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# Blend or Not to Blend? What Faculty Members Think About Blended Learning?

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**ABSTRACT**
In this study, it is aimed to reveal the opinions of the academics who have experienced the blended method in the course of blended courses. The study was carried out using a parallel mixed design. Research data were collected from academics who were determined by convenient sampling method. The research was conducted with 52 academics who stated that they had experienced the blended method. Data obtained from Likert type questions were analyzed by using frequency, percentage and average from descriptive statistical techniques and data obtained from open-ended questions were analyzed by content analysis. It transpired that blended learning is mostly preferred in the courses where information technologies are used. Considering that modern ICT is used extensively in blended learning, this is an expected result. Although the participants were generally satisfied with using blended learning, it was understood that they were concerned about the students not attending lessons, a low level of interaction and experiencing various communication problems, and difficulties presented by practical or applied lessons. Despite these concerns, it was found that respondents were generally satisfied with the quality of the lessons taught with blended learning. Another important finding obtained from the research data is the recommendation of participating academics to prepare instructors who will teach using blended education to plan and organize pre-course processes well. It is thought that future studies will primarily focus on research that will dampen the down-sides identified by our research participants, and will support efforts to develop and disseminate blended learning.

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## Introduction

Today, innovations that have emerged with the development of technology are spreading and becoming accepted at a dizzying speed. Şahin and Demir (2015) state that technology-oriented change and renewal efforts deeply affect human life both in the context of the individual and society. So much so that the effective use of technology, which is frequently used in all areas of life, has become an inevitable necessity (Reyes, 2020). Unsurprisingly, technological innovations are widely used in learning environments for educational purposes (Çakır, 2013; Gün & Çoban, 2019; Karataş & Sözcü, 2013; Pollock & Hauseman 2019; Yahşi, 2020). With the cheapening of personal computers in the 2000s, learning environments have been moved to a network environment where computers, projectors and internet technologies are used intensively (Eren & Kurt, 2011).

New learning models have emerged with the integration of rapidly developing technology into education. One of these models is the open and distance learning application, which was first implemented by the Massachusetts Institute of Technology in 1999 (Özkul & Aydın, 2020). The widespread use of internet-based technologies in recent years has increased the use of various applications that support learning in out-of-class environments. In this context, online education draws attention as a reflection of the paradigm shift in education. Online education, which has been used intensively since the early 2000s, makes education opportunities accessible and usable, especially for adults in remote regions (Luyt, 2013), accessing more quality education content independent of time and place (Gürdoğan & Bağ, 2020). Although it has benefits, there are also limitations such as limited social communication (Heinze & Procter, 2004) and the problem of motivating individual students studying independently (Salmon, 2013). Within the framework of these limitations, blended learning has been developed as a model consisting of the combination of the positive effects of both face-to-face education and online education. Blended learning is a teaching model in which part of the teaching process is carried out using distance educational technologies and some of it is carried out face-to-face (Akkoyunlu & Soylu, 2006). The Department of Education and Early Childhood Development in the US (2012) defines blended learning as "a combination of effective use of online and face-to-face approaches" (p. 5).

In their study in 2001, Singh and Reed defined blended learning not only as the use of face-to-face and distance education together and the blending of information technologies, but also as planning it in a way that will contribute to education at the highest level in terms of cost-effectiveness and learning gains. For this, they defined blended learning as the work of transferring appropriate learning technologies to appropriate people at the right time by combining them with the right learning styles.

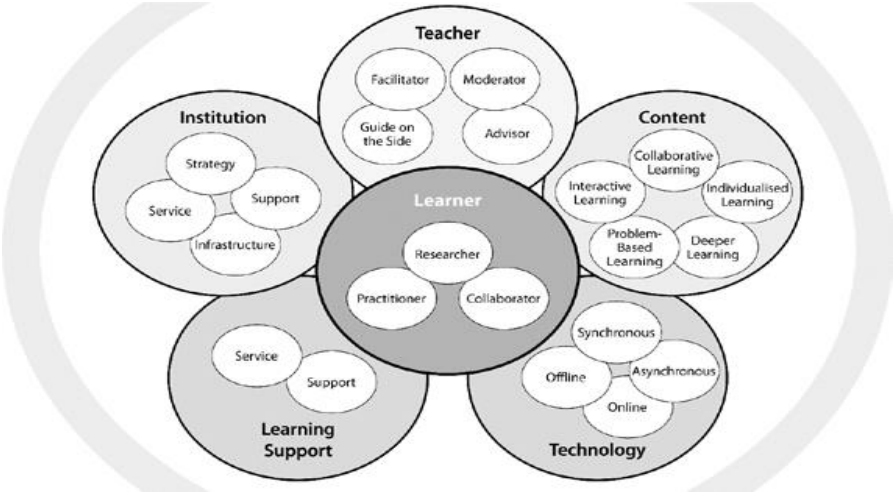
Integrating technology only for the purpose of blended education will not make that education blended learning and 'will not provide an adequate solution for effective teaching and learning' (Hadjerrouit, 2008, p.29). Unless given support, independence and interaction opportunities provided by being online are not provided, only technology will be integrated in the education (Cleveland-Innes & Wilton, 2018). Staker and Horn (2012) refer to this type of practice as technology-rich instruction. Staker and Horn (2012), who revised the definition of Innosight's in 2011, defined blended learning as 'a formal education program in which a student learns at least in part through online delivery of content and instruction with some element of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home' (p.3). The main diference between blended learning and technology-rich instruction is that in blended learning students have more control their learning with regard to time and place.

