Students are able to find information relevant to their personal situations and interest. E-learning allows students to select learning materials that meet their level of knowledge, interest and what they need to know to perform more effectively in an activity. E-learning is more focused on the learner and it is more interesting for the learner because it is information that they want to learn. E-learning is flexible and can be customized to meet the individual needs of the learners.

E-learning helps students develop knowledge of the Internet. This knowledge will help learners throughout their careers. E-learning encourages students to take personal responsibility for their own learning. When learners succeed, it builds self-knowledge and self-confidence in them.

Educators and corporations really benefit from e-learning. Learners enjoy having the opportunity to learn at their own pace, on their own time, and have it less costly.

#### 1.4.2 Disadvantages of E-Learning

One disadvantage of e-learning is that learners need to have access to a computer as well as the Internet. They also need to have computer skills with software programs such as word processing, spreadsheets, Internet browsers, and e-mail. Without these skills it is not possible for the student to succeed in e-learning. E-learners need to be very comfortable using a computer. Slow Internet connections or older computers may make accessing course materials difficult. This can cause considerable frustration and the abandonment of the activity. Another disadvantage of e-learning is managing computer files and online learning software. For learners with beginner-level computer skills it can sometimes seem complex to keep their computer files organized. Without good computer organizational skills learners may lose or misplace reports causing them to be late in submitting assignments. Also, it is not unknown for difficulties to arise when installing new software, thus causing unplanned delays.

E-learning also requires just as much time (perhaps more) for attending class and completing assignments as any traditional classroom course. This means that students have to be highly motivated and responsible because all the work they do is on their own. Learners with low motivation or poor study habits may fall behind. Another disadvantage of e-learning is that without the routine structures of a traditional class, students may get lost or confused about course activities and deadlines causing the student to fail or do poorly.

Another disadvantage of e-learning is that students may feel isolated from the instructor, whose help and guidance is not always available to help the learner so learners need to have discipline to work independently without the instructor's assistance. E-learners also need to have good writing and communication skills. When instructors and other learners are not meeting face-to-face it is possible to misinterpret what was meant.

#### 1.4.3 Benefits of E-Learning versus Traditional Classroom

E-Learning can provide for major benefits for the organizations and individuals involved (Wikipedia).

1. **Reducing environmental impact:** eLearning allows people to avoid travel, thus reducing the overall carbon output. The fact that it takes place in a virtual environment also allows some reduction of paper usage. With virtual notes instead of paper notes and online assessments instead of paper assessments, eLearning is a more environmentally friendly solution.
2. **Quality education, made affordable:** The fact that instructors of the highest calibre can share their knowledge across borders allows students to attend courses across physical, political, and economic boundaries. Recognized experts have the opportunity of making information available internationally, to anyone interested at minimum costs. This can drastically reduce the costs of higher education, making it much more affordable and accessible to the masses. An internet connection, a computer, and a projector would allow an entire classroom in a third world university to benefit from the knowledge of an opinion leader.
3. **Convenience and flexibility to learners:** in many contexts, eLearning is self-paced and the learning sessions are available twenty four hours seven days a week (24x7). Learners are not bound to a specific day/time to attend classes in person, but at their convenience, may pause their study sessions.

#### 1.5. Success in E-Learning

E-learning can frequently be viewed as a more varied approach to learning, which in turn may have an increased difficulty with obtaining success. As with traditional learning environments, the success with e-learning depends on both the instructor and learner. However, people often agree that e-learning requires a certain type of learner and even instructor. The demands may be greater and students are more prone to fall behind studies. Overall, the conditions to ensure success simply revolve around necessary parties; the learner and instructor.

### 1.5.1 E-Learners

According to the article, “Ten Strategies for a successful eLearning experience”, there are ten learner controlled strategies for a successful e-learning experience. These strategies are as follows.

#### **1. Time Management**

Designate a certain amount of time each week to dedicate to e-learning experiences. The time may vary each week, though make sure enough is allotted.

#### **2. Web Experience**

E-learners should have an adequate background in computers and be comfortable with various computer tasks. If one has little or no experience in this area, reference books are available to make the internet-related tasks simpler.

#### **3. Awareness of Written Tones**

When corresponding with peers or educators, the e-learner must recall that visual cues are not evident. If not careful with the written language, one may misconstrue the implied meaning.

#### **4. Frequent Study Group Formation**

As with allocating time to complete various tasks, the e-learner must also take initiative in developing study groups or opportunities for peer interaction. Doing this will keep confusion and questions about the experience at a minimum.

#### **5. System Requirements**

Without the appropriate technology, the e-learning experience will be unsuccessful from the start. Appropriate software may be required as well as internet access and multimedia plug-ins.

#### **6. High Motivation.**

Motivation is one of the most important qualities and e-learner may possess. It is essential for e-learners to be highly motivated and is the key to e-learning success.

## 7. Interest in the Subject

Keeping an open mind and developing an interest regarding the fascinating world of elearning will keep negativity at bay.

## 8. Controlled Learning Environment

As with any learning situation, the environment in which the learner chooses will have an influence of to whether they will be successful. Be aware that a focused, controlled environment will foster a greater amount of learning than a distracting one.

## 9. Ability to Take Breaks

Taking short frequent breaks away from the computer will decrease headaches and fatigue.

## 10. Avoidance of Procrastination

Avoid putting off work that has to be done. While procrastinating is deleterious to traditional learning, it is even more damaging to e-learning activities.

*"Procrastination is the art of keeping up with yesterday."* Don Marquis

*"Only Robinson Crusoe had everything done by Friday."* Author Unknown

*"Nothing is so fatiguing as the eternal hanging on of an uncompleted task."* William James

### 1.5.2 E-Instructor

The success of e-learning is not solely based on the e-learner; it depends very much on the e-learning instructor.

According to Ryan (2001) successful e-learning is based on a Virtual Learning Environment (VLE). This specific internet-based environment is based on four pieces of criteria.

- Courseware - self study learning materials, simulations, multimedia components
- Supporting Materials - reference materials such as articles, case studies, books, World Wide Web links
- Online Assessment - both formative and summative tests, quizzes, and assignments
- Online Support - via email, Computer Media Communication (CMC), chat rooms, bulletin boards

Ryan states that other components that are an extension of the learning environment include: course outlines, syllabuses, exercises, links to resources and learning packs.

In conclusion, as with any situation, whether it is distance-learning-based or not, success is based upon determination and experiences. If e-learner and e-instructor both possess the right tools, successful e-learning is within your grasp.

## **1.6 Instructional Strategies for E-Learning**

### **1.6.1 Introduction**

Effective teaching begins with effective planning. A vital part of that planning includes determining the instructional strategy to be utilized in order to deliver the instruction. By definition, instructional strategies “determine the approach a teacher may take to achieve the learning objectives” and are included in the pre-instructional activities, information presentation, learner activities, testing, and follow-through. The strategies are usually tied to the needs and interests of students to enhance learning and are based on many types of learning styles.

Although e-learning is a relatively new field, strategies used in the traditional classroom setting can be used to create effective learning and a dynamic learning environment online. There are many ten effective instructional strategies: mentorship, forums, small group work, projects, collaborative learning, case studies, learning contracts, discussion, lecture and self-directed learning that can be used in an online environment. But for the purpose of this paper, it will discuss the mentorship in self-directed learning.

### **1.6.2 Self-Directed Learning**

Self-directed learning is defined as “learning initiated and directed by the learner (that) can include self-paced, independent, and individualized learning as well as self-instruction” (Instructional Strategies for Online Courses, 2006). This strategy can be very effective, as it forces the learner to take the initiative, resulting in a more active learning process, thereby facilitating a deeper understanding of the material (Clark, 2001).

E-learning, by its very nature, is a great forum in which self-directed learning can occur. Asynchronous classes which offer guidelines for learners can then allow those learners to work at their own pace, in their own environment, utilizing resources often found through self-guided research. Students can work independently, visiting virtual libraries, museums and even accessing newspapers and the latest research from the comfort of their own homes (Clark, 2001).

