

Future of Virtual Learning Methods and User Expectations – Can Present Methods Flourish Without Change?

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Abstract

The ever changing Information and Communication Technologies (ICT) add enormous approaches of utilizing computing in to our lives, daily. Every aspect of social needs have been touched with ICT, including Virtual Learning (VL). VL, with life span of slightly above a decade, still looks for possible approaches to enhance its functions with significant pressure from related disciplines for continual improvements. Very recently with the introduction of Web 2.0, Semantic Web, and 3-Dimensional Virtual Environments users expand their horizons of expectations. Along with this technology advancement, there has been a noticeable social and demographic transformation from recent years. Sociologists refer these as new generations of human kind with high intellect, Multitasking nature, and high awareness of their environments. At the moment they are getting into the education stream with high eager for creativity, flexibility and entertainment. Most of present primary and secondary students show such characteristics and advance their expectations frequently. On the other hand VL still not accommodating new social networking and entertainment approaches as it confined to limitations from traditional learning pedagogies and administrative rules. So far only successful step it could step forward is the blended learning which now fading its novelty. The simple yet foremost essential question is, how far could we retain our students willingly with present Virtual Learning methods? Or will it becomes another unimpressive rigid approach of learning to our future generations. This paper discusses possible approaches to evolve Virtual Learning Methods and Models to make the future learning enjoyable yet comprehensive task.

Keywords: Virtual Learning Methods, Learning Preferences, Generation Y and Z, Social Networking, Learning Strategy Development

1 Introduction

Education is considered as a fundamental necessity for any human being. Most of the developed societies consider it as the main qualification for being competitive among the others. As a result, enormous efforts have been made, throughout our civilizations for enhancing the education processes. ICT has shown a remarkable potential for making educational activities more effective and efficient, when used along with educational pedagogies. ICT affects many systematic disciplines to alter and revise their traditional workflows to improve their productivity. Hence the e-Learning is a growing area where

many universities are focused on to gain the maximum benefits through ICT. During past decades, there were significant works to improve the related technology (Perera, 2009). It is not only the e-Learning that made things better, but many believe blended approach would produce even better results. The term blended learning is used to describe a learning situation that combines several delivery methods with the goal of providing the most efficient and effective instruction experience by such combination (Williams, 2003). Many Higher-Education institutions have adopted the use of virtual learning environments and incorporate e-learning into their traditional teaching mechanisms as part of a blended-learning approach (Evans, 2008). Blended learning combines multiple delivery media that are designed to complement each other and promote learning behaviour (Singh, 2003). In fact blended learning tries to provide a common platform for traditional learning aspects with possible combinations from virtual learning technologies.

“Potential for a greater learner autonomy where learners are more empowered through control of tools and content development” (Field, 2007), can be seen with advanced technological development, especially ICT related. So far the blended learning tried to mix traditional aspects of learning with technology, but missing this vital concept of learner autonomy. In fact the technological advancement is so rapid and it moves further deviating from the learning approaches that we use today, making a more autonomous and creative person. It is now indeed the time for the requirement of another paradigm shift for learning activities to bridge the gap between our learning methods and today’s technology offerings. Essentially, it is meaningless to focus on situational aspects from time to time and find many different solutions as we could never able to develop sustainable learning methods. “To effectively accommodate, support, and promote the knowledge production process, instructors need to select appropriate learning models and strategies” (Dabbagh, 2007). Therefore, the main motivation of this paper is to introduce strategic guidance for future planning for learning approach improvements irrespective of technological changes time to time, while offering education to new generations meeting their behavioural preferences.

This paper is organized as follows. The section 2 discusses the present problem with virtual learning from the view of socio-behavioural concerns. Then in the section 3, the paper introduces a strategic model for analyze learning methods and their strategic positions respect to key aspects of today’s virtual learning. Section 4 gives a brief summary of possible technologies to move forward with virtual learning improvements, where as the section 5 discuss the issues we are going to encounter with these learning enhancements. Thereafter, the Conclusion summarizes the possible policy implications and finally the references will complete the paper.

