A Content Analysis of Blended Learning Studies Conducted during Covid-19 Pandemic Period

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Abstract

The goal of this research is to analyze the content of blended learning studies that were published between 2019 and 2021. In this regard, this study investigated 50 studies by using different parameters. This research is divided into two parts in this context. One One of them investigates how research has progressed and what challenges linked to blending learning have been investigated. In the second part, this study aims to raise awareness on the fact that blended learning is still a hot issue among scholars, particularly in the wake of the Covid-19 outbreak. Previous study clearly reveals that certain studies have looked into the impact of blended learning on students' perception and motivation (Ortega-Morána, Pagadora, Maestre-Antequeraa, Arcob, Monteirob, & Sánchez-Margalloa, 2020; Moura, Souza, & Viana, 2021). In light of these findings, this study concludes that blended learning is a critical component of educational activities, particularly when the years between 2019 and 2021 are viewed as pandemic years.

Keywords: Covid-19, blended learning, hybrid learning, mixed learning, content analysis.

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Covid-19 Pandemi Döneminde Gerçekleştirilen Harmanlanmış Öğrenme Çalışmalarının İçerik Analizi

Öz

Bu çalışmanın amacı 2019-2021 yılları arasında yayınlanan harmanlanmış öğrenme çalışmalarına ilişkin içerik analizi yapmaktır. Bu bağlamda, bu çalışma iki bölümden oluşmaktadır. Bunlardan biri, çalışmaların nasıl değiştiğini ve harmanlamış öğrenme ile ilgili hangi konuların çalışıldığını araştırmaktır. İkinci olarak, bu çalışma, özellikle Covid-19 salgını sırasında, harmanlanmış öğrenmenin araştırmacılar için hala popüler bir konu olduğu konusunda bir tartışma yapmaya çalışmaktadır. Bu açıdan bakıldığında, önceki araştırmalar, bazı çalışmaların harmanlanmış öğrenmenin öğrencilerin algı ve motivasyonu üzerindeki etkisini araştırdığını açıkça göstermektedir (Ortega-Morána, Pagadora, Maestre-Antequeraa, Arcob, Monteirob ve Sánchez-Margalloa, 2020; Moura, Souza, & Viana, 2021). Tüm bu veriler ışığında bu çalışma, özellikle 2019 ve 2021 yıllarının pandemi dönemi olarak geçtiği düşünüldüğünde, harmanlanmış öğrenmenin eğitim faaliyetleri için önemli bir parametre olduğunu değerlendirmektedir.

Anahtar Sözcükler: Covid-19, harmanlanmış öğrenme, hibrit öğrenme, karma öğrenme, içerik analizi.

Introduction

The point that technology has reached today and the development of internet technologies have an undeniable effect on human life, showing its effect in every layer of life. One of these layers is education and training. After the digitalization in education, which started primarily with distance learning, it has entered into different orientations in terms of being more efficient and responding to the needs of people. In this direction, face-to-face education has been supported by distance education technologies and distance education became a dynamo to make the efficiency of education as efficient as possible (Tonbuloğlu and Tonbuloğlu, 2021).

Eastman (2015) defines blended learning as a learning strategy that brings together computer-based technologies and face-to-face teaching on an individual and student basis. Today, research express blended learning in different terms such as *blended learning, mixed learning and hybrid learning*. When examining the literature review, it is clear to say that distance education and face-to-face education environments have different effects according to space, time, human machine and content elements (Graham, 2006). According to Horn and Staker (2017), there are four different blended learning models. These are a) rotation model, b) personally blended (A La Carte) model, c) flexible blended learning model, and d) enriched virtual blended learning model. The rotation model is also evaluated in four different categories: a) station rotation, b) laboratory rotation, c) flipped class, and d) individual rotation. Similarly, Khan (2005) discusses blended learning in four different dimensions as *the blending of online and offline learning, structured and*

unstructured learning according to collaboration, the individual's own learning speed, and finally *the blending of special content and ready-made content.* In addition to these models, TeachThought Staff (2019) explained that the following models can be used for blended learning: *a) project-based blended learning model, b) self-managed blended learning model, c) inside-out blended learning model, d) complementary blended learning model, e) outside-in blended learning model, and f) mastery-based blended learning model*.

During the Covid-19 period, some studies focused on the benefits of blended learning. For example, Akgündüz (2019) explained the benefits of developed and implemented blended learning models as follows:

a) being able to benefit from the internet environment,

b) realizing individual learning at one's own pace,

c) ensuring effective communication,

d) accommodating various learning styles,

e) creating differences in the course curriculum,

f) providing self-learning,

g) getting feedback faster,

h) realization of full learning,

i) using virtual classroom applications,

j) ensuring efficiency due to the time flexibility of the course.