An online environment such as BlackBoard (Appendix I) offers a number of opportunities for self-directed learning (Self Directed Learning, 2002). Students can use their Personal Calendar to schedule and organize learning Tasks; the Course Map assists students in finding course resources and activities they wish to utilize; the instructor can describe a case or frame a problem in an Assignment and charge students with independently researching the issue, identifying a solution and supporting their conclusion; the instructor can provide a wide range of informational resources that students can choose to further their academic interests or solve problems, such as Book lists, Course Documents, Recourse center and External Links to Internet sites or databases; instructors can use Course Information to describe the goals and learning objectives, including a provision for student-defined objectives or learning contracts.

Environments such as WebCT also offer additional options for self-directed learning such as bookmarks which allow the student to review target points in the material for further exploration or develop individual research plans using the Image Database or Reference section of the tool (Self Directed Learning, 2002).

This instructional strategy may be the way of the future in online learning. McCormack and Jones contend that “the trend in web-based classrooms is away from the student as a passive recipient of knowledge toward the student involved in the learning process as an active, self-directed participant” (Matthew, 2000). With that in mind, instructors need to search for ways to motivate learners to engage in self-directed learning.

### 1.6.3 Technology-Enhanced Teaching Relationship

The exciting thing about teaching in self-directed learning is the vast amount of technology tools available to encourage collaboration and communication between the teacher and student. These tools make it easy for the teacher and student to stay in touch almost instantaneously eliminating the isolation that was previously attributed to this mode of learning. Some of these tools include email, text messaging, instant messaging, course management systems, online grading, course websites and more. To appreciate these technologies it is necessary to recall how they were done before they were enabled by technology.

Previously, with correspondence schools, self-directed learners could only communicate with their instructors via ordinary postal service—‘snail mail’. This often led to high dropout rates and loss of interest by the student. Today, students can receive guidance within minutes via email, receive instantaneous responses via instant messaging, access their course materials through course management tools such as blackboard or course websites,



and even send text messages directly from the mobile phone to their mentors. A big advantage of technology enhanced teaching that must not be overlooked is the course materials themselves.

In the past, course materials were printed and mailed to the students. Today, course materials are posted on course websites this makes it easy for the materials to be updated. In addition, it ensures that students are also receiving the latest and most up-to-date materials. Another advantage of technology enhanced mentorship in self-directed e-learning is the ability for students to view their grades instantly on-line. Grades are posted electronically and students can easily monitor their progress throughout the course.

One cannot overlook the global benefits. Students from all over the world with access to the Internet can participate in this learning method. Technology-enhanced teaching actually offers a cost benefit to both the teacher and student because it eliminates postage costs and what is much more important, the time spent waiting to receive materials.

#### 1.6.4 Successful Teaching Strategies in E-Learning

E-Learning education dictates changes in behavior for both the teacher and the learner. The successful student develops persistence and skills in self-directing work. The successful e-learning education teacher becomes conversant with new technology and develops new instructional styles, moving from creating instruction to managing resources and students and disseminating views (Strain, 1987). Administrative and faculty support e-learning education are critical to the success of this instructional method. Administrators should take note that the implementation of a e-learning education program may allow access to a greater number of students. However, the time and work associated with teaching at a distance exceeds the normal requirements of campus-based instruction.

Students in e-learning education settings perform as well or better on assignments, class activities, and exams when compared to campus-based students (St. Pierre, 1998). Nevertheless, students must maintain persistence and a clear focus to succeed in a e-learning situation. Self-direction, a passion for learning, and strong individual responsibility are important influences on achievement. There are indications that e-learning education works best for more mature, motivated, well-organized, and already accomplished learners (Rintala, 1998).

According to Floretta, the following successful strategies that work for teachers and students should be clearly defined and stated while developing the course plan. They should also be visible throughout the course.

**A. Have a published description of your self-directed learning.**

This is especially important because it sets the expectations from the start. Students know what to expect and how the course is run. This published description should be made available to all prospective students on the school website as well as the course website. In some schools, students are made to acknowledge through an electronic signature that they have clearly read and understood the way the school defines e-learning and the way the mentor engages the student. The description should include the student's responsibilities and the teacher's role in the student's learning. It should also provide the student with the collaboration and communication options with the expectation that the mentor is available for the student.

**B. Set a time when you expect for students to complete their assignments.**

Although a key benefit of self-directed learning is the convenience of working at an individual pace, teachers should have set a time when to receive assignments. Students should not be encouraged to relax completely with their school work. Part of self-directed learning is the fact that students become responsible for their learning. Part of this learning is maintaining a good study habit. In many schools, students are allowed a generous amount of time to complete their work; however there are deadlines, which may be extended when students request on-line extensions.

**C. Clearly communication the course objectives and goals.**

For each course there should be set objectives that students must master. It is very important to clearly communication these objectives and goals to students. Clarity is a key thing in self-directed learning, otherwise, students blindly walk through the course. Some schools require students to use a check list to ensure that they have met all the required course objectives for each lesson. Homework assignments should tie into course objectives and the overall course goal

**D. Give a clear and extensive description of the course projects.**

A key success factor in e-learning is clear direction on projects. Because students work on their own, it is very important that they are provided with clear description on projects. The description should include the goal of the project and the project expectations. For example, teachers may provide itemized guide-lines, with which students are able to focus on the task at hand rather than spending most of their time trying to understand the project.

**E. Have teachers commit to a reasonable response time.**

Another key success strategy in e-learning is response time. In this regard, response time is the time it takes a mentor to respond to a student. Mentors should commit to a quick response time so that students are motivated to move on with the course.

**F. Provide extensive feedback on projects and homework.**

Extensive feedback is very vital in mentorship based e-learning. Extensive feedback allows the students to clearly identify where they have gone wrong, locate the areas of improvement. For example, the teacher has to provide clearly written set guidelines for each project he/she assigns students, with key areas of focus. He/she then evaluates each project extensively based on the set guideline and provides extensive feedback within a reasonable time frame. This example is vital for self-directed e-learners since they are not in a traditional classroom environment with face-to-face interaction with the teacher.

## **1.7 Delivering Methods**

The common term e-learning refers to online training that can be delivered through various strategies. web-based training (WBT), computer based training (CBT), synchronous and asynchronous are the most common types of e-learning.

Web-based training enables a large population located throughout the world to experience e-learning using text, streaming media and graphics. Computer based training is an alternate means of delivering web-based e-learning via LAN, the Internet, or with portable storage devices that vary (at the time of writing) from the huge 16GB memory stick to the lowly 500MB CD-ROM. Synchronous (live) meetings allow learners and the instructor to meet and develop the learning process simultaneously even though they may be located in different parts of the world; only time difference has to be considered. The method of asynchronous e-learning is an independent self-paced training that does not require an instructor; it can be initiated whenever and wherever the student wishes, at anytime and for irregular periods.

### **1.7.1 Synchronous E-Learning**

The method of Synchronous e-learning delivery offers the benefit of a live classroom via the Internet. According to a survey done in 2001 and 2002 WebEx and Centra were the leading technology platforms for delivering synchronous e-learning (Publichino, 2004).

#### A. Centra

Centra Symposium enables students from around the world to be brought together on-line in highly interactive virtual classes thus reducing travel, time and expense of on-site studies. More than just an on-line session, a Centra Symposium is a complete virtual class solution that addresses the entire process of creating and managing an entire study program—before, during, and after the "live" session.

Centra Symposia allow for presenters and attendees to meet in a real time setting incorporating voice and video. The system requirements for Centra include an agreed operating system (OS), fast as possible Internet connection, standard Net browser, and adequate computer memory.

In Centra, the presenters are the creators of the meetings and have full control over the presentation; they also invite the attendees to the real time sessions. The attendees attend the meeting using an ID provided by the presenter(s). Centra features "break out" rooms and audio conferencing.

