Higher Education in the 21st Century – A Learning-Centered Approach

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Introduction

Competition in the 21st Century knowledge economy requires corporations, organizations, and professionals to face a common challenge. This challenge encompasses the constant need to participate, upgrade, and improve their competences to increase their responsibilities through further education, training, and professional development. The active participation in a knowledge economy demands the use of new approaches, from distance learning through the Internet to the consideration of the workplace as a classroom to the consideration of the classroom as a place to learn and develop competences that can be immediately applied in the workplace. This is the biggest challenge faced by universities and business schools around the world: prepare students to succeed in the global marketplace of the 21st Century.

In order to achieve this important goal, a learning-centered environment must be created that eliminates the “sage on the stage” that envisions the instructor as the holder of an “absolute” truth. In using a different, broader, and more diverse set of alternatives to learning,
these “sages” or educational agents need to develop a strategy to enable the students to consolidate their and other students’ learning in a single, unique and comprehensive whole that is able to adapt and morph according to the environment and the requirements. This accomplishes the students’ goal for learning topics, ideas, concepts, and material that is personally relevant to them and their colleagues simultaneously, despite the different needs or environments. It also allows the students to demonstrate competencies to employers and the market, regardless of the understanding of the business environment or the business need.

In examining these needs within their environments, there are a multitude of differences in the needs and requirements. While in today’s business environment technical competences are mandatory in almost every function of global business, these are not sufficient for exceptional performance. Other fundamental competences are instrumental to achieving a better performance. Among them, one includes the following:

1. the ability to identify, organize, plan, and allocate resources;
2. interpersonal skills including the ability to work well with other people including working with individuals with dissimilar ethnic, heritage, racial, socio-economic, religious, and cultural backgrounds;
3. the ability to gather and use all information necessary to improve the professional performance;
4. the ability to understand complex interrelations, through the use of social, cultural, ethnic, and informational systems; and
5. the ability to work effectively and efficiently with a variety of different technologies in a variety of different environments.

To develop those competences, a solid foundation composed of intellectual abilities, emotional intelligence, spiritual intelligence, and personal characteristics needs to be in place. While personal characteristics are mistakenly considered to be irrelevant by many people, it is the individuality of interpretation and actions that enable any individual to become successful throughout her or his career. The personal qualities enable the learning processes and specific skills to be utilized in the direction or toward the goal structured by the company or the individual.
Learning as an Adult

The traditional higher education addresses and educates adult learners in the same way as children at school. This technique is called pedagogy. However, adults have moved beyond the childhood skills and have learned how to survive by utilizing their own idiosyncrasies, experiences, and expectations. They learn using one or more of the different styles of learning using the eight intelligences of Gardner (2006) including visual – spatial, body – kinesthetic, musical, interpersonal, intrapersonal, linguistic, logical – mathematical, and naturalist. The order or method of learning is discussed by Kolb (1984) sequentially concrete experience, reflective observation, abstract conceptualization, and active experimentation. Kolb (1984) has not adjusted his model to include social and/or power pressures, unconscious elements including personal egos and evaluations of the learning environment, idiosyncratic defense mechanism, evolutionary processes, and evaluations of the benefit or utility of what is learned (Vince, 1998).

When taken together, people are frequently faced with problems connected to their learning process that result in problems with learning. Some of these include: 1) they are forced to learn in a pedagogical way, the so-called “sage on the stage”. That is, there is someone teaching, transmitting information, and directing the learning with no room for interaction or discussion; and/or 2) personal exposure to classrooms is distant and the structure and expectations are foreign to the individual who is accustomed to learning in a synergistic manner where the learning takes an individual across a multitude of differences needing reflection. Learning may in fact intone the dismissal of previously held ideas and concepts in an attempt to adapt to the environment in a holistic manner that encourages self-reflection and evolution.

However, in many post-secondary institutions, teaching is accomplished in a manner that can really impair the learning process. This creates many difficulties for achieving learning outcomes, such as:

- Lack of a learning methodology aligned to one’s cognitive development stage; and
- Lack of a context that justifies the search for new learning. These outcomes are complicated by the individual’s personal motivation or characteristics that may or may not stem from previous experience, but exist nevertheless. These include:
  - Lack of comfort in continuing or restarting to learn, due to previous unpleasant or negative teaching/learning experience; and
  - Lack of personal motivation to learn despite understanding the close connection between learning and developing; envisioning this process only as a necessary evil, something that must be pursued but without enjoyment or pleasure.