Applications of blended learning during the Covid-19 outbreak, seem to focus on mostly online processes and activities. According to Tonbuloğlu and Tonbuloğlu (2021), this situation is reflected and seen in the guidelines published by the Council of International Schools (CIS, 2020), Cambridge School (Cambridge, 2020; McCarthy, 2016), New England Association of

Schools and Colleges (NEASC), Educational Collaborative for International Schools (ECIS) and International Schools Services (ISS) organizations. In addition, the literature review clearly shows that studies on blended learning in the field of medicine still frequently focus on blended learning applications. For example, in their study, Lebeaux, Jablon, Flahault, Lanternier, Pacé, Mainardi, and Lemogne (2021), focused on providing an open-source course management system (Moodle) for blended learning on Infectious diseases and Microbiology. The study results showed that the use of Moodle for blended learning on Infectious Diseases and Microbiology increased student engagement and satisfaction. Similarly, Ortega-Morána, Pagadora, Maestre-Antequeraa, Arcob, Monteirob, and Sánchez-Margalloa (2020) investigated the validation of the online theoretical module of the Minimal Invasive Surgery nursing course, criteria, and nurses' interest in blended learning to assess nurses' perception and satisfaction, sociability and usability. Study results clearly showed that nurses saw blended learning as an ideal method for education but argued that researchers needed more research to assess whether blended learning could improve learning outcomes.

Some studies during the Covid-19 period examined positive and negative situations that occurred during the transition from face-to-face education to blended learning. For example, Bentinck (2020) investigated the problem of low student engagement and interaction in online synchronous and asynchronous activities during the transition to blended learning. The study results argued that the positive outlook for the blended learning environment results from the lack of time to develop new skills related to online interaction. From a different perspective, other studies (Ustun &

Tracey, 2020; Ustun & Tracey, 2021; Ustun, Yilmaz, & Yilmaz 2021) focused on design process of blended learning during the Covid-19 period. For example, Ustun and Tracey (2020) developed a three phase design based research approach, while Ustun & Tracey (2021) implemented blended learning through design-based research in higher education. The findings of Ustun & Tracey (2021) showed that blended learning allowed teachers to use active learning strategies, engage students in critical thinking, and improve the quality of interactive and collaborative learning assignments.

Literature review clearly shows that the studies focusing on blended learning applications in Turkey are limited, compared to global studies conducted between 2019 and 2021. In this regard, Turkish Higher Education Institution published the Quality Assurance Status Report for Distance and Blended Education Activities for 2020. According to this report, researchers conducted only 40 doctoral dissertations and 59 master's theses on blended learning between the years 2007-2020. According to the report, research on blended learning appears to be quite scarce in K-12 and adult education.

Looking at the research examples carried out in Turkey on blended learning, Deveci Topal (2013) evaluated learners studying in higher education in terms of motivation, academic achievement, and perception levels. The results showed that participants obtained results in favor of blended learning. In another study, Tosun (2015) obtained similar positive results in favor of blended learning. Çetin and Özdemir (2018), in their study, concluded that blended learning is more effective than face-to-face learning in ninth-grade students' attitudes towards the Internet. Erdoğan (2019), in a similar way, examined the academic achievement and self-efficacy of tenth-grade students

in the blended learning environment and face-to-face environments and found a significant difference among the variables in favor of blended learning environments. In Ocak and Dikmen's (2020) research, researchers argue that blended learning environments have a positive effect on mobile programming. From a different perspective, Kestel (2020) revealed, in his study, that the blended learning environment of undergraduate nursing students positively affected their success. Takmak et al. (2021), on the other hand, stated that the application of simulation in blended learning environments of undergraduate nursing students increased students' satisfaction and self-efficacy attitudes.

It seems clear that Turkish blended learning studies seem to focus on academic achievements and perceptions/ opinions of the subjects about blended learning environments. With the effect of the Covid-19 outbreak, the blended learning studies mostly conducted research on nurses/medical staff as participants in 2021. The literature review shows an increase in blended learning studies conducted during Covid-19 pandemic period, compared to the studies conducted before Covid-19 period. Some studies also investigated the permanence issue in blended studies. For example, Yalçın (2020) concluded that blended learning environments positively affected seventh-grade students' academic achievement but had no effect on permanence. Attitude is also another variable investigated by researchers during the Covid-19 period. In this sense, Şerefli (2020) stated that blended learning environments positively affect on the academic achievement of secondary school students, but do not affect their attitudes.

In this regard, this study has two folds. One of them is investigating how studies have changed and what topics related to blending have been studied. Secondly, this study attempts to argue that blended learning is still a popular topic for researchers, especially during the Covid-19 pandemic.

Method

This study aims to analyze the content of blended learning studies published between the years 2019 and 2021. For this reason, this study used the qualitative-based content analysis method in the research. Salur (2020) defines content analysis as classifying and making meaningful data related to each other within the framework of certain terms and subjects. Generally, the literature review argues that there are three types of content analysis: a.) meta-analysis, b.) meta-synthesis, and c.) descriptive content. Within the scope of the research, this study carried out a descriptive content analysis method with document analysis. According to Dinçer (2018), in the descriptive content analysis, which is a research method in which the conceptual structure is certain, the research tries to reveal the frequency and percentage distributions of the data collected and the data related to the research subject.

