PSYCHOLOGICAL AND SOCIOLOGICAL ASPECTS OF eLEARNING

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**Abstract**

Influence that computers have over the education, with possibility of globalisation, are no longer a future fictional educational mode. Consequence of connecting via Internet and greater possibilities of sharing the educational contents shape some other conditions for teachers and organisers of learning. Additionally, education is becoming a lucrative business, which hasn’t been the case so far. Teaching is becoming a product that must respect all rules of market business. One of those is customer’s satisfaction, regardless to his background. The authors try to prove through the paper that customer’s satisfaction, in this case one of the higher education students, is a possible parameter of product’s quality. Satisfaction is observed from individual and group aspect that reflects both psychological and sociological aspect of the matter. Analysis has been made due to specifying the profile of individual or in raster satisfied participant of eLearning. At the process the students have been specifically analysed so it opens up a possibility of further researches which can include other participants as well.

**Key words**: eLearning, eStudent, cooperation, collaboration, eContents

1. **Introduction**

Learning as a process connotes an interactive relationship between constituting elements. According to the majority of authors, learning is composed of five elements: student, teacher, teaching material or teaching content, teaching goals and context within which learning is being realised. The first three elements compose a basic level of learning process, while goals and context determine dimensions of that level. Learning rudiment refers to the axis, presented by student and teacher. Their relationship will define learning contents and goals. It can also be said vice versa, making the student-teacher relationship according to set goals and learning contents. Context, within which learning process is being realised, is also, dependent of the mentioned relationships. However, the context obtrudes other requirements and limitations derived from the complete social connections and needs. Definition of context can be analysed from several different standpoints. If it is observed from the individual’s standpoint then an adjustment of individuals towards the contextual frames is required, since the latter provide achievement of the set goals. With social goals and needs, a context necessarily reflects ways of realising the social goals, mostly determined by general political determinants of a society. Aspect of continuity in education as a basic goal of learning process will determine a context known as gradient education: primary, secondary and higher education.

Preliminary attention should be towards one aspect of learning: its bivalence, if it is treated as the activity. Basic axis student-teacher specifies learning through two symbiotically connected activities: learning and teaching. Both activities exist even in situation that can be described as self-education or, a situation when student and teacher is actually one person. Still, the most frequent educational form or shape represent educational group. Educational group, department, class or any other name that specifies a group of students assembled around learning contents with similar goals. However, each group consists of individuals who are persons with their own different psycho-physical characteristics. In learning process the harmonisation of these characteristics within appropriate level has always been a basic problem within pedagogic-didactic-methodical principles and actions. One starts with a psychological treatment of a group and necessary socialization of individuals in order to fulfil defined learning goals. In historical development, pedagogy has used accomplishments of both psychology and sociology. This paper deals with the issues of socialization and satisfaction of students during the process of eLearning as evolutionary form of learning.

1. **eLearning as form of cooperative learning**

It is natural for the computers to find their relevance in learning, but method of their introduction isn’t natural. Due to the fact that application of computers connotes certain competencies, computers were firstly introduced in higher education. Unnatural is also the fact that education is among last professions that accepted computers. Unnatural is due to the fact that usage of computers requires education. Virtualisation of the process and relative independence of space and time of performing the process are attributes specific to eLearnig as a learning method. Class, department and physical continuity of learning are also determined by relationship between mentioned elements that constitute learning. Historically, learning or education has been modified in compliance with development and achievements made in science. Classroom as a physical place where education is being performed and class as educational formation of students put in front of teacher also comprise learning context. Historically the class has also gone through changes that have been determined by learning goals put in front of students and teachers.

Introduction of computers into learning changes many things, but not the very essence of learning. No matter the quantity of computers and software included in the process, the students will still be learning and teachers teaching. The question is: what is then role of a computer? From the aspect of teaching computer is still referred as a learning tool, indeed more sophisticated so it can in some aspects replace teacher. From student’s aspect, computer is an associate in learning that provides much more then teacher himself would be able to provide. Computer is networked and it ensured relative independence of time and place of education so it modifies borders of a class/group. It also ensures forms of cooperation on a level required by learning goals put in front of that group.