#### B. WebEx

WebEx allows users to collaborate in real time meetings using a standard browser over the Internet that incorporates data, voice and video. WebEx synchronous meetings are hosted applications and therefore do not require the users to purchase or install any special kinds of hardware or software. It is supported by various browsers such as Windows, Macintosh, Linux, and Solaris systems as well as Internet Explorer, Mozilla, Firefox, Netscape and Safari.

#### C. Synchronous E-Learning Features

Features that can be incorporated when delivering E-Learning: ([Resource Bridge, 2005](#))

- Audio and video conferencing
- Whiteboard - a virtual blackboard
- PowerPoint slides
- Voice-Over-Internet Protocol (VOIP)
- Net surfing
- Video - streaming and prerecorded
- Chat application – text messaging
- Virtual break-out rooms

- Polls & quizzes
- Assessment tests (results fed back)
- Session record and playback

#### 1.7.2 Asynchronous E-Learning

**Asynchronous learning** is a student-centered teaching method that uses online learning resources to facilitate information sharing outside the constraints of time and place among a network of people. Asynchronous learning is based on constructivist theory, a student-centered approach that emphasizes the importance of peer-to-peer interactions.

This approach combines self-study with asynchronous interactions to promote learning, and it can be used to facilitate learning in traditional on-campus education, distance education, and continuing education. This combined network of learners and the electronic network in which they communicate are referred to as an asynchronous learning network.

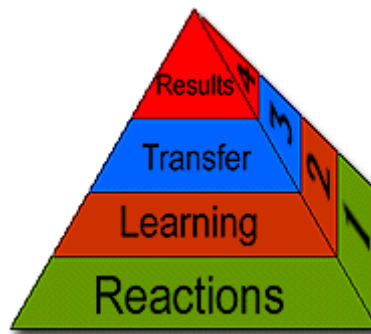
The online learning resources used to support asynchronous learning include

- Email
- Electronic mailing lists
- Threaded conferencing systems
- Online discussion boards
- Wikis
- Blogs.

#### 1.8 Assessment of E-Learning

Kirkpatrick’s Four Levels of Evaluation

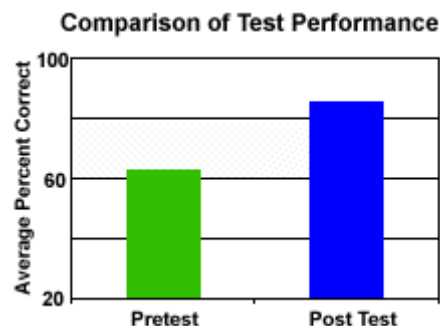
One important outcome of any educational effort is to prepare the candidate to face the challenges in the working environment. Kirkpatrick’s model can be used to address evaluation outcomes (Kirkpatrick, 1996). Kirkpatrick’s four evaluation measures are: reaction, learning, behavior and results.



### 1.8.1. Level 1- Evaluation- Reactions

At the First Level of evaluation, the goal is to find out the reaction of the students to the instructor, course and learning environment. This can be useful for demonstrating that the opinions of those taking part in the training matter. A Level One evaluation is also a vehicle to provide feedback and allows for the quantification of the information received about the student's reactions.

### 1.8.2 Level 2- Evaluation- Learning



Kirkpatrick's Second Level stretches beyond reaction and assesses the learning, also known as knowledge, skills and attitude (KSA) of the learner.

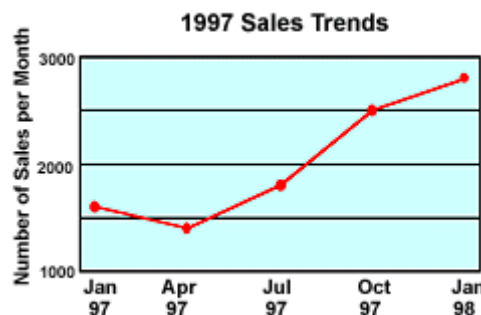
More specifically, Level Two data can describe the extent to which participant attitudes changed and if relevant knowledge and skills were increased by the training. Level Two data is valuable for answering the basic question “Did the participants learn anything?”

### 1.8.3-Level 3- Evaluation - Behavior

This level measures the transfer that has occurred in learners' behavior due to the training program. Evaluating at this level attempts to answer the question - Are the newly acquired skills, knowledge, or attitude being used in the everyday environment of the learner? For many trainers this level represents the truest assessment of a program's effectiveness.

However, measuring at this level is difficult as it is often impossible to predict when the change in behavior will occur, and thus requires important decisions in terms of when to evaluate, how often to evaluate, and how to evaluate.

#### 1.8.4 Level 4 – Evaluation - Results



As with any results, the results of online learning must be analyzed cautiously. Since the effort to gather the information may be biased, the design of the model must be carefully crafted. Based on careful efforts at information gathering, however, the institutional efforts are more likely to be complete. The benefits of this time-consuming process boil down to the primary reason why educational institutes exist: the preparation of students with right tools and skills to meet global challenges and to prepare students to forge a better society.

Kirkpatrick's Four Levels of Evaluation have consistently proven since their creation, that each level has particular benefits and unique challenges. As the Level of Evaluation increases, the complexity and difficulty of data and data collection also increases. Keep in mind however, that while the higher levels may require more cost, time, and complexity, they also result in the most valuable measurements that a training program could benefit from. Despite time and new evaluation innovations, Kirkpatrick's idea still remains one of the most widely used models of evaluation today.



## CONCLUSION

Students today are exposed to different learning environments to gain the maximum value in learning (Webster & Hackley, 1997). Every institution is unique and has own strengths in conducting online courses. The essence of quality education, in any form, is to ensure that learning objectives are achieved efficiently, without sacrificing the standards of the educator and his or her institution.

According to Gardiner (1994), the critical components that educational institutions provide students to face society should include:

- capacities for critical thinking and complex problem solving,
- respect for people different from oneself,
- principled ethical behavior,
- lifelong learning, and
- effective interpersonal interaction and team work.

Institutions that embark on the path of online learning go through a long process. The concern should not be just with whether online learning is conducted successfully using the available technology, but also whether the institutions did what they set out to do, i.e., educating students.

In this paper, I have addressed critical issues concerning the design, evaluation and assessment of electronic learning in higher education. I have argued that student, technological and institutional issues be addressed together. Successful online learning is unlikely to occur if any of these factors receive inadequate attention.

### **The Future of E-learning**

Despite the fact that e-learning is beset with a host of challenges and issues that continue to make it controversial and often difficult to institute, it is nevertheless already widely recognized as an invaluable resource for students, educators, and parents. As we progress deeper into the 21st century, the primary challenge may lie more in moving beyond the traditional ways of teaching and learning that still cling to both in-person and virtual learning environments, and into the broadening realm of possibility that the newest technologies have opened to us.



APPENDIX 1

*Blackboard Collaboration and Communication Tools*

Component	Description	Instructional Activities
<ul style="list-style-type: none"> <li>• <b>Address Book</b></li> </ul>	List of students and contact information.	Students can use the <b>Address Book</b> to look up other students in their course so they might communicate.
<ul style="list-style-type: none"> <li>• <b>Chat</b></li> </ul>	This <b>Virtual Classroom</b> component allows students, groups of students, and instructors to discuss a topic in real-time .	Participants in a <b>Virtual Classroom</b> session can debate an issue.  Instructors can give immediate feedback.
<ul style="list-style-type: none"> <li>• <b>Discussion Board</b></li> </ul>	Allows students, groups of students, and instructors to post asynchronous threaded messages to a discussion topic.	Instructors can create and facilitate group discussions, and monitor student participation. Students can collaborate to discover the multiple perspectives of their classmates, and to share their insights.
<ul style="list-style-type: none"> <li>• <b>Edit Your Home Page</b></li> </ul>	Allows students to create a biography of themselves that others can view from a web browser.	Students can share their experiences and interests with others, and can locate students they would like to collaborate with.
<ul style="list-style-type: none"> <li>• <b>E-mail</b></li> </ul>	Students/Instructors can send/receive asynchronous messages to targeted individuals using the address supplied in the <b>Personal Info</b> component.	Students and instructors can communicate privately to ask questions and provide feedback. Students can share and critique ideas with other selected students.

