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Determining the Opinions and Experiences of Students Who Started Nursing Training with Distance Education in the Transition Process to Hybrid Education: A Qualitative Study

Çevrim İçi Eğitimle Hemşirelik Eğitimine Başlayan Öğrencilerin Hibrit Eğitime Geçiş Sürecinde Görüş ve Deneyimlerinin Belirlenmesi: Nitel Bir Çalışma

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# Abstract

The first aim of this study was to determine the views of nursing students who started their education with distance education and then experienced the hybrid education method, and the second aim was to provide a resource for future decisions and initiatives in nursing education to provide student-centred education by taking these views into account. The research was a qualitative (phenomenological analysis) study design. The study included 20 nursing students continuing their education in the Nursing Department of a state university in Istanbul, who completed the first year of their university education with an distance education method and switched to a hybrid education method in the second year. Data were collected using a socio-demographic form and a semi-structured interview form. The interviews were conducted by telephone as audio interviews and the recordings were analysed using an interpretative phenomenological analysis method. Three themes were identified in this study: transformation, COVID-19 and nursing education. The students stated that the hybrid education model was inadequate, although it attempted to overcome the shortcomings of distance education, and that nursing education was not effective in the hybrid model, although it was effective in some cases.

Keywords: Education, Nursing, Distance education, COVID-19, Türkiye, Qualitative study

# Özet

Bu çalışmanın ilk amacı, eğitimlerine çevrim içi eğitim ile başlayan ve daha sonra hibrit (karma) eğitim yöntemini deneyimleyen hemşirelik öğrencilerinin görüşlerini belirlemek, ikinci amacı ise bu görüşleri dikkate alarak öğrenci temelli bir eğitim sağlamak için hemşirelik eğitimine ilişkin gelecekteki karar ve girişimlere kaynak oluşturmaktır. Araştırma nitel (fenomenoloji) çalışma desenindedir. Çalışmaya İstanbul'da bir devlet üniversitesinin hemşirelik bölümünde öğrenimlerine devam etmekte olan, üniversite öğrenimlerinin ilk yılını çevrim içi eğitim yöntemi ile tamamlamış ve ikinci yılında ise hibrit eğitim yöntemine geçiş yapmış olan 20 hemşirelik öğrencisi dahil edilmiştir. Veriler sosyodemografik form ve yarı yapılandırılmış görüşme formu aracılığıyla toplanmıştır. Görüşmeler telefon aracılığıyla sesli görüşme olarak yapılmış ve kayıtlar yorumlayıcı fenomenolojik analiz yöntemi ile analiz edilmiştir. Bu çalışmada konu ile ilgili dönüşüm, COVID-19 ve hemşirelik eğitimi olmak üzere 3 tema belirlenmiştir.

Öğrenciler, hibrit eğitim modelinin uzaktan eğitimden kaynaklanan eksiklikleri gidermeye çalışsa da yetersiz kaldığını ve hemşirelik eğitiminin bazı durumlarda etkili olsa da hibrit modelde etkili olmadığını belirtmişlerdir.

Anahtar Kelimeler: Eğitim, Hemşirelik, Uzaktan Eğitim, COVID-19, Türkiye, Nitel Araştırma

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### 1. Introduction

The coronavirus pandemic (COVID-19) has spread rapidly and emerged as a problem affecting all over the world (World Health Organization, 2020). The pandemic process has brought many difficulties with it. The pandemic has caused some changes in the field of education as well as affecting all areas of life because of the restrictions and quarantines taken around the world. After the schools were closed, new methods of teaching were started to be used to current education. The transition from formal education to distance education was made throughout Türkiye, as in many countries (Telli & Altun, 2020; Viner et al., 2020; Wang et al., 2020). Earlier studies have reported some of the limitations and problems faced by students during the transition to distance education such as lack of electronic resources, living in rural areas, work and family responsibility, problems in the distance education infrastructure of the university, lack of face-to-face education, limited opportunities and concerns brought by the pandemic (Hark Söylemez, 2020; Kürtüncü & Kurt, 2020; Ramos-Morcillo et al., 2020).

