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THE EFFECT OF USING THE COOPERATIVE LEARNING AND BLENDED LEARNING METHOD IN IMPROVING THE LEVEL OF STUDENTS PERFORMANCE IN LEARNING VOLLEYBALL FOR SECONDARY SCHOOL STUDENTS

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Abstract

Educators all across the world are starting to worry more and more about the effects of blended learning when mixed with other methods. With its accessibility from anywhere, its ability to accommodate multiple users, and its overall ease of use, blended learning has emerged as a promising new educational medium. This research aimed to discover how effective a Cooperative Learning in a Blended Learning (CLBL) setting is for instructing. Students' learning outcomes were examined by contrasting CLBL with teacher-led instruction in a BL setting, and students' reactions to this type of learning environment were studied for patterns. A experimental study was used at the Andalus School of Directorate of Misan Education, Ministry of Eduaction of Iraq in the 2019-2020 academic year. 64 students from the fifth stage were randomly picked over the course of two semesters, with 32 of them being placed in the experimental group and 32 being placed in the control group. A pre-test and a post-test were the primary instruments used to gather the desired data. According to the results of the independent samples t-test, the CLBL environment had a substantial impact on the improvement of students' volleyball performance. Students who learned in a CLBL environment significantly outperformed those who studied with teacher-led instruction. This was demonstrated by the t-test probability value on the posttest (0.025), which was below than the significance threshold (0.050). In addition, the students were pleased

with the efficiency of the CLBL environment and found that it was essential in enhancing their volleyball play.

Keywords: Cooperative Learning, Blended Learning, Performance, Volleyball.

Introduction

In recent years, there has been a dramatic increase in the use of cutting-edge technologies in the classroom (Alam, 2022). Computers, mobile devices, virtual classrooms, multimedia, the internet, telecommunication, and other e-learning innovations and applications are allowing for more individualised lessons (Belaya, 2018). Since then, significant developments in ICT have emerged as a new scenario in the instructional framework, merging face-to-face instruction with online computer-mediated training to enhance both types of instruction, as well as to increase accessibility, convenience, and efficacy. Many studies have been carried out on the applicability of face-to-face cooperative learning. However, there were hardly any reports originating from a CLBL setting that actually made use of cooperative learning. Implementing cooperative learning in such a setting is tough for the teachers. The integration of CL into a BL scenario should be designed based on the learning outcomes, resources, student characteristics, and the development of course materials. It involves commitment and willingness to take risks, time, and planning. In addition, Ren and Jiang (2019) agrees that the optimum approach to education is a mixture of traditional classroom instruction and digital resources. Blended learning combines online and traditional classroom methods through a number of means (Dwiyogo & Radjah, 2020). The education system and the modernization of educational programmes have been influenced by the rapid advancement of ICT (Хасанова, 2020). As a result of the emergence of e-learning, education is no longer dependent on the teacher to impart knowledge and information. E-learning delivers speed and learning to fulfil his demands despite a lack of skills (Kuatbekov et al., 2021). The multimedia learning process is completed at a specified place and time in accordance with the student's capabilities and learning potentials (Alobaid, 2020). Educational technology is the use of teaching aids, equipment, and audio-visual aids in conjunction with a teacher and a textbook, as well as a way of developing an educational system (Bates, 2020). Which entails adopting a methodical, step-by-step approach to work and utilising all technological possibilities, in accordance with philosophies of teaching and learning (Tammets et al., 2022). Here, blended learning arose as a logical extension of e-learning; it bridges the gap between the two forms of education by bringing together online and classroom-based instruction (Keifenheim et al., 2019). It's a hybrid of the two concepts, it combines modern and historical