As a sample, this research determined 50 studies (Appendix 1) focusing on blended learning between 2019 and 2021. In this direction, Salur (2020) indicates that, in qualitative studies, the sample is not expected to represent the universe, and there is an opinion that will enable the universe to be understood. From this perspective, this research evaluated and grouped 50 blended learning studies in detail, according to the following criteria: a.) the index, in which the journal was published, b.) publication year, c.) type of

participant, d.) research method and e.) variables. Researchers conducted the first academic research in October 2020, using the same keywords (*blended learning, hybrid learning, and mixed learning*) in the indexes used in the education and psychology area to reach the studies conducted in the last two years on blended learning. Researchers repeated a second search in May 2021 to see if a new study was available. Accordingly, researchers searched and correlated *WoS (SCI, SSCI, SCI-Expanded), EBSCOhost, Emerging Sources Citation Index (ESCI), ERIC, Scopus, PubMed/Medline, Science Direct, ProQuest Dissertations & Theses Global, PsycINFO* indexes (Figure 1). Researchers, regardless of the field, analyzed and examined all academic studies related to blended learning, published between 2019 and 2021, including the keywords *"blended learning," "hybrid learning," and "blended learning."* Evaluation criteria included not only articles, but also published theses/dissertations. In the light of the importance of academic publication, the content analysis included only refereed journals published in indexes and theses/dissertations.
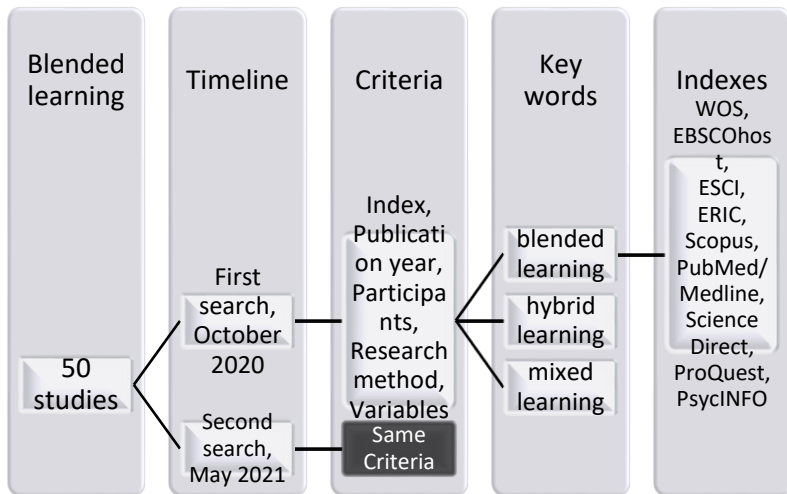
Figure 1. Research methodology

Findings

The findings of the study focused on indexes, publication year, sampling type, research type, and variables used in selected studies. In this regard, Table 1 shows the distribution of studies, published by indexes, on blended learning environments between 2019 and 2021. Accordingly, within the scope of the research, the studies on blended learning environments between the years 2019-2021 were mostly included in ProQuest (52%), Social Sciences Citation Index (18%), PubMed/ Medline (12%) ranked third, and SCI-expanded (6%), Emerging Sources Citation Index (6%), and Scopus (6%) ranked fourth indexes (Table 1). There were 26 dissertations/theses and 26 indexed articles investigated in this research (Appendix 1).

Table 1. Distribution of Studies, Published by Indexes, on Blended Learning Environments between 2019 and 2021

Indexes of Studies	Frequency (f)	Percentage (%)
ProQuest	26	52
Social Sciences Citation Index	9	18
PubMed/ Medline	6	12
SCI-expanded	3	6
Emerging Sources Citation Index	3	6
Scopus	3	6
Total	**50**	**100**

This study examined 26 dissertations and 24 indexed articles retrieved from the years between 2019 and 2021. Figure 2 shows the dissertations/theses and indexed studies.

Proquest (n=26)	Dissertations (n=24)
	Burhnam (2021); Epperson (2020); Cox(2020); Hensley (2020); Polat (2020); Ayesha (2020); Wong (2020); Foley (2020); Thomson (2019); Woods (2020); McHone (2020); Cheng (2020); Almusfar (2020); Ayeni (2020); Cotner (2020); Katzin (2020); Ward (2020); Fang (2020); Jenine (2019); Cano (2019); Payton (2019); Lukarov (2019); Davis (2019); Thomas (2019)
	Theses (n=2)
	Bentinck (2020); Shiru (2020)
İndexed Articles (n=24)	Alsalhi, Eltahir, & Al-Qatawneh (2019); Berga et al. (2021); Ceulemans et al. (2021); Chango et al. (2021); Cocquyt, Zhu, Diep, De Greef, & Vanwing (2019); Crites, & Rye (2020); De Moura et al. (2021); Farahani et al. (2020); Gao, Jiang, & Tang (2020); Gjestvang, Høye, & Bronken (2021); Lapitan Jr. et al. (2021); Law, K. M., Geng, S., & Li (2019); Lebeaux et al. (2021); Li, He, Yuan, Chen, & Sun (2019); Littenberg-Tobias, & Reich (2020); Nortvig, Petersen, Helsinghof, & Brænder (2020); Ortega-Morán et al.(2020); O'Reilly et al. (2020); Rasheed, Kamsin, & Abdullah (2020); Romadhon, Rahmah, & Wirani (2019); Tebbs, Hutchinson, Lau, & Botti (2021); Yang, Carter Jr, Zhang, & Hunt (2021); Yao (2019); Yigzaw, Tebekaw, Kim, Kols, Ayalew, & Eyassu (2019)

Figure 2. Dissertations and indexed articles examined in the research

Table 2 shows the distribution of studies on blended learning environments between 2019 and 2021 by publication year. In Table 2, findings show that 28 of the 50 studies examined between 2019 and 2021 were carried

out in 2020, in the second place, 14 studies in 2019 and 8 studies in 2021 with the least number of studies.