- **Group Pages**

Provide a workspace for a team of students to collaborate on group projects, share files and post joint solutions.

Team members can collaborate with each other in real time using **Virtual Classroom** sessions. They can post their final outputs for the instructor and other classmates to review.
- **Personal Info**

This component supplies the **E-mail** address in the **User Directory** of all Blackboard users at an institution.

Students can **E-mail** not only their classmates, but other Blackboard students in an institution to expand their participation in communities of practice.
- **Roster**

Allows students to locate contact information for students in their course.

Students and instructors can use the **Roster** to **E-mail** others in the course.
- **Staff Info**

Posts information about instructors, guest speakers, and teaching assistants relating to the course.

Students can learn about their learning facilitators and can read what they have to say about the course.
- **User Directory**

Lists contact information for everyone enrolled in a Blackboard course in the institution.

Instructors and students can find out the **E-mail** addresses of any Blackboard user to expand their communication circles.
- **Virtual Classroom**

A real time (synchronous) facility featuring chat and discussion tools, as well as a **Whiteboard** that students and instructors can use for illustrative purposes..

Instructors can use to explain concepts and show models interactively with students. Students can ask questions and receive feedback in real time.
- **Whiteboard**

**Whiteboard** is a component of the **Virtual Classroom**, and can

Instructors can use graphical representations to augment

be used to diagram models or verbal descriptions.  
 show presentations.

*Blackboard Content Creation and Delivery Tools*

Component	Description	Instructional Activities
• <b>Assignments</b>	Lists student projects, deliverables, and due dates.	All participants have a common area to refer to that provides a listing of student activities and end-products.
• <b>Books</b>	Identifies recommended print-based reading materials.	Provides students with additional resources for further study.
• <b>Course Content Area</b>	Describes the collection of course features and materials that make up the class, such as <b>Course Information, Course Documents, and Course Documents</b> .	The instructor can select which Blackboard features to provide within the course, making the course structure more relevant to the topic or method of study.
• <b>Course Documents</b>	These are the major "learning materials" for students, including both text and multimedia files, organized by folders.	Instructors can provide a variety of learning materials and group them in meaningful categories.
• <b>Course Information</b>	Part of the <b>Course Content</b> area that displays the syllabus or course objectives.	Identifies general goals and milestones for the class.
• <b>Course Tasks</b>	Lists learning activities for the course.	Helps the student organize his/her schedule.
• <b>Digital Drop Box</b>	Allows students to submit their projects, papers, and outputs.	The <b>Digital Drop Box</b> provides a means for students to submit end-products directly to the

- External Links**

This is a list of external URLs recommended by the instructor.

instructor for assessment and feedback.

Students can enrich their learning experience by visiting reference sources outside the course materials.
- Learning Units**

**Learning Units** are sequenced instructional topics developed with Blackboard.

Students who have little experience with a topic may benefit from a more directive learning approach.
- Resource Center**

Blackboard's comprehensive set of references and resources on many subject areas of academic and professional interest..

Students can find additional references for course materials, or for other fields or subjects that are of interest to them.

*Blackboard Administrative Tools*

Component	Description	Instructional Activities
<ul style="list-style-type: none"> <li>• <b>Announcements</b></li> </ul>	Area where the instructor can post class news.	Instructors can tell students about changes in the schedule or new learning opportunities.
<ul style="list-style-type: none"> <li>• <b>Area Availability</b></li> </ul>	This feature enables instructors to select which <b>Content Areas</b> will be available to students .	Instructors can select only the Blackboard features that are meaningful for their courses .
<ul style="list-style-type: none"> <li>• <b>Categorize Course</b></li> </ul>	Determines which part of the Blackboard course catalog the course will be listed in.	Instructors can associate keywords, subjects with the course, so students who browse their Blackboard catalog can find instructional opportunities of interest to them.
<ul style="list-style-type: none"> <li>• <b>Course Availability and Guest Access</b></li> </ul>	Instructors can enroll or drop students from a course, and can define what privileges guests have, if any, within a course.	This feature allows students to "audit" a course (as a guest) or take it for credit (with full student privileges).
<ul style="list-style-type: none"> <li>• <b>Course Calendar</b></li> </ul>	This feature shows course events displayed in calendar format.	Instructors and students can keep track of important milestones and deadlines.
<ul style="list-style-type: none"> <li>• <b>Course Recycler</b></li> </ul>	This utility removes semester-specific items from a course (such as discussion lists and saved <b>Virtual Classroom</b> sessions).	This is a convenience feature that allows the instructor to quickly set up the same course for the next semester without inputs from previous students.
<ul style="list-style-type: none"> <li>• <b>Course Settings</b></li> </ul>	Instructors can customize some aspects of the course interface,	The instructor can use labels and names for <b>Content Areas</b> that are

such a button appearance and names of certain **Course Content Areas**.

meaningful in the context of the subject matter.

- **Enrollment Options**

A **Survey** is similar to a quiz in structure, but the outcome is not graded.

This feature is used to poll students for their opinions in order to improve course content or instructional strategies.

*Blackboard Learning Tools*

Component	Description	Instructional Activities
<ul style="list-style-type: none"> <li>• <b>Collect</b></li> </ul>	<p>This feature allows students to combine selected messages from the <b>Discussion Board</b> into a single text file.</p>	<p>Students can use the resulting "collected" file to search for key words and juxtapose congruent or opposing ideas within the texts.</p>
<ul style="list-style-type: none"> <li>• <b>Course Map</b></li> </ul>	<p>Provides a bird's eye view of course components.</p>	<p>Students and the instructor can use the map to more easily locate items of interest for further study.</p>
<ul style="list-style-type: none"> <li>• <b>Electric Blackboard</b></li> </ul>	<p>This is a text editor that allows students to take notes about the course content and save them in their Blackboard course area as a cumulative journal.</p>	<p>Students can document their ideas and reflect on their learning progress throughout the course.</p>
<ul style="list-style-type: none"> <li>• <b>Manual</b></li> </ul>	<p>The <b>Manual</b> provides students with assistance for using Blackboard features.</p>	<p>By providing help for the navigational and functional aspects of Blackboard, the <b>Manual</b> reduces cognitive load on novice users and allows them to concentrate on course materials, rather than procedural matters.</p>
<ul style="list-style-type: none"> <li>• <b>Personal Calendar</b></li> </ul>	<p>The <b>My Calendar</b> feature allows a student to set up his/her individual schedule for course-related activities.</p>	<p>This feature supports self-regulation in learners by assisting with the scheduling of their learning activities and strategies.</p>

- **Personal Tasks**                      Learners can develop their own task list with due dates.                      By defining learning tasks necessary to achieve instructional goals, students can take more responsibility for their own education.



*Blackboard Assessment Tools*

Component	Description	Instructional Activities
<ul style="list-style-type: none"> <li>• <b>Assessment Manager</b></li> </ul>	Creates and administers objective-type tests, quizzes and surveys.	Instructors can design vehicles to test student comprehension of declarative or procedural information.
<ul style="list-style-type: none"> <li>• <b>Course Statistics</b></li> </ul>	Tracks course and specific content usage and access times.	Statistics can be used by the instructor to help develop a formative assessment of course materials.
<ul style="list-style-type: none"> <li>• <b>My Grades</b></li> </ul>	This is a grade book for the student, showing instructor assessments of student outputs.	A student can review his/her grades to determine his/her conceptual weaknesses or strengths.
<ul style="list-style-type: none"> <li>• <b>Online Grade book</b></li> </ul>	Reports student grades for online assessments.	Instructors can analyze the grade book statistically or qualitatively to see which areas students are having trouble with..
<ul style="list-style-type: none"> <li>• <b>Pool Manager</b></li> </ul>	This feature ensures randomized quizzes by selecting a unique set of questions for each quiz from a bank of possible queries.	This feature helps ensure that students don't just "memorize" the answers to quizzes from semester to semester.
<ul style="list-style-type: none"> <li>• <b>Quiz</b></li> </ul>	An objective assessment instrument that tests student knowledge using multiple choice, matching, ordering, fill-in-the-blank or true-false questions.	A quiz on Blackboard to determine what a student knows and how "fluent" s/he is - what level of "automaticity" the student has reached.
<ul style="list-style-type: none"> <li>• <b>Survey</b></li> </ul>	A <b>Survey</b> is similar to a quiz in	This feature is used to poll

structure, but the outcome is not graded.

students for their opinions in order to improve course content or instructional strategies.