elements. It employs terminology like blended learning, blended learning, and hybrid learning, all of which have historic roots and generally refer to the blending of learning styles and tactics via diverse modalities (Kannan & Munday, 2018). Because of its accessibility from everywhere at any time, ability to accommodate multiple users at once, and overall ease of use, BL has proven to be an excellent tool for advancing education (Purnamasari, 2018). Implementing cooperative learning in such a setting is tough for the teachers. The integration of CL into a BL scenario should be designed based on the learning outcomes, resources, student characteristics, and the development of course materials. It involves commitment and willingness to take risks, time, and planning (Baena-Morales et al., 2020). According to Lu (2021), students can better acquire targeted knowledge, attitudes, and abilities when they follow a predetermined course of study. Blended learning (BL) entails integrating different types of instruction—online and offline, formal and informal—to tailor each student's educational experience to their unique needs. The term "blended" refers to the practise of combining traditional classroom instruction with digital materials (Al Awamleh, 2020). Blended learning, in the same vein, is defined by Hughes (2022) as a combination of in-person classroom instruction with online learning to foster student engagement, knowledge retention, and flexibility. Integrating digital tools with traditional classroom instruction calls for a well-thought-out plan and method. Blended learning, as defined by Krause in Goh and Sigala (2020), is the adoption of strategic and systematic models to the use of ICT that combine the best characteristics of face-to-face classroom instruction with the best characteristics of other delivery modes, teaching methods, and learning styles (Cecchini Estrada et al., 2019). Few studies have compared the efficacy of cooperative learning with teacher-led instruction in a blended learning setting. Therefore, the purpose of this study was to compare the effectiveness of a CLBL setting and a teacher-led instruction in a BL environment for imparting knowledge of the Research Method to secondary school students while they are studying the sport of volleyball. The study also uncovered how students reacted to using the CLBL setting. For this reason, the following questions were offered: 1) Is there any significant effect on improving the level of students performance in learning volleyball for secondary school students between the CLBL environment and teacher-led instruction in BL environment at the fifth stage at secondary school? 2) What are the students' responses to the implementation of the CLBL environment in classesroom?

RESEARCH METHOD

Design

This research used a experiment with a pre-test and post-test control group design. Jolak et al. (2020) assert that all internal and external validity risks are mitigated by

the real experiment's design. The random distribution of participants is a feature that is not present in other designs.

Participants

These participants of this study were the students from the fifth stage of the Andalus School of Directorate of Misan Education, Ministry of Eduaction of Iraq in the 2019-2020 academic year. This study used a matched set of independent samples from two whole classes to investigate the impact of a CLBL setting on students' academic performance. Students took the pretest before the experiment began so that similar groups of them may be randomly assigned to the experimental and control groups.

Table 1: Demographic information on study subject

Group	N	Age Range	Learning Approach
Control	32	16- 17	Teacher-led
Experimental	32	16-17	Cooperative learning

Instruments

The instruments that were used to gather quantitative data were a pretest and a posttest. The pre-test and post-test were comprised. The test items were selected from Practice Quizzes. To avoid the effect of pretest sensitization, the test items in the posttest were different from the pretest but were of a similar difficulty level. In this study, a questionnaire was issued to specialists regarding the selection of the most crucial volleyball skills. Quantitative information was gathered with the help of a pre- and post-test. The two tests, pre and post, were combined into one. The questions on the real test came from the sample questions on the sample quizzes. The test items in the posttest were different from the pretest but of the same difficulty level to prevent the effect of sensitization. This research polled experts to determine which volleyball skills are fundamental. Procedures for Collecting Data Over the course of 16 weeks, or four months, students were able to complete all of the study's assigned tasks and activities. The study began with a pre-test that was given to both sets of students. Research participants were given therapy as part of the study's second phase. The final step was post-tests, which followed the same format as the pre-tests. The CLBL environment was used as a therapy method in the experimental group. It is a model of blended learning that combines the strengths of both individual and group study. Contact sessions, online team challenges, and group activities made up the bulk of the CLBL treatment. The meetings were actual classes where people talked to one another. The educator adopted collaborative methods of instruction in each and every teacheting. Students were placed in groups of four to five of varying compositions to complete these tasks. The online competitions were conducted entirely in virtual real-time sessions. The online team challenges included a variety of activities that students

were tasked with completing as a group before submitting their work on BeL (Borneo eLearning), the institution's chosen learning management system. There were many group assignments offered to the students. Students were given clear instructions and informed of all upcoming events. The team challenge activities included (a) referencing resources found in BeL, such as a learning contract, a semester-long learning programme, course materials, and guidelines, (b) participating in online discussion forums started by individual members of the group, and (c) taking online quizzes individually but having the results averaged for a group score. Participation in both in-person and virtual group activities was required for the assigned tasks. Students had to hold in-person meetings more than once in order to complete assignments like creating a video presentation to describe the topic's content, reading research papers on 10 various types of research methods, and writing a research proposal outline. The tasks were completed in-person, but the submissions had to be made digitally. The lecturer provided BL in a teacher-led classroom setting for the control group. Both groups received the identical course materials and assignments. The various methods of instruction and assigned homework were the key differentiators. To a large extent, the lecturer had a significant role in the instructional process. At class meetings, he taught the topic, and in the BeL forums, he sparked conversation about it. Students in the control group also participated in group activities, but their groups were formed according to "who loves whom."

