

Methods of teaching school informatics in English based on blended learning technology

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Abstract

Blended cooperative learning applications, which offer education with the opportunities offered by information technologies, have the potential to increase the interaction between learners and support learners to learn information more permanently and to develop positive attitudes towards the lesson. Along with the developing technology, technological tools have been included in education. The effect of the blended learning method, which is a technological innovation, is very important in language teaching. The aim of this study; To determine the opinions of English teachers about blended teaching. Within the scope of this general purpose, the positive aspects and negative aspects of the technological tools, the advantages and disadvantages of the blended learning methods, the effect of this method on the students are determined by the English teachers working in the secondary school. A qualitative research method was used to reach the results of this research. The

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opinions of 15 English teachers who use the blended learning method and technological tools in their classes were taken. In the selection of the sample, the teachers' use of technology was taken as a basis. The opinions of 15 English teachers who used technological equipment in their classes and participated in the research voluntarily were consulted. The findings were thematised and explained with the content analysis method. It has been concluded that the teachers participating in the research have positive contributions to the learning of technological tools. It is among the results of the study that blended learning has important advantages such as providing instant feedback and continuous feedback to students, taking into account individual differences, increasing the interaction and communication outside the classroom, and increasing the interest in the lesson.

Keywords: English, language, blended learning, technology, educational environment, information technology

1. Introduction

Towards the end of the 19th century, the question "How do we learn?" was asked. This question has given us new approaches and new thoughts. Learning and teaching is the most important concept. "Learning and teaching are different processes. Students today learn in different ways than in the past. The most important criterion for them is that they find the applied learning method meaningful and worth spending time, and their use of technology. What can be taught must be taught and cannot be learned otherwise. But it can be learned things must also be learned and cannot be taught." opinions emerge (Drucker, 1996; Bakar, 2020; Prensky, 2010).

The impact of the learning and teaching process is related to technology. Internet and technology concepts in recent years. Education is in all areas of life and has been influential in the field. With the effect of the new age, the effect of digitalisation on the speed of learning and teaching in education is increasing day by day (Tonbuluğlu, & Tonbuluğlu, 2021).

In a study on the use of educational technologies in teaching, it was identified that there are six benefits of technology-based education. these; development in subject learning, computer and Internet use, and vocational training; increased interest and desire to learn; Development in individual learning, research capabilities and social development (Gates, 1999; Ünsal, 2007).

With the ever-developing age, information technologies have developed in the world. As a result of the penetration of the Internet into every field, it has an important place in the field of education. Under the leadership of the teacher, which forms the basis of the constructivist approach, the student's knowledge new information by coding existing information in mind, not memorising It also forms the basis of blended learning environments. forms (Üstün, 2011; Ocak, Üstün, Apaydın, 2010;). For this reason, the transition from traditional learning methods to alternative learning methods has been rapid after developing technology (Jonker, März, & Voogt, 2018; Yalçın, 2020).

Blended learning is a method of creating an ideal learning environment by completing face-to-face education and distance education together. The learning process is shaped by taking into account educational factors such as learning in the effort, time, place, success and motivation(Ozdeniz, 2021; Singh, 2021; Cannon, Lohtia, & Paulich, 2021). Blended learning, providing the most appropriate level of education for a specific target audience to use different educational environments simultaneously (Bersin, 2004, p. 15; Garrison et al. Kanuka, 2004, p. 96; Singh and Reed, 2001). Blended learning has been valued and applied in higher education for a variety of reasons, including addressing the need for a more flexible and personalised curriculum (Jonker, März, & Voogt, 2018), responding to student diversity using differentiated instruction (Boelens, Voet, & De. Wever, 2018) or increasing students' interaction with learning materials (Mestan, 2019).

