EXAMINING BLENDED LEARNING IN A THEORETICAL CONTEXT

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ABSTRACT

In this study, it is aimed to examine blended learning in a theoretical context. While conducting this research, the source scanning method was used. The definition of blended learning, its function, where it is used, and its effect in different fields are revealed. While blending literally means taking the positive aspects of two things and creating a good and balanced composition; It is explained as the combination or blending of web-supported technologies in education for educational purposes. With the need for distance education from time to time, blended learning has become more prevalent and the importance of blended learning has increased. In the study; The steps to be applied in the blended learning process, Blended learning dimensions and Blending types, Blended Learning Approaches, blended learning in language teaching, the use of blended learning in different disciplines and blended learning in Turkish teaching are explained. According to the findings obtained from the study; With the development of technology, the use of blended learning has increased. It has been concluded that the aims of blended learning vary according to courses, and this change shows that blended learning can be applied in every course. The diversification of blended learning objectives has shown that blended learning can be applied to different fields, different students, different situations and different content.

Key Words: Blended Learning, Theoretical, Literature Review.

1. INTRODUCTION

Blended learning is an approach that provides a more effective and comprehensive learning experience by combining various learning methods. This includes integrating learning methods such as traditional classroom instruction, digital learning platforms, interactive applications, group studies, experience-based learning, and more. This diversity aims to offer students an environment suitable for different learning styles and needs. Blended learning encourages students to understand more deeply and consider topics from a variety of perspectives. Driscoll (2002) explained blended learning as "the combination or blending of web-supported technologies (virtual classes, self-paced education, collaborative learning, use of video, audio and text) for educational purposes." In other words, blended learning generally means using two or more methods for the learning purpose (Ünsal, 2013).

With the emergence of new technologies, these technologies, which are used effectively in every aspect of our lives, have changed educational processes and led to the emergence of new learning environments. Technological advances offer various opportunities in educational processes. Technology offers the opportunity for more effective learning environments in education (Dickinson and Bass, 2020). Access to information has become easier and communication and interaction opportunities have expanded. Individuals can constantly access information through various digital platforms and interact with different communication channels. This situation has required teachers to design studies and develop new approaches that will increase students' participation in lessons in the online environment (Howard et al., 2021). Recently, the concept of blended learning has also come to the fore in this context.

Blended learning, also known as blended or hybrid learning, when looking at the definitions; It is a learning aimed at teaching with more than one method, without limiting it to a single method.

Blended learning has six goals. Ünsal (2013) explains these as follows:

1.Pedagogical richness

2.Access to information

3.Social interaction

4. Guiding personal learning

5.Low cost

6.Ease of replacement.

Features of Blended Learning:

• Reaching education in a wider area

• Easy to apply

• Benefit-cost effectiveness

• Positive professional outcomes

• Ability to meet different needs

• Advanced education (Unsal, 2013).

2.BLENDED LEARNİNG APPROACHES

Program Flow Model

It consists of completing certain tools according to a chronological schedule and designing a step-by-step teaching program. This is a process similar to high school or college classes. Each section or stage is in a sequence that builds on the previous one. The program has a clear, unchanging plan, and this plan requires students to progress in a certain order. The last stage of the program is completed by making an approach to measure all learning (Ünsal, 2013).

Essence and Complements

It is generally based on a basic educational approach combined with classroom instruction and web-enabled courseware. Then optional materials are presented, which combine and complement other materials, direct communication, various resources and supporting tools for the topics. This approach has exercises and resources for all elements; but these are arranged step by step, that is, they are not precisely planned. In the Core and Supplements model, additional material is optional and clearly planned. Students decide on the additional materials to be used. In addition, it is not necessary for all students to finish the course at the same time in this approach. Ultimately, blended learning is a whole of these two approaches, but when it is simplified, both can be considered a way to start (Ünsal, 2013).