Distance learning will reduce individuals ability to learn by following others, awareness, observing the working environment, and learning from the work of others (Montgomery, 2021). The studies, in which students expressed their educational processes and related concerns during the pandemic, showed the importance of this period for nursing training (Işık & Küğcümen, 2021; Yanık & Yeşilçınar, 2021; Kürtüncü & Kurt, 2020; Puljak et al., 2020). It has been stated that distance education has affected the academic success of the students studying in the field of health because of the inability of the students to go to the clinical and laboratory practical/hands-on interventions and not being able to be in the institutions where health services are provided (International Council of Nurses, 2021). In addition, understanding people's emotional state is considered an important skill that nursing students should acquire and these skills are vital in the work environment (Labrague et al., 2018).

In the continuation of the pandemic process, the Council of Higher Education, which is responsible for the management of universities in Türkiye, has decided to continue education with a hybrid learning model (Council of Higher Education, 2021). The hybrid education model is a model that aims to minimize the negative aspects of distance and face-to-face (classroom) learning methods and to combine their advantages (Kaya & Kahraman, 2020). It has come to the fore that it is important to continue education with a hybrid system by taking protection measures for students and educators, as the pandemic

process eases, moreover, there is a need for improvement in the methods used in distance education, and hybrid learning is recommended especially for health science students

(Abbasi et al., 2020; Işık & Küğcümen, 2021). Thus, hybrid education has been included in the process as an important learning model, which is a blended form of distance and face-to-face education. It is stated that the flexible learning environment provided in the hybrid model gives positive results in terms of learner autonomy and motivation (Korucu & Kabak, 2020). It is obtained as a result that distance education cannot be an alternative to face-to-face education, but it can be applied as a supporter of face-to-face education (Aslan, 2019). In this context, from the point of view of nursing, in which the applied learning model is used, it is thought that the experiences of nursing students, who started their undergraduate education with the distance education model, during the transition to the hybrid education model are important.

In this study, practical applications (i.e., laboratory and clinical applications) were carried out face to face and in the field, a hybrid education model was used for theoretical lessons. Due to the pandemic conditions, this education model used was carried out simultaneously and online in line with the demands of the students. The lessons were taught with the support of distance education tools (Zoom, Edmodo, and video-supported content). Previous studies examined the transition processes from face-to-face education to distance education (Rana et al., 2021; Spencer & Temple, 2021; Wijaya et al., 2021). However, studies investigating experiences in the transition from distance education to hybrid education are limited. Therefore, it was aimed to determine the opinions and experiences of nursing students starting to receive nursing training with distance education in the transition process to hybrid education and suggestions for these experiences.

## 2. Method

The research was a qualitative (interpretative phenomenological analysis) study design and conducted according to the consolidated criteria for reporting qualitative research (Tong et al., 2007).

## 2.1. Aim

One of the aims of this study is to determine the views of nursing students starting their training with distance education and then experiencing the hybrid (blended) education method and the other one is to form a resource for future decisions and initiatives on nursing training to provide a student-based education by considering these opinions.

### 2.2. Research Questions

What are the experiences and opinions of students who started their university education with distance education in the process of transition to hybrid education?

# 2.3. Population and Sample of the Study

In this research, the purposive sampling method was used to determine the experiences of students who started their first year at the university with distance education and switched to hybrid education in the second year (Palys, 2008). The research was conducted with second-year nursing students studying

at a state university in Istanbul. Inclusion criteria for the study were as follows; (a) Being 18 years old and over, (b) Starting the 1st year of university with distance education in the COVID-19 pandemic and continuing with hybrid education in the 2nd year, (c) Being a nursing student. Some researchers stated that it is not possible to calculate the sample size in qualitative research, while others stated that the sample size should be chosen according to the research method (Onwuegbuzie & Leech, 2007). It was stated that 3-25 participants would be sufficient for the sample in the interpretative phenomenological analysis method Therefore, a total of 20 nursing students participated in the study (n=20). There was no dropout in the study (Table1).

