

EVALUATION OF A BLENDED COURSE FROM THE VIEWPOINT OF CONSTRUCTIVISM

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ABSTRACT

This paper was written to evaluate an undergraduate course, Internet Applications in Education, given at Computer Education and Instructional Technologies department at Middle East Technical University in Turkey. In this paper, the researcher analyzes underlying design rationalities of this course from the viewpoint of Constructivism. After analyzing, Internet Applications in Education course, the researcher saw that many of the constructivist instructional strategies are used effectively in this course. Some different technologies are used, because in constructivism, there is a need for information to be presented in a variety of different ways (Ertmer&Newby, 1993). Eventually, the researcher strongly support the idea of Ertmer&Newby (1993), “to be successful, meaningful, and lasting; learning must include all three of these crucial factors: activity (practice), concept (knowledge), and culture (context) (Brown at al., 1989 cited in Ertmer&Newby, 1993). Since all these components are used effectively, it is a successful lesson in which constructivism is integrated influentially.

Keywords: Blended Learning, constructivism, evaluation of courses

INTRODUCTION

This paper was written to evaluate an undergraduate course, Internet Applications in Education, given at Computer Education and Instructional Technologies department at Middle East Technical University in Turkey. In this paper, the researcher analyzes underlying design rationalities of this course from the viewpoint of Constructivism.

Course Description

This course is a 4th year course given to CEIT 4th grade students as a must course. This course focuses on the fundamentals and functions of the Internet so that the students gain an understanding of using the Internet in the classroom for; communication, informational resources, and instructional applications across the curriculum. (Internet Applications in Education, 2002)

Instructional Strategies

This course is a good sample of Blended Learning in which there are 2 class-hours and 2 lab-hours each week and there is a web-page, which students can access anytime and anywhere simply by connecting to the internet. The used instructional strategies are given below as stated in the web page of the lesson. (Internet Applications in Education, 2002) Peer-to-Peer Collaboration, authentic learning, critical thinking, project based learning, Instructor feedback and grader feedback.

Analysis of the Course

In the class hours of this course, the instructor encourages students to make a classroom discussion on a topic that is related to the course. In these hours, students actively participate to the lesson by expressing their own ideas clearly in their own words, without explicit teacher direction, like in constructivism, there is no right or wrong answers to transmit, instead, the students create their own meaning by sharing ideas with their class-mates (Airassian&Walsh, 1997). This kind of classroom discussion or collaboration is emphasized as a critical feature in constructivist learning environment by Driscoll (2000), because “learners test their own understandings against those of others, notably those of teachers and more advanced peers” (p.377), and then, they re-create their knowledge by assimilating multiple perspectives of these people.

In the lab-hours, the students apply the knowledge that they have gathered in the class-hours or by using the tutorials in the web page. The teacher gives them some weekly homework and they participate actively by doing homework individually with the supervision of graduate teaching assistants. The students discover how to use the program themselves because, as I experienced, when you learn something by searching for it, you gain much more beneficial knowledge. Naturally, this makes a lasting change in the students’ comprehension. Also, as it is emphasized in constructivism that there is always more than one solution to a problem (Switzer, 2004), the students are able to see the other ways to reach the solution, instead of memorizing a single solution.

The course site is constructed by the course instructor. In this web site, the students learn on their own control by navigating through the pages, because “knowledge is a function of how individual creates meaning from his or her own experiences” (Jonassen, 1991, cited in Ertmer& Newby, 1993). Therefore, this page seems to be designed depending on constructivist principles, so I am going to tell about the components of this page and their relationships to constructivism.

First, there are introduction and syllabus pages, from which the students can gain a basic understanding of the course, and objective page, which shows what the students will accomplish as a result of the lesson. More, the used instructional strategies are written in order to make the students aware of which strategies will be used to achieve the goals. As emphasized by Driscoll (2000), “Constructivists are interested in having learners identify and pursue their own learning goals” and all these components promote students’ self-regulation in learning (p. 380).

Second, there is a grade page which includes a full-description of grading. Also, it shows when and which page the user visited each week and the total time the user stayed in the web-site. There are two advantages of showing the grading in such a way. First, it promotes self-evaluation and reflection to maximize the students’ responsibility. Second, it helps the teacher to assess the students’ progress continuously. Likely, in constructivism, it is important to observe the students to help and support them.

