



COLLABORATIVE E-LEARNING ENVIRONMENT: ENHANCING THE ATTITUDES OF OPTIMAL INVESTMENT DIPLOMA STUDENTS TOWARDS THE DIGITAL SKILLS COURSE

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ABSTRACT

A collaborative e-learning environment with online social interactions amongst learners is one of the settings that must be used in addition to the classroom in order to achieve numerous learning objectives. Additionally, to determine if this option has an impact on specific learning outcomes. The aim of this study is to explore the effectiveness of the collaborative e-learning environment on enhancing the optimization diploma students' orientation towards the digital skills course. The study sample was chosen from the optimal investment students in the Department of Curricula and Teaching Methods, to be randomly divided into two equal groups (control and experimental). Using a trend scale as a tool for data collecting for this study. The outcomes demonstrated that, in comparison to their counterparts in the control group who pursued traditional academic methods, the collaborative online learning environment significantly and positively improved pupils in the experimental group's attitudes.

Keywords: collaborative e-learning; e-learning; attitudes; digital skills; optimal investment

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INTRODUCTION

The creation of knowledge and the alteration of behavior are both parts of the learning process [1, 2]. Collaboration is a method of community partnership [3, 4]. As a result, the phrase "cooperative learning" is used to characterize educational circumstances in which two or more students work together to attain a shared educational objective [5]. Additionally, collaborative e-learning is a communicative technique for creating shared knowledge that makes use of online-connected electronic devices to accomplish shared knowledge-creation objectives [1, 6]. By promoting debate, extensive explanations, problem-solving, and the formulation of fresh ideas, collaborative e-learning highlights the value of effective contact between students [5, 7]. Additionally, some LMS solutions make it possible to regularly engage in collaborative e-learning [8, 9]. In comparison to students who work alone on the instructional task, research show that students who engage in small groups achieve higher learning outcomes in the areas of motivation, emotion, social interaction, cognition, and metacognition [5, 10, 11]. This is in addition to the fact that constructivist-learning theories support the notions of group work and cooperative learning [12, 13]. The connection between students and teachers, as well as the sharing of knowledge online, have all had a big impact on how engaged students are in the learning process and, ultimately, how well they perform academically [14]. The skills they acquire through cooperative learning exchanges also enable learners to obtain assistance from one another and finish tasks that they would be unable to achieve on their alone [12]. The platform of Blackboard (as an e-learning management system) enables students in academic institutions to access the course materials, create student communities, and communicate with their professors.

In other terms, cooperative learning is a method of learning where two or more students collaborate to finish a job [15, 16]. The constructivist, social constructivist, and sociocultural theories have given rise to cooperative learning, which involves social interactions between students [12, 17, 18]. Cooperative learning, then, is based on the notion that learning is a naturally social activity in which student's converse with one another [19]. In order to address difficulties during the learning process, this collaborative learning entails cooperating, negotiating, and communicating among students within a group while employing their cognitive and metacognitive talents [20]. New learning methodologies, such "Electronic Collaborative Learning," have been established because of educational technology innovation [12]. The utilization of online tools in LMS systems also provides learners with a motivating opportunity to improve collaboration and learning [21], This makes certain that students engage with classmates, professors, and content to learn and support the learning process [22]. Collaborative e-learning also places more of an emphasis on producing knowledge than consuming it, changing the focus of education from the teacher to the learner [23]. Collaborative e-learning has many advantages, including improved learner-learner interactions, preparation for the workplace and real-world social circumstances, understanding and responsibility from various

perspectives, and higher self-esteem [19]. Additionally, research on online discussion tools revealed a favorable correlation between interaction and learning outcomes [24, 25].

The positive attitude of the learner towards the provided content depends on his positive participation in the e-learning situation, which allows him to add and modify the content, review it, comment on it. And share between more than one learner together in modifying, adding to and improving the content, which helps in building a social network that supports The idea of forming groups with common interests [26, 27]. Which the researcher believes is developing observation, deduction and analysis skills. Learning also takes place through communication and participation with others, and perhaps this is indicated by Vygotsky's social learning theory, where the learner's direction, way of thinking, and interpretation of various educational situations are affected by his interaction with others who are more knowledgeable or capable [28, 29]. Helping learners explain and justify their thinking and open negotiation about their interpretations and solutions to educational tasks is what drives towards establishing agreed meanings. Alternatively, reaching a state of consensus, but it allows learners to develop multiple perspectives on a topic and compare it. Its aim is to evaluate the ongoing discussions and points of controversy [30, 31]. Therefore, the current study attempts to investigate the effectiveness of the collaborative e-learning environment on enhancing the optimization diploma students' orientation towards the digital skills course.

RESEARCH PROBLEM

Due to the apparent decline in the attainment of the best, return on investment for diploma students enrolled in the "Digital Skills" course at the Department of Curricula and Teaching Methods, as well as the associated attitudes toward the course. The researchers thought of employing this environment to enhance the optimal investment diploma students' attitudes towards the digital skills course.