2 Problem

Due to the increasingly diverse population, education is changing toward a more global, technology-rich environment designed to meet these diverse and changing needs of students (Gunter, 2007). As a result, many isolated researchers try different methods for incorporating new technological methods as they are, without following a proper

behavioural analysis on student preferences and technological suitability. In general any system approach needs to convince its users through different methodologies with sufficient amount of customizations to achieve the adaptability of the system. Adaptability is one of the important factors which help to yield the acceptance of an e-learning system. The issues of how to support adaptability in learning systems, and provide students with personalized learning materials, can be partially solved by providing student-centred, self-paced, interactive learning materials along with introducing automatic and dynamically adaptive learning methods (Sun, 2005).

Recent studies have shown that "the successful implementation of educational technologies depends largely on the attitudes of educators, who eventually determine how they are used" (Albarini, 2006). This is another important issue as educators are going to use the available new technologies with their preferred way, but student expect it differently. This is where the socio-behavioural input is needed to train educators to work with digitally oriented new generations.

2.1 New Generations' Learning Tastes

Demographic and Socio-Behavioural analyses show, three major generation groups at present; namely Generation X, Generation Y and Generation Z (still at the definition level). In present context Generation X refers to people with age around and above 30 years born up to 1980. They expect more self esteem and flexibility of what they do in the same time with less technology preference. Most of present learning methods are focused with this group and pedagogical confinements aligned with their requirements. Generation Y, usually defined as those between the ages of 11 and 25 or up to 30 at present context. They care less about salaries, and more about flexible working, time to travel and a better work-life balance. And employers have to meet their demands (Asthana, 2008). Generation Y is described as self-confident, self-reliant, independent, and goal oriented ... Perhaps the generation may put a bigger premium on having fun, and is more relaxed and able to take uncertainty in stride. They are special, sheltered, confident, team-oriented, achieving, pressured, and conventional (McIntosh-Elkins, 2007). Generation Y members have used computers since a young age and are e-learners (Allerton, 2001). They live to be trained, enjoy the challenge of new opportunities, seek work-life balance and like to be involved in decision making (Allerton, 2001). Present high school and university students are in this category and show different interests than what they have been offered in learning.

Generation Z, are the present youngest generation of human race who born after the internet information and communication became the mainstream of our lives, i.e. after mid 90's. There are not much behavioural characteristics clearly identified with this generation, as they are still around 12 – 13 years of age at most and many of them are in the present primary education system. Palfrey & Gasser (2008, p.41) define this generation as digitally born humans. They have digital identities from their birth, and every activity of their lives, digitally related and will have heaps of digital records of their life as grow. What we can anticipate is that they will be more autonomic, entertaining themselves and create their own environment irrespective of what happens around them and less tolerable with rigid, routinely, stereotypic activities.

Both Y and Z generations are more extraverts with highly connected to social networks. Extraversion refers to high activity, assertiveness, and a tendency towards social behaviour (Furnham *et al.*, 2007). Individuals high in extraversion enjoy human interactions and take pleasure in activities that involve large social gatherings. Indeed, work-life balance is one of the top priorities of students (Comeau-Kirschner and Wah, 1999). Proserpio and Gioia (2007) argued that we will no longer teaching a verbal, or even just a visual, but a virtual generation of students with digitally oriented mindsets. The clear differences between Generation X with Y and Z indicate it is highly essential to alter present learning methods to accommodate new generations' requirements.