Table 2. Distribution of Studies on Blended Learning Environments between 2019 and 2021 by Publication Year

Years of Research	Frequency (f)	Percentage (%)
2019	14	28
2020	28	56
2021	8	16
Total	**50**	**100**

Table 3 shows the distribution of studies on blended learning environments between 2019 and 2021 by sample type. According to these results, studies with undergraduate students are in the first place (46%), case studies are in the second place (20%), adult learners are in the third place (18%), high school students are in the fourth place (6%), and meta-analysis studies are in the fifth place. The findings clearly indicated that few studies were conducted with primary school students (2%).

Table 3. Distribution of Studies on Blended Learning Environments between 2019 and 2021 by Sample Type

Sample Types	Frequency (f)	Percentage (%)
Undergraduate Students	23	46
Case Studies	10	20
Adult learners	9	18
High School Students	3	6
Meta-analyses	2	4
Primary School Students	1	2
Total	**50**	**100**

In their study, O'Reilly et al. (2020), investigates nursing students' perceptions of the effectiveness of blended learning approaches for mathematics skill and promoting self-efficacy. The study findings showed that a structured pedagogical approach to nursing numeracy skills in undergraduate programs improved students' self-reported self-efficacy in mathematics and helped students recognize the importance of learning and apply these skills as nursing clinicians. Similarly, Tebbs et al. (2020) studied post-registration nurses' motivation to undertake an introductory program using a blended learning methodology and understanding and clinical behavior changes. The findings concluded that introductory programs using blended learning strategies have a role that allows nurses to establish their professional identities, find their position in clinical teams, and meet the needs of organizations. Farahani et al. (2020) also studied 65 undergraduate

pharmacy students in their study. The study aimed to evaluate whether a blended learning program consisting of e-learning and clinical examinations could improve pharmacy students' skills in making pharmaceutical consultations with patients with type 2 diabetes mellitus. The study findings found blended learning to be effective in improving the counseling skills of the participants. Clinical examinations showed that a blended learning approach could improve students' diabetes consultation and communication skills. These results support the use of this teaching technique to teach patient counseling.

Table 4 shows the distribution of studies on blended learning environments by research methods between 2019 and 2021. Examining the studies carried out on blended learning environments in terms of methodological approach, it was determined that most of the research was done with the qualitative method. In the second place, it was determined that the researches were conducted with the mixed method. The findings of this study revealed that blended learning studies with quantitative method come in the third place (Table 4).

Table 4. Distribution of Studies on Blended Learning Environments by Research Methods between 2019 and 2021

Research Method	Frequency (f)	Percentage (%)
Qualitative method	19	38
Mixed method	16	32
Quantitative method	15	30
Total	**50**	**100**

Based on the findings, some dissertations (Burhnam, 2021; Epperson, 2020; Foley, 2020; Thomson, 2019) seem to focus on the qualitative cases study method, while others (Cano, 2019; Payton, 2019; Lukarov, 2019; Davis, 2019) choose to study mixed method in their dissertations. In this respect, it seems clear that the studies do not focus on only one method but choose different research methods.

Table 5 shows the distribution of studies on blended learning environments between 2019 and 2021 by variables. Examining the studies on blended learning environments between the years 2019_2021 according to variables, the study findings clearly shows that the variables of perception (%19.04) and academic achievement (%19.04) are mostly examined in blended learning environments. Other variables studied by researchers are respectively as follows: satisfaction (%7.93), motivation (%6.34), attitude (%6.34), effectiveness (%6.34), blended curriculum development (%6.34), self-sufficiency (%3.17), learner autonomy (%3.17), interaction (% 3.17), skill (%3.17), academic behavior (%3.17), perceived quality and value (%3.17), blended learning adoption (%3.17), worry/anxiety (%3.17) and meta-analysis (%3.17).

Table 5. Distribution of Studies on Blended Learning Environments between 2019_2021 by Variables

Variables	Frequency (f)	Percentage (%)
Perception	12	19.04
Academic success	12	19.04
Satisfaction	5	7.93
Motivation	4	6.34
Attitude	4	6.34
Effectiveness	4	6.34
Blended Program Development	4	6.34
Self-sufficiency	2	3.17
Learner Autonomy	2	3.17
Interaction	2	3.17
Skill	2	3.17
Academic Behavior	2	3.17
Perceived Quality and Value	2	3.17
Embracing Blended Learning	2	3.17
Worry/Anxiety	2	3.17
Meta-Analysis	2	3.17
Total	**63**	**100**

Regarding perception studies, Lebeaux et al. (2021) studied infectious diseases and microbiology learning in a blended, open-source, course

management system (Moodle). The results indicated that Moodle for blended learning on Infectious Diseases and microbiology increased student engagement and satisfaction with blended courses. Similarly, Ortega-Morán et al. (2020) studied performing the validation of the online theoretical module of the Minimally Invasive Surgery course to assess measures of student perception and satisfaction, sociability and usability, as well as nurses' interest in blended learning. Study findings argued that nurses considered blended learning an ideal method for education, but more research is needed to assess whether it can improve learning outcomes. Another perception study, Gao, Jiang, & Tang (2020) examines the relationship between students' perception of the blended learning platform and their satisfaction with the interactive course. The study found and argued three significant findings (1) that emotional engagement and perceived volatility of the blended learning platform affects course satisfaction with blended learning (2) perceived usefulness, ease of use, and interaction indirectly influence course satisfaction through emotional engagement; (3) perceived usefulness has a stronger direct effect on students' cognitive and emotional engagement.