## REFERENCES

**Asynchronous Learning:** [http://en.wikipedia.org/wiki/Asynchronous\\_learning](http://en.wikipedia.org/wiki/Asynchronous_learning)

**Blacboard:**<http://www.prenhall.com/dabbagh/ollresources/self-directed-strategy-frameset.html>

**Clark, Anne & Pitt, Tina. (2001).** Creating powerful online courses using multiple instructional strategies. From <http://www.emoderators.com/moderators/pitt.html>

**Gardiner, L.F. (1994).** Redesigning higher education: Producing dramatic gains in student learning. Washington, DC: Association for the study of Higher Education.

**E-Learning:** <http://en.wikipedia.org/wiki/E-Learning>

**Floretta Ekwensi**, an Instructional Designer from Georgia, is working towards her Master's of Science degree in Instructional Technology (MSIT) from Bloomsburg University as a distance education student.

**Instructional strategies for online courses. (2006).** Illinois Online Network. From <http://www.ion.uillinois.edu/resources/tutorials/pedagogy/instructionalstrategies.asp>

**Kirkpatrick, D.L. (1996).** Evaluating training programs: The four levels. San Francisco: Berett-Koehler.

**Loughney, M. and DelVecchio K.** Key Benefits of ELearning  
<http://www.exomedia.ca/eLearning/benefits.cfm>

**Matthew, Norman & Dohery-Poirier, Maryanne. (2000,)**  
Using the World World Web to enhance classroom instruction. From [http://firstmonday.org/issues/issue5\\_3/mathew/](http://firstmonday.org/issues/issue5_3/mathew/)

**MacLean, D.D. (1996).** Use of computer-based technology in health, physical education, recreation and dance. ERIC Digest 94-7, Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education. ED 390 874

**Matthew** is an Instructional Technology graduate student at Bloomsburg University of Pennsylvania.

**Parrat, S. (1995).** Future Learning: Distance education in community colleges. ERC Digest 95-2. Los Angeles, CA: ERIC Clearinghouse on Community Colleges, ED 385 311

**Pulichino, Joe. (2004,)** The Learning Guild: Report on trends in organizational practices of synchronous e-learning. From <http://www.webex.com/pdf/elearning-guild.pdf>

**Rintala, J. (1998).** Computer technology in higher education: An experiment, not a solution. Quest, 50(4), 366-378, EJ 576 392

**Ryan, M., & Hall, L. (2001).** E-learning, teaching and training: A first look at principles, issues, and implications. (Report No. AACE-ED-466-209). Charlottesville, VA: Association in Advancement in Computer Education.

**St.Pierre, P. (1998).** Distance Learning in physical education teacher education. *Quest* 50(4). 344-356. EJ 675-391.

**Self-directed-learning:** Supports with each product (2002,) Pearson Education Inc. From <http://www.prenhall.com/dabbagh/ollresources/self-directed-strategy-frameset.html>

**Strain, J. (1987).** The role of the faculty member in distance education. *American Journal of Distance Education*, 1 (2).

**Ten Strategies for a successful eLearning experience.** Online Degree Search. From <http://www.online-degree-search.net/strategies.html>

**Tham, C.M. & Werner, J.M. (2005).** Designing and Evaluating E-Learning in Higher Education: A Review and Recommendations. *Journal of Leadership and Organizational Studies*, Vol. 11, No.2

**Webster, J., & Hackley, P. (1997).** Teaching effectiveness in technology-mediated distance learning. *Academy of Management Journal*, 40(6): 1282-1309.

**World Wide Learn. E-Learning Essentials:** Delivery Methods: [www.worldwidelearn](http://www.worldwidelearn)

---

## Information Systems in Higher Education: Strategic Initiatives or Operational Supports

---

### **Jacqueline Musabende, Ph.D. (ABD)**

International School of Management, Paris, France

Head of IS Outsourcing Unit, Experian, Paris, France

Address: 2 Rue du gros caillou; 75007, Paris, France

Phone: (0033) 1 45 55 57 85

Mobile: (0033) 6 15 76 13 54

Email: mu\_jacqueline@yahoo.com

**Abstract:** In the 21<sup>st</sup> century, information systems/information technology (IS/IT) occupy an indisputable place in higher education. Information systems are gaining ground in educational administration as well as in teaching activities as delivery modes. Furthermore, information systems' knowledge and skills have proven their usefulness for future managers. Considering IS/IT on these three axes in education, one can ask how information systems interact with teaching principles and theories. Can IS/IT be an integrated part of higher education and be considered as a contributor to global higher education objectives?

This paper deals with the problem of the place IS/IT should occupy in higher education. The question is whether IS/IT should be considered as strategic initiatives or as operational supports to educational activities. The paper tries to demonstrate the way IS/IT are approached in the educational institution and whether the place they are given may impact on educational goals and outcomes.

**Keywords:** Higher education, information systems, information technology, e-learning.

**Reference:** Reference to this paper should be made as follows: Musabende, J. (2009) "Information Systems in Education: Strategic Initiative or Operational Support", International Council of Business Schools and Programs Annual Conference Proceedings, Volume 1, Number 1.

**Biographical Notes:** Jacqueline Musabende received her BBA degree in 2000 from Adventist University of central Africa, Rwanda, her Master 's degree in computer science in 2005 from Ecole nationale des ponts et chaussés, France, and she is currently PhD student at International School of management, France.

Musabende works currently as IT expert and her professional expertise includes the system analysis and design, IT business value management, e-commerce, management information systems, information system performance analysis, knowledge management, data mining and databases, object-oriented programming and modeling, IT project management, information extraction and e-learning.

Musabende worked on information system analysis and design in the financial industry such as budget, accounting and banking systems. She has extensive experience in Information system outsourcing and management of information system for paperless procedures such as electronic signature, check and document processes. Musabende works with international companies in France, Rwanda, Spain, UK , USA and international organization such as UNDP, World Bank, African development Bank and IFM.

---

## Introduction

IS/IT's importance in higher education is no longer something to be proven. Nevertheless, in the large majority of cases information systems fail to meet expectations leading to many discussions about their effectiveness and efficiency (Devos et al. 2008). Explanations of these failures are often found in the requirement engineering, resources and financial (Donaldson et al. 2000), management of the projects (Dalcher & Drevin, 2003; Shoniregun, 2004).

However, other raisons may explain the IS/IT outcomes and why they meet or do not meet expectations. Among these reasons are the ways IS/IT have been integrated, what the culture of the institution is regarding IS/IT and how the institution adopted or accepted the use of IS/IT (Bagozzi et al., 1989).

### *Structure of the paper*

The paper is divided into three sections and is led by three key supportive questions:

**Question 1:** *To what extent should IS/IT be considered in the educational system?*

**Question 2:** *How are IS/IT perceived by the educational community?*

**Question 3:** *Should IS/IT be an integrated initiative in educational strategic planning?*

The first section of this paper deals with the challenges and potential of IS/IT in higher education. This section aims to respond to the supportive question: To what extent should IS/IT be considered in the educational system? The second section introduces the specific characteristics of IS/IT in education to respond to the supportive question: How are IS/IT perceived by the educational community? The last section concludes by responding to the main leading question: Should IS/IT be an integrated strategic initiative in education?