The problem of the current study appeared through the researchers' observation of the lack of achieving the objectives of the "Digital Skills" course among a large percentage of the Optimum Investment Diploma students. Previous research also showed that learners who received a positive attitude achieved many positive results in their studies, and scientific evidence showed the impact of student attitudes on the teaching and learning processes [32-35]. However, little is known about whether the collaborative e-learning environment is effective in enhancing the optimization diploma students' orientation towards the digital skills course. Accordingly, the problem of the current study can be formulated in an attempt to identify and explore the effectiveness of the collaborative e-learning environment on enhancing the orientation of the Optimal Investment Diploma students towards the digital skills course.

RESEARCH AIMS

The current study seeks to answer the following main question: What is the effectiveness of the collaborative e-learning environment on enhancing the optimization diploma students' attitudes towards the digital skills course?

RESEARCH IMPORTANCE

- Utilizing the collaborative online learning environment in the classroom to address academic issues.
- Utilizing student collaboration to assist in the completion of the course's goals.
- Directing attention towards benefiting from the collaborative e-learning environment to develop students' attitudes towards academic courses.

RESEARCH LIMITS

There are a number of limitations to this research as follows:

Objective Determinants

This research is limited to exploring the effectiveness of the collaborative e-learning environment in enhancing the optimization investment diploma students registered in the Department of Curricula and Teaching Methods towards the digital skills course.

Human Determinants

The sample of this research is limited to students of the Optimal Investment Diploma in the Department of Curricula and Teaching Methods who are enrolled in the "Digital Skills" course.

Temporal Determinants

During the second semester of 2022.

Spatial Determinants

The College of Education at Najran University houses the spatial determinants of the study.

RESEARCH TERMS

Collaborative E-Learning Environment

The collaborative e-learning environment shifts the focus of education from the teacher to the student and places more emphasis on producing knowledge than on absorbing it [36, 37]. A learning technique known as a procedural

e-learning environment involves two or more learners cooperating to finish a task electronically with the use of contemporary technology and information technology infrastructure.

Attitude

Attitude is a group of feelings that a person expresses towards a specific thing in terms of support or opposition, and it is measured by the sum of his responses in the attitude scale prepared for this purpose [38, 39]. It is defined procedurally in this study as a group of feelings expressed by students towards the "Research Methods" course in terms of support or opposition, and it is measured by the sum of their responses in the attitude scale prepared for this purpose.

Methodology

The objective of the current study's methodology, as indicated in Table 1, was to employ a semi-experimental design to determine the effects of an independent variable (collaborative e-learning environment) on the dependent variable (attitude).

Table (1): Quasi-experimental research design

	Pre-test	Treatment	Post-test
Control Group	Attitude scale	Traditional way	Attitude scale
Experimental Group		Collaborative e-learning environment	

Research Tool (Attitude Scale)

The scale aimed at measuring students' attitudes towards the course, before and after studying the course (in the collaborative e-learning environment versus the traditional method). The scale was built based on many studies and literature that dealt with how to build and design attitude scales in general. Which dealt with building measures of attitudes towards technological innovations and their use in education in particular, including [40-43]. After identifying the previous sources, the scale phrases were formulated, which consisted of (30) phrases, half of which are positive phrases and the other half are negative phrases. It has been taken into account when formulating the exclusion of phrases that can be interpreted in more than one way, that the phrases are free of ambiguity, that the phrases contain the topic of directions, either explicitly or implicitly. In addition, by examining the literature on the methods and methods of constructing scales, the researcher saw that the Likert type follows the accumulated estimates. This is due to its many advantages in terms of: the ability to distinguish, the ease of application of the scale, the ease of correcting the scale and processing its results, the answer of each statement bears all degrees of approval or opposition [44-46].

Through the Likert method, statements are presented to the individual and in front of each statement there are five alternatives to respond (strongly agree, agree, neutral, disagree, strongly disagree). The scale was initially conducted on a group of (10) students who took the course in the semester preceding the application. The aim of the exploratory test for the scale was to determine the time of the scale (20 minutes), and to calculate the stability of the test (0.90 according to Cronbach's alpha equation). The validity of the scale was also verified by presenting it in its initial form to a number of arbitrators specialized in curricula and educational technology, who confirmed the validity of the scale for application, and the observations made by the arbitrators were taken into consideration when final preparation of the scale.

Research Sample

In the second semester of 2022, 54 students who were enrolled in the first level of the optimal investment diploma at the Department of Curriculum and Teaching Methods made up the study's sample. They were split into two equal groups at random (control and experimental). There were (27) students in each group. Both groups took the training on "digital skills". All participants were made aware of the consent forms for study participation prior to the start of the course. Participants might choose to participate or not, with or without consequences.

Ensure the Homogeneity of the Two Groups

Attitude scale was also applied previously to the students of the two study groups. In addition, by analyzing the extracted data as well with the T. test for independent samples to identify the significance of the differences between the mean scores of the students of the two groups to verify their equivalence before the start of the experiment. Table (2) reveals the differences between students' scores in the pre-application using the trend scale.