In order for effective blended teaching and learning to occur, a good understanding of the underlying theories and models is required. Otherwise, it will only be a superficial application for integrating technology.

Different models have been developed for a better understanding of the framework. Among these models are the Complex Adaptive Blended Learning System (CABLS) (Fig-1) and the Community of Inquiry (CoI) (Fig-2) models, both considered usable at all educational levels (Cleveland-Innes & Wilton, 2018).

**Figure 1**

*The CABLS Framework*




*Note*. (Cleveland-Innes & Wilton, 2018) (p.11)

In both models, the constructivist approach is adopted, in which the learner is put in the centre. Therole of the learner transforms from rote learner into an active researcher and participant role, while the role of the teacher transforms from one of conveying information to that of moderator. In the process of changing these roles, the presentation of the content requires the use of problem-based, interactive and participatory learning methods in order to create deeper learning compared with using traditional techniques. Hence, educators 'are faced with new pedagogical issues surrounding student interactions, course content design and delivery, multiple levels of communication, defining new types of assignments and performance expectations, and different assessment and evaluation techniques' (Moller et al., 2008, p. 67).

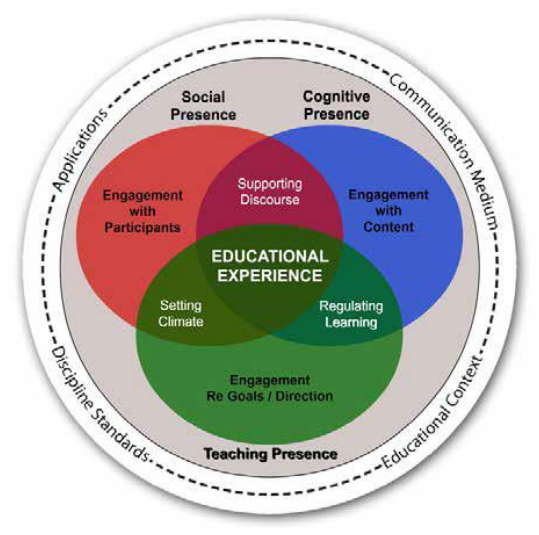
It is important to develop high-level thinking skills in order to ensure that this collaborative-constructivist learning can be realised and to have meaningful learning. Some of the factors affecting the success of blended education is the creation of learning environments that will enable learners to interact at a high level in the process of inquiry-based learning, and learners' positive attitudes and, as a result, greater satisfaction (Desai et al. 2009 p.328).

The CoI is a learning model consisting of teaching presence, social presence and cognitive presence elements, which enables the minimisation of limitations of especially social communication skills in blended and distance learning environments. As shown in Figure -2, a meaningful and deep learning experience in online environments is formed as a result of the balanced intersection of these 3 presences. The most effective method that can enable this meaningful learning to occur is inquiry-based teaching and learning (Cleveland-Innes & Wilton, 2018).

In the framework of inquiry-based learning, activities should be created to ensure the learners' participation in the content, as well as in effective interaction with their learner and trainers, as opposed to the direct transmission of the content. With the effect of these 3 (Social, Cognitive and Teaching) presences, it enables students to take more responsibility in their learning, to be more satisfied with the lesson and the instructor, to provide meaningful learning, to develop a sense of belonging, and to help learners learn from each other and to help each other with respect.

**Figure 2**

*The Community of Inquiry model*




*Note.* (Cleveland-Innes & Wilton, 2018) (p.15)

While providing a clear and reliable communication between learners within the framework of social presence group harmony, the Teaching presence emphasises the responsibilities of both the learner and the teacher in the instructional design process for recognising meaningful learning. The Cognitive presence has been defined "as the extent to which learners are able to construct and confirm meaning through sustained reflection and discourse in a critical community" (Cleveland-Innes & Wilton, 2018)(p.16).

Today, where online learning and blended learning models are used frequently, educators are faced with new applications and are expected to carry out new pedagogical processes such as communicating with learners through various platforms, making evaluations using multiple assessment methods, and transforming teaching from teacher-centred to learner-centred, unlike the traditional teaching methods they are accustomed to.