Hijazi, Crowley, Smith & Shaffer (2006), stated the conveniences of learning under certain themes. These;

- Ease of meeting in-class learning objectives
- Ease of giving the same courses with the same content
- Effective use of lesson time
- Flexible course schedules
- Increasing research options
- Accessible course content at any time
- Ability to use different web applications in the training process (video with iframe slide 'prezi, google slide', javascript exam applications scorm contents)
- Ensuring students' access to course content from different venues
- Relief of the teacher from the burdens such as attendance, homework control
- High increase in student-teacher interaction (Meriçelli, 2015).

Blended learning has both advantages and disadvantages. It is a disadvantage that teachers are not sufficiently equipped about technology or that educational institutions do not have sufficient infrastructure. It has been observed that students have negative attitudes towards online teaching due to insufficient computer skills, low motivation, and limitations in independent research abilities (Gaziano & Liesen, 2004). It is also a disadvantage that students who are accustomed to traditional learning methods cannot get used to the technique of the blended learning environment.

Rodriguez (2009) examined the critical thinking skills of university students and the blended learning model in his doctoral thesis. According to the results of the research, blended learning increased the reasoning skills of the students. Baglien (2009) examined the Family and Consumer Sciences course in a blended model in his doctoral thesis. According to the results of the research, success will increase if schools support blended learning in terms of finance, education and continuity. Arano-Ocuaman (2010) showed in his study that the students in the blended environment can learn more easily than the students in the traditional environment and that they find it satisfactory to use technology to help them improve themselves. In his doctoral thesis, Ruck researched teachers' face-to-face and online teaching techniques in a blended learning environment. Teachers' pedagogical beliefs were also examined in the study. According to the results of the research, the teachers showed a more teacher-centered approach in the face-to-face part compared to the online part. The pedagogical beliefs of the teachers did not show similarity with their behavior in the classroom. In this sense, it is thought that it would be good to provide training to teachers in the field of classroom pedagogy.

The benefits of the blended learning method for language learning enable students to learn from different sources through web-supported materials and activities by enriching their way of accessing information. With blended learning, time and space limitations are removed and student-student and student-teacher communication and interaction are maintained both in the classroom and online. Blended learning allows students to learn on their own without depending on teacher guidance. It

provides diversity to students in their learning. Students can choose their learning according to their needs and requirements. In addition to the opportunities offered by e-learning, blended learning is less costly and easier to access than e-learning (Dag, 2011).

1.1. Purpose of the research

The aim of this research is to examine the views of teachers who teach English as a language about blended learning environments. Within the scope of this general purpose, answers to the following questions were sought.

1. What are the positive and negative aspects of using technological tools in language teaching?
2. What are the positive and negative aspects of the blended learning method in language teaching?
3. What are the effects of blended learning in language teaching on students?

1.2. The Importance of Research

The importance of digitalisation in education The cause of the epidemic in the world has been revealed once again. In order to continue the education, distance education was started. It is a type of learning under the name of e-learning in blended learning. It is thought that the evaluation of the situation from the perspective of the teachers will provide important contributions in terms of blended learning, increasing the effectiveness of the environments, the qualifications of the teachers, the achievements of the students, the determination of the problems experienced and the determination of the right solutions to these problems.

2. Methods

Blended learning is a learning model in which different educational environments (face-to-face and distance education) are used simultaneously. It is widely used in all teaching levels. This qualitative study, which examines the views of teachers teaching English as a foreign language on blended learning, is phenomenology research. Phenomenology research is research in which facts, events, experiences or attitudes are analysed in depth by collecting accurate and detailed information from the participants (Creswell, 2014, Patton, 2015, Wagner, Kawulich, & Garner 2012). In phenomenological studies, data is usually obtained through face-to-face interviews (Creswell & Poth, 2018, p. 79).