Table 1: Sociodemographic haracteristics of the study participants

			Max
Age	20±0.91	19	22
		n (20)	%
Gender	Female	17	85
	Male	3	15
Marital status	Married	0	0
	Single	20	100
Volunteer Selection of Nursing Status	Willingly	10	50
	Due to Family Pressure	2	10
	Due to Work Anxiety	8	40
Place of the residence	Family	7	35
	Student dormitory	11	55
	Student house	1	5
	Relatives house	1	5
Working status	Employee	1	5
	Not employee	19	95
Economic status	Income less than expense	2	10
	Income equal to expense	14	70
	Income more than expenses	4	20

X= mean, SD= Standart devitation, Min= Minimum, Max= Maximum

# 2.4. Data Collection and Data Tools

Data were obtained through interviews conducted via phone calls. It has been stated that it is appropriate to collect data via phone in cases where face-to-face interviews threaten health (Sturges & Hanrahan, 2004). This method was chosen to protect both researchers and participants from the COVID-19 virus. The telephone interview method is more convenient than the face-to-face interview method in terms of both providing anonymity (Vogt et al., 2012) and enabling more qualified information on sensitive issues (Sturges & Hanrahan, 2004). However, there are disadvantages such as the lack of eye contact and the inability to identify non-verbal messages (Saarijärvi, 2021). Interviews were conducted by the first author of the study when participants were available. Before the participants were called, information was given by text message and the call was made upon receiving the message "I am available for the interview" from the participant. Before asking semi-structured questions, the purpose and scope of the research as well as how it will be implemented were explained to each participant. If they decided to participate

in the study, they were asked to verbally consent to their participation and to the audio recording of the interviews. All interviews were audio recorded. The interviews lasted 17-22 minutes. The research was carried out at the end of the students' fall term final exams (30 January - 7 February 2022) and the beginning of the spring term (27 February- 11 March). Data collection was finished when data saturation was reached (when data started to repeat) (Merriam & Tisdell, 2016).

## 2.5. Ethic

This study was approved by the Social and Human Sciences Ethics Committee from a university (Date: 24.02.2022 and Decision no:2022/88).

#### 2.6. Limitations

The results of this study are limited to the experiences of nursing students who started distance education in Turkey and switched to hybrid education in the second year. Therefore, the results cannot be generalised. Another limitation is that the body language of the participants could not be observed because face-to-face interviews could not be conducted and the data were collected through voice phone calls.

## 2.7. Analysis

The data obtained from the sociodemographic form of the participants were analyzed with the IBM® Statistical Package for the Social Sciences (SPSS®) Version 22. The steps of qualitative research were as follows: (1) Audio recordings were transcribed by two authors. (2) The consistency and accuracy of the transcriptions with the audio recordings were checked by the other authors. Transcripts were returned to participants for comment. (3) Later, all transcriptions were read and listened to multiple times by all researchers and coded independently. (4) Coding booklets were created by each researcher. (5) After this step, the clarification of the coding and the creation of the categories were completed independently by the research team members. (6) Afterwards, the whole team came together and discussed until reaching a consensus to determine the categories and sub-themes. (7) After creating the categories, sub-themes and themes were created through conceptual similarities (Smith et al., 2009). The findings of the study were reviewed and confirmed by an independent researcher. Qualitative data were analyzed using the MAXQDA program with the interpretative phenomenological analysis.