In terms of academic achievement in blended learning during the Covid-19 outbreak, Wong (2020) investigated the data obtained from situational assessments to determine how well students performed at math achievement levels using the blended learning approach. The effect of blended learning on student academic achievement in Algebra I was examined among 9th-grade students in a Texas public high school. The study findings clearly showed no statistically significant difference in the mean

scores of students' raw scores between different types of instruction. Interestingly, raw score averages were slightly higher for students with traditional education than students with blended education for both genders and African American and Hispanic students. Shiru (2020), in this master's these, also studied the effect of blended learning on students' academic success during pandemic. The study examined the effects of blended learning and e-learning on students' academic achievement in the field of financial accounting in Kwara State Education Colleges. The study findings revealed that blended learning and teaching positively affect the academic success of colleges of education in financial accounting.

Conclusion and Discussion

The purpose of this study was to examine the studies published between the years 2019 and 2021 on blended learning environments and to try to understand how the general trend in blended learning changed during the Covid-19 pandemic period. In this sense, this study administered a descriptive content analysis by using 50 studies in terms of indexes, publication year, sample type, research method, and variables.

In line with the research results, this study found that the most publications on blended learning were theses published within ProQuest. This study argues that because of the nature of the Covid-19 period, many theses and dissertations focused on the effect of Covid-19 outbreak on education. In addition to this, this study indicates that expanding the scope of measurement by repeating the research on different databases will effectively increase the efficiency of blended education environments.

In terms of the year in which the examined studies were published, this study found that 28 studies were focusing on blended learning environments in 2020. In this regard, Kök (2018), examining the studies between 2002 and 2015, stated that he came across 14 studies on blended learning, mostly published in 2012. From this perspective, this study concludes that there is a regular increase depending on the development of technology in blended learning environments. According to Tonbuloğlu and Tonbuloğlu (2021), there are 40 doctoral dissertations published between 2007 and 2020 and 59 master's theses published between 2009 and 2020. Moreover, Korucu and Kabak (2020) stated that between 2015-2020, doctorate and master's theses were published in 2019 at the most. Thinking about the findings given above, this study argues that studies dealing with blended learning start to increase with the pandemic.

After analyzing the publications, this study found that in terms of sample type, the majority of the studies were carried out on higher education students. In the meta-analysis study of Kök (2018), in which he compared blended learning and face-to-face learning in terms of academic achievement, covering the years between 2002 and 2015, he concluded that the national and international studies examined mostly focused on higher education students. Korucu and Kabak (2020) stated that most studies were carried out on higher education students between 2015-2020. In this research, the findings clearly showed that these results did not change between the years 2019-2021, and this research supports the findings of the other research.

When the publications related to blended learning environments in 2019 and 2021 were examined in terms of research method, this study found

that the majority of studies used mixed research methods. Aşiroğlu (2020), in his research, stated that there were no quantitative and qualitative research methods specified for 2020. Similarly, Karamustafaoğlu and Değirmenci (2018) also stated that the studies did not mention their research method in the publications regarding blended learning in science education. Moreover, Küçükoğlu and Ozan (2013) concluded that the master's theses published in the departments, especially in elementary education, mostly used the qualitative method, while doctoral dissertations used the quantitative, qualitative, and mixed methods equally. In this regard, this research contributes to the field by filling the gap in blended learning environments.

When this research examined the studies on blended learning between the years 2019 and 2021 in terms of variables, the findings showed that academic achievement and perception were measured the most in blended learning studies. Kök (2018) states that the advantages of face-to-face learning environments and the technological advantages of e-learning environments in blended learning environments, both nationally and internationally, have a positive effect on academic success. The findings of this study argue that the blended learning approach can be a solution to overcome educational challenges in the Covid-19 era and will respond to many needs, including different parameters and variables. For example, the Turkish Higher Education Institution (YÖK, 2021) indicated that with the continuation of some of the applied training and especially the spread of blended teaching, many research carried out new normalization in the global epidemic studies. In this sense, the statements made by previous findings support the inference of our findings. Therefore, this study recommends speeding up the studies on

blended learning and its environments and conducting research on the variables that are not studied. Secondly, this study argues for starting working on variables such as attitude, which have been studied in a small number in previous studies and whose effects appear over a long period.