Data Analysis

SPSS (IBM SPSS Statistics version 23) was used for statistical analysis of pre- and post-test outcomes. Parametric statistics (> 0.05) can be used, as shown by the findings of the Kolmogorov-Smirnov test and Levene's test, which were used as requirements for the hypothesis testing. The quantitative data was analysed using a combination of descriptive statistics and inferential statistics (the independent samples t-test). Assuming a 0.05 level of significance was used.

FINDINGS AND DISCUSSION

Findings

The Effect of CLBL improving the level of students performance in learning volleyball for students

The study's goal was to compare the performance of the experimental and control groups, with these two factors in mind, in order to gauge the students' perceptions of the efficacy of their education. A t-test was run on independent samples to see whether the training had a significant impact on the students' learning achievement. The information is presented in Table 2.

Table 2: Shows the arithmetic means, standard deviations and the value of (t) calculated between the pre-test and post-tests of the service and reception skills of the control group.

Skills	Pre-test		Post-test		Percentage of development	T	Sig
	M	SD	M	SD			
Service	4.30	0.82	5.86	0.78	% 26. 63	8.66	0.000
Reception	3.26	0.82	4.11	0.85	%20.69	6.28	0.000

The results showed that the values of (t) calculated between the pre- and post-tests of the performance tests for the transmission and reception skills of volleyball transmission are greater than the tabular vaUles shown in Table (2), which displays the arithmetic means, standard deviations, calculated (t) value, and percentages of evolution of the control group, at the level of significance (0.05) and degree of freedom (2.35). Which indicates that there are substantial differences between the pre- and post-tests, in favour of the post-tests, and the results also showed that the percentages of the amount of development have reached the highest percentage of the technical performance test for the skill of sending volleyball, having achieved a percentage of (% 26. 63), compared to the percentages of performance tests of the skills of service and reception the transmission of volleyball. The researcher attributes the emergence of these moral differences for the control group to the impact of the approach followed in the class to develop the performance of service and reception volleyball skills and what it includes of repetitions of performance for the two skills under study, as random repetitive attempts are the important key to performance, which is to make unpredictable movements predictable movements and timing (Malhotra et al., 2022).

Table 3: Shows the arithmetic means, standard deviations and the value of (t) calculated between the pre-test and post-tests of the service and reception skills of the Experimental group.

Skills	Pre-test		Post-test		Percentage of development	T	Sig
	M	SD	M	SD			
Service	4.15	0.99	7.37	1.03	%55.70	9.01	0.000
Reception	3.12	0.84	7.51	1.15	% 58.46	7.49	0.000

The results showed that the values of (t) calculated between the pre- and post-tests of the performance tests for the transmission and reception skills of volleyball transmission are greater than the tabular vaUles shown in Table (2), which displays the arithmetic means, standard deviations, calculated (t) value, and percentages of evolution of the control group, at the level of significance (0.05) and degree of freedom (2.35). Which indicates that there are substantial differences between the pre- and post-tests, in favour of the post-tests, and the results also showed that the percentages

of the amount of development have reached the highest percentage of the technical performance test for the skill of sending volleyball, having achieved a percentage of (% 58.46), compared to the percentages of performance tests of the skills of service and reception the transmission of volleyball. The employment of various training instruments leads to the development and improvement of performance of service and reception skills, hence ensuring the motor pathway of the skill to be learnt (Gil-Arias et al., 2019). These exercises contain part of the motor path of the skill and work in which a muscle or several muscles are used when performing the movement of competition, and the appropriateness of the training tools used to develop my skill under study as it was characterised by adequate physical and skill preparation, which is consistent with the level of the research sample and their capabilities and abilities.

Table 4: Shows the arithmetic means, standard deviations and the value of (t) calculated between the post-tests of the service and reception skills of the Experimental and control groups.