Interpretative phenomenological analyses (IPA): IPA was developed in the field of psychology by Jonathan A. Smith in the 1990s. The theory is based on the existential phenomenological approaches of Maurice Merleau-Ponty and Martin Heidegger. IPA is an interpretive method and hermeneutics, i.e. the process of interpretation, gains importance here. In this process, the researcher tries to understand the participant's experiences while at the same time adding his/her own interpretations to the process.

Smith sought a more in-depth qualitative analysis to understand the experiences of individuals and combined the phenomenological approach with an interpretive perspective to create the IPA (Tındal, 2009).

# 2.8. Researcher positionality

During the study, three researchers were academics (Prof., PhD. and MSc.) and two researchers were female final year nursing students. Nursing education during the COVID-19 era required academic nurses to become practising professional educators in a new environment.

#### 2.9. Trustworthiness

Guba and Lincoln (1994) drew attention to the need for trustworthiness rather than reliability in qualitative research, unlike quantitative research, and established some criteria (Houser, 2018; Merriam, 2023; Guba & Lincoln, 1994). These criteria are grouped under four headings: credibility, reliability, confirmability, and transferability.

## 2.10. Credibility

Expert review and participant confirmation methods were used to increase the credibility of the research (Holloway & Galvin, 2023). After the audio recordings were converted into transcriptions, confirmations were obtained from the participants. The themes obtained were shared with some of the participants. Participants were asked to evaluate whether the themes were appropriate to the phenomena they wanted to express. In addition to these, an independent researcher was requested to examine the results.

## 2.11. Reliability

To ensure the reliability of the research, the researcher triangulation method was used and it was ensured that more than one researcher was involved in the collection, analysis, and interpretation of the data (Houser, 2018; Streubert & Carpenter, 2011).

## 2.12. Confirmability

All the confirmability criteria, which were reported by Holloway and Galvin (2023), included in our study were explained in the following paragraph (Holloway & Galvin, 2023). The raw data (audio recordings) in the research were available to the researchers. The findings of the study and how the findings were obtained (codings, categories, themes) were explained in detail. The method and the steps of the work process were provided. The aims and objectives of the study were clearly stated. The outcome measurements (i.e., sociodemographic data form and semi-structured interview form) were shared.

# 2.13. Transferability

To prove transferability in qualitative research, how the sample selection was made, the characteristics of the participants and the environment should be reported (Sharts-Hopko, 2002). These criteria were explained in the method section of this study.

## 3. Results

After the coding, codes were put together to create categories, and categories created sub-themes. Finally, the themes were formed as Transformation, COVID-19, and Nursing Training.

### 3.1. Transformation

The experiences and opinions of the students participating in the research, who were in the transition from the distance education model to the hybrid education model, have gathered in the sub-themes of "Learning started now", "New place, new relationship", "Self-management" and "Being a university student" under the theme of "Transformation".

## 3.1.1. Learning started now

The majority of the students participating in the study stated that their views on hybrid education were positive:

-I was not absent from school unless it was necessary. It was very good and nice to listen to the professors face-to-face. Even if I didn't take notes at that moment, I could say "Oh yes, he/she taught us about that" and understand it. Because we had the chance to listen in a one-on-one environment. (Student7)

-It increased the efficiency of learning. I felt that I could learn because we had practical courses as well. For example, when we were having theoretical courses in distance education, I did not know whether I have learned something or not. In my opinion, exams do not show whether I've learned or not since they are based on memorization. So, we study during the exam week, and then, we pass the courses. But when you practice, you can say: "I learned this". I think I am learning now because we've had practice in internships, laboratory classes, etc. Honestly, I didn't think I was learning anything with distance education. (Student6)

Only one student stated that she had difficulty adapting for a while after switching to hybrid education, but learning with the hybrid model was more effective:

-I had a very hard time in the beginning. I could not come to school for the first 2 months, I was constantly attending classes online. But later on, when I came to school, I realized that I understood better. I could have mastered the subjects better. (Student18)

One student, on the other hand, stated that although he/she thought he/she would have difficulties in the hybrid education model, she/he adapted without any difficulty:

