DEVELOPMENT OF QUALITY LEARNING MODELS

by

Amílcar S. Gonçalves
Professor, Universidade Aberta, Portugal
CENEGE - Study Center for Business and Economics
E-mail: amilcar@univ-ab.pt

ABSTRACT

Some fundamental questions in the Distance Education Model, at the Universidade Aberta, Portugal, are: How do we help students to develop their interests? How do we give them the power of knowledge? How can we enable students to learn faster, maintaining the ability to immediately implement what is learned, creating new skills and having these skills become habits that are used instinctively? We believe that in the answer to these questions and many others emerging from them, is the key for reducing the failure rate and improving productivity in the school years and after.

In this paper we show how "Accelerated Learning Techniques" (ALT) can help in creating the right environment to accomplish these goals. We know from psychology that students learn best when they are motivated by interest and empowered by knowledge. In the Accelerated Learning framework adopted we consider three main elements: 1. **Keeping People Safe:** Based on Maslow's hierarchy of needs (physiological, safety, belonging, esteem and self-actualisation), we develop procedures to be used in the learning model. 2. **Improving Retention:** There are a number of elements that can be implemented to improve retention, when using ALT for the course construction. Many of them have to do with "Emotionally Charged Learning" and the "Mind Map" for learning. 3. **Having multiple learning modes for people to grasp the concepts:** Following Gardner's work on Multiple Intelligences, courses are developed by making use of different learning modes, from several intelligence domains (musical, kinesthetic, logical and spatial, linguistic, mathematical, intrapersonal, interpersonal and emotional).
INTRODUCTION

The basic purpose of teaching is to provide students/learners with opportunities to learn. Teaching therefore describes what the instructor can do for the students/learners. On the other hand, learning describes what the student/learner is able to do. It involves both gain in knowledge and changing in attitudes and behaviors. In fact, teaching and learning are two faces of the same coin, since the purpose of teaching is to facilitate learning.

Teaching and learning activities should be planned taking into account the needs of the customer. On the other hand, the most suitable environment must be furnished to make these activities both attractive and conductive to learning. The instructor / lecturer should select the most appropriate methods in the context of the subject being taught. However, students/learners learn best when they are active participants. This participation should always be stimulated and this can be done by selecting the appropriate teaching techniques.

Distance education provides an extension in the scope of the learning environment far beyond the classroom/office walls, allowing the student/learner and the instructor to be geographically remote from each other. For appropriate delivery of the course in this way, it is necessary to lay it down as a "learning oriented" rather than a "teaching oriented" one. This approach is called "e-learning". It provides a self-instructional study by the student/learner and hence allows a better achievement of the learning objectives of the course.

The process of e-learning implies the use of the computer facilities in a network (intranet / internet) to deliver the course such as text, graphics, audio, still images and moving video. The application of multimedia technology in the teaching/learning process is now attracting great attention since it furnishes an appropriate environment which makes this process an enjoyable experience for students/learners. Maintaining the ability to immediately implement what is learned is equally critical. Creating new skills and having these skills become habits that are used instinctively are the keys to quickly responding to changing market forces.

"Accelerated Learning Techniques" (ALT) can help in creating the right environment to accomplish these goals. Accelerated learning provides a mechanism to ensure that what is taught is quickly learned and easy to apply.

WHAT IS ACCELERATED LEARNING?

Accelerated learning is a proven way to teach people in a way that will improve their retention and their ability to apply the new knowledge so they can quickly use what they've learned. Accelerated learning techniques were pioneered some decades ago (*) in the teaching of foreign languages. They have since been applied to a wide variety of fields in business and in academia. These techniques use a combination of teaching principles to make the learner comfortable, and creating an environment where participation leads to learning, almost without any conscious effort on the learner's part. Actually, an accelerated learning program is conducted as if the participants are playing a game, and not actively engaged in a typical learning event. There is a lengthy testing and revision process of courses developed with accelerated learning methods to make sure that every technique that is used achieves the desired learning outcomes for the participants. The environment is tightly scripted in courses using accelerated learning to ensure that participants achieve a high level of competency.

ACCELERATED LEARNING FRAMEWORK

There are three main elements of this accelerated learning framework:
1. Keeping people safe (based on Maslow’s hierarchy of needs)
2. Focusing on improving retention
3. Having multiple learning modes for people to grasp the concepts

1. Keeping People Safe

The key to success with accelerated learning is in the participation that leads to self-discovery of the basic learning objectives. However, the simulations created to accelerate learning push the boundaries for many people. In order to be psychologically prepared to participate in the learning process, it has to be ensured that the participants’ basic needs are met.

As outlined in Maslow’s hierarchy of needs, people need to have their basic needs met in order to reach higher levels of self-actualization. This hierarchy is used in structuring the learning process so that people can reach the optimal state of self-actualization through self-discovery. The following section lists each of the hierarchical needs, along with examples of how each need is addressed in the construction of the learning process.