### *Delimitations*

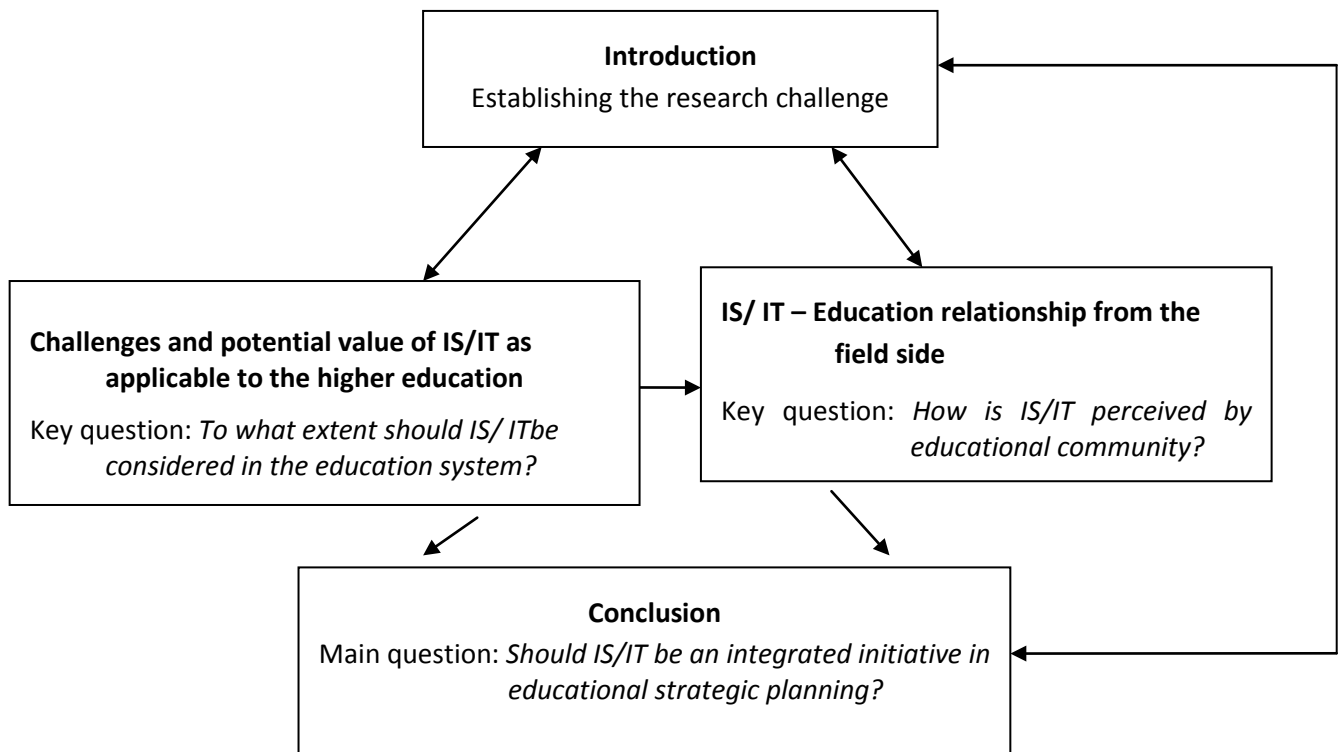
This paper is a personal conceptual point of view about IS/IT in higher education as inspired by the PhD course *Teaching and the human brain* and the knowledge of the author in IS/IT. It is founded on two concepts:

- the existing literature and academic theories that discuss IS/IT concepts and their integration in higher education; and
- field examples, observation and knowledge from the author’s own experience in IS/IT.

The paper deals with IS/IT in higher education as applied in administration and in learning processes where information systems are seen as the facilitator-bridge that help instructor providing knowledge to the student and ensuring interaction between instructor and student and between students.

The scope of this paper is institutional, the institution being defined as the organizational unit providing the education. The paper focuses on IS/IT integration in higher education, its role in educational objectives, issues surrounding its integration in the educational community and what the perceptions of this community are about IS/IT. The paper shows the impact of IS/IT integration in higher education on educators and students and is designed for managerial executives.

Figure I - The logical structure of the research





## **Challenges and permanent potential value of IS/ IT as applicable to higher education**

### ***To what extent should IS/IT be considered in educational system***

#### **Challenges**

Information systems' success in improving processes and increasing performance in institutions (Herman & Golan, 1988) and organizations does not eclipse the problem of IS/IT project failures as demonstrated by a large amount of research and literature on this subject (Kaplan et al. 2009; Gauld 2007; Walid et al. 2009) in all domains including education.

Theoretically and in general, to ensure the success of IS/IT implementation in higher education three steps should be respected:

- designing or reviewing procedures and processes as clearly as possible and translating them into IS/IT terms, language and requirements;
- ensuring that the designed IS/IT procedures and processes are in compliance with the existing principles and processes to confirm their authenticity;
- ensuring that IS/IT designs conform to the educational norms and principles in one objective to provide a solution with features that may embrace educational principles such as brain-based learning principles. This step may concern ergonomic issues and may help to undermine the resistance to IS/IT integration (Markus, 1983).

Following this three-step process, we see that IS/IT integration processes in educational systems are not only about technical supportive systems but a complex process where decision making may be very crucial as it involves different people and engages all educational systems. This process presents another issue which is to conform IS/IT solutions to educational objectives because educational strategy planning is long term while IS/IT capabilities' life cycle is shorter (Cairo, et al., 1996). Thus, the decision to integrate IS/IT in education may have very heavy consequences not only on educational outcomes but also on the overall strategy.

Researchers are divided on the character of information systems. Some researchers present IS/IT as a technical system and others present IS/IT as a social system. For example, Land (1992) defines IS/IT as a social system composed by users, infrastructure, software, environment and organizational structure. In education, this concept confers IS/IT to a more than "educational-activities-technical-supportive-tools" status because IS/IT will get involved in the whole learning process and educational system. Nevertheless the emphasis should be put on the fact that the educational community may not over-rely on IS/IT to resolve all its problems and let IS/IT alone lead the education.

Gilmore & Halcomb (2004) conducted a study on the effect of technology use in the classroom on student-teacher interaction and their findings indicate that in order for technological integration in the classroom to be successful, the instructor must retain a prominent role within the class format. Ransdall (2002) said that "Instructional software makes the human teacher more important, rather than less". Therefore, IT/IS should ease the job but should be followed and accompanied by human educational activities. For example, in the case of IS/IT evaluation solutions, evaluators may judge students' behavior by taking into account any other parameters that may not be programmed for IS/IT evaluation solutions and they should be updated often for improvement.

### **Permanent hidden potential value of IS/IT in education**

IT/IS have hidden potential values that should be captured, created and exploited and their exploitation should be maximized to ensure that education benefits from their usefulness. The problem starts here, because when IS/IT work on their minimum capacity, opportunities for new technologies are missed which increases the negative perceptions of IS/IT.

As an example, an institution whose website provides information only may be losing a good occasion to use this portal for e-learning by extending the website to utilize this function. The website may also be extended to utilize administration by including online applications and online payment options and so on.

These permanent opportunities may be circumscribed in the heterogeneity of IT/IS that may be taken into account to advance technology and take all advantages of IS/IT into higher education. The changing pace in IS/IT solutions (Cairo et al.,1996) may oblige education to follow and fix very short term objectives which is not easy as the education system is very complex and changes occur over a long term period. This may discourage institutions to integrate IS/IT into their educational strategy because its exigencies may interfere with the education strategy as highlighted in the challenges section above.

While IS/IT present a real interest for education, often its benefits come with other problems or issues that should be managed in another way that requires the institution to modify their strategy. Breaking barriers is one of the big advantages of IS/IT in education: Geographical barriers are no longer a problem to extend education because learning may be done online. Educational institutions can extend their offer to different students all around the world at a very low cost because they can follow courses from their home location. The institution may benefit from competencies of qualified teachers and professors from all around the world as they can teach online from their own locations. All these benefits come with a real advantage of cost-cutting in education expenses while introducing new challenges to the

institution such as management of a virtual environment to make sure the expectations will be met. The approach of education management may change in the way that will allow institutions to manage the virtual and traditional educational systems simultaneously.