This study shows that research that allows us to see the whole picture on a subject such as meta-analysis and content analysis are very little about blended learning. For this reason, it is reasonable to recommend conducting content analysis studies covering the previous years. In this regard, this study covered and evaluated the pandemic period between 2019 and 2021. Naturally, some data found in this research for 2020 was higher than the years 2019 and 2021. In order to make a more accurate assessment on a yearly basis, it would be a good idea to conduct research- specific studies and use different parameters to understand the effect of blended learning during the Covid-19 outbreak. Accordingly, as long as the pandemic continues, it seems clear that studies will be carried out and repeated to make the necessary improvements in blended learning environments.

The idea of examining the indexes in this study supports the argument that there is no research on indexes in which the studies regarding blended learning are published. This study suggests that this gap should be studied by expanding the publication index information related to blended learning environments in the field.

As a result, the point where technology has come, the worldwide pandemic and the increase in academic success, and the studies carried out in blended education environments reveal the need for blended education. The continuation of the demand for face-to-face education and the possibilities

offered by technology to realize permanent learning in educational environments reveal the importance of blended learning environments.

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Genişletilmiş Türkçe Özet:

Özet: Bu çalışmanın amacı 2019-2021 yılları arasında yayınlanan harmanlanmış öğrenme çalışmalarına ilişkin içerik analizi yapmaktır. Bu bağlamda, bu çalışma iki bölümden oluşmaktadır. Bunlardan biri, çalışmaların nasıl değiştiğini ve harmanlamış öğrenme ile ilgili hangi konuların çalışıldığını araştırmaktır. İkinci olarak, bu çalışma, özellikle Covid-19 salgını sırasında, harmanlanmış öğrenmenin araştırmacılar için hala popüler bir konu olduğu konusunda bir tartışma yapmaya çalışmaktadır. Bu açıdan bakıldığında, önceki araştırmalar, bazı çalışmaların harmanlanmış öğrenmenin öğrencilerin algı ve motivasyonu üzerindeki etkisini araştırdığını açıkça göstermektedir (Ortega-Morána, Pagadora, Maestre-Antequeraa, Arcob, Monteirob ve Sánchez-Margalloa, 2020; Moura, Souza, & Viana, 2021). Tüm bu veriler ışığında bu çalışma, özellikle 2019 ve 2021 yıllarının pandemi dönemi olarak geçtiği düşünüldüğünde, harmanlanmış öğrenmenin eğitim faaliyetleri için önemli bir parametre olduğunu değerlendirmektedir.

Yöntem: Bu çalışmanın amacı, 2019-2021 yılları arasında yayınlanan harmanlanmış öğrenme çalışmalarına ilişkin içerik analizi yapmaktır. Bu sebeple, araştırmada nitel tabanlı içerik analizi yöntemi uygulanmıştır. Belirli terim ve konular çerçevesinde birbiriyle ilişkili olan verilerin tasniflenerek anlamlı hale getirilmesine içerik analizi denilmektedir (Salur, 2020). İçerik analizinin; meta-analiz, meta-sentez ve betimsel içerik olmak üzere üç çeşidi bulunmaktadır. Araştırma kapsamında betimsel içerik analiz yöntemi doküman incelemesiyle gerçekleştirilmiştir. Kavramsal yapının belirli olduğu araştırma yöntemi olan betimsel içerik analizinde toplanan veriler frekans ve

yüzde dağılımları ile araştırma konusu ile ilgili verileri ortaya konulmaya çalışılmıştır (Dinçer, 2018).

Nitel çalışmalarda örneklemin evreni temsil etmesi beklenmez ve evrenin anlaşılmasını sağlayacak bir görüş hakimdir (Salur, 2020). Bu doğrultuda çalışmada, 2019 ve 2021 yılları arasında harmanlanmış öğrenmeye odaklanan 50 çalışma örneklem olarak belirlenmiştir. 50 harmanlanmış öğrenme çalışması aşağıdaki kriterlere göre detaylı olarak değerlendirilerek gruplandırılmıştır: a.) derginin yayınlandığı dizin, b.) yayın yılı, c.) katılımcı türü, d.) araştırma yöntemi ve e.) değişkenler. Harmanlanmış öğrenme ile ilgili son iki yılda yapılan çalışmalara ulaşmak için eğitim ve psikolojide kullanılan indekslerdeki aynı anahtar kelimeler (harmanlanmış öğrenme, hibrit öğrenme, karma öğrenme) kullanılarak Ekim 2020'de akademik bir araştırma yapılmıştır. Yeni bir çalışma olup olmadığını görmek için Mayıs 2021'de ikinci bir arama tekrarlanmıştır. Buna göre WoS (SCI, SSCI, SCI-Expanded), EBSCOhost, Emerging Sources Citation Index (ESCI), ERIC, Scopus, PubMed/Medline, Science Direct, ProQuest Dissertations & Theses Global, PsycINFO indeksleri aranmış ve ilişkilendirilmiştir. Harmanlanmış öğrenme ile ilgili tüm aramalar yapılmış, 2019-2021 yılları arasında yayınlanan ve "harmanlanmış öğrenme","hibrit öğrenme" ve "karma öğrenme" anahtar kelimeleri de dahil olmak üzere tüm akademik çalışmalar alan gözetmeksizin incelenmiştir. Sadece makaleler değil, yayınlanmış yüksek lisans/doktora tezleri de tarama için değerlendirilmiştir. Sonuç olarak akademik yayının önemi ışığında sadece indeksli olan lisan üstü tezler ve hakemli dergiler değerlendirilmiştir.

