Participation in Virtual Learning Environment as Facilitating the Enhancement of Intellectual Thinking Dispositions / Golan carmi

Abstract:

The rapid development in the field of computerization and communication technologies has created at the recent years a new reality that is complicated and different. This reality calls a challenge on the familiar concepts and processes which present the world of traditional teaching and learning, create conceptual changes in educational approaches and pedagogical systems, and opens new horizons that until now did not exist in the world of research.

Aims of research

The purpose of this research is to examine the connection between studying in academic courses that are transferred in a virtual environment within the internet and the improvements of intellectual thinking dispositions. Within this framework we seek to examine the changes in thinking dispositions of the learner following the studying process which take place in the virtual environment; to dwell on the personal characteristic of the learners that influence the thinking dispositions within the virtual courses; and to find out what are the pedagogical components and the didactic processes that influence the cognitive and intellectual thinking dispositions of the on-line student.

Methodology

The method of research involved a combination of quantitative and qualitative aspects in order to examine in the best manner the factors, the processes and components that influence the thinking dispositions of students, who study through virtual learning technology in the internet. the theoretical basis of the research is the theory developed by Perkins and colleagues (1993) in regard to thinking dispositions. the quantitative research sample included 285 students who study toward their B.A. and M.A. degree at the information science and political sciences departments, at the Bar Ilan University. The research framework examined courses that were synchronic and a-

synchronic and were transferred fully on-line in the net by the High Learn system. Examination of the courses in the research was done in three stages: Handing out the first questionnaire at the end of the course, afterwards handing out another two questionnaires at the end of the course, and finally conducting designed interviews with with a smple group chosen from the population of quantitative group. As stated previously, within the framework of the quantitative part three questionnaires were provided: two examined the thinking dispositions – one before the beginning of the virtual learning course and the other one after completion of this course, the third questionnaire examined any prior knowledge and work experience with computers and internet, additional virtual learning courses that were taken, attitude toward studying in a virtual learning courses that were taken, attitude toward studying in a virtual learning courses and personal information; this questionnaire was handed out at the end of the course together with the second one (see appendix a-c). In the qualitative part of the research 14 interviews were conducted, the participants were chosen from the entire research population. The designed interviews with this particular group were performed after completion of the virtual learning course.

Results of the Quantitative Research

Analysis of the quantitative finding showed, that there is a clear statistical influence of studying in virtual environment on improvement of the intellectual thinking dispositions in all 7 measurements of the thinking dispositions. This influence is substantial in most student's characteristics and in most parts of the virtual learning components, which has a different positive level of magnitudes on all 7 thinking dispositions. The statistical clarity received in most variables which examined within the research framework, indicates a comprehensive improvement in all thinking dispositions after studying in a virtual course. The quantitative research shows, that there are clear differences in a substantial part of the thinking dispositions measurements amongst students with specific personal characteristics and those who do not hold the same characteristics. Amongst students with personal characteristics such as: knowledge and experience in computers and internet, level of academic education and age range over 25 showed a better improvement which was displayed

in most thinking dispositions. In the variable, the way a student percept the on-line studying, found also clear differences in most thinking dispositions amongst students who see the studying as more positive than those who see it less positive. On the other hand, examining the connection between the 7 thinking dispositions and the prior participation of students in virtual courses did not indicate a statistical clarity, also no gender clear differences were displayed in all 7 measurements of the thinking dispositions.

Likewise, clear statistical differences were displayed in all 7 measurements of the thinking dispositions in technological and pedagogical variables that were also examined in the research. The virtual teaching system, assignments and coursework in the net, lecturer feedback through the technological system, active participation of the learner, use of technological tools and digital illustrations – all were found to be major influencing factors on improvement of thinking dispositions. The more the students participated to a large extend in the virtual course, and the more they reported a versatile use of technological teaching method for presentations and illustrations, and the more they positively appreciated the on-line teaching system, the on-line assignments and coursework, and the lecturer feedback at the virtual course – a better improvement in thinking dispositions was displayed in all 7 measurements.