Skills	Experimental		Control		T	Sig
	M	SD	M	SD		
Service	7.37	1.03	5.86	0.78	4.51	0.000
Reception	7.51	1.15	4.11	0.85	3.78	0.000

Table (4) shows the arithmetic means, standard deviations and the value of (t) calculated in the post-tests between the control and experimental groups of performance tests for the skills of service and reception volleyball transmission. The results showed that the values of (t) calculated between the post-tests of the control group and the post-tests of the experimental group for performance tests for the skills of service and reception the transmission with volleyball are greater than the tabular t-value of (2.00) at the level of significance (0.05) and the degree of freedom (62), which indicates significant differences between the control and experimental groups and in favor of the experimental group. The usage and execution of various training tools sequentially in learning improved the learning process and skill performance, as access to learning must be attempted to practise the exercise and the most important variable in learning is motor practise and the exercise itself (Song et al., 2021).

Discussing the results of performance tests for the skills of service and reception volleyball for the control and experimental groups.

Through the results presented in tables (2, 3, 4) for the tests of performance of the skills of sending and receiving the volleyball transmission, it was determined that there are significant differences between the pre-tests and the post-tests of the tests under study, with the post-tests showing a significant advantage for both the control and experimental groups. The researcher attributes the emergence of these differences for

the control group to the use of the teacher's curriculum and the number of performance repetitions, as well as the effect of motor transfer from other practical lessons, which led to the improvement of students' volleyball skills. Practicing the cooperative learning curriculum during practical application aids in the acquisition of knowledge (Bjørke & Mordal Moen, 2020). Cooperative learning contributed to the development of several basic elements, the most important of which is motor skills, special cooperative learning serve to guide the integration of the level of fitness of a particular element as well as the ability to compatibility and elements of technical and tactical performance and link it to building.

Discussion

The study had two primary goals. The primary goal was to look at whether or not the CLBL setting could affect the pupils' academic performance. The students' reactions to the implementation of the CLBL environment were the focus of the study's second aim. Compared to a BL setting where the teacher is in charge of instruction, the CLBL setting significantly improves students' learning outcomes. These findings suggested that the CLBL setting was superior to teacher-led instruction in the same BL context when it came to teaching a research approach in a volleyball course. As evidenced by their tests scores, students seem to enjoy CL when it is integrated into a mixed learning environment. They understood their part in cooperative learning and the value of using technology in the classroom. Students' responses on the tests painted an upbeat picture of their perceptions of the CLBL classroom's effectiveness. There was clear evidence of its importance to the students education. First, the students' ability to self-regulate their learning has also been shown to be crucial in a mixed learning setting, where they are occasionally distracted by their access to the internet. Lastly, students generally said that CL in blended learning helped them accomplish their goals and that the lessons were engaging and informative. CLBL can contribute to the following aspects: (a) helping students feel comfortable expressing their learns (Blynova et al., 2020); (b) facilitating student participation and ensuring team-learning (Guden & Bellen (2020); (c) providing students with a strong classroom team sense, in the sense that they had the responsibility of group learning (Farias, Wallhead & Mesquita, 2020); (d) enhancing students' basic skills (Behzadnia et al., 2018); (e) maintaining individual accountability in team (Morgan, Fletcher & Sarkar, 2019); and (f) promoting student engagement in learning (Bessa et al., 2019). Several elements thought to be the cause of improved learning outcomes when applying the CLBL environment are: (1) being founded on a constructivist perspective, (2) being superior , and (3) being able to encourage and stimulate the active engagement of learners in the learning process (Tarigan et al., 2021). However, the teacher needs to consider the following aspects in order to employ cooperative learning in blended learning instruction effectively. They are: (a) teacher competencies, pedagogical competence

and especially technological competence (Bosch, Mentz & Reitsma, 2020), (b) student characteristics, supporting devices, and material characteristics, (c) blended learning characteristics, (d) learning outcomes, (e) cooperative characteristics, (f)supporting structures, by social systems، determining syntax of learning, principles of reaction, learning elements, and impact of instruction (Silva, Farias & Mesquita, 2021).

Conclusion

Students in the fifth semester at Andalus School, Directorate of Misan Education, Ministry of Education in Iraq participated in a CLBL environment on Research Method in learning volleyball, from which it was concluded that they had achieved great learning outcomes at the end of the sixteen meetings of a learning programme in the blended format between cooperative learning and teacher-led instruction. Results show that the CLBL setting used in the proposed teaching programme is significantly more effective than traditional BL. Students like the rigorous approach to instruction brought by CL in blended learning since they were able to pick up useful knowledge from one another. Students were also positive about CL's usefulness in a hybrid classroom setting. Implemented correctly, CL in blended learning can strengthen the learning process by elevating the level of learning effort above that of traditional classroom learning. It is possible that CL in a mixed learning setting will become a prominent form of education in the years to come.

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