For the effective implementation of blended learning, administrators, teachers and learners need to understand and use this model effectively (Biluic et al., 2010). But different researchers have disagreed on the methods used in blended learning environments, the way they were applied, and their effectiveness.

Studies have shown that blended learning cannot be equally effective for all course types. For this reason, while face-to-face learning methods are more effective in some courses, the use of e-learning technologies provides advantages in other courses. In some courses, both methods can be used in a balanced way (Osguthorpe & Graham, 2003).

Looking at the literature, it is seen that research on blended learning has been carried out at various education levels including medical education (Salim, et all, 2018), nursing education (Jowsey et al., 2020), engineering (Sharunova et al., 2018), programming education (Alamary, 2019) and many others. Pima et al. (2018) study involved a thematic review of blended learning in higher education between 2000-2016, just under 30% of the 210 blended learning studies (n=62) were grouped into categories on the basis of instructional design. They stated that about 16% (n = 33) came under the title of under sub-headings such as learning-teaching styles with learner and teacher opinions and attitudes. The studies examined in the literature have mainly been conducted on a course basis and been carried out after educators had received initial training on this subject. However, due to shutdown of schools along with the pandemic, educators had to make a mandatory and sudden transition to distance education. In this implementation process, which was a new experience for most of educators, a number of trainers put blended learning practice at the centre of their educational

activities. Blended learning has been a fairly new application area for educators. During the Covid-19 pandemic, this new paradigm had the opportunity to be thoroughly tested. At the Covid-19 pandemic, blended teaching practices including distance education have gained much more importance due to the physical conditions of the learning environments and the measures taken within the scope of combating the epidemic.

This study aimed to reveal the views and experiences of educators on blended learning. As Saboowala & Mishra (2021) stated, there have been few research studies investigating problems and cases involving blended learning from the point of view of educators. most of the studies have moreover been conducted on at K-12 level (Drysdale et al., 2013).

This study aimed to reveal the views and experiences of educators who have experienced blended learning on the use of blended learning in higher education. In this context, answers to the following research questions were sought:

1. What is the satisfaction level of tertiary instructors for using blended learning?
2. How do tertiary instructors regard blended learning in comparison with face-to-face learning?
3. What information and communication technologies do tertiary instructors use in blended learning? what do they think about the effectiveness of these technologies?
4. What are respondents' recommendations for instructors who will use blended learning?

This study will shed light on the discovery of blended learning experiences of academic instructors at tertiary institutions. Thus, this study will provide to readers with an idea of the diversity of factors that support and hinder blended learning. It is hoped that it will provide valuable findings in terms of giving ideas to academics and instructors who want to use blended learning in their lessons.

## Method

In this study, the convergent parallel design, which is one of the mixed research method designs, in which quantitative and qualitative data are collected and analysed at the same stage of the research process and presented by combining two different result sets obtained after the analysis, was used (Creswell, 2012; Şimşek, 2014; Creswell & Plano Clark, 2015).

This study is a mixed structure research in which quantitative and qualitative data are used, aiming to mirror the views and experiences of academics regarding blended learning that has become widespread with the emergence of online learning applications. In this way, in addition to minimising the disadvantages of quantitative or qualitative research carried out singularly, more comprehensive findings have been achieved with various kinds of research data. No experimental application was made in this study. In this context, the question of how academics run the blended learning is not within the scope of the study and research questions. Therefore, no questions were asked to the participants about how they applied the blended learning.

### Participants

In this study, where appropriate sampling is used, quantitative and qualitative study groups consist of the same academics. Appropriate sampling method is explained as collecting data from a sample that the researcher can easily reach (Büyüköztürk et al., 2016). In this method, researchers create study groups by including sample units they can easily reach in their research (Kılıç, 2012). This method, which is also called easy sampling in the literature, can be preferred in practice due to reasons such as low cost, time saving and labour shortage (Şimşek, 2014). In this context, academics working at universities in Turkey were reached through the LinkedIn network.

Fifty-eight academics working in 16 different universities and faculties participated in the survey. 6 out of 58 participants were excluded from the research sample because they did not have experience with the blended method.