Physiological Needs

The first need identified in the hierarchy in Maslow’s book “Motivation and Personality”(*) is fundamental physiology - food, water, oxygen, etc. In other words, anything that the physical organism needs to survive involving very fundamental life or death needs. The learner should be provided with all this basic needs, Throughout the learning process, comfort breaks must be taken every hour, care must be taken to make sure that the physical space is comfortable, and it is also recommended that learners prepare for the learning sessions ahead of time by getting adequate rest.

Safety Needs

The second of Maslow’s hierarchical needs is safety. According to Maslow “If both the physiological needs are relatively well gratified, there then emerges a new set of needs, which we may categorize roughly as the safety needs, (security; stability; dependency; protection; freedom from fear, anxiety, and chaos; need for structure, order, law, and limits; strength in the protector; and so on).”

In the learning process, for every course its structure is explained in the pre-course preparations, with several props used for continual referral regarding the structure. Additionally, an emotional “tee-up” for every new activity is used to ensure that, gradually, the learner feels psychologically ready to participate in the upcoming activity. All this is done to make certain that the learner’s second need for safety is met prior to moving forward.

Belonging Needs

The third of Maslow’s hierarchical needs is for belonging and love. According to Maslow "If the safety needs are fairly well gratified, there will emerge the love and affection and belongingness needs, and the whole cycle already described will repeat itself with this new center. The love needs involve giving and receiving affection. When they are unsatisfied, a person will feel keenly the absence of friends, mate, or children. Such a

person will hunger for relations with people in general (for a place in the group or family) and will strive with great intensity to achieve this goal. Attaining such a place will matter more than anything else in the world and he or she may even forget that once, when hunger was foremost, love seemed unreal, unnecessary, and unimportant. Now the pangs of loneliness, ostracism, rejection, friendlessness, and rootlessness are preeminent.”

In order to address the need for belonging, the learners have to participate in team activities as much as possible, for the entire learning process. To create an affinity for their team, learners compete with the other teams. Situational and shared humor further helps the learners to feel an affiliation to their team and to increase their sense of belonging.

Esteeem Needs
The fourth of Maslow’s hierarchical needs is esteem. According to Maslow "All people in our society (with a few pathological exceptions) have a need or desire for a stable, firmly based, usually high evaluation of themselves, for self-respect or self-esteem, and for the esteem of others. These needs may therefore be classified into two subsidiary sets. These are, first, the desire for strength, achievement, adequacy, mastery and competence, confidence in the face of the world, and independence and freedom. Second, we have what we may call the desire for reputation or prestige (defining it as respect or esteem from other people), status, fame and glory, dominance, recognition, attention, importance, dignity, or appreciation."

"Satisfaction of the self-esteem need leads to feelings of self-confidence, worth, strength, capability, and adequacy, of being useful and necessary in the world. But thwarting of these needs produces feelings of inferiority, of weakness, and of helplessness.

"The most stable and therefore most healthy self-esteem is based on deserved respect from others rather than on external fame or celebrity and unwarranted adulation."

When preparing the course structure several things must be done to meet this need for esteem. During the pre-course preparations, part of the process for the course is to find out what each learners’ perception are regarding their expectations for the course, and what they would like to improve. Their esteem need is therefore met as a pre-requisite to the class.

Another element to meet the esteem need is used to help people ground themselves in their true expertise throughout the course. This further develops learners’ self-esteem so that they are more open to self-discovering concepts that may be new to them. As noted in Maslow’s last quote, stable esteem is based on deserved respect rather than on unwarranted adulation.

Through participating in the course simulation, the learners discover both areas where they have mastery and areas where they find they need to learn more.

Self-Actualization Needs
The last need in Maslow’s hierarchy is self-actualization. According to Maslow “Even if all these needs are satisfied, we may still often (if not always) expect that a new discontent and restlessness will soon develop, unless the individual is doing what he or she, individually, is fitted for. Musicians must make music, artists must paint, poets must write if they are to be ultimately at peace with themselves. What humans can be, they must be. They must be true to their own nature. This need we may call self-actualization.”

We use this last need in the premise of learning. When people are learning, they are in a mode of discovery. Self-discovery lends itself to the highest level of learning – when people are self-actualizing their innate growth. By meeting the earlier needs with the course structure and the simulation, people are open to self-discovery, and the pace of their learning is accelerated.

2. Improving Retention
When constructing a course using accelerated learning techniques, there are a number of elements that are implemented to improve retention. There are four main areas in the course structure, which can be used to improve retention.

The first area is with creating the course scenario. People remember by making associations to what they already know. Creating metaphors develops strong associations from new concepts to “old themes.” In creating simulations to teach a given subject for specific purposes, great care is taken to develop the scenario of the simulation. The first criteria for the simulation scenario is that the simulation needs to be close enough to the teams’ objectives. The scenarios are also developed to stimulate humor among the project teams, since laughing has been proven to be a very strong mnemonic. The learner should also be stimulated to make improvisational comedy during the learning sessions. The course structure should encourage for that, in some way. This will work to improve retention, since laughing is a strong mnemonic and people laugh the most at their own jokes. It also works to increase the learners’ feeling of belonging.

