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Designing E-Learning Process

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Abstract: *In the last few decades, the rapid increase and development of advanced information technology has widened the gaps between different countries. The term E-Learning is ambiguous to those outside the E-Learning industry and, even within its diverse disciplines; it has different meanings to different people. This paper seeks to explore a model to be used as a filter for refining the items and products of E-Learning Process (ELP). Firstly, this model is concerned with the definitions and identifications of typical social problems which delay the application and deployment of E-Learning Process and secondly, we propose a simple model for socially conscious E-Learning Process to increase the benefits and effectiveness of ELP, as well as increase the number of customers in the world. In this model, Social Metrics (SM) are the parameters used to measure ELP improvement with respect to social goals. These metrics are used as evaluation criteria of concepts and ideas (CI) that will lead to the establishment of a relationship matrix (SM-CI). This model will add a new dimension to the quality of E-Learning Process by deploying social value to the quality function; it can also be used as a reference for social decision-making and design for society at the early stages of E-Learning product development.*

Keywords: *E-Learning Process, social concerns, social metrics, best concept.*

I. INTRODUCTION

E-Learning, or electronic learning, is a term that encompasses all forms of Technology Enhanced Learning (TEL) or very specific types of TEL such as online or Web-based learning (Ashraf, 1999). Nevertheless, the term does not have a universally accepted definition and there are divides in the e-learning industry about whether a technology-enhanced system can be called E-Learning if there is no set pedagogy as some argue E-Learning is: "pedagogy empowered by digital technology" (Dublin, 2003). Also, the term E-Learning is ambiguous to those outside the E-Learning industry and, even within its diverse disciplines; it has different meanings to different people (Deetz and Tracy, 2000). For instance, in companies it often refers to the strategies that use the company network to deliver training courses to employees, while in most Universities lately, E-Learning is used to define a specific mode to attend a course or program of study where the students rarely or never meet face-to face, nor access campus educational facilities, because they study online (Roche, 1999). This brings benefits to a large group of citizens.

For the success of E-Learning Process and for any other process, it is important to fulfill customer requirements in order to achieve satisfaction (Hauser and Clausing, 1998). This objective was misunderstood and translated by some E-Learning sources and sponsors (institutions, companies, individuals) without taking into consideration the psychological and social factors – for example cultural and religious – that effectively contribute toward customer satisfaction. It is known that the traditional process proposed for customer satisfaction, such as Quality Function Deployment, has no explicit mechanism to include social issues in the course of program or product development and/or improvement (Kenneth, 1996). In the Western countries, since the establishment of the World Wide Web (WWW) and the creation and application of some easy approaches to access the Internet, governments, companies, organization, and educational institutions of all types have been in touch with what is known today as E-Learning Process, which can be summarized by facilitating, measuring and managing learning (Howitt, 2001). In different areas, the maximum benefits of E-Learning were achieved because of the commitment of top management and other employed factors for the success of E-Learning Process (Kirkpatrick and Lee, 1997).

On the other hand, the literature review shows that E-Learning Process has not yet been accepted, applied and deployed in many countries of the third world as it is in the West (Stettner, 2000). There are several obstacles that companies and institutions have to overcome, and other pitfalls to be avoided on the way of successful application and deployment of E-Learning Process (United Nations-ESKWA, 2000).

Most institutions have relied on individual faculty members or departments to make their own decisions about how to implement an E-Learning environment that best meets their needs. The result has been a patchwork of incompatible solutions that has made it difficult for the institution to reach its goals and objectives (Burdge, 2004). However, many institutions could establish some base E- Learning components which need a larger strategic platform development effort. Individual initiatives for the usage and deployment of E-Learning Process faced many difficulties such as lack of knowledge and financial problems (Barrow, 1999). A very small group of people had the facilities to benefit from the process. Moreover, in many countries, the citizens did not

have the possibility and freedom to access the Internet due to security reasons and regulations issued by the government. The possibilities and the methods of E-Learning applications may vary from one country to another but some common factors delaying the application of this process can be extracted from the analysis of different cases. These factors are stated in Table 1.

Table 1. General concerns of E-Learning deployment

- Strategic and planning concerns
- Management commitment concerns
- Financial concerns
- Social concerns
- Political system concerns

Due to project confidentiality, only the social concerns are developed and presented in detail in Table 2.

Table 2. Social concerns of E-Learning deployment

- Sex discrimination
- Religious beliefs
- Cultural constraints
- Language preferences
- Freedom's constraints

For the elaboration and understanding of some social concerns, the following examples are provided:

- In some countries, girls' rights to study are very limited. They are not obliged to go to school and, if they do attend school, the teacher must be female, and they can only study up to grade five. They are purposely disconnected from the Internet.
- Some religious extremists consider the Internet as a source of sin because of some immoral websites. For this reason, they disconnect their families from the Internet and consequently E-Learning Process is prohibited.
- Many citizens and residents of some countries prefer to use their native language to study and the majority of them don't know the English language.
- Some political regimes such as the former Soviet political system disconnect their citizens from the outside world (Romanov, 2000). At present, a few political systems of several third-world countries follow the same strategy and apply very strict control over Internet availability and its usage by their citizens.

A New Approach to Social Conscious E-Learning Process (SCELP)

The concept of social metrics as a filter

Social Metrics (SMs) are parameters used to measure E-Learning Process improvement with respect to social goals. They play a fundamental role in the content development process of an E-Learning item, making them essential to the successful practice of "Design for Society". Social Metrics may also be considered as a resource of, by and for everyone interested in measuring social returns of any operation or process. The following metrics are called primary or high-level social metrics:

Religion metrics (respect is the desirable goal) cover:

-having the Holy Book of any religion as a main source of information;

-accepting and respecting the beliefs and thoughts of others;

-taking into consideration the vital and positive roles of religious representatives and institutions of any group of people.