Third, there is a lecture page, which includes tutorials about the course topics, such as Photoshop, Flash, HTML etc... In these pages, there is a learner-to content interaction, where the students access the content at their own convenience and complete it at own peace. (Driscoll, 2000) Whenever they have some misunderstandings or need to recall something, they can go over again by simply navigating through pages. Although, the 4th grade students are already familiar with these topics, the course is very valuable for them because some new knowledge can be built upon the foundations of previous learning. (Kanuka&Anderson, 1999 cited in Switzer, 2004, p.90) In addition, according to constructivism, “understanding is developed through continued, situated use” (Brown et al., 1989, p.33 cited in Driscoll, 2000) meaning that, with every other use in different situations, the students can gain different perspectives of the same topic. After having some basic knowledge about these topics in the first years, the students are given some more advance knowledge in this course since these topics are not easy to master and there are lots of subtopics to discover. As stated by Ertmer and Newby (1993), it is obvious that, such a constructive learning environment, is most effective for the stage of advance knowledge acquisition (p.65), because the students already have a basic knowledge on which it is easier to assimilate new knowledge by discovering themselves.

Fourth, there are homework and self-study pages. After the students study on the lecture pages on their own pace, they apply these knowledge by doing homework in the lab-hours. There are clear instructions about how to do the homework in order to provide a meaningful context to guide them (Driscoll, 2000). After the deadline, the solution of the homework is represented in the same page which aims to correct any misunderstandings in students’ comprehension. Furthermore, self-study pages contain some extra activity which students are free to do to improve them in each topic. These pages are very important for learning in a constructivist environment because according to Driscoll (2000), “learning can take place in the context of meaningful activity” which makes a lasting change in students’ comprehension.

Fifth, there are links and e-sources pages which include some extra tutorials and links of some useful internet pages respectively. Since content is not pre-specified and information from many sources is essential in a constructivist environment (Ertmer&Newby,1993), some more tutorial is provided for students’ use, in addition to lecture pages. Instead of memorizing facts, the students can develop a deeper comprehension of the topics by discovering more knowledge of their needs and interests. Furthermore, there are news page, which includes updated news and information about the course, and, FAQ and instructor pages which provide extra support for students use.

Finally, some asynchronous communication tools, e-mail and forum, and synchronous communication tools, chat and group chat are available for students use in this web page. These tools play a critical role in a constructivist learning environment because most of the knowledge is constructed by social interaction (Airasian&Walsh, 1997). Furthermore, they provide a good environment for peer to peer collaboration, because through communication, the students are able to share ideas and learn from each other. Now, I am going to discuss some features of each communication tool in more detail.

First, whenever the students have a technical or instructional problem, or they want to ask something more about the course, they can send e-mail directly to the instructor by using e-mail icon in the page. Because this is a kind of asynchronous communication, only one person can communicate at a time (Jonassen, 1996), so the instructor answers or gives a direct feedback at a later time on his own convenience. As stated by Jonassen (1996), the advantage of using e-mail is that “it is the most direct CMC service as the sender addresses his/her message to intended audience” (p.157), the teacher in this issue. Here, I see that, there is a high learner-to-instructor interaction which aims to provide further support and guidance for the students.

Next, the students are encouraged to state their own opinions on some course-related issues by using forum open to whole class-members. At the beginning, the teacher comes up with some issues to be discussed by the class, as in constructivism, teachers should be initiators of activities that will evoke student’s interest (Airasian&Walsh, 1997). Then, they are free to open a forum on a topic they are interested in, which creates a feeling of ownership among the students. Here, the students show their opinions and interpretations by commenting on the original topic or others participants’ opinions. I believe that, by

writing in the forum, the students become self-awareness of their knowledge construction, which is emphasized by constructivists (Driscoll, 2000). In addition, while recognizing others point of view, they develop individual perspectives. (Driscoll, 2000) Therefore, an electronic discussion of ideas occurs, which is easier to monitor for the teacher (Jonassen, 1996) because all the arguments of the students are recorded in the forum. In addition, in forum, which is an asynchronous environment, the student reason out the ideas before responding, thus deeper and more powerful learner-to-learner or learner-to-instructor interaction takes place. (Jonassen, 1996) More, the students can access the recorded ideas of others whenever needed.