Results of the Qualitative Research

The designed interviews were found as complementary to the statistical results which were received from the questionnaires analysis. Its major part supports the quantitative findings, and some of them even enlighten additional sides of the variables examined in the research assumptions. The analysis summary of the designed interview shows that the interviewed group is divided into two sub groups, almost identically sized. In one group, a medium-high improvement occurred in their thinking dispositions in regard to most parameters examined, and in the second group only a slight improvement occurred in their thinking dispositions or none at all.

Students whose thinking dispositions displayed a medium-high improvements from an intellectual aspect, in all seven thinking dispositions or just in part of them, expressed positive evaluations toward the virtual learning course, and indicated the fact that the course required them to think, to become more thorough, to obtain the main from the whole, to observe additional perspectives and to think independently. Ste students also express positive evaluations in regard to the contribution made toward their personal experiences, their knowledge involving computers and internet, their learning at the virtual environment and being at this stage of academic learning in order to improve their thinking disposition, they even expressed positive evaluations towards learning in the virtual environment. Those positive appreciations were also stated in regard to the assignment and tasks provided to them within the learning framework and particularly toward the lecturer feedback within the virtual learning. Those students also stated that they prefer to learn in the course that is virtual than frontal or a course that is being transferred solely in a virtual manner, mainly due to reasons such as the method of learning which is perceived as convenient and due to a better coping with the method of virtual learning.

Compared with the students that their thinking dispositions improvements were minor or none at all in regard to intellectual aspects, in all seven thinking disposition, expressed negative evaluations toward the learning in a virtual environment. Those evaluations derived mainly due to the difficulties in learning through the internet. The students also expressed negative evaluations in regard to the contribution made toward their personal experience associated with computers and internet learning; as well as the work in these particular environments and the stage academic learning they are at in order to improve their thinking dispositions. Negative evaluations were provided also toward the virtual learning environment which mainly derived from the inconvenient learning in front of the computer. They also stated negative evaluations toward the assignments and tasks provided to them throughout the learning framework claiming that they are not different than those tasks provided during the frontal courses and that they do not contribute in a particular manner to their thinking disposition. In regard to the lecturer feedback when there was one throughout the course it did not contribute to their thinking improvements. Those

students also stated their preference in regard to the fact that there should be more frontal sessions in class during the virtual learning course.

Research conclusions

The research shows that the learning at the virtual environment through the net contributes to the improvement of the thinking dispositions, and by doing so promoted intellectual thinking patterns. The quantitative and qualitative research outcomes indicate personal characteristics such as: experience and knowledge in computer and internet, level of academic education and age of 25 and beyond, all have a cardinal influence on the improvement of most thinking disposition. Likewise, the students' conceptions toward the learning in a virtual environment also significantly influence on the improvement of their thinking dispositions. Variables such as: comfort, pleasure, interest, challenge and novelty – were found to be an influencing elements on the improvement of the students' thinking dispositions. Likewise, an active participation in the virtual course also contributes to the improvement of the thinking dispositions. It was found that an active individual learning, a strong self discipline and a high motivation, and active participation in virtual discussions, interactivity with colleagues and participation in the continuous tasks of the course- also contribute in its part to the improvement of the dispositions. The pedagogical components during the learning and studying process such as the distant learning, an a-synchronic learning, and on line assignments and tasks, independent learning, work with colleagues, online learning material and the lecturer feedback – influence the improvement of the thinking dispositions. The technological means of the virtual learning were also found as effective in regard to the thinking dispositions. The combined model of virtual learning in the net along with the frontal learning in the class is the one preferred by the students and is effective in regard to its outcomes. The research shows that the student refer to the virtual learning courses not as something out of place during the academic learning process, but as integral activity that constitutes inseparable part of the learning process within the campus classes.

Recommendations

- We recommend that the students should acquire informational skills and informative tools in order to optimally use the possibilities concealed in the internet as a learning environment.
- It is recommended to train the lecturers in regard to tea

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