2.1. Population and Sample

The universe of the research is English teachers working in secondary school. Purposeful sampling, in which individuals with knowledge are selected by the researcher in order to obtain data about an event or phenomenon (Ary, Jacobs, Irvine, & Walker, 2014, p. 169; Babbie, 2017, p. 196; Gürbüz & Şahin, p. 134.) methods were determined by the criterion sampling method. In the criterion sampling method, the criteria that are important for the research are determined beforehand and the cases that meet these criteria are studied (Patton, 2015). The criteria can be prepared by the researcher or a previously prepared criteria list can be used (Yıldırım & Şimşek, 2016). The criteria determined for sampling in this study are that the teachers participating in the research teach the English language with the blended learning model. In this context, 15 English teachers teaching English with the blended learning model working in secondary school constitute the sample of the research. Demographic information of the sample is shown in Table 1.

Table 1: Demographic Characteristics of the Research Group

Variable	Specifications	N
Gender	Woman	9
	Man	6
Age	22-27	4
	28-33	6
	34-39	5

2.2. Data Collection and Analysis

Semi-structured interviews were conducted with the sample group in order to determine the views of English teachers on blended learning. In the interview forms, there are 2 questions about the demographic information of the participants (gender, age) and 3 open-ended questions asked in the context of the research question. For the validity of the open-ended questions in the interview forms, the opinions of two academicians from the field of measurement, evaluation and statistics were taken, and the clarity of the questions was reviewed by making a preliminary application with 2 teachers who teach English as a foreign language. As a result of expert opinion and preliminary practice, necessary arrangements were made on the questions and the interview forms were made ready for application. The questions in the interview form are as follows:

1. What do you think about the advantages and disadvantages of using technological tools in your lesson?
2. What do you think about the advantages and disadvantages of the blended learning method in your course?
3. What is the impact of blended learning in language teaching on your students

Descriptive statistical analyses were made on the demographic information of the English teachers participating in the research using the SPSS 22.0 (Statistical Package for the Social Sciences) program. The open-ended questions asked in the context of the research questions were analysed with the content analysis method, one of the qualitative data analysis methods. The audio recordings of the face-to-face interviews with the teachers were transcribed. Then, the data related to each other was determined and coding was done. The data were also analysed by an independent field expert and the reliability calculation was made on the codes obtained by using the formula suggested by Miles and Huberman (1994, p. 64). As a result of the calculation, it was understood that the research was 81% reliable. In cases where the intercoder reliability is over 70%, the research is considered reliable (Miles & Huberman, 1994, p. 64). After the codes were created, themes and sub-themes were determined for each interview question. In terms of the credibility of the research, participant confirmation was applied (Yıldırım & Şimşek, 2016, p. 277). The findings obtained from the research were analysed by using the coding method. Frequency and percentage calculations were made and the data were interpreted by supporting direct quotations from teachers' opinions

3. Result

3.1. Advantages and disadvantages of using technological tools in teaching English

Table 2. Advantages and disadvantages of using technological tools

	N	N
		effective teaching
		fun content
		6
		6
		diversity in learning
ADVANTAGES	15	
		4
DISADVANTAGES	4	Lack of infrastructure
		3
	3	Material

English teachers were asked about the advantages and disadvantages of using technological tools in language teaching. All of the teachers stated that they were advantageous from their findings regarding the advantages and disadvantages of technological tools. As an advantage of using technological tools in language teaching, English teachers thought that it should be used because it provides effective teaching opportunities to students (12), provides entertaining content (6), and provides diversity in learning (6). It has been concluded that the use of technological equipment may be a disadvantage due to the lack of infrastructure (4) and the lack of financial means (3).

Examples of the opinions of the teacher;

“There are many mobile applications with English content. The use of technological tools during language learning is quite common and effective.”

“When we want to use mobile applications, not every student may have an electronic phone or internet. This comes across as a disadvantage.”

3.2. Advantages and disadvantages of blended learning method in teaching English

Table 3. Advantages and disadvantages of blended learning

	N		N
ADVANTAGES	15	Personalised learning opportunity	10
		flexibility	8
		Cost	8
		multiple methods	6
		Interaction	1
DISADVANTAGES	4	technological equipment	4

Most of the teachers stated that they were advantageous from their findings regarding the advantages and disadvantages of the blended teaching environment in language teaching to English teachers.

