

Chapter 2

Cultural Implications for Student Engagement in Online Learning

Samiullah Paracha

United Nations University – Macao, China

Toshiro Takahara

Kobe Institute of Computing, Japan

Sania Jehanzeb

Ritsumeikan Asia Pacific University, Japan

ABSTRACT

The main goal of this research is to investigate how learners with different cultural background differ in their interaction style and visual behavior in multimedia-enhanced education, more specifically between groups from the African vs. Asian regions. The researchers conducted a controlled eye-tracking experiment to explore and evaluate the visual behavior of African, Afghan, Japanese and Chinese learners when scanning through different online multimedia contents. The analysis of their eye-gaze patterns and heat-maps revealed significant differences in terms of learners' interaction style, gender, color, text or multimedia preferences. This cross-cultural investigation collectively contributes towards effective use of multimedia technologies in education that ultimately increases learners' engagement and retention.

INTRODUCTION

Education is the most important sector in development. Since there are many resource limitations in developing countries, e-learning is a prominent solution to overcome these obstacles and the engine to promote the social development. But the reality is, many e-learning projects face difficulties for their implementation. Ssekakubo G. of University of Capetown clearly cited that most of e-learning initiatives in developing countries have not been successful. (Ssekakubo G. et al. 2011) There are various causes for these difficulties. Hardware and technology centered projects have a perception issue between the supplier and receiver. For the supplier, the project is a success because they provided the agreed number

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of hardwares and softwares to the receiver. But for the receiver, the project is not a success because the system did not bring the expected outcomes. These difficulties are frequently combined with management problems, and human resource problems.

Technology centered projects are actually far from innovative, they are based on this supplier side logic, without thinking about the usability of the system by the target users. These projects make the users say “We prefer traditional materials and traditional methods” like Malala Yousafzai said at the european parliament in 2013 about children’s needs for books and pens instead of smartphones and game machines. Some e-learning projects face fierce contestations of the teachers, because the teachers feel threatened that the e- learning project will take up their place. This is caused by the lack of communication and involvement of the teachers in the project. Because of the number of implementation difficulties, fund providers started to avoid e-learning project. Despite all these problems and issues, e-learning seems to be one of the most prominent solutions because all of its advantages fits to solve the problems of limited resources in developing countries.

Generally speaking, there are three approaches to alleviate these issues: (i) Development oriented ICT, not ICT oriented development; (ii) Advanced interdisciplinary communication among stakeholders; and (iii) Contents development mechanism. Among them, the most critical approach is the contents development mechanism. Because it is directly related to the quality of e-learning. Educational contents are already defined in the most of the countries, but how to teach these contents is totally depends on the teachers. So the ability of teachers is the most important factor to introduce e-learning. Teachers are the interface to embody the educational contents, and all the e-learning technologies are the tools to help teachers in this process. And the content development mechanism must include how to produce high quality e-learning contents and e-learning interface.

Contents and interface are interrelated and indissociable, because the interface is a representation of contents and its quality is a part of the quality of contents. This fact was often underestimated, especially by the engineers, who have the main interest in the functionality of the system. But e-learning is far from a computer program or a software, which has a mechanical response to the inputs. E-learning is more human science than computer science, since the aim of e- learning is to make the humans learn. So e-learning must tackle with the human complexity, and the core technology is the interface design. There is already the research field called Human Computer Interaction (HCI). In HCI, interface design is often considered as an aesthetic side of the computer technology. But, Interface design is a whole human science of communication in order to bridge the computer and human senses. Interface design is how to make the accurate user perception by the stimulus created by the computers. It is also called User Experience (UX).

Why this important technology is often underestimated? Because the good interface design is clear, transparent and invisible to most of the users. This is why good interface design is not perceived as a design, and the designer have to make a delicate balance between visibility and invisibility. We do not know how the people, more precisely the students of the target culture interact with various e-learning materials. What kind of contents they are attracted, what is the best position of contents, what is their color preference, etc. It is an important aspect for the e-learning. Interface is the core of the communication between human and computer, and the interface design defines the efficiency and effectiveness of the e-learning material for the educational purposes. There are many design tips and analysis of design policies, but they are always talking about the trend of the design, or the usability of the design. Of course, usability is important for the e-learning materials, but usability can be different according to the

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