In this century, flexibility and an unlimited choice of IS/IT solutions (Vyver, 2009) may be very attractive because there is no longer an obligation to a traditional system that requires major changes when a new solution has to be added to the existing system. Compatibility problems are no longer obstacles and IS/IT providers are improving their solutions to meet education's requirements. With this liberal approach in IS/IT, it is now up to the institutions to make a good plan that may allow alignment of IS/IT with educational strategy, otherwise educational institutions may find themselves with a set of different IS/IT components and solutions introduced one after another every time a problem occurs or is discovered, something that may lead to a lack of maximization of IS/IT benefits.

The maximization of IS/IT in education may mobilize more resources and all the institution's hierarchy and students may have to be mobilized too. The institution's managers may be involved in the IS/IT integration to ensure its value is created and exploited on all levels.

#### **IS/IT – Education relationship from the field side**

##### ***How are IS/IT is perceived in educational community***

###### **Overview**

Many educational institutions and governments all around the world have implemented IS/IT for education (Wako, 2003; Kozma, 2003; Lavooy & Newlin, 2003) and they are observing good results and improvement in almost all areas of education as illustrated by different studies. The studies show that students experiencing the use of IS/IT in their activities are performing better than students who are still learning in the traditional way. Andriole, Lytle & Monsanto (1995) in their study on the effect of IT in students-educators interaction show that 73 percent of students felt they learned more in asynchronous-learning, network-based courses than they would have expected to learn in a conventional course. Lavooy et al. (2003) say that concerns expressed by educators about the reduction in the interaction between instructor and students in web-based courses ignore a fundamental aspect of web instruction: Computer Mediated Communication (CMC). They say that, in their experience, the effective use of CMC has resulted in an increase, not a decrease, in student-student and instructor-student interactivity.

Despite this good news in IS/IT integration in education there are some aspects that should be explored because of different groups of people concerned by IS/IT integration in education such as faculty (educators), students and executives. The success of IS/IT

integration is correlated to the way those three groups will deal with IS/IT integration but given the character of challenges surrounding IS/IT integration in higher education, the role of executives and the board is crucial. The adoption of IS/IT will be influenced by the level of implication of the executives to heighten educators' and learners' awareness of the IS/IT. Bagozzi et al. (1989) proposed a model they called “the model for technology acceptance” and suggest that technology use may be explained by user motivation which, they believe, is influenced by technology features and capabilities. Considering this concept, one may say that IS/IT choice may be led by features and capabilities that educators and students will accept to use. However, in many cases educators and students should accept the use of IS/IT even though their features and capabilities may seem to be obstacles. Thus another way, independent of the IS/IT features and capabilities, should be found to make them accept and adopt IS/IT.

### **Educators with IS/IT integration in higher education**

Many problems may perturb educators in adopting IS/IT to their teaching activities. With IS/IT integration, they are required to change the way they teach or have been taught to meet IS/IT requirements. This is an issue because to successfully integrate IS/IT into higher education, educators must lead the adoption. Not only should they accept IS/IT use but they must become familiar with and use IS/IT correctly to ensure that they will attend expected outcomes (Bandura, 1997). The challenge for education is now to know how to bring educators to adopt IS/IT in their work and how to shape educators' perceptions of IS/IT utility in their activities. Bandura (1997) believes that the perception of someone on his/her self capacity to accomplish a given task may influence his/her thinking, motivation and behavior, thus people tend to avoid situations and activities they consider as obstacles.

Educators are required to be more competitive and improve their knowledge in use of IS/IT. Actually, if all educational activities are going to be automated and will require IS/IT support then highly qualified educators may have these skills. The cost engaged to acquire IS/IT may also be covered by the gain it will produce, an approach that may increase the competition. Therefore, training, lifelong learning and overtime work are different issues that should be dealt with when educators make the effort to approach IS/IT and to understand the benefits of IS/IT in accomplishing their objectives.

IS/IT integration in higher education impacts on educators who see changes in their work. Preparation and planning of their courses should now take into account the IS/IT requirements. This action asks for more time and self motivation. Herman & Golan (1988), using Yinger's cyclical teaching planning model, suggest that planning focuses on three stages: a problem-finding stage where IS/IT are seen as a knowledge base, problem-

formulation and solution where IS/IT cannot be of large importance and implementation, evaluation and routinization where IS/IT may play the role of evaluation tools to measure the effectiveness of the teacher’s implemented programs. With this concept, throughout these three stages IS/IT are not considered as means used to convey knowledge from educator to student and they do not play a role in the student-educator interaction. They are awarded with a thorough supportive role to serve as a base of knowledge that may help in activities done outside of the class, such as:

- before class for gathering information that may help planning; and
- after class for gathering information to evaluate results.

However, currently, IS/IT in education play a significant role in “educator-student” interaction and influence the way knowledge is transferred. The heterogeneity of IS/IT may require educators to gain more competencies and skills because of the way they are dealing with tools and applications, their commitment and knowledge, their freedom and the way they feel at ease manipulating IS/IT tools before students may affect their learning process. Wilson & Horch (2002) when discussing the one of brain-based learning principles (“Learning involves both focused attention and peripheral perceptions”) say that the brain absorbs information of which it is directly aware, but it also absorbs information that lies beyond the immediate focus of attention. In fact, the brain responds to the entire sensory context in which teaching and communication occur. They conclude that these “peripheral signals are extremely potent and thus educators can and should pay extensive attention to all facets of the educational environment.”

Actually, students are influenced by their educators’ knowledge of the tools they are required to use. There is nothing worse than an educator who does not know where his/her files are or who is struggling to fix a projector for slides in the classroom. It is a poor experience for the educator but it can be a worse experience for students and may come with negative consequences. Dealing with this issue may not be a process of initiating educators on the use of IS/IT as the support tool to their activities but a real strategy that may explain and shed light on the necessity of having a good understanding of technology and its utilization in their respective domains.

### **Students with IS/IT integration in higher education**

The role of students in IS/IT integration is of large importance when considering student-centered education. The adoption of IS/IT by students will determine its integration success in the educational system. Adopting IS/IT by students is referred to the students’ acceptance of using IS/IT but strictly for what they were designed for.

To ensure that students will accept using IS/IT may be easier than to control their use for the targeted objective which may be another challenge that requires the institution to make specific programmes for guiding IS/IT use. This is not something that may be left to an IS/IT administrator because it engages the objectives of the institution. Therefore it is important for the institution to consider IS/IT as an integrated part of the learning process and to establish principles to secure the authenticity of learning through IS/IT. For example, with e-learning, for students following distance learning (online) IS/IT facilitate the access to the school learning activities and programmes but there is nothing that guarantees that the school will be able to transfer to the students its culture and values other than reading, writing and completing assignments. How can an institution engage students in learning and how can they gauge their commitment? Attendance, commitment, group work, cultural exchanges, etc., all these values are attributed by traditional education and may not be embraced with IS/IT learning and it is very difficult to know what the consequences will be for the future.

Implementing IS/IT may look beyond facilities used to support learning activities and see IS/IT as a strategic initiative that forms an integrated part of educational strategic planning to attend an institution's objectives.

The guidelines and measures may be established to supervise the IS/IT learning process and IS/IT use. New means that should help to evaluate the motivation, participation and commitment of students may be developed.

### **Learning environment and IS/IT**

Wako (2003) classified factors of IS/IT success in education into three major factors: political commitment, good governance and strong management. These three factors may be linked to the institution's strategy, where executives may be involved in IS/IT projects and objectives and may do everything to encourage the creation of a real IS/IT environment. However, above the commitment of politics, good governance and strong management there is another factor which is the society or community culture regarding IS/IT.

Educational culture, represented by the interaction between educator and student may experience changes due to the use of IS/IT facilities. Indeed there is a decrease in face-to-face interaction between educators and students because there are many other ways to communicate and interact. This situation may sometimes have very serious consequences for learning because students and educators use their own intuitions and interpretations of virtual correspondence trying to know each other. With IS/IT the amount of interaction

between students and educators may increase (Lavooy et al., 2003) but then the quality of these interactions should be investigated.