**Table 1**

*Demographic Characteristics of the Study Group*

| | Demographic | N | % |
|---|---|---|---|
| Gender | Female | 30 | 58 |
| | Male | 22 | 42 |
| | Total | 52 | 100 |
| Age | 26-40 | 17 | 33 |
| | 41-60 | 32 | 61 |
| | +61 | 3 | 6 |
| | Total | 52 | 100 |
| Seniority | 1-10 | 14 | 27 |
| | 11-20 | 16 | 31 |
| | 21-30 | 14 | 27 |
| | +31 | 8 | 15 |
| | Total | 52 | %100 |
| Title | Research Assistant | 3 | 6 |
| | Lecturer | 11 | 21 |
| | Dr Lecturer | 3 | 6 |
| | Dr Faculty Member | 16 | 31 |
| | Associate Professor | 10 | 19 |
| | Professor | 9 | 17 |
| | Total | 52 | %100 |

Table-1 includes various information about the demographic characteristics of the study group. The majority of the participants (58%) are female. It is seen that the distribution of participants according to their years of experience is close to each other.

## Instruments

A questionnaire consisting of Likert and open-ended questions was used as the data collection tool. The use of this survey technique facilitates researchers in reaching larger amounts of data at lower costs than many data more intensive collection techniques such as interviews and observations (Büyüköztürk et al., 2016). In this study, "Blended Lesson/Course Questionnaire", which was translated into Turkish by language specialist and adapted by the researchers, was used as a data collection tool. Translations were evaluated independently by the researchers and were compared. The Blended Lesson/Course Questionnaire was finalised by making the necessary corrections in line with the opinions of the field experts and assessment and evaluation experts.

## Data Analysis

Quantitative and qualitative techniques were used together to analyse the data collected. Descriptive statistics were used in the analysis of quantitative data (frequency, percentage, mean), while content analysis was used in the analysis of qualitative data. Qualitative content analysis is a method used to understand human behavior and nature through indirect methods. It is used to

determine the existence of certain words or concepts in the data structure consisting of text or text sets (Büyüköztürk et al., 2016). The main purpose of using content analysis is to reach the concepts that can explain the research data and the relationships between these concepts. In this way, by analyzing the research data in depth, the concepts or themes that cannot be noticed in the data structures can be discovered (Yıldırım & Şimşek, 2013). The main purpose of using content analysis is to reach the concepts that can explain the research data and the relationships between these concepts. In this way, by analyzing the research data in depth, the concepts or themes that cannot be noticed in the data structures can be discovered (Yıldırım & Şimşek, 2013). Answers given by the respondents to the open-ended questions were coded independently by the researchers. The compatibility between the codings of the researchers was examined and differences were eliminated by consensus.

Scale intervals were determined to be used in the analysis of Likert type questions. Scale intervals for 4-point likert are shown in Table-2, and scale intervals for 5-point likert are shown in Table-3. In the analysis of qualitative data, academics were coded with the labels A1, A2, A3, ….., A50, A51, A52. In order to support the qualitative data, the references made to the discourses of the academicians were described with this coding technique.

**Table 2**

*Scale Ranges for a 4-point Likert*

| Weight | Lower – Upper Limit |
|---|---|
| 1 | 1.00 – 1.75 |
| 2 | 1.76 – 2.50 |
| 3 | 2.51 – 3.25 |
| 4 | 3.25 – 4.00 |

**Table 3**

*Scale Ranges for 5-point Likert*

| Weight | Lower – Upper Limit |
|---|---|
| 1 | 1.00 – 1.80 |
| 2 | 1.81 – 2.60 |
| 3 | 2.61 – 3.40 |
| 4 | 3.41 – 4.20 |
| 5 | 4.21 – 5.00 |

## Validity and Reliability

In this study, various steps were taken to increase the validity and reliability of the research. In order to increase the dependability of the research, a mixed research methodology, in which quantitative and qualitative research methods were used together. In this way, it is aimed to reach comprehensive findings by analyzing the views of academicians in a more in-depth manner. In addition, in order to increase the validity, it is aimed to reach the academicians working in various departments of the universities and to reveal the experiences of the academicians who apply different education programs on blended learning. Thus, it was provided to reach a more comprehensive data set.

In order to increase the credibility of the study, support was received from English language experts for the Turkish translation study for peer debriefing. Thus, it is planned to minimize the errors that may arise from the structure of the language and to make the translation that gives the most accurate meaning. Another step taken in this context was to consult the opinions of field experts and assessment and evaluation experts for the translated questionnaire. In this way, it has been contributed to the safe measurement of the property that is desired to be measured. In addition, in the coding process of qualitative data, firstly, the researchers were provided to complete the data coding process independently of each other, and in the next step, the codes revealed by the researchers were evaluated together to increase the coherence between the codes. In this way, it is aimed to minimize the subjective errors originating from the researcher.

## Results

### P1-Lessons Taught by Academics with Blended Learning

The Blended Lesson/Course Questionnaire includes two preparatory questions. The first of these questions is aimed at describing which courses the respondent teaches using blended learning. 72 different courses were given using this method. The ones given by more than one respondent from these courses are shown in Table-4.