-I can say that it has positively affected me. I thought that I would experience the process of getting used to it. I didn't have any trouble at all, as if everything was normal. (Student8)

Besides, interacting with friends and instructors was an important factor in students' learning:

-This has affected my academic life very positively as I could talk with my friends. When a problem arises, I can reach my professors. Together, we can come up with a solution. At the same time, I have

the opportunity to observe my professors' experiences and the work that they have done. In addition to that, I am learning many things. So, I can say that it was perfect for me. (Student15)

-We can meet with friends more often, consult ideas, and learn. It is more instructive to learn with friends. (Student13)

## 3.1.2. New place, new relationship

It was seen that hybrid education had a great effect on the socialization of students who started their university life with distance education:

- -I think, socially, it is better and we got to know more people. Because we stayed at home during the pandemic process, our communications have weakened. However, meeting new people in a new environment felt a little better. (Student9)
- -When I was in my hometown, Hatay, I was living in a village. I could never go out there anyway. I have a more social life here. (Student3)
- -Staying away from home 2-3 days a week was so nice that I didn't care if the school was face-to-face (or if there was a pandemic). I get up at 05:30 in the morning, and even my family is very surprised. I could attend classes online, but I was so bored. So, I get up early in the morning and go to school and I do not care that I leave home early. (Student17)

### 3.1.3. Self-management

The students who participated in the research expressed their experiences on self-management and financial issues after transitioning to hybrid education as follows:

- -At first, I could not go to school. I had friends from the dormitory and we went to the campus together. Once I went on my own, I took the wrong subway. I had gone the wrong way. I got used to using transportation alone after that. (Student16)
- -I am staying in a dormitory in Maltepe (close to the campus). But I used to come from Başakşehir. I was waking up at 5 am to come to school, which took 3 hours. It was very exhausting for me. But then, I was transferred to my current dormitory. I have to work to provide for myself. If I do not work, I can't support myself. (Student12)
- -I used to spend a lot of money. But then I realized that I had to be organized and not spend as much. (Student5)

## 3.1.4. Being a university student

In the study, some of the students stated that they felt like university students when they transitioned to hybrid education:

-I can clearly say that I have realized that I was studying nursing, this year. Well, I was a nursing student, yet I had never held an injector before. It didn't make much sense to me. I had a little practice through the internship programs this year. (Student4)

-I think it's been a much better year. I had at least some of my courses face-to-face and we attended the internship program this year. I'm starting to feel a little more like a college student. (Student3)

### 3.2. COVID-19

COVID-19 theme was divided into "Whatever" and "I'm Afraid But" sub-themes.

#### 3.2.1. Whatever

It was seen that some students participating in the research no longer cared about the COVID-19 infection and wanted to continue their education face-to-face.

-I do not care if I am infected or not anymore, because it just takes a week. So many people around me got infected, and I do not think it is lethal anymore. As university students, we are now in a mood that it does not matter what happens, as long as we go to schools, as long as we are in different cities. (Student14)

-I have no concerns about going to the clinic (for internships) because I think everyone understands very well how to act (to prevent infection); the patients are likewise, and the staff working in the hospital are nice and in harmony. (Student15)

-I am not concerned. I take precautions (to protect myself) and am not concerned. (Student10)

-I am no longer afraid of COVID-19. I think I have already taken the necessary precautions such as putting a mask on and using the disinfectant. It is really good to practice the subjects I learned in courses in the hospital. Even if we learn something at school, we don't learn if we do not practice it. We realized this in the first semester at the hospital. No matter how much we know about the subject, it is different in the hospital setting. (Student18)

### 3.2.2. I'm afraid but

In the study, some students stated that despite their fear of COVID-19 disease, they should receive face-to-face training and practice to learn their profession:

-It is very different to be in a hospital due to COVID-19. This makes me a little nervous, but not enough to interfere with my work. (Student8)

-We encounter a lot of people in the hospital. We have to communicate with people a lot. Therefore, of course, the risk of contagion is high. Hospital environments are already places of contamination. Practicing what I know theoretically motivates me a lot. Thus, practicing or learning something that I do not know is very beneficial. (Student2)

## 3.3. Nursing Training

Nursing students who continue their training with the hybrid education are divided into the sub-themes of "Sometimes functional" and "It should never be" based on their opinions on this education model.