The contact, face-to-face between student and educator is a very important issue that should not be ignored. One of the brain-based learning principles stated that: Learning Involves Both Focused Attention and Peripheral Perception (Horn, 2007) and Lombardi (2004) said that an instructor's belief systems and attitudes toward subjects influences students, no matter how well the instructor thinks they are hidden. Bringing this principle into the IS/IT learning system the culture issue, languages, etc. will play a large role in the interpretation students will give to the instructor's actions and comments.

The other issue for education is to deal with the environment surrounding IS/IT learning system activities. A traditional educational environment is very rich: there are different people (students and educators), material and so on, with large possibilities to learn from this environment and interact with it. The principle of brain-based learning says that people learn from everything surrounding them and interact with each element in this rich environment (Horn, 2007). Using IS/IT facilities may undermine this principle because more competencies are required to deal with an IS/IT environment and not everyone has these competencies. In addition, fears of IS/IT may undermine the efforts by students to learn the surrounding environment which may be very limited in some cases as exemplified by virtual learning.

### **Should IS/IT be an integrated initiative in educational strategic planning**

The adoption of IS/IT by all educational institution is crucial for the success of IS/IT in higher education.

The educational institution may prepare educators and students and help them to understand the “raison d'être” of this intense program and what could be their interests apart from the one manifested for the institution and education. Deci & Ryan (2002) discussed the self-determination theory and said that competence, autonomy and relatedness may lead to the motivation of someone to do something. They said that when a person feels capable to produce a given behavior, and that this behavior may lead to self important results then the person will be more motivated to adopt this behavior.

IS/IT integration is deeper than a tool that comes to resolve all an institution's problems. Rather than doing that, it creates many problems or reveals existing issues that must be approached and resolved. Among other problems and issues arisen by IS/IT integration we can cite new competences and skills in IS/IT required for educators, new procedures and

processes to conform to IS/IT requirements, etc. Thus with IS/IT integration, a set of activities should be launched to resolve problems, to fix others and different decisions should be made to be ready to change and to manage the IS/IT incursion in the institution culture while keeping in mind that - as in any other culture – it is a long process to change or to accept change (Judson, 1991). The new element immersion in another culture is a very risky and long process that may be accompanied by specific and strong measures (Kotter 1995; Fernandez & Rainey, 2006).

Due to the heavy decisions and investments in IS/IT and given its consequences on the overall objectives of the education, it is very important that IS/ IT integration in higher education be done as an integrated strategic initiative aligned with educational objectives while enforcing their support in operational activities to ensure a positive outcome.

IS/IT may be thought of as part of an educational system and their integration may be accompanied by appropriate measures, principles, methods and guidelines to ensure their success and from there to secure their contribution to the educational objectives. IS/IT must be adopted by the educational community to ensure they will contribute to the overall objectives. Educators may adopt IS/IT and accept them as an integrated part of their work of teaching and transferring knowledge. Students influence the integration of IS/IT into education thus their adoption is vital to the success of IS/IT and will determine their outcomes.

There is a large amount of research and theory on IS/IT in business but still there is a large domain to be explored in IS/IT in higher education. This paper gives another facet of IS/IT integration in higher education emphasizing the importance of their strategic character and the sensibility of their integration and adoption by the educational community. IS/IT may be seen not only on the field side as a technical supportive tool for learning activities but as an integrated part of a strategic plan and their impact on the learning process should be taken into account.



## References

- Andriole, S. J., Lytle, R. H., Monsanto, C. A. (1995). Asynchronous learning networks: Drexel's experience. *Technological Horizons In Education*, 23
- Bagozzi, R. P., Davis, F. D., Warshaw, P.R. (1989). User acceptance of computer technology: A Comparison of Two Theoretical Models. *Management Science*, 35(8), 982, 1003
- Bagozzi, R. P. (2007) The Legacy of the Technology Acceptance Model and a Proposal for a Paradigm Shift. *Journal of the Association for Information Systems*, 8(4) 244-254,.
- Bandura, A. (1997). *Self-efficacy: the exercise of control*. W.H. Freeman (New York)
- Cairo, P. C., Kritis, K. J. , Mayers, R.G. (1996). Career assessment and the adult career concerns inventory. *Journal of Career Assessment*, 4(2),189-204.
- Dalcher, D. & Drevin, L. (2003). Learning from information systems failures by using narrative and ante-narrative methods. *SAICSIT; Proceedings of the 2003 annual research conference of the South African institute of computer scientists and information technologists on Enablement through technology*. (47), 137-143.
- Deci, E. L & Ryan, R.M. (2002). *Handbook of self-determination research*, University of Rochester Press
- Devos, J., Landeghem, H., V., Deschoolmeester, D.(2008). Outsourced Information Systems Failures in SMEs: a Multiple Case Study. *The Electronic Journal Information Systems Evaluation* ,11(2), 73-82.
- Donaldson, J. & Jenkins, J. (2000). *Systems failures: An approach to understanding what can go wrong*. European Software Day of EuroMicr'00, 2000.
- Fernandez, S. & Rainey, H. G. (2006). Managing Successful Organizational Change in the public Sector: An Agenda for Research and Practice. *The Premier Journal of Public Administration*. 66(2)
- Gauld, R. (2007). Public sector information system project failures: Lessons from a new Zealand hospital organization. *Government Information Quarterly* 24(1), 102-114.
- Gilmore, C. & Halcomb, C. G. (2004). Technology in the Classroom: Investigating the Effect on the Student-Teacher Interaction. Retrieved October 10, 2009 from [http://psychology.wichita.edu/surl/usabilitynews/62/online\\_stats.htm](http://psychology.wichita.edu/surl/usabilitynews/62/online_stats.htm) 2004.

Herman, J. L. & Golan, S. (1988). *Increasing the utility of information systems in schools: lessons from the literature*. California Univ., Los Angeles. Center for the Study of Evaluation

Horn, P. (2007). *The twelve principles of brain-based learning*. ISM, Paris

Judson, A. S. (1991). *Changing Behavior in Organization: Minimizing Resistance to Change*. Cambridge, MA: Basil Blackwell.

Kaplan, B., Harris-Salomone, K.,D.(2009). Health IT Success and Failure: Recommendations from Literature and an AMIA Workshop. *Journal of the American Medical Informatics Association*,16(3), 291.

Kotter, P. J. (1995). *Leading Change*. Harvard Business school press

Kozma, B. (2003).Technology and Classroom Practices: An International Study. *Journal of Research on Technology in Education*, 36(1)

Land, F. (1992) "The Information Systems Domain" in *Information Systems Research: Issues, Methodologies and Practical Guidelines*, (Galliers, R. D. ed.) Blackwell Scientific, pp. 6-13.

Lavooy, M. J., Newlin, M. H. (2003) Computer mediated communication: online instruction and interactivity. *Journal of Interactive Learning Research*, 14 (2), 157-165.

Lombardi, J. (2004). Practical Ways Brain-based Research Applies to ESL Learners. *The Internet TESL Journal*, 10(8),

Markus, M. L. (1983). Power, Politics and MIS Implementation. *Communications of the ACM*, 26, 430-444.

Ransdall, S. (2002). *Teaching psychology as a laboratory science in the age of the internet*, *Behavior Research Methods*, 34, 145-150. .

Shoniregun, C. A. (2004). An investigation of information systems project failure and its implication on organizations. *International Journal of Services Technology and Management*, 5(1), 25-41.

Vyver, G. (2009). The Search for the Adaptable ICT Student. *Journal of Information Technology Education*, 8, 19-28.

Wako, T. N. (2003). *Education management information*; Unesco. Zimbabwe

Walid, A., Khalid, A., Khalid, K., Khalid, A., Saleem, A., Hani, A. S. (2009). Taxonomy of an IT Project Failure: Root Causes. *International Management Review*, 5(1)

Wilson, L. & Horch, H. (2002). Implications of Brain Research for Teaching

Young Adolescents. *Middle School Journal*, 34(1), 57-61.