As an advantage of blended learning in language teaching, English teachers have stated that it offers personalised learning opportunities to students (10), flexible education opportunities (8), cost (8), the possibility of using more than one method at the same time (6) and it increases interaction (1). As a disadvantage, 4 English teachers stated that there may be a problem due to the inadequacy of technological equipment.

Examples of the opinions of the teacher candidates;

“Blended learning is one of the new types of learning and it is effective. It offers the opportunity to use many methods at the same time.”

“The materials used in language teaching sometimes require a lot of money. Instead of purchasing these tools, it is much cheaper to use them virtually by preparing a blended learning environment.”

3.3. The impact of blended learning in language teaching on your students

Table 2. Impact of blended learning on students

N

POSITIVE	
attitude towards the lesson	11
Motivation	9
Technology supported education	7
peer communication	3
NEGATIVE	
Internet is required	18

English teachers were asked about the impact of blended learning on students. Indicate these effects as negative and positive. Most of the teachers counted the positive features more. They stated that the positive effects on students increased their motivation towards learning (11), their attitudes and prejudices towards the course were removed (9), they were happy because they received technology-supported education (7), and they were in constant interaction with their friends (3).

Examples of the opinions of the teacher;

“I saw that the students showed a positive attitude towards the blended learning application. Their motivation increased. Their self-confidence has increased.”

“Language learning seems to be a challenging course in the eyes of students. I saw that my students, who had negative attitudes towards language teaching, exhibited positive attitudes towards the lesson thanks to blended learning. In this case, I can say that blended learning is effective on students in language teaching.”

4. Discussion and Conclusion

Teachers' opinions were sought to determine whether blended learning is effective in teaching English. The general results obtained from the research are that the blended learning method is a suitable method for language teaching.

When the findings regarding the advantages and disadvantages of using technological equipment in English teaching were examined, all of the teachers expressed an opinion as an advantage. It has been concluded that technological tools provide effective teaching opportunities to students, provide the opportunity to prepare content in a fun way, and provide diversity in learning. Considering the findings regarding the disadvantage of using technological equipment, there may be problems due to the lack of infrastructure and financial impossibilities that are disadvantages in the use of technological equipment. Stambekova, Shmidt, Galieva, . Kydyrbaeva, Yerzhanova, & Issabayeva, (2021) stated that it is necessary to reorganise the educational content for technological equipment and that it is important to create the technological infrastructure.

When we look at the results of the advantages and disadvantages of the blended teaching environment in English language teaching, it is concluded that it provides personalised learning, flexible education, cost, the possibility of using more than one method at the same time, and learning by increasing the interaction. As a disadvantage, 4 English teachers stated that there may be a problem due to the inadequacy of technological equipment. The disadvantage obtained from this study is similar to a previous study. Some studies show that blended learning does not have a significant effect on learner attitude, such as the study of Yushau (2006). It was concluded that the reason for this was due to the insufficient technological infrastructure.

English teachers were asked about the impact of blended learning on students. Most of the teachers outnumbered the positive traits. If we look at the results of the positive effects on the students, it is seen that the motivation of the students towards learning increased (11), their attitudes and prejudices towards the lesson were removed (9), they were happy because they received technology-supported education (7), and they had positive opinions because they were in constant interaction with their friends (3). they have stated. Findings from this study are supported by other studies. Some studies support the positive development of students' attitudes and motivation towards the lesson, who are educated in blended learning environments (Kirişcioğlu, 2009; Yapıcı & Akbayın, 2012; Karchmer, 2011; Isiguzel, 2014; Boelens, Voet, & De Wever, 2018).

Suggestions

The difficulties experienced by students during the use of technological equipment can be investigated and precautions can be taken regarding these difficulties. For the effect of blended learning on language teaching, student's attitudes and behaviors can be examined. Blended learning method can be used not only in language teaching but also in different lessons.

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