Culture metrics
Politics metrics
History metrics
Race metrics
Language metrics
Due to project confidentiality, the full statement and details of the social metrics cannot be shown here.

In order to use SMs as a filter, we first have to look at the nature and characteristics of the E-Learning product. The latter may or may not have any relations with social issues. In general, the evaluation criteria may not include any Social Metric, or any number of Social Metrics.

In the new approach to social conscious E-Learning Process, it is suggested to apply SMs as evaluation criteria for concepts and ideas which flow through sentences and phrases of a paragraph at the early stages of E-Learning product development. This may reduce the size of the E-Learning product, e.g. text. by eliminating the concepts not matching the desirable goal of any Social Metric. That means SMs would act like a filter, which can only be passed by socially friendly ideas, thus reducing the amount of conceptual work at the very beginning of the E-Learning Process development (Figure 1). The next step is the application of Social Impact Assessment (SIM) to select few concepts only.

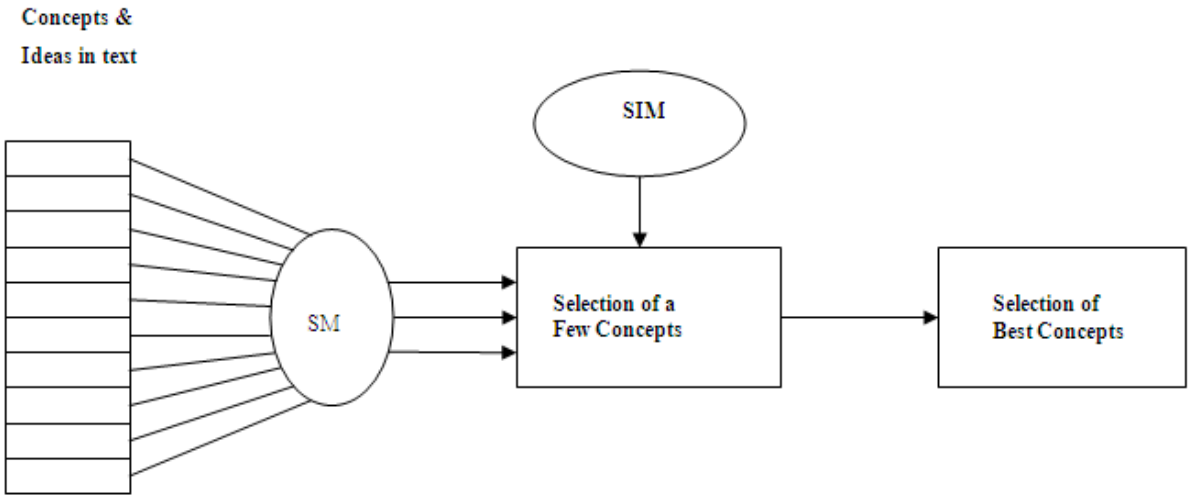

Figure 1: Social Metrics as a Filter

The usage of SMs as an evaluation criteria of concepts and ideas (CI) will lead to the establishment of a relationship matrix (SM – CI) – see Figure 1 – which develops the different levels of relationships between the SMs and the concepts. The assessment of the social impacts at this early stage of product development can be done on a rough scale as follows:
1 = very negative
2 = negative
3 = negligible
4 = positive
5 = very positive
For the explanation of the levels of assessment, two examples are provided for the metrics of race and culture:

a) The concept "White people should have priority for employment" has a very negative social impact as it clearly discriminates people by race and color. Such a statement may destroy the relation between the E-Learning product and process designers and millions of customers (Catherine, 2000).
b) The concept "Australian aborigines have had a low level of culture and civilization before the settlement of Europeans in Australia" has a very positive relationship with culture and history metrics (Pauline, 1999).

A further development of Social Metrics may contain an interactive "Design for Society" database listing specific units of social impact, consequence measurement, social benefits, and providing realistic appraisal of possible social ramifications and suggestions for project content alternatives. It may also contain an Expert Forum where practitioners and experts can share, review and critique impact assessment methods and establish special social metrics towards "Design for Society".

The Advantages of (SC-E-LP)
In summary, the advantages of (SC-E-LP) are as follows:

a) SC-E-LP adds a new dimension to the quality of the E-Learning Process by deploying a social value to the quality function.
b) SC-E-LP extends the application of E-Learning Process. It can also be used as a reference for social decision-making and design for society at the early stages of E-Learning product development.
c) SC-E-LP reduces the percentage of customers who are socially offended by the incorrect content of E-Learning Process, which may in turn increase the number of customers.

d) SC-E-LP may reduce or totally eliminate the extra costs paid by organizers as fines for offending or insulting a receiver.
e) SC-E-LP significantly reduces the cause for E-Learning Process failure, which is associated with the misunderstanding and/or ignorance of the psychological and social values and principles of customers.

Example: The history of Lebanon in 1940's
…Lebanon was occupied by the French army. The Lebanese Christians suffered more than Muslims in the battles for the independence of Lebanon….

Analysis

The text contains two sentences:

-"Lebanon was occupied by the French army" is not in confrontation with any social metric. It is accepted to stay in the text.

-The second sentence **"…** Christians suffered more than Muslims …"may lead to an argument and debate. This sentence will not pass through the filter. It is in contradiction with more than one primary or high-level social metric such as politics and history metrics. This sentence will be corrected or totally eliminated from the text.

The following table presents a possible approach for the evaluation of the sentences composing a paragraph. The idea which has the highest total is accepted with two possibilities:

1. No correction is needed because the sentence is not in contradiction with any social metric
2. A minor correction is required because the sentence is in contradiction with at least one social metric

Table3. Example of an (SM – CI) Matrix

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