Despite these obstacles, educators of adults need to develop a better understanding of the adult’s learning process and all roles involved in the process within the surrounding environment. The desired outcome is a learner-centered education, in which students share the responsibility of learning with “facilitators” and which lead to successful personal and professional development. This is an approach that was named “Andragogy” by Malcolm Knowles (1980), an American educator who, at the end of the 20th Century, questioned the outcomes obtained by the use of a traditional approach, or Pedagogy, with adult students. Knowles (1980) based the andragogical model on four fundamental assumptions, all of which had some relationship to our notions about a learner’s ability, need, and desire to take responsibility for learning:
  - The learner’s self-concept moves from dependency to independency or self-directedness;
  - The learner accumulates a reservoir of experiences that can be used as a foundation upon which to build their learning;
  - The learner’s readiness to learn becomes increasingly associated with the developmental tasks of social roles; and
  - The learner’s time and curricular perspectives change from postponed to immediacy of application and from subject-centeredness to performance-centeredness.
Thus, Andragogy and Pedagogy differ considerably in terms of how to approach the student, the conceptualization of the learning environment, and the interaction between and among the student(s) and the educator. These differences are consolidated in Table 1.

<table>
<thead>
<tr>
<th>Pedagogy (&quot;sage on the stage&quot;)</th>
<th>Andragogy (student-centered learning)</th>
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<tbody>
<tr>
<td>Students are dependent</td>
<td>Students are independent and self-directed.</td>
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<tr>
<td>Students are extrinsically motivated (rewards, competition, etc.)</td>
<td>Students are intrinsically motivated (achievement)</td>
</tr>
<tr>
<td>Learning characterized by knowledge and information transmission (lectures, assigned readings)</td>
<td>Learning characterized by inquisitive projects, experimentation and independent studies</td>
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<td>Formal learning environment characterized by competition and value judgment.</td>
<td>A more informal learning environment characterized by equity, mutual respect and cooperation</td>
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<td>Planning and evaluation are completely controlled by educator</td>
<td>Learning should be based on experience.</td>
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<tr>
<td>The performance is basically evaluated through external methods (grades, quizzes and exams)</td>
<td>Students are centered on performance in their learning processes.</td>
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Table 1 – Pedagogy vs. Andragogy (adapted from Jarvis, 1985)

The Truth is Out There

Today, the need for more knowledge, skills, and abilities is increasing every day, making efficient and effective learning is a must for the majority of adults. Conversely, reaching and
motivating people to continue learning and developing their skills, knowledge, and abilities further than they are required is an extremely complicated task. Problems involved in allowing others, possibly subordinates / friends / younger adults / etc. know you do not have the knowledge; remembering how to study for tests; comfort with “the way things used to be”; time pressures with the demands of work, family, and friends; the requirement to travel to the educational institution; the human desire to “fit in” with co-workers who are not continuing their education; the requirement for precise information, not general education or generalized concepts (Edelson, 2000); and many more reasons and excuses are given for not continuing with higher education. This is complicated by the emotional and psychological environment of the classroom wherein often the distance between students and faculty in the classroom is significant. As adults, the fear of failure and the misalignment between students’ and faculty’s expectations lead to a growing percentage of withdrawals or lack of commitment by those who are enrolled. Still other student are disenchanted with programs due to lack of rigor within the course, high expenses, the failure of courses to include current material, among others (Returning to School as an Adult, 2014). There are many issues to be addressed but is the replacement of Pedagogy by Andragogy sufficient? Is Androgogy the best solution for all learning situations involving adults?

Within this paper, we respond to these questions by relying on a learning-centered environment, represented by a continuum, shown in Figure 1. At one end of the continuum is Pedagogy or teacher-directed learning; and on the other is Andragogy or teacher-facilitated learning. The continuum has been discussed elsewhere (Aquino, 2008) and is used herein to highlight the best balance of these two methods of instruction and, therefore, improve the effectiveness and efficiency of the learning process. That is, different educational institutions, different levels of students, different ages of students will require different levels of Androgogy and Pedagogy. Therefore, faculty and educational organizations should be able to move along this continuum and find the correct balance between the two pure approaches to build a learning-centered environment.