Even before the sixties, in last Century, when the first networked personal computers occurred, there has been a scientific interest for analysis of cooperative or associative teaching. Analysis of cooperative model of teaching has usually been applied in the field of social psychology. Even in the beginning of the last Century the social psychologists have been researching teaching in small group due to determination of influence the others have over solving the exercises. The results of their researches have implied that different assignments were being more successfully solved if solved by groups, instead by individuals (Abrami at al, 1998, 640)

Cooperative or associative teaching is defined as a method by which students and/or pupils work together in groups where positive interdependence is being encouraged in order to initiate individual responsibility for own learning and active participation on all level of education (Abrami at al, 1998, 640). Similar to that definition cooperative teaching is described by other authors as well. Cooperative teaching as common work of students, who in pairs or smaller groups work on common issue, research common theme or are being expanded through mutual findings in order to create new ideas, new or unique combinations (Steele at al, 1988, 50).

Figure 1: Knowledge construction by increasing social learning (source: http://www.irrodl.org/index.php/irrodl/article/ view/ 609/1166, May, 2012)

However, individual responsibility is the element that only could provide cooperativeness of required quality. It is clear that individual responsibility of group’s member is influenced by several factors. No doubt that pleasure and satisfaction during the process are some basic factors of that responsibility. Individual’s responsibility is influenced also by his cultural, educational and psychological predispositions. Equally important are social and sociologic aspects of collaboration. Social status determines possibilities of inclusion in eLearning and active collaboration of individuals while socialization of individuals within group doesn’t depend solely of him, but of the complete group as well.

1. **Socialisation of eClass/eGroup and some important characteristics**

The most important components of cooperative or associative teaching refer to communication (Hertz-Lazarowitz, 1989) or interpersonal interaction (Poulsen at al, 1995). Cooperative teaching helps to develop other important social skills as empathy and adjustment. Besides, participation in cooperative groups strengthens the individual’s motivation and persistence, responsibility towards others is being developed, friendly feelings towards group members, group productivity and efficiency is growing, while socio-emotional problems in cooperative groups are being solved in more qualitative manner (Hare at al, 1994).

Adjustment as a process of adaptation of an individual or a group towards greater group or generally environment is exceptionally important in eLearning. Adjustment process is actually a process of socialization. Namely, virtualisation of learning connotes a virtualisation of students as well. In the beginning the individuals who constitute the group do not know each other well and some sort of personal introduction is necessary. In virtual frames that process is known as revelation or self-revelation. Self-revelation is considered as communication skill needed for exposure of secret or private information upon themselves or other group members. Since eLearning can include different forms of communication as chat rooms, e-mail, discussion forums, possibilities of self-revelation are enormous and so is the socialization of a group. Socialization of individuals in group is realised through mutual introduction and convergence. This can be achieved in virtual frames only through self-revelation. This way others could be motivated to behave in similar way. Since communication in eLearning is altered, it is allowed to manage impressions, pose questions and suggest methods of communication. This helps to remove possible doubts in communication and integrity of a group (Figure 1.). Method of cooperative learning can be used in different educational levels, so forms of cooperative teaching can be different as well. There is a line of textbooks for educational employees with different propositions for group work.

1. **Research**

Considering mentioned guidelines of cooperative teaching, eLearning can be observed as one of important methods of learning supported by computer. Basic cause is stated in fact that technology is becoming the constitutional part of teaching process. This helped to create conditions for altering social environment in which teaching is being performed. Existence of social trends initiated by eLearning as phenomenon enables form of cooperative teaching which characteristics could be characterised by measuring the students’ attitudes.