Then, there are chat and group-chat pages which provide real time communication between the class members. Chat tool provides the students the opportunity of communicating with every member of the class who is online at the same time. The students can learn who is online by clicking on the online user button and start a conversation with these people. As stated by Driscoll (2001), using chat, learners are active participants in a collaborative learning process with instructor and class-mates, resulting in maximum interaction. It is possible to give immediate feedback, extent the suggestions, brainstorming, discuss and share ideas in such a real time environment (Driscoll, 2001). The students participate in dialog and come to help of their class-mates by giving immediate answers, which means they learn from each others. However, as I experienced, sometimes there may be so many people talking to each other so all the conversations overlap, which create a chaotic environment (Hara& Kling, 2000). In order to avoid this kind of an environment, the instructor put an option for group chat which enables to communicate only with the group members of the term project, which I will discuss next.

At the end of the term, the students are expected to prepare a term project by using the skills and experiences they have gained through out the whole semester. First, the teacher wants the students to form groups of 3 or 4 people. Here, the students are free to choose their group members and if someone can't find a group; it is announced in the forum. However, I believe that choosing the group members randomly, increases the effectiveness of the group project, because, as I experienced, whenever some close friends comes together, only some of them works and the others do nothing. So, the instructor should improve some more controlling strategies to monitor all the group members' progress. Furthermore, it is not surprising that all the group members have the same skill and knowledge resulting in high-quality or poor-quality final projects. But, in collaborative learning, it is especially emphasized for students to learn from each other, so I support choosing the group members randomly from different skill and achievement levels.

Next, the groups chose the topic of the project depending on their own interest which results in enhanced learning and motivation (Driscoll, 200). In this course, all the groups prepare a web-based learning project which may be used in a real classroom setting. Therefore, project based learning is used in an authentic learning environment due to the high connection of student projects with the real world. Furthermore, the students have a chance of practicing what they have learned about the theory of IT up to the 4th class. To me, this is a very useful lived experience, because learning can be "facilitated by involvement in authentic tasks anchored in meaningful context" (Ertmer&Newby ,1993, p.64). Therefore, this kind of projects helps the students to acquire the necessary knowledge and skills for their future career.

The teacher helps and provides guidance to the students through all the processes of the project by communicating via e-mail, chat, and forum, or making face-to-face dialogs in class or in his office. The students are free to make decisions about the components of their final product which increases their sense of ownership. Finally, the teacher wants them to prepare a detailed project report and concept map that considers all important issues about their final projects. By summarizing in the report, they become more aware of which components they used, what design decisions they made, and the processes they have went through, like constructivism emphasize on everything that gives a way of being self conscious about their progress.(Driscoll,2000)

There are many advantages of using project based learning in a collaborative and authentic learning environment. First, the students' responsibility increases due to the social pressure within the team meaning that they don't want to disappoint their group members by decreasing the quality of the teamwork (Frank& Barzilai, 2004). Second, as a result of collaboration, learners become intrinsically motivated and more engaged with the course material (Yazıcı, 2004), which is a key issue in a constructivist learning environment (Airasian& Walsh, 1997). In this course, students are highly motivated since they design an exact sample of a real course which provides a beneficial experience to their future career. Third, the students learn how to work together with the people from different backgrounds (Krajcik, 1999, cited in Frank&Barzilai, 2004) and so they improve some communication and social skills which enhances their self-confidence. Finally, group problem solving leads to better and deeper comprehension of the content and process (Maier, 1967, cited in Yazıcı, 2004).

CONCLUSION

After analyzing, Internet Applications in Education course, I saw that many of the constructivist instructional strategies are used effectively in this course. Some different technologies are used, because in constructivism, there is a need for information to be presented in a variety of different ways (Ertmer&Newby, 1993). Obviously, I believe that, the course is applied in a student-centered context, because students are in the charge of their own learning, and the instructor acts as a

guider and facilitator. They create their own meaning by discovering, gathering and then interpreting the knowledge of their experiences resulting from interaction with the learning environment supplied by the instructor. Eventually, I strongly support the idea of Ertmer&Newby (1993), "to be successful, meaningful, and lasting; learning must include all three of these crucial factors: activity (practice), concept (knowledge), and culture (context) (Brown at al., 1989 cited in Ertmer&Newby, 1993). Since all these components are used effectively, it is a successful lesson in which constructivism is integrated influentially.

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