Bulgular: Araştırma kapsamında 2019-2021 yılları arasında harmanlanmış öğrenme ortamları ile ilgili incelenen çalışmaların en çok ProQuest (%52), ikinci sırada Social Sciences Citation Index (%18), üçüncü sırada PubMed/ Medline (%12) ve dördüncü sırada SCI-expanded, Emerging Sources Citation Index, Scopus (%6) indekslerinde yer aldığı görülmektedir. 2019 ve 2021 yılları arasında incelenen 50 çalışmanın en çok 2020 yılında, ikinci sırada 14 çalışma ile 2019 yılında ve en az çalışmanın 2021 yılında gerçekleştirildiği görülmektedir. 2019 ve 2021 yılları arasında harmanlanmış öğrenme ortamları ile ilgili çalışmaların örneklem türleri ile ilgili sonuçlarda çalışma kapsamında değerlendirilmiştir. Bu sonuçlara göre, çalışmaların en çok Lisans öğrencileri (%46), ikinci sırada vaka çalışmaları (%20), üçüncü sırada yetişkin öğrenenler (%18), dördüncü sırada lise öğrencileri (%6), beşinci sırada meta analiz çalışmaları ve en az ilköğretim öğrencileri (%2) örneklemleri üzerinde gerçekleştirildiği sonucu elde edilmiştir. Çalışmada 2019 ve 2021 yılları arasında harmanlanmış öğrenme ortamları ile ilgili gerçekleştirilen çalışmaların metodolojileri açısından verilerine de yer verilmiştir. Buna göre, en çok nitel yöntem, ikinci sırada ise karma yöntem ve üçüncü sırada ise nicel yöntem ile çalışmaların yapıldığı ortaya konulmuştur. Çalışmada 2019 ve 2021 yılları arasında harmanlanmış öğrenme ortamları ile ilgili çalışmaların değişkenlerine göre dağılımı görülmektedir. Bu verilere göre, harmanlanmış öğrenme ortamlarında en çok algı (%19.04) ve akademik başarı (%19.04) değişkenlerinin incelendiği görülmektedir. Diğer çalışılan değişkinler ise sırasıyla; memnuniyet (%7.93), motivasyon (%6.34), tutum (%6.34), etkililik (%6.34), harmanlanmış program geliştirme (%6.34), kendi kendine yeterlilik (%3.17), öğrenen özerkliği (%3.17), etkileşim (%3.17), beceri

(%3.17), akademik davranış (%3.17), algılanan kalite ve değer (%3.17), harmanlanmış öğrenmeyi benimseme (%3.17), endişe/kaygı (%3.17) ve meta-analiz (%3.17) değişkenleri olmuştur.

Sonuç ve Tartışma: Araştırma sonuçları doğrultusunda harmanlanmış öğrenme ile ilgili en çok yayının ProQuest bünyesinde yayınlanan tezler olduğu görülmüştür. Bu sonucun sebebi olarak ise yayınların çoğunun tez olması gösterilebilir. Ayrıca farklı veritabanları üzerinde araştırmanın tekrarlanarak ölçüm kapsamının genişletilmesi harmanlanmış eğitim ortamlarının verimi arttırmada etkili olacağı düşünülmektedir.

İncelenen araştırmaların yayınlandıkları yıl açısından 2020 yılında 28 adet harmanlanmış öğrenme ortamları ile çalışmaların gerçekleştirildiği görülmüştür. Kök (2018)'ün 2002-2015 yılları arasında en çok 2012 yılında 14 harmanlanmış öğrenme ile ilgili çalışmaya rastladığını belirtmiştir. Bu sonuçlara göre, harmanlanmış öğrenme ortamlarında teknolojinin de gelişimine bağlı olarak düzenli bir artış olduğu ifade edilebilir. Tonbuloğlu ve Tonbuloğlu (2021)'na göre 2007-2020 yılları arasında 40 doktora yayını, 2009-2020 yılları arasında da 59 yüksek lisans yayını olduğu ifade edilmiştir. Korucu ve Kabak (2020)'nin çalışmalarında ise 2015-2020 yılları arasında doktora ve yüksek lisans tezlerinin en fazla 2019 yılında yayınlandığı ifade edilmektedir. Bu yayınlarının yayınlanma yıllarına bakıldığında ise pandemi ile harmanlanmış öğrenme yayınlarında belli bir artış başladığı görülmektedir.

Yayınların örneklem türü incelemesi sonucunda büyük çoğunluğun yükseköğretim öğrencileri üzerinde gerçekleştirildiği sonucu elde edilmiştir. Kök (2018)'ün 2002-2015 yılları arasını kapsayan çalışmasında harmanlanmış

öğrenme ile yüz yüze öğrenmenin akademik eriş açısından karşılaştırdığı meta-analiz çalışmasında ulusal ve uluslararası incelediği çalışmaların en fazla yükseköğretim öğrencileri üzerinde gerçekleştirildiği sonucunu elde etmiştir. Korucu ve Kabak (2020) ise 2015-2020 yılları arasında da en fazla çalışma yükseköğretim öğrencileri üzerinde yapıldığını ifade etmişlerdir. Bu araştırmada da, 2019-2021 yılları arasında bu sonuçların değişmediği görülmekte ve araştırmamızla desteklenmektedir.