2.2 Impact of Transitional Learning Activities

Whenever there is a new and affordable technology available, we tend to apply it for our education system thinking that we could solve infrastructure and social issues affecting education through that. However, we never foresee, what is the technological situation in learning context as well as in near future. We could observe this situation with most of the learning development activities as educators trying to introduce dozens of new teaching approaches with different technological infrastructure to overcome learning difficulties. This make students to confuse on technologies they use and ironically always the technology they are using to learn lags with what available for them in the society. This makes those students to lack their interest on the technologies used for teaching. Unfortunately, with resource constraints, teachers could not afford the latest technology either. But if we carefully examine, we could produce similar results to latest technological approaches, using what we have, in most cases. For that we need to examine student's preferences without confining ourselves to rigid learning processes.

Having discussed the main problem area for this analysis, the next sections try to provide a strategic solution with potential technical approaches for implementation.

3 Proposed Model for Analysis

It is really difficult to foresee the learner requirement in a situational manner, without a strategic drive for analyzing. Trying to tailor-made learning methods as new technologies emerge only give temporarily solutions and could be more probable to affect learners negatively. As we saw in above, without considering appropriate factors with suitable combinations, we would not able to get optimum learning methods to entertain students with new technologies.

The model which is proposed here correlates the three prime aspects of virtual learning. Most of the scholars have acknowledged the pedagogical aspects and technological aspects, but not the socio-behavioural aspects. Here the model introduces the socio-behavioural as a new paradigm to the learning methods analysis. Some may think that this aspect was already there with the learning activities. Even if it was the case it never used for thorough analysis at policy level. With this model, we could analyse many possible outcomes when different aspects gets dominating, allowing us to design our learning methods more appropriately and consistently, without getting affected from frequent technological changes or pedagogical constraints.

The model shown in the figure 1 below is the abstract view of how these three aspects combine each other for a future virtual learning environment. According to the proposed model, more overlapping of aspects altogether, gives ideal virtual learning environments. If the combinations are not balanced with all aspects, prominent aspects will make the learning activities less effective.

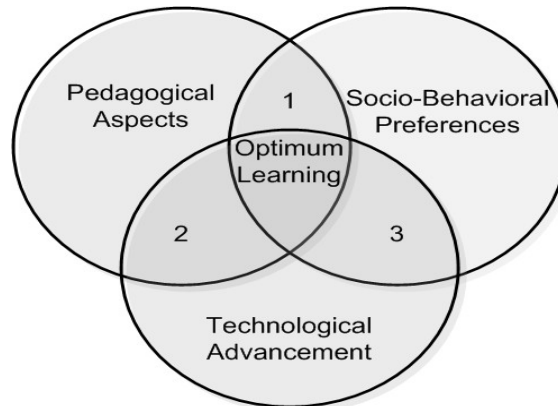


Figure 1: Conceptual model to analyze learning process improvements

3.1 Areas to Avoid

There are three sub areas according to the model shown as 1, 2, and 3 indicating possible problem areas. For the best results in future learning methods we have to avoid these situations and try to make them acceptable to all aspects.

Overlapping Area 1 - This indicates the combination of Pedagogical Aspects with Socio-Behavioural Preferences, but no consideration with available advanced technologies for improving learning methods. The course environments may somewhat attractive to students and meet pedagogical requirements, but not operating productively due to the overhead learning processes without technological support.

Overlapping Area 2 - This area represents the combination of Pedagogical Aspects with Advanced Technological solutions, but no consideration for making the learning process attractive to the audience. In fact, today's typical virtual learning environments have high vulnerability to fall into this category, and in future things would be worsen with new generation's preferences. Unfortunately, today what we are doing is, trying to make virtual learning align with pedagogical constraints and including blended aspects to widen the virtual learning scope, without taking into account on how students perceive our methods.

Overlapping Area 3 - This indicates the combination of Advanced Technologies and student preferences, without the Pedagogical Aspects of learning. Most of the latest pervasive and social networking solutions come under this category. We cannot use them as it is since they do not provide any formal learning methods.