Goals of Blended Learning

The flexible structure of blended learning and the emphasis on its different aspects cause the aims of this learning to be considered as a framework. Osguthorpe and Graham (2003) explained why blended learning should be preferred and the purposes of this framework. These are pedagogical richness, access to information, social interaction, learner control, cost effectiveness and revisionability.

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Blended learning is done with the aim of increasing learning at a level that enables students to learn at the highest level. In this approach, flexibility can be provided to students in terms of time management through the use of various technologies. Students can prepare for the lesson by taking the content of a lesson online or by sharing a file before the lesson. This can be an advantage in terms of saving time and also allows for different activities during the lesson. As Schmidt (2002) stated, in order to provide pedagogical richness, the content can be edited and made more appropriate by using various learning activities and different multimedia tools over the internet. In addition, while carrying out this activity, the pedagogical dimension that takes into account target-content analysis and student needs analysis should not be ignored (Khan, 2005). Looking at pedagogical richness from a different perspective, Sands (2002) stated that it would not be sufficient to simply upload materials developed using various technological tools and present them to students. He emphasizes that students may not be interested in this and states that this should be done by creating various online environments where students can interact with each other and with the teacher.

Blended Learning Models

When it is looked at blended learning models, the first thing that stands out is Graham's (2006) approach, which states that blended learning can be achieved at four different levels. These four levels are; institution, program, course and activity levels.

Blending at the institution level is the online and face-to-face blending of all courses and activities, not just one or a few courses or programs within any institution. Blending at the program level, which can generally be seen at the undergraduate level, is defined as conducting some courses in the program face-to-face and some online. Blending at the course level is the combination of online and face-to-face learning throughout the course. Blending at the event level means that some of the activities are carried out face to face and some online (Graham, 2006).

NIIT (National Institute of Information Technology) has also identified three models for blended learning (Vailathan, 2002). Skill Developing Model: In this model, course content can be presented in the form of information and practice. The interaction between student-student and student-teacher is combined with normal learning and various web activities (e-mail, discussion forum, etc.).

Behavior Developing Model: It is a model that gives students the opportunity to practice new behaviors in life-like environments without taking risks. It is the combination of online collaborative learning activities (web-based conferences, discussion forums, group

projects, online discussion programs, etc.) with classroom learning.

Competency Developing Model: It consists of activities carried out under teacher guidance using online performance-supported tools. In this model, learning management systems, instant messaging. With activities such as simulations, students have the opportunity to apply their newly acquired knowledge and skills in real situations.

Another blended learning model is Osguthorpe and Graham's (2003) model. This model has three components: "online face-to-face activities", "online face-to-face students" and "online face-to-face instructors". In the first one, outside of face-to-face lesson hours, the student and teacher continue the rest of the lesson in interaction in the online environment. Synchronous and asynchronous learning activities are carried out in this model. In the second, students and teachers interact in a classroom environment where different students can participate. In the third type, there is interaction with students in the classroom environment, in which other instructors other than the teacher can participate.

Blended Learning Environments and Design

There are various learning environments in blended learning. These are generally synchronous (face-to-face classroom, virtual classroom) and discrete time (discussion forums, self-learning materials) learning environments (Hofman, 2006). While designing blended learning environments, it should be planned how the elements of blended learning will be incorporated into the courses in a variable and systematic manner. In this planning, the difference and feature of blended learning is that it allows the use of online learning environments. While creating a blended learning environment, it is necessary to design the environment from a holistic perspective, taking into account the existing conditions, the goals expected from learning, the content, the methods and tools to be used, and not only by determining these (Neumeier, 2005). While creating blended learning environments based on this perspective, it is seen that there are different approaches, as in many dimensions of blended learning. Although this situation can be interpreted as a lack of consensus, it can actually be seen as richness and flexibility. In this respect, it is thought that it would be useful to make explanations about different opinions in terms of the design of blended learning environments.