**Table 4**

*Top 5 Lessons Taught by Academics with Blended Learning*

| Lessons | f |
|---|---|
| Informatics Education Programmes | 3 |
| Information technologies | 2 |
| Graphics and Animation in Education | 2 |
| Office Software | 2 |
| Teaching Practice | 2 |

The courses taught using blended learning were predominantly related to information technologies. Other courses are shown in Figure-3 using the word cloud technique.

**Figure 3**

*Lessons Taught by Academics with the Blended Method*

## P2. Training Received through Distance Education

The second preparatory question posed was aimed at describing whether respondents had themselves been subjected to distance education. While 30 participants stated that they had received distance education, 20 had not, and 2 did not answer this question. 20 different programmes were undertaken through distance education. The most common five of these are given in Table-5.

**Table 5**

*Top 5 Courses Undertaken via Distance Education*

| Education | f |
|---|---|
| University Certificate Programmes | 6 |
| Distance Education Software Training | 5 |
| Graduate Courses | 4 |
| Undergraduate Courses | 2 |
| Research Methods courses (Quantitative/Qualitative) | 2 |

Other courses studied by distance education are given in Figure-4 using the word cloud technique cloud technique.

**Figure 4**

*Various Programs Undertaken by via Distance Education*


## Research Question-1:

What is the satisfaction level of tertiary instructors for using blended learning?

**Q1.** The distribution of the answers given by the academics to the question "*how satisfied are you with your blended courses*" is shown in Table-6. A very large proportion (f=24, 46 %) answered "Generally I am Satisfied". On the other hand, very few of them (f=3, 6%) answered "I am not at all satisfied".

**Table 6**

*Satisfaction Levels of Academicians with the Blended Courses/Lessons*

| Never Satisfied | | Not Satisfied | | Undecided | | Generally Satisfied | | Very satisfied | | $\bar{x}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| (1) | | (2) | | (3) | | (4) | | (5) | | |
| f | % | f | % | f | % | f | % | f | % | 3.42 |
| 3 | 6 | 8 | 15 | 11 | 21 | 24 | 46. | 6 | 12 | |

The average of the answers given was 3.42, corresponding to the band "3**.41 – 4.20: I am generally satisfied (4)**".

**Q2.** The question "*if you said you are not satisfied in the previous question, why do you think this way?*" was answered by respondents who had stated that they were not satisfied with blended courses/lessons, along with those who had stated that they were undecided and were uncertain even though they were satisfied. In this context, the codes obtained from the answers of the participants are given in Table-7.

**Table 7**

*Reasons for Dissatisfaction with the Blended Courses*

| Situations That Create Dissatisfaction | f |
|---|---|
| Low class participation | 7 |
| Not suitable for practical courses | 5 |
| Weakness in interaction | 3 |
| Technical deficiencies / Infrastructure problems | 3 |
| Lack of communication | 2 |
| Ergonomic challenges | 2 |
| Large class sizes | 2 |
| Low motivation | 2 |
| Concerns about assessment | 2 |
| Lack of technology use | 1 |
| Failure to monitor course recordings | 1 |
| Not keeping cameras and microphones turned on | 1 |
| No feedback | 1 |
| Not student-centred | 1 |
| Not suitable for university education | 1 |
| Increased workload | 1 |
| Total | 35 |

Sources of dissatisfaction centred on the lack of participation, difficulties experienced for applied training, weak interaction and technical inadequacies / infrastructure problems.

Some of the answers given by the academicians to this question are reproduced below: ('Translated from Turkish by the authors')

**A13:** "*Interaction with students cannot be provided in the online course as in the classroom. In addition, when the exam of the course is online, it becomes difficult to make a fair exam*."

**A17:** "*It's good in theory, but what you show in the application demonstration may look wrong online. When he shows it face to face again, the students realise that he is wrong. I think the real thing is better seen first*."

**A36:** "*The low attendance and participation of the students was a disadvantage*."

## Research Question-2:

How do tertiary instructors regard blended learning in comparison with face-to-face learning?

**Q3.** Table-8 presents 35% (f=18) stated that they considered blended learning to be better, while 6% (f=3) stated that it was a poor substitute.

**Table 8**

*Opinions on the Comparison of the Blended Learning with Face-to-Face Learning*

| Very Bad (1) | | Worse (2) | | Kind of the Same (3) | | Better (4) | | Very Good (5) | | $\bar{x}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| f | % | f | % | f | % | f | % | f | % | 3.63 |
| 3 | 6 | 9 | 17 | 16 | 31 | 18 | 35 | 6 | 12 | |

The average of the answers 3.63, corresponding to the "**3.41 – 4.20: Better (4)**" band. In this context, it can be said that the academicians participating in the study found the quality of blended learning better when compared to face-to-face learning.