4 Possible Solutions

The greater ubiquity of open standards-based e-tools and services is prompting a range of integrated and collaborative tools and functionality (de Freitas and Neumann, 2009). Indeed these tools provide good platforms to link both pedagogical aspects with user preferences.

Social networking solutions are very popular at the moment with younger generation. Facebook, MySpace, Twitter, and many similar social networking solutions have penetrated into students' lives, where most of them spent reasonable time with their preferred systems. Not only that, but also students use these as informal methods to share their opinions, plan group activities, participate in virtual events, sharing contents, etc.

Edirisingha and Salmon (2007) found that pod-casts contributed to informality and engagement. Pod-casting can also make learning more appealing to a diversity of learners and can generate greater inclusive nature (Cebeci and Tekdal, 2006). Rich media content through pod-casting and mobile sharing is another possible solution to make learning activities more attractive to users while making their learning more autonomous.

3-D virtual learning environments are another possibility to incorporate game flavour with learning activities. The "digital classroom" provided by 2D tools does not resemble the reality of the conventional classroom (de Lucia *et al.* 2009). There are many successful implementations of 3-D virtual learning environments available from universities and trend will move to the school education in near future.

Finally, moving further Mixed Realities would generate extraordinary results with combining all possible virtual and real technologies for comprehensive learning. "Mixed Reality is a new technology to edutainment, with potential to revolutionise learning and teaching with more engagement" (Liu *et al.*, 2007).

However, we also have to consider the relative cost of introducing new technologies to the learning arena for better results. Any Technology that students are widely using already for their entertainment would be a great option.

5 Issues to Overcome

Introducing, social networking, user generated content and heterogeneous technologies, results dozens of issues to emerge with present learning methods, indeed it would make the most of educators worry too. Some of the most prominent potential issues and possible remedial actions are discussed briefly, here.

"Many studies have specifically examined how an instructor's feedback impacted on student-student interactions and satisfaction and Wize and others have found that a moderated online discussion community by an instructor can elicit greater participation among students than an un-moderated one" (Heejung *et al.*, 2009). As the educational activities should be formal in nature, it may be not possible to use new entertaining technologies without moderation. For an example, the way social networking forum postings (language, spellings, short words, abusive words etc.) made by students among their friends may not suitable for proper learning. A moderator must be present to ensure appropriate learning mix with formal learning.

"In education, there is a growing concern with the Internet triggered dishonesty sparked by the massive use of the Internet" (Akbulut *et al.*, 2008). The Internet can facilitate many kinds of unethical behaviours such as plagiarism, piracy, fraudulence, falsification, misuse, etc. (Ross, 2005). With the social networking and rich content sharing methods, students could easily alter available content and claim the ownership for assessments. Also, it would be really difficult to access control on student activities to ensure proper assessment based learning activities. Future research is essential to implement technological solutions to overcome these issues.

Yet again, it is the educator who governs the methods and models used in learning process, and therefore they have to be convinced with the new approaches. They have to be trained and provided with sufficient guidance on how to work with new generational students and new technologies. There are one or two generational gaps with present educators and students, making the delivery of education happen according to the educators' mindsets even the methods accommodate all aspects in balanced nature. Therefore, to achieve, effective results from these improvements, present academia must be openly convinced on the benefits of changes.

6 Conclusion

This paper has very briefly, yet comprehensively, rationalized the problems that existing virtual learning methods and models, would experience in near future with new student generations, if they do not accommodate necessary improvements. Since the situational approaches for analysing these issues would not yield sustainable solutions, paper has introduced a strategic model to analyze virtual learning methods with prime aspects and their combinations. The technologies and potential issues discussed here would only guide the pathway, but essentially need further research on possible avenues of improvements with suitable technical customization. There are enormous untapped potential researches relating to future learning methods improvements. Unfortunately, so far researches focusing more on isolated technical approaches without considering the broad spectrum to provide sustainable solutions to next generations. Whether we evolve the present learning methods or not would decide their acceptance from future students.

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