Related researches

The research conducted by Traupel (2006) was conducted in a traditional style for physics courses and in an environment where multimedia content was prepared and implemented. As a result of the research, it was stated that the project was successful and that blended learning environments increased the quality of courses. In the research, it was determined that the interaction that started auditorily among the students attending the course continued with textual speech over time, and that the auditory interaction, which was limited in distance education students, decreased over time. It was stated that communication through textual speech is the basic element in interaction and it was concluded that textual interaction is disturbing for students in a face-to-face environment. It was also emphasized that textual communication was found to be a necessary tool for blended learning environments. In addition, as a result of the research, it was stated that blended learning environments are effective and it was suggested that they should be widely used in undergraduate courses.

Yushau (2006) stated that 70 students participated in their study investigating the effect of the blended learning environment on university students' attitudes towards mathematics and computer courses. It was stated that randomly selected students attended face-to-face classes three times a week and were given the opportunity to access resources and prepare homework online through Maltab applications. As a result of the research, it was stated that there was a statistically significant decrease in students' computer anxiety, but there was no significant change in their attitudes towards computers and mathematics.

In the study conducted by Delfino and Persico (2007), it was stated that prospective teachers aimed to use collaborative learning techniques by using computer technologies in a blended teaching environment and to investigate the positive and negative aspects of the problems and solution suggestions encountered during the process. The research, conducted in the form of a case study, lasted for four years with the participation of 100-150 students each year. As a result of the research, it was stated that educators generally tend to choose the method they know, and it was emphasized that online learning techniques should be used more effectively in teacher education and new generation teachers should internalize these approaches.

The purpose of the research conducted by Deghaidy and Nouby (2008); to examine the effects of collaborative blended learning environment on teacher candidates' achievements, attitudes towards e-learning and collaboration in the teacher training program in Egypt. It was stated that 26 teacher candidates participated in the study conducted with mixed method, and as a result of the research, it was stated that the participants in the experimental group

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achieved higher scores in the post-tests and their attitudes towards e-learning compared to the control group.

It was stated that the research, which was conducted with a mixed method and participated by teacher candidates, aimed to examine the effect of collaborative blended e-learning environment on the success and attitudes of teacher candidates. As a result of the research, it was stated that students who received education in the blended teaching environment had higher positive attitudes towards learning.

In the study conducted by Pearcy (2009), it was aimed to examine the effect of the blended learning approach on students' academic performance, attitudes and satisfaction levels by comparing it with face-to-face teaching and web-based distance education. As a result of the research, it was stated that the satisfaction levels of the students were very high and there was a significant difference in attitude towards the course in favor of traditional teaching. It was also emphasized that a low positive relationship was detected between academic performance and the time spent participating in online activities.

The study conducted by Acelajado (2011) aimed to examine the effects of blended learning in mathematics teaching. The research was conducted with a quasi-experimental design and a total of 40 students participated. As a result of the research, it was stated that the blended learning approach was more effective than the traditional learning approach on all dependent variables, and the blended learning approach was also observed positively in the interest and motivation levels of the students.

Kistow (2011) stated that the purpose of his study conducted in Trinidad and Tobago was to determine the experiences of higher education students towards blended learning. It was stated that 150 students participated in the quantitative study and a survey was used as a data collection tool. As a result of the research, it was emphasized that students liked blended learning and preferred education in these learning environments.

The research conducted by Pokuaa (2011) was conducted in a higher education institution, and the web-based approach was blended with face-to-face learning and used to evaluate students' student performances. In the experimental study, it was stated that the blended learning approach provided a 61% improvement in students' performance. It was emphasized in the research that it was determined that the blended learning approach would produce more negative results than the face-to-face approach if the technological infrastructure was not prepared or if it was done inadequately.

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In their study, Tsai et al. (2011) investigated the effect of blended learning in certificate programs at the vocational education level in Taiwan on students' academic success, satisfaction with the course and self-regulation perceptions. It was stated that 112 students at three different grade levels participated in the study and online applications were used. As a result of the study, they stated that they found that blended learning activities had a positive effect in terms of the variables investigated.