**Q4.** Table-9 presents The evaluations of the academicians on comparing the amount of interaction in the blended classroom with that in the face-to-face classroom without any web component. In most respondents (f=17, 33%) stated that the level of interaction in the blended classroom decreased when compared to the face-to-face classroom without any web component. While 54% (f=28) thought that interaction is negatively affected, 29% (f=15) thought that the interaction has changed positively. The remaining 17% (f=9) stated that the amount of interaction did not change.

**Table 9**

*Academics' Views on the Interaction of the Blended Classroom*

| Reduced (1) | | Reduced a little (2) | | Kind of the same (3) | | Raised a little (4) | | Increased (5) | | $\bar{x}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| f | % | f | % | f | % | f | % | f | % | 2.53 |
| 17 | 33 | 11 | 21 | 9 | 17 | 9 | 17 | 6 | 12 | |

The average 2.53, corresponding to the band "**1.81 – 2.60: Decreased a little (2)**". In this context, according to the academics participating in the research, it can be said that the level of interaction in the blended classroom is generally regarded as insufficient compared to the classroom without a web component.

**Q5**. The opinions of the academics on the success of the students in the blended classroom when compared to the face-to-face classroom without any web component are given in Table-10. 6 themes and 15 different codes related to these opinions were used.

**Table 10**

*Views of Academicians on Student Success in the Blended Classroom*

| Theme | Code | f |
|---|---|---|
| Positively Impacted | Success increased | 5 |
| | The success of the students participating in the course increased | 1 |
| Adversely Affected | Success fell | 3 |
| Did Not Affect | No difference | 9 |
| I Can't Compare | I'm undecided / I can't compare | 5 |
| Does Not Reflect Real Success | Success in exams is high, but success in homework and projects is low | 1 |
| | Success in online exams is higher than in face-to-face exams | 1 |
| | Higher grades were received with cheating | 1 |
| | Learning decreased because it was passed by cheating | 1 |
| | Not real success | 1 |
| Measurement And Evaluation Problems | There is a reliability problem for assessment and evaluation | 5 |
| | There are negative aspects (number of questions, duration, etc.) for assessment and evaluation. | 1 |
| | Total | 34 |

In the survey question, respondents were asked to evaluate student success but most of them gave answers for measurement and evaluation rather than success. Respondents who evaluated success mostly stated that there was no difference or that success as measured by assessed outcomes decreased. Based on this finding, it can be said that there is an essential need to carry out studies to increase the reliability of the assessment in the blended learning method.

Some noteworthy answers given to this question are as follows:

**A1:** "*There is a trust issue. I wasn't sure if the students really did the exam themselves. For this reason, I talked to the students on social media about the exam questions both before and after the exam. I asked them questions and asked them to comment. I have tried to overcome this problem of trust by considering the course participation and I think it is effective*."

**A12:** "*Due to cheating in exams, the student's learning decreased, but the success rate increased."*

**A23:** "*I could not compare because the measuring system was different*."

**A36:** "*The success rate is increasing. However, exam security poses a major problem*."

**A38:** "*Students who attend class, participate in class and homework are more successful.*"

## Research Question-3:

What information and communication technologies do tertiary instructors use in blended learning? what do they think about the effectiveness of these technologies?

**Q6.** The answers regarding the instructional technologies used by the respondents in their blended courses are shown in Table-11. The most intensively used instructional technology in blended courses are communication technologies (Chat, Web/Video Conferencing), and the least used were Social Networks (Twitter, Facebook, MySpace).

**Table 11**

*Instructional technologies used*

| | Social Networks | | LMS | | Communication | | Student Response Systems | | Plagiarism Detection Software | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Twitter<br>Facebook<br>MySpace | | RSS<br>Blogs<br>Podcast<br>Course Enrolment<br>Wikipedia<br>Wiki Courses | | Chats<br>Web/Video Conference | | | | Turnitin.com<br>Web Assign | |
| | f | % | f | % | f | % | f | % | f | % |
| None (1) | 12 | 23 | 4 | 8 | 2 | 4 | 2 | 4 | 5 | 10 |
| I do not intend to use (2) | 12 | 23 | 3 | 6 | 1 | 2 | 3 | 6 | 5 | 10 |
| I'm thinking of using (3) | 8 | 15 | 5 | 10 | 1 | 2 | 7 | 13 | 10 | 19 |
| I plan to use (4) | 11 | 21 | 8 | 15 | 11 | 21 | 5 | 10 | 8 | 15 |
| Currently Using (5) | 9 | 18 | 32 | 61 | 37 | 71 | 35 | 67 | 24 | 46 |

**Q7.** The opinions of the academics on the effectiveness of the above technologies used in blended courses are given in Table-12. Two chose not to answer this question. More than half (f=32, 68%) stated that they found using the above-mentioned instructional technologies in blended courses generally effective. Only 6% (f=3) stated that they found these tools ineffective in general and none rated them as very ineffective.