### 3.3.1. Sometimes functional

Some of the students stated that hybrid education in nursing can sometimes be functional:

- -In hybrid education, I do not need to be face-to-face in classes and I can spare time for myself as much as I want, and I can improve myself in different ways. (Student15)
- -I find hybrid education useful. If I want to go on a trip and if there is a lesson for 2 hours that day, I can attend the class online and I have no experience a problem with absenteeism. (Student5)
- -In hybrid education, if someone wants to attend online or face-to-face, they can. This is an advantage as I do not know which is efficient for whom. The training method can be chosen from person to person. So, it is left to our choice. (Student6)

## 3.3.2. It should never be

Some of the students stated that nursing should be face-to-face, not hybrid:

- -Everyone is so relieved, not me. It's a little bad that they think they can just attend the classes online. I think nursing training needs to be entirely face-to-face and hybrid education should be ended. (Student17)
- -Nursing is an practical field; we have one-on-one relationships with patients and people. It is not a profession that can be learned online. (Student12)

The students evaluated the fact that some theoretical courses continue to be distance within the scope of hybrid education as follows:

- -We had a pharmacology class this semester. I did not know it was an important class back then. It's all about the drugs, after all, and it requires memorization and using complex words (Latin). I thought it did not matter much, since it was an online course. Frankly, I did not pay much attention to the class and I did not listen much. Then I realized that many terms were very hard to learn. I barely passed the exams. (Student19)
- -It is bad that a course with a lot of information is online, it would be better if it was face-to-face. I think I could learn better. (Student1)
- -Some courses are still online, for example, pharmacology. I am having a really hard time with it. This is the only negative thing with hybrid education. (Student2)
- -The distance education option has become something of a convenience. I thought that I could join the classes online when I did not want to get up early. But I tried to go to courses as much as possible. (Student20)

### 4. Discussion

The themes determined as a result of this research, in which the thoughts and experiences of nursing students about the hybrid education process are examined, were Transformation, COVID-19, and Nursing Training. The findings from the "learning started now" sub-theme, which was examined under the theme of transformation in the research, revealed that the transition from distance education to a hybrid education model had positive effects on students' learning. It was stated that hybrid education positively affected students' academic success, and their attitudes towards hybrid education were positive in a meta-analysis conducted by Korucu and Kabak (2020), in which thirty studies were included (Korucu & Kabak, 2020). From this point of view, it may be preferable to use the hybrid education option than distance education, and thus it can have a more positive effect on the success of the students.

Statements from students under the sub-themes of "new place, new relationship," "self-control," and "being a university student" revealed that universities help students gain identity, solve problems, be involved in a new environment, and overcome difficulties such as housing, economic problems, and the adaptation process, particularly for students who have migrated from small cities to big cities such

as Istanbul. This was especially true given that universities are places where students are taught scientific thinking skills and are encouraged to express themselves (Donat et al., 2019). In addition, the experience of being a university student, which is in the transition phase from adolescence to adulthood, provides the opportunity to meet new people and creates a new field of interaction with new friends and educators within the campus environment. In this case, many students can experience the university environment and studentship, which can be described as a delayed acquaintance for students who took distance education in the first year and transitioned to hybrid education in the second year (Leidl et al., 2020; Donat et al., 2019). It can be suggested that being in contact with the concrete field of education should be taken into account as a holistic encouraging and supportive factor for students who are in identity development (in terms of their developmental period) and that learning should be provided as interactively as possible.