Research which has been conducted among students at Polytechnic of Rijeka aimed at reaching the attitudes of students towards eLearning they have had the opportunity to participate in. Questionnaire was comprised of 20 questions related to the population’s characteristics in a demographic sense.

Out of total population (124 examinees) two thirds (68%) were male. Prevailing age was in scope 27 – 30 years. Success in elementary school was very good (74%), similar to the high schools (56% with dispersal towards grade good). 95% of population make excellent students that explains age and some latter results. Among examinees 64% are fully employed. Spare time majority spend with their partners (64%) or friends (23%), while interesting is also the fact that 6% of examinees prefer to spend their time on their own. Time spent with partner or friend is by frequency several times per week (35%) or several times per month (29%). Analysis of social status implies 82% disposes with own work incomes, while equal percentage has their own apartment (47%) or live with their parents (41%), which explains fact that 26% are married, while 44% live alone. Regarding the place where they like to spend their own spare time, 50% stated they like spend some time in nature. Success achieved on exams follows descending trend from high school, so the most frequent grade is C (53%), with majority of examinees gained B as the most frequent grade (26%). Questionnaire was based upon eLearning at course “Development of web applications”. At the beginning very interested or interested in teaching was 59%, respectively 35%, while 71% hasn’t had any former experiences with online form of learning. According to the results of questionnaire the greatest number of examinees considers online learning as the future perspective of education (82.35%), while knowledge and skills developed by virtue of online learning are considered to be advantage by (future) employment (73.53%). These results match the results of researches taken during the last several years. Frinkling and his associates in 2005, and Ducatel and Burgealman in 1999 outlined the need for re-Skilling and up-Skilling of work force and unemployed so to decrease discrepancies of skills and to increase ICT literacy. Though even number of examinees considers online learning brings or doesn’t bring prosperity of individuals and society, the majority (73.53%) thinks online learning isn’t a necessary evil intruded by information technology. Despite the existing stereotype that teaching and learning supported by the computer is anti-social or that it undermines physical contacts among people, research result obtained with the Polytechnic of Rijeka students indicates that nearly 60% of examinees considers online learning doesn’t estrange people. Remaining part of questions related to mentor teaching and specification of learning goals. The majority (94%) thinks learning goals are clearly defined, 91% believes their mentors to be motivating, 93% thinks of their mentors as communication-opened, 79% believes to have a possession over their feedback upon progress and success, while only 51% is satisfied with the prepared learning materials, with 34% truly satisfied makes learning materials good since 70% examinees specified them efficient tool in online learning. The same results have been recorded about difficulty, simplicity and clearness of updated materials, while level of interaction between users and materials has been graded good by 70%. Organisation of knowledge evaluation is considered good by 79%. Nevertheless, 58% of examinees cannot state whether they are missing the f2f communication within traditional learning, while 24% claims they do miss it, contrary to 18% who don’t miss it.

**Conclusion**

eLearning will surely replace traditional method of learning out of several reasons. The most important is a relative independence of place and time of realisation. However, eLearning connotes fulfilling of some primary conditions, firstly the existence of infrastructure and certain social status of attendants. The full online mode presumes implementation of equipment. However, regardless to the advantages brought by ICT in learning frames, one shouldn’t forget the pedagogical, didactical and methodical setting of eLearning. Whether it is eLearning or perhaps mLearning, the principles of both should once again be analysed. ICT provides speed of communication but not the speed of gaining the required skills and knowledge. That velocity is strictly individual. Since earlier in time, learning has always tried to provide individual approach to students propos class/group within frames of eLearning another situation occurs – the strict individualisation of user-computer approach. Therefore it is necessary through cooperation and collaboration to make eGroup/eClass compact and integral since it is the only possible way to achieve defined goals within defined period. Speed can sometimes be the brake of success. Socialization of group and harmonisation of the progress surely is a problem that requires a good analysis from both psychological and sociological aspect, especially in sense of accepted teaching and learning theories.

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