**Table 12**

*Opinions on Effectiveness of Instructional Technologies Used in Blended Classrooms*

| Very Ineffective (1) | | Generally Ineffective (2) | | Undecided (3) | | Generally Effective (4) | | Very Effective (5) | | $\bar{x}$ |
|---|---|---|---|---|---|---|---|---|---|---|
| f | % | f | % | f | % | f | % | f | % | |
| 0 | 0 | 3 | 6 | 5 | 11 | 32 | 68 | 7 | 15 | 3.91 |

The average 3.91, corresponding to the band "**3.41 – 4.20: Generally Effective (4)**". From this point of view, it can be said that academics are generally satisfied with using the above-mentioned technologies in their blended courses.

## Research Question-4:

What are the participants' recommendations for instructors who will use blended learning?

**Q8.** The recommendations of the academicians for the instructors who are considering using blended learning are given in Table-13. Table-13 presents 38 codes were mentioned, 10 of these by more than one respondent.

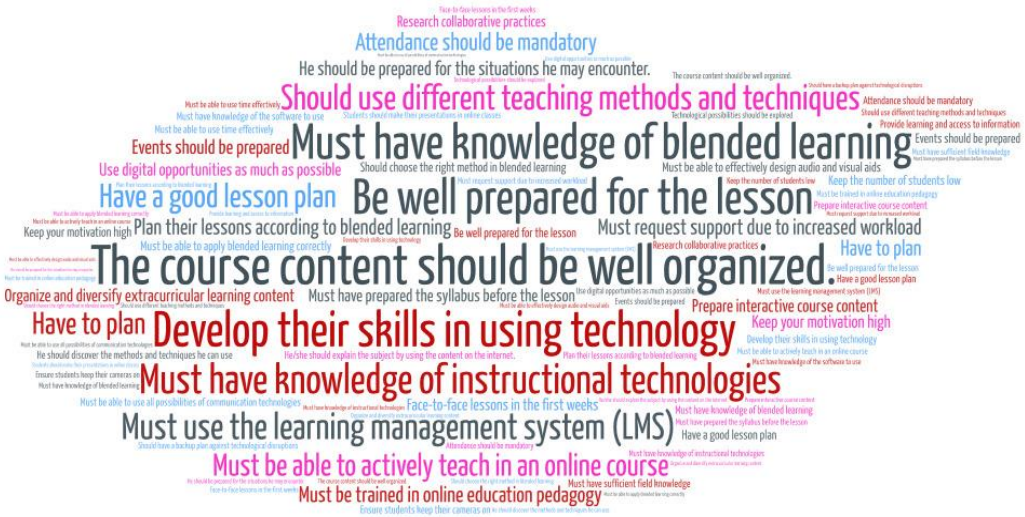
**Table 13**

*Recommendations for Instructors Who Will Provide Blended Lessons*

| | Code | f |
|---|---|---|
| 1 | The course content should be well organized. | 4 |
| 2 | Be well prepared for the lesson | 4 |
| 3 | Develop their skills in using technology | 4 |
| 4 | Must have knowledge of blended learning | 3 |
| 5 | Must have knowledge of instructional technologies | 3 |
| 6 | Must use the learning management system (LMS) | 3 |
| 7 | Should use different teaching methods and techniques | 2 |
| 8 | Must be able to actively teach in an online course | 2 |
| 9 | Plan their lessons according to blended learning | 2 |
| 10 | He should be prepared for the situations he may encounter. | 2 |

**Figure 6**

*Recommendations for Instructors Who Will Provide Blended Lessons*




Some noteworthy answers given to this question are as follows:

**A1:** "*Reading what blended learning is :) Where and how effective online tools are in education, how online assessment can be done, how social media can be used in education, etc. How teaching is designed. These need to be read and studied.*"

**A4:** "*Being well prepared for the lesson and improving the ability to use technology*"

**A30:** "*Preparing events, looking at collaborative applications on the internet, Preferring LMS systems that gather under a single roof for student tracking and answering students' questions.*"

**A40:** "*Let them experience different technologies and always have a plan B against technological disruptions.*"

**A52:** "*Digital opportunities should be used in detail, and written information should be added and classified in addition to videos, topics related to the course layout, etc*."

## Conclusion and Discussion

This study, aimed to reveal the views of tertiary academic instructors who have experienced blended learning. In this context, the blended course experiences of the participants, their satisfaction levels with using blended learning, their evaluations comparing blended learning with face-to-face learning, and their recommendations for instructors who are considering using the blended learning were examined.