In the study, when we evaluated the "I'm afraid but" and "Whatever" sub-themes in which the students expressed their views on the COVID-19 pandemic, it was seen that the students did not report intense anxiety but reported existing anxiety for risk of contamination for their loved ones. It was stated in the previous studies that student reported more intense problems such as anxiety, sleep, and difficulties in coping (Fofana et al., 2020; Yüksel Kaçan et al., 2021). It was thought that the high death rates and transmission rates due to COVID-19, quarantine and closure measures, the use of distance education methods, and uncertainties about education affected the results of these studies (Kochuvilayil et al., 2021; Mahmud et al., 2021; Turan, 2022; Cao et al., 2020; Ekiz et al., 2020; Kim et al., 2021). Besides, it was stated in a study that nursing students were concerned about the health of their families during the pandemic process (Lovrić et al., 2020). Considering the findings of our study and the literature, it is believed that taking high protection measures and regular follow-ups for students who are in a clinical internship, especially in risky times such as pandemics, will have a positive effect on health anxiety. Additionally, in a qualitative study conducted by Yılmaz and Büyüköztürk (2021), the opinions of senior nursing students who continued their clinical practice during the pandemic process were taken and when their expressions were examined, it was observed that the existence of their concerns about the

pandemic and the concern of infecting their relatives with the virus. It was also observed that there were statements regarding the will to be in the clinical field and improve their skills despite their concerns (Yılmaz & Büyüköztürk, 2021).

When the results are evaluated, it can be thought that the presence of nursing students in the clinical practice by taking the necessary precautions will be supportive in adapting to the profession, and the situation of the students in the clinical internship may have more positive outcomes compared to the situation of being away from the clinic. Similarly, while the opinions of the students in our study were parallel to these statements, a group of students did not express anxiety, contrary to the literature data, and did not express the effect of the pandemic in a negative way (Yılmaz & Büyüköztürk, 2021).

In the current study, students' views on hybrid nursing training under the theme of "Nursing training" were the sub-themes of "Sometimes functional" and "Should never be". Opinions have emerged that the nursing training should all be face-to-face and that hybrid education can sometimes be functional. According to studies on hybrid (blended) education, it contributes to the delivery of nursing training, facilitates learning, has the benefits of both face-to-face and online methods and is well received by students. (Mucuk et al., 2021; Koç & Ateş Çobanoğlu, 2020; Korucu & Kabak, 2020; Leidl et al., 2020). In our study, some of the students found the hybrid education model beneficial, whereas others stated that it was ineffective. This result may suggest that there may be differences in students' learning styles.

Furthermore, when the studies in the literature are examined, it is stated nursing students that the use of online methods in education is not as effective as the face-to-face education method, and it is evaluated negatively due to technical problems, communication problems, and non-permanence of learning (İlaslan & Demiray, 2021; Keskin & Özer Kaya, 2020). In a study conducted by Diab and Elgahsh (2020) with nursing students, it is stated that 61.6% of the students have negative attitudes toward distance education, and when the grade levels are considered, the first-grade students show negative attitudes the most (Diab & Elgahsh, 2020). Considering all these, it can be stated that it would be more effective to conduct the education and practices of disciplines that require applied learning, such as nursing education, as much as possible with face-to-face and field education models.

### 5. Conclusion

In summary, the hybrid education model may be more functional, especially in conducting theoretical courses rather than practical courses. Distance and hybrid education are less effective than face-to-face education in the education of applied professions such as nursing. Students stated that although the hybrid education model tried to overcome the deficiencies caused by distance education, it was insufficient and nursing training was not effective in the hybrid model, although it was effective in some cases. In this context, it may be stated that in unexpected situations (such as a COVID-19 pandemic), nursing training should be planned to be effective at the highest level, and face-to-face education and practices should be continued by ensuring the protection of students in the most effective way. In cases where face-to-face education cannot continue, it