The other two elements used to improve retention involve the way the whole learning section is structured. Participants remember the most at the beginning and endings of sections. Therefore, it is recommended that the course is arranged in one-hour long modules. For every other one-hour long module a “ritual” will occur. The rituals in and of themselves improve retention, but also add to the first element, the commencements and endings phenomena.

At the beginning of each module, the learners are engaged in a question and answer session, used to establish their preparedness for the module’s activities. Once all the learners are prepared to participate in the module’s activity, they are given instructions for the activity and allowed to work through the activity as a group. When they are finished with the activity, they go through a debriefing period where they answer questions about their discoveries during the activity, individually and as a team.

In the last ritual of every module, the current module is briefly linked to the next module and the participants are given a time for a Q&A period and a break.

3. Using Multiple Learning Modes
The learning framework of a course must be designed for people to be able to use self-discovery methods to learn the course concepts through many different techniques. The premise of Gardner’s work on Multiple Intelligences(*) is that all people can learn from different intelligence domains, but some have an easier time learning, or are more dominant in, one intelligence over another. In this approach for the learning process considered, the idea is to use the several different opportunities to learn the course concepts from many intelligence domains:

Musical
Classical, baroque, and romantic music can stimulate different aspects of the brain and make it easier to learn new concepts. Various classical, baroque, and romantic musical selections should be played during the learning sessions. Each piece must be selected based on the type of activity and the level of engagement of the learner.

Music is also used to ground people in the rituals with the course. During the breaks, theme music that is related to the simulation scenario is played. Starting the theme music signifies the ending of the “structured” learning and the beginning of the break. Stopping the theme music signifies the end of break and the beginning of the next module.

**Kinesthetic**
People learn by participating in hands-on manipulative activities. The learners should take notes and do other things that occupy their hands. Recommended exercises vary accordingly to the subject learned.
Another element of kinesthetic learning happens at the ending of the breaks. Part of the break ritual must includes stretching exercises that the learners lead themselves. The stretching exercises give an opportunity to rejuvenate and relax – a critical element of accelerated learning.

**Logical and Spatial**
In the course structure a color-coded system with bookmarks/post-its should identified, which the learners use to build up their exercises, project plans and schedules. A logical progression for how the learners use their color-coded bookmarks/post-its is used, so that they can see a clear step-by-step progression.

**Linguistic**
People learn by communicating. Linguistic learning happens through writing, brainstorming in teams, and in presenting the team’s work to the other teams. Each team participant is involved in the writing and the brainstorming, and they self-select the level of presentation participation. This leaves ample opportunity for a presentation by all those who are inclined to participate in learning through the linguistic realm.

**Mathematical**
People who learn through mathematical expression get cued into the learning objectives by the way the course is structured. Every activity, and each break in the course, is timed. Participants who are mathematically oriented learn many of the fundamental team dynamic concepts because of this timing. They are motivated towards completing the task at hand through effectively working with their teammates, because of the focus on the timing measurement. This heightens their awareness of the task at hand, the importance of sharing team leadership roles, engaging in positive conflict resolution steps, and of setting appropriate team guidelines. Additionally, learning through mathematical expression is an aspect of estimating budget issues and in manipulating the schedules based on the dependencies involved.

**Intrapersonal**
The intrapersonal mode of learning is represented by how well someone understands him or herself. At the end of every module, there is a debriefing of the activity in that module. Adults learn and retain what they learned by reflecting on what they experienced. Learners are asked to reflect on four questions as part of that debrief:

1. What did you feel doing the activity? (When you associate a learning experience to an emotion, it improves the retention of the learning experience).
2. What happened when you did the activity?
3. What did you learn doing the activity?
4. How are you going to use this?

**Interpersonal**
People learn through their participation with other people. In the learning process, learners are involved in team-based simulations, so that they can take advantage of interpersonal learning.

**Emotional**
We are all emotional beings, and emotions can either stimulate or block learning. One of the strongest emotional catalysts for learning is competition. In this course, teams are competing with one another. Competition element keeps people focused on participating in the simulation - if not for themselves, then for their teammates. It has been found that people will do the right thing because they want to protect their teammates, rather than because it’s the right thing for them to do. This finding is also used to stimulate motivation through competition among the teams.

**Conclusion:**

This approach to teaching is unconventional from the standard classroom approaches used today. However, it has been proven highly effective for a wide spectrum audience - people from a wide variety of backgrounds and experience levels. The application of this approach to E-learning has been tried elsewhere (*), with good results. However, much needs to be done, in order to take full advantage of the rich combination with existing distance learning technology, as it can be seen in a recent published report .(**)

**Bibliography**

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