Considering that technology-supported courses are carried out using the blended method, it is expected that the instructors who use this method will have knowledge of information technologies. It is seen that respondents who had experienced blended learning mostly give courses related to information technologies such as Informatics Education Programmes, Information Technologies, Office Software, Graphics and Animation in Education. It can be said that this is an expected situation. Asrafh et al. (2021), noted that blended learning attracted interest and had increased in use in all fields, but that it was used more in applied fields such as medical education, information technologies and STEAM education.

Ibrahim and Nat (2019), examined the factors that affect the motivation of instructors using blended learning in higher education. Among the 6 factors that affect motivation, interaction with technology, institutional environment, interaction with students, instructor's attitudes and beliefs, and the instructor's learning on this subject have a positive effect on motivation. Academic workload had no effect on motivation. When the satisfaction levels of the academics using blended learning were examined, it was found that they were generally satisfied. Various factors may have been involved in the general satisfaction level of the participants. The most positive factors associated with the blended method are the use of technology during lessons, flexibility of time and space equality of opportunity, time saving and being economical (Pandurov, 2021). 60% of respondents stated that they had received training on distance education within the scope of the findings of the second research. The reason for satisfaction may be due to the fact that the instructors had received training on blended learning or rather, they embarked on it with positive expectations. In a British paper it was noted that schools and teachers attach importance to their professional development for blended teaching (Klein, 2021). However, there are some factors that cause academics to be dissatisfied or hesitant about blended learning, including low participation, suitability for applied/practical courses, poor level of interaction, lack of communication, low motivation, ergonomic difficulties and concerns about assessment and evaluation. Factors that reduce motivation are in parallel with those widely noted in the literature (İbrahim & Nat, 2019; Alvarez, 2019; Hakala, I., & MyllymÃ, 2011; Ashraf et all., 2021).

In their research examining the effect of student participation in the lesson and learning outcomes in blended learning, Hakala and Myllymaki (2011) categorised learners as those who had only face-to-face lessons, those who participated in hybrid lessons, and those who undertake online education only. As a result of the research conducted on the dimensions of students' participation in the course, interaction levels, course completion and academic success, relatively higher data were obtained in terms of participation in the courses, the level of interaction with the teacher and the level of completion of the course. Fitriyana et al. (2021) revealed that the instructional intervention-the blended learning had significant effects on students' self-efficacy and self-regulated learning, but did not have a significant effect on students' success, in a hybrid learning application using videoconferencing and the Chemondro game as an alternative chemistry learning strategy. In that study, instructors stated that the quality of education in the courses in which they applied blended learning was better than those in the face-to-face courses. Various factors may be effective in the emergence of this finding. An important factor is that the blended learning model is internalised. Academics may have made an effort to increase the quality of the courses applied with the blended method. Another important factor can be said to be the opportunities provided by blended

management. This study related to Hakala and Myllymaki (2011) both positively and negatively. Participants stated that there was an increase in the achievement scores of the students, but their learning levels had decreased while Hakala and Myllymaki (2011) stated that the lowest achievement level among the students in the three categories was the students in blended education. One of the main issues that academics complained about in blended education was cheating in the exams and the validity of the evaluation results. Similarly, Ibrohim et al. (2021) drew attention to the problems experienced in evaluation and emphasised the factors of student and infrastructure as factors that make online evaluation difficult. First of all, the exams were conducted online and mainly in the form of multiple choice form. Although some restrictions have been imposed by universities in this regard, it may not have been able to show the success of preventing cheating. In the context of online and/or blended learning, both the instructional design process of the course cannot be the same as face-to-face education and its evaluation cannot be the same. Various assessment mechanisms should be put in place by using homework, tests, project-based activities, and web 2.0 tools that will keep student interaction continuous.

Suggestions for instructors who want to teach using blended learning mostly cover pre-course delivery preparation. Suggestions such as organising the course content well, preparing well for the course and improving technology use skills come to the fore. Especially in recent years, with the widespread use of technology-supported learning environments, it is thought that pre-lesson preparations are of critical importance for the acquisition of new skills for blended learning and more efficient learning. From this point of view, it is thought that many academics may have emphasised this issue in particular.

As stated in the systematic literature study conducted by Ashraf et al. (2021), most of the research conducted in recent years has been conducted with a quantitative research approach. He suggested that qualitative research could be conducted in the coming years. In this framework, we can suggest that mixed and applied methods can also be used, as those who carry out this study with a mixed qualitative/quantitative approach. Among the purposes of our study, the variety and comparison of the preferred mixed teaching methods was not carried out. In future studies, studies can be conducted to examine the comparison of two or more blended learning in terms of different variables (participation, success, motivation, etc.).

Although there are important findings that have emerged, there are sample selection methods that limit the study. In future studies, the research can be diversified by using different sampling methods. Although there are difficulties in conducting it with 52 participants in terms of qualitative method, it can be examined in terms of more participants, similar variables or more or different variables in terms of quantitative method.

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