2019-2021 yılları arasında harmanlanmış öğrenme ortamları ile ilgili yayınların araştırma yöntemi açısından incelendiğinde çoğunluğun karma araştırma yöntemi ile gerçekleştirildiği bulguları elde edilmiştir. Aşiroğlu (2020)'nin çalışmasında 2020 yılın içinde harmanlanmış öğrenme ile ilgili yapılan çoğu çalışmanın nicel ve nitel boyutta araştırma yöntemi belirtmediği ifade edilmiştir. Karamustafaoğlu ve Değirmenci (2018)'in çalışmalarında da aynı şekilde fen eğitiminde harmanlanmış öğrenme ile ilgili yayınlarda araştırma modelinin ifade edilmediği ifade edilmiştir. Küçükoğlu ve Ozan (2013)'ın çalışmalarında yüksek lisans tezlerinde en çok nitel yöntemin, doktora tezlerinde ise nicel, nitel ve karma yöntemin eşit oranda kullanıldığı sonucu elde edilmiştir. Bu noktada araştırmamız harmanlanmış öğrenme ortamları ile ilgili alandaki boşluğu doldurduğu görülmektedir.

Harmanlanmış öğrenme ile ilgili 2019-2020 yılları arasında yer alan çalışmalar değişkenler açısından incelendiğinde ise en çok akademik başarı ve algının ölçüldüğü sonucu elde edilmiştir. Kök (2018) ulusal ve uluslararası incelemiş olduğu çalışmalar sonucunda harmanlanmış öğrenme ortamlarında yüz yüze öğrenme ortamlarının avantajları ve e-öğrenme ortamlarının

teknolojik avantajlarının bir araya getirilerek gerçekleştirilen öğretimin akademik başarıyı olumlu yönde etkilediğini ifade etmektedir.

Bu çalışmanın bulguları, Covid-19 döneminde harmanlanmış öğrenme yaklaşımının eğitimsel zorlukların üstesinden gelmek için bir çözüm olabileceğini ve farklı parametreler ve değişkenler dahil birçok ihtiyaca cevap vereceğini savunmaktadır. Yüksek Öğretim Kurumu tarafından yapılan açıklama bulgularımızın çıkarımını desteklemektedir: "Uygulamalı eğitimlerin bir kısmına devam edilmesi ve özellikle harmanlanmış (hibrit) öğretimin de yaygınlaşması ile birlikte geçtiğimiz yıl ''Küresel Salgında Yeni Normalleşme'' çalışmaları yapılmıştır." (YÖK, 2021). Dolayısıyla harmanlanmış öğrenme ve ortamları ile ilgili çalışmalara hız verilerek çalışılmayan değişkenler üzerinde araştırmaların yapılması bu çalışmada önerilmektedir. Tutum gibi az sayıda üzerinde çalışılan ve etkisinin uzun sürede ortaya çıktığı değişkenler üzerinde ivedilikle çalışılmaya başlanması önerilmektedir. Meta-analiz ve içerik analizi gibi bir konu üzerinde tüm tabloyu görmemizi sağlayan araştırmaların harmanlanmış öğrenme ile ilgili oldukça az olduğu görülmüştür. Bu sebeple, daha geniş yılları kapsayan içerik analizi çalışmalarının yapılması önerilmektedir. Araştırmada pandemi dönemini kapsayan 2019 ve 2021 yılları arasındaki çalışmalar değerlendirilmiştir. Doğal olarak 2020 yılı verileri daha yüksek çıkmıştır. Yıl bazında daha doğru değerlendirme yapılabilmesi için 2021 yılı bitiminde bu yıla özel bir araştırmanın yapılması tavsiye edilmektedir. Buna bağlı olarak pandemi devam ettiği sürece her yılın sonunda mutlaka çalışmalar revize edilerek tekrarlanması harmanlanmış öğrenme ortamlarında gerekli iyileştirmelerin yapılabilmesi için önerilmektedir.

Harmanlanmış öğrenme ile ilgili çalışmaların yayınlandıkları indeksler ile ilgili araştırmaya rastlanılmadığı gerekçesiyle çalışmamıza konu olmuştur. Alanda harmanlanmış öğrenme ortamları ile ilgili yayın indeks bilgileri ile ilgili bu boşluğun genişletilerek çalışılması önerilmektedir. Sonuç olarak, teknolojinin geldiği nokta, dünya genelinde yaşanan pandemi ve harmanlanmış eğitim ortamlarında gerçekleştirilen çalışmaların sonucunda akademik başarının arttığının görülmesi harmanlanmış eğitime duyulan ihtiyacın gerekçelerini ortaya koymaktadır. Yüz yüze eğitime olan talebin devam etmesi ve teknolojinin eğitim ortamlarında kalıcı öğrenmenin gerçekleşmesi için sunduğu olanaklar harmanlanmış öğrenme ortamlarının önemini ortaya koymaktadır.