Table (2): The significance of the differences between the two research groups in the pre-measurement of the attitude scale

Group	M	SD	T. Ratio	Sig.
Control Group	33.6	5.149	7.25	.197
Experimental Group	31.3	6.253		

Research Variables

- The independent variable: Collaborative e-learning environment.
- Dependent variable: Attitude.

Experimental Processing Material

The foundation for this encounter was the Blackboard system's Digital Applications course. Six subgroups of five pupils each were created for the experimental group. They were taught via collaborative e-learning. The following steps are part of the collaborative e-learning strategy: 1. The instructor uses Collaborate Ultra Experience LTI to present course material on Blackboard. 2. Each week, the lecturer assigns collaborative assignments to the subgroups of students that are connected to the lecture's subject. 3. Work together to complete work in subgroups by negotiating, interacting, and using the discussion capabilities of the learning management system. 4. Use the assignment icon in Blackboard to send weekly assignments to each subgroup.

The students in the control group do their weekly assignments individually, as is the custom in the classroom. The steps in the conventional approach are as follows: 1. in the lecture hall, the speaker discusses the course material. 2. The instructor assigns the control group's pupils weekly, individually generated projects that are directly relevant to the lecture's subject. 3. Carry out tasks by using the search functions of the Internet. 4. Manually delivering each student's weekly homework to the lecturer. Next, the attitude scale is applied.

Statistical Processing

The T. test for independent samples was used to compare the arithmetic means of the values of the trends of the students in the two study groups in order to guarantee the homogeneity of the groups and to assess the data from the final experiment.

RESULTS

Attitude Scale Results

To answer the second study question, by extracting the scores of the post application of the attitude scale for both study groups. Then calculating the modified earning percentage (degree of post-application - degree of pre-application), in order to try to find out if there are statistically significant differences between the two groups (experimental and control) due to the use of the collaborative e-learning environment. Table (3) shows the results of the "T" test to compare the averages of the adjusted earnings ratio for the students of the two study groups.

Table (3): The results of the "T" test to compare the averages of the adjusted earnings ratio for the students of the two study groups

Group	M	SD	T. Ratio	Sig.
Control Group	94.8	6.253	7.374	.046
Experimental Group	110.4	5.417		

The previous table shows that the value of "T" for the difference between the modified earning percentage for the students of the two study groups (experimental and control) in the product evaluation card was (7.374). The average score of the control group students was (94.8). While the average score of the experimental group students was (110.4). Thus, we find that the value of "t" is statistically significant, and in such a case, the statistical significance is directed in favor of the higher group on average. It is the experimental group, where the arithmetic mean was (110.4), and an increase of (15.6) from the control group.

Thus, the statistical significance is directed in favor of the higher group on average, which is the experimental group (which is taught through the collaborative e-learning environment). Thus, the study answered the second question, "What is the effectiveness of the collaborative e-learning environment on developing directional skills among students of the College of Education at Najran University?" Where a statistically significant difference was found at the level (0.05) between the adjusted earnings ratio towards the students of the experimental group (studying through a collaborative e-learning environment) and the control group (studying in the traditional way) in favor of the experimental group.

DISCUSSION

The main objective of this study was to evaluate the effectiveness of the collaborative e-learning environment on enhancing the optimization investment diploma students' orientation towards the digital skills course enrolled in the "digital applications" course. The results showed that the difference in the adjusted earnings ratio of the students of the experimental group taught through the cooperative e-learning environment and the control group taught through the traditional method in the orientation was statistically significant in favor of the experimental group. These results are consistent with the results of a number of previous researches, such as [47-49]. These results may be attributed to a variety of causes or factors. For example, learners' orientation can be enhanced through collaborative learning materials [50, 51]. Moreover, interaction with peers, lecturers and online knowledge sharing behavior has been seen to have a significant impact on learners' engagement, which has a significant impact on their orientation [14]. The collaborative e-learning environment also emphasizes the importance of positive interaction between students by encouraging them to ask questions, exchange arguments, provide detailed explanations and solutions to problems, and formulate new ideas [5, 52]. The collaborative e-learning environment as a strategy through inquiry-based learning and questioning can improve student orientation and directly enhance their achievement [49, 53].

RECOMMENDATIONS

The researchers offer some recommendations in their conclusion in light of the findings of the current study:

- Training academic staff how to use collaborative e-learning settings.
- Promoting optimal investment students' attitudes by using other technical products.
- Paying attention to the development of students' attitudes at different educational levels.

SUGGESTED RESEARCH

The researchers also offer some recommendations in their conclusion in light of the issue raised by the study:

- Applying this research to a sample of female students will help other samples corroborate the effectiveness of employing collaborative e-learning settings.
- Conducting additional research to examine the potential for improving student attitudes by utilizing a virtual learning environment.
- Doing research to determine how reinforcement learning affects the development of students' attitudes.

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