The right “blend” of Pedagogy and Andragogy as the learning approach, and the consequent right positioning in the continuum, depends upon a series of factors, such as:
• The cognitive development level of the learners;
• The characteristics of the learners’ generation;
• The previous educational experiences of the learners;
• Their learning styles;
• The learning objectives;
• The educational environment; and
• The external environment.
Figure 1 – Learning Continuum

- Pedagogy
  - Directed Learning
  - Non-reflexive Learning
  - Dualism
  - Theory X
  - “Sage on the stage”
  - Superficial Processing
  - Training
  - Passive Learning

- Andragogy
  - Facilitated Learning
  - Reflexive Learning
  - Relativism
  - Theory Y
  - Learner Centered
  - Deep Processing
  - Education
  - Active Learning
The Role of Faculty and Educational Organizations

As discussed before, the correct positioning in the learning continuum can be influenced by many factors, but besides that, it is necessary that faculty members adopt a pro-active attitude, characterized by the following aspects:

- **The faculty should “read” each class profile**, meaning that before starting any further interactions or activities it is desirable to get acquainted and understand who are those people sitting in the classroom - the learners, with their previous background and experiences, and their expectations – and prepare a tailored approach that could address the specific learning needs of that particular group of students. Diversity is one of the most powerful traces of the world we live in. One approach cannot be of universal application and success.

- **The faculty should demonstrate a total confidence in the students’ ability to learn**. This is a approach widely known in the educational area, and in the marketplace in general, as the “**Pygmalion Effect**” (Rosenthal & Jacobson, 1968) or the “**Self-Fulfilling Prophecy**”.

- **The faculty must provide a context to the learning experience**. It is far more appealing to the learner to discover that all information and knowledge being gathered can and will be used in both their personal as their professional lives. This leads to a change from a dualistic focus to a relativistic one, in which whatever is learned has a meaning and must be worked, evaluated and modified according to daily needs for personal growth, using a experiential and/or social approach to learning as defined by Kolb (1984) and Bandura (1977).

As one can realize from analyzing the above statements, the path chosen in this article is to foster a facilitated learning, giving a great share of responsibility and decision power to the learners. This approach prepares professionals that are more capable of facing the ambiguities and challenges existing in a world that is intrinsically dynamic and changes at increasing speeds.
A University Experience

At a given university environment, the authors had to face a great deal of diversity, in terms of both different cultures and generations. The University used in this research had five campus (one in the US and four in Europe) and students that came from more than 100 different countries, with a great concentration of individuals from China and India. In those two specific cultures, students expect to receive directions from the faculty members and do not share responsibility of learning with them. However, the philosophy of education at the chosen academic environment was to prepare professionals to succeed in the global marketplace, so a great deal of time had been spent on respecting everyone’s culture, but at the same time adding other cultures’ aspects into the original cultural basis. Another specific ingredient in the chosen environment was the presence of different generations: Baby Boomers, Generation X, and Millenials (Hicks, 1999), what made the task of developing a learning-centered environment even tougher. The faculty members were in its majority members of the Baby Boomers’ generation, whereas the students divided into Xers and Millennials. The natural clash between learning styles had to be addressed.

In order to overcome all these issues and create a learning-centered environment at the University, a philosophy of active learning was adopted and all syllabi were reviewed, with the definition of new learning outcomes that would foster the development of the upper levels of Bloom’s Taxonomy (1956, 1973) in all graduate and undergraduate programs. A faculty development program focused on developing skills for implementing a facilitated learning was implemented. The faculty members had to be prepared and motivated to use different approaches in the classroom, in order to reach out to a bigger percentage of the students. The delivery had to be more aligned with an experiential and social approach to learning, as exemplified as follows:

- Use of up-to-date textbooks that explored the multimedia nature of students, through media clips, website interaction, etc.
- Combination of lectures and simulations to contextualize the knowledge into a real marketplace and foster the development of critical thinking and conceptual skills
• Use of the case method and role plays to develop interpersonal and managerial skills
• Mentoring, coaching and counseling to foster social learning
• Participation in external activities, to increase networking and opportunities for employment.
• Invitation to guest speakers to bring the reality of the marketplace to the classroom.
• Use of Skype and other Internet options as an alternative to bring guest speakers to the classroom

On the students’ dimension, the university worked towards the creation and/or updating of programs to develop learning and study skills that could help success not only during college, but also in the future careers. Employability is a must, and the development of learning skills should be the foundation for managerial and interpersonal skills, the skills that employers really are looking for in prospect employees. A good model to be considered as a framework for success is the one presented at the SCANS Project (1993) that encompasses the following:

**Workplace Competencies**

• Resources: Identifies, organizes, plans, and allocates resources.
  o Time: selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules.
  o Money: uses or prepares budgets, makes forecast, keeps records, and makes adjustments to meet objectives.
  o Material and facilities: acquires, stores, allocates, and uses materials and space efficiently.
  o Human resources: assesses skills and distributes work accordingly, evaluates performance, and provides feedback.

• Interpersonal: Works with others.
  o Participants as member of a team: contributes to group efforts.
  o Teaches others new skills.
  o Serves clients and customers: works to satisfy customers' expectation.
  o Exercises leadership: communicates existing procedures and policies.
- Negotiates: works towards agreements involving exchange of resources, and resolves divergent interest.
- Works with diversity: works well with men and women from diverse backgrounds.

- **Information:** Acquires and uses information.
  - Acquires and evaluates information.
  - Organizes and maintains information.
  - Interprets and communicates information.
  - Uses computers to process information.

- **System:** Understands complex inter-relationships
  - Understands systems: know how social, organizational, and technological systems work and operates effectively with them.
  - Monitors and corrects performance: distinguishes trends, predicts impacts on system operations, diagnoses deviations in systems' performance, and corrects malfunctions.
  - Improves or designs systems: suggests modifications to existing systems and develop new or alternative systems to improve performance.

- **Technology:** Works with a variety of technologies.
  - Selects technology: chooses procedures, tools, or equipment including computers and related technologies.
  - Applies technology task: understands overall intent and proper procedures for setup and operation of equipment.
  - Maintains and troubleshoots equipment: prevents, identifies, or solves problems with equipment, including computers and other technologies.

**Foundation Skills**

- **Basic skills**
  - Reading: locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules.
  - Writing: communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts.
  - Arithmetic/Mathematics: performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques.
- Listening: receives, attends to, interprets, and responds to verbal messages and other cues.
- Speaking: organizes ideas and communicates orally.

- **Thinking skills**
  - Creative thinking: generates new ideas
  - Decision making: specifies goals and constraints, generates alternatives, considers risk, and evaluates and chooses best alternatives.
  - Problem solving: recognizes problems and devises and implements plan of action.
  - Seeing things in the mind's eye: organizes, and processes symbols, pictures, graphs, objects and other information.
  - Knowing how to learn: uses efficient learning techniques to acquire and apply new knowledge and skills.
  - Reasoning: discovers a rule of principle underlying the relationship between two or more objects and applies it in solving a problem.

- **Personal qualities**
  - Responsibility: exerts a high level of effort and perseveres towards goal attainment.
  - Self-esteem: believes in own self-worth and maintains a positive self.
  - Sociability: demonstrates understanding, friendliness, adaptability, empathy in group settings.
  - Self-Management: assesses self accurately, sets personal goals, monitors progress.
  - Integrity/Honesty: chooses ethical courses of action
Conclusion

Life in college and university is just a step to be overcome towards a successful career. The potential employers in the marketplace look for professionals that are capable to show and use appropriately not only technical skills for a specific area, but also interpersonal and managerial skills. Students need to be approached in such a way to foster their interest in the development of such characteristics, since they will help them to pursue a successful career and life. This approach involves the creation of a strong foundation over which these interpersonal and managerial skills will lay on. Learning is a must for the rest of their lives and this is an issue that needs to be addressed in a clear and concise way: learning-centered approach to education, based on experiencing and including many dimensions to reach the diversity of students we have today. Lifelong learning and the correct skills will certainly prepare them for the years to come.
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