In his study, Rowe (2012) aimed to examine the effectiveness of the blended learning approach in undergraduate clinical education courses with the variables of clinical justification, critical thinking and reflective thinking. As a result of the experimental research, it was stated that blended learning had a positive effect on the dependent variables.

It was stated that the research conducted by Ruck (2012) was conducted to examine the pedagogical characteristics and pedagogical beliefs of teachers in the blended learning environment. Qualitative and quantitative data collection tools were used in the mixed method study. As a result of the research, it was stated that teachers exhibited a more teacher-centered approach in face-to-face education compared to the blended learning environment and that there was no similarity between teachers' pedagogical beliefs and their behaviors in the classroom. As a result of the research, it was suggested that it would be good to provide training to teachers in the field of classroom pedagogy.

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In their study, Moskal et al. (2013) made a conceptual discussion by focusing on what blended learning is like and as a result of their study, they suggested that blended learning environments could be effective if handled and implemented in a structure that is constantly researched, planned, evaluated and developed as an institutional activity.

In their study, Kuo et al. (2014) aimed to examine the interaction types and satisfaction of secondary school teachers in blended learning environments. It was also stated that the study also focused on the relationship between students' perceptions of three different interactions (student-student, student-teacher, student-content) in the blended learning environment. 22 students attended the training, which lasted 15 weeks. The study was carried out with a quantitative approach. The scale, which tries to detect the interactions and opinions of the participants, was used as a data collection tool. As a result of the research, it was concluded that the most important interaction was the interaction between the student and the content and although other forms of interaction contributed, they did not have a significant effect. It was also stated that there was a significant difference in favor of men in the gender variable regarding blended learning environments.

In their study, Kälberer et al. (2016) focused on the consequences of using blended learning in the evaluation process of a course of engineering faculty students working at the same time in Germany. They used the blended learning environment to conduct remote evaluation during the research process; At the end of the study, they stated that communication, time and language problems come to the fore in this type of evaluation.

In their study, Bervell and Arkorful (2020) aimed to examine the impact of LMS systems on teacher behavior in Ghana and teachers' approach to blended learning. It was stated that a survey was used as a data collection tool in the quantitative study and 269 volunteer teachers participated as participants. As a result of the research, it was stated that teachers welcomed blended learning as long as the technological infrastructure supported it that voluntary participation was important to achieve good results, and that students should also be included in the study as a suggestion.

As a result of their study investigating the effect of blended learning strategies in higher education on the learning outcomes of students in computer and communication technologies courses. Resien et al. (2020) stated that blended learning strategies are an effective application on learning outcomes.

In their study, Vo et al. (2020) aimed to examine the effect of the application of blended learning in different disciplines (difficult-easy) on student performances. It was stated that 571 students participated in the study conducted at a state university in Vietnam, and a survey and achievement test were used to collect data in the quantitatively designed study. As an easy discipline in study; it was stated that courses from law, foreign languages and social sciences and engineering (thermodynamics) were chosen as the difficult discipline. As a result of the study investigating the effect of blended learning in different disciplines. It was stated that blended learning was effective in the courses in both categories and that it contributed to student success and it was also determined that female students were more willing to learn blended than male students.

In their study, Berga et al. (2021) aimed to determine the effect of blended learning in nursing education in Canada on students' self-efficacy, knowledge and perceptions. It was stated that 187 undergraduate students participated in the study and it was carried out in a quasi-experimental design. At the end of the study, it was stated that there was no significant difference in terms of students' self-efficacy and knowledge scores of blended learning activities, but they had positive perceptions and it was stated that this method encouraged innovative and flexible learning opportunities.

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In their study conducted in Belgium, Bruggeman et al. (2021) aimed to determine the qualifications that teachers should have regarding blended learning, which has become widespread in higher education. Focus group discussions were held in the study, which included 12 participants. As a result of the research, it was emphasized that two important elements come to the fore in terms of the qualifications that teachers who will teach in blended learning environments must have. These include recognizing a pedagogical need for change and having a creative perspective to incorporate technology into teaching processes.

Jost et al. (2021) examined the effect of blended learning on students' academic success in their study, which lasted 14 weeks and was conducted at the Distance University Institute in Switzerland, with the participation of 62 psychology department students. As a result of their research, they stated that narrowly reducing the concept of academic success to exam scores is a limitation of the study and stated that approximately 24% of the participants did not complete the process, but the factors that determine the impact on academic success in the blended learning environment are; they determined that students' personality characteristics, studying regularly and studying at the most appropriate time of the day.

In their study, Polhun et al. (2021) aimed to examine the effect of blended learning, which was carried out during the pandemic period in Ukraine during the transition of students from distance education to blended education, on their success and attitudes with the test they developed. Undergraduate students from different departments participated in the research and their foreign The application was carried out in language lessons. As a result of the study, it was stated that blended learning was effective on their success and the students exhibited positive attitudes.

Diana et al. (2022) aimed to examine the effect of blended learning on students' social skills in their study in Indonesia. It was stated that a case study, a qualitative design, was adopted in the study in which students from different grade levels participated. At the end of the study, it was stated that blended learning creates a good, safe and comfortable communication environment between teachers and students and is an important factor in the development of students' abilities and skills, and it is stated that it is a good alternative to only online or face-to-face learning environment.

In their study, Finlay et al. (2022) aimed to investigate the blended learning experiences and perceptions of students studying in the sports department during the pandemic period in the United Kingdom. The study focused solely on the effect of an applied course in a virtual environhent or a blended learning environment on student perceptions and experiences, and was conducted with the participation of 81 students in the virtual

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environment and 62 students in the blended learning environment. At the end of the study, it was stated that students' perceptions of the blended learning environment were more positive and that it allowed them to practice activities.

In his study, Prifti (2022) aimed to examine the effect of blended learning on students' self-efficacy perceptions and satisfaction in a higher education institution in Albania. It was stated that in the study conducted with 375 students taking business management courses, a quantitative study method was adopted in which data was collected using a survey. At the end of the study, it was emphasized that the students were satisfied with the blended learning environment and their self-efficacy perception improved.

Suana (2022) stated the purpose of her study as explaining the effect of inquiry-based blended learning design in the undergraduate physics course on students' learning success and satisfaction. It was stated that 32 students participated in the study, which was carried out in the form of a pre-test post-test semi-experimental design and the data were collected by scale and survey. At the end of the study, it was emphasized that the students were satisfied with the activities and viewed them positively, the learning outcomes increased sufficiently, and inquiry-based blended learning could be used effectively and efficiently in physics teaching.

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RESULT

In this study, blended learning was examined in a theoretical context. What blended learning is, its usage area, purposes and models of blended learning are explained. It has been determined by relevant research that blended learning can be used interdisciplinary. In the studies in the literature review; it has been revealed that the readiness level of teachers is of great importance for the successful implementation of the blended learning model and competencies such as teachers' mastery of technology, ability to determine learning goals, guiding students and personalizing learning experiences enable them to be successful in the blended learning process. It has been determined that it is critical for education systems to provide appropriate support and training for teachers to develop these skills that the blended learning model enriches the learning experiences of students and that teachers can undertake the role of effective guidance and support.

It was found that students generally have a positive view of the blended learning process, environment and activities. It has been observed that the blended learning process has a significant impact on students' project and design development and is an element that affects them positively. It has been revealed that it helps students feel comfortable, gain independent

working skills, develop their creativity and self-confidence, and thus create an idea and product.

With blended learning; Students are provided with the opportunity to acquire knowledge using various learning styles and tools. It has been observed that every student can find an approach that suits their own learning style. This increased students' participation in the lesson. Additionally, blended learning has supported students' development by providing them with feedback and evaluation.

In studies; With blended learning, learning is made deeper and more comprehensive by bringing together detailed and diverse information sources. By combining different learning methods, for example using different methods such as reading books, interactive applications, group work or sharing experiences, students often gained a better understanding of the topics. It has contributed to making the learned information more permanent and to the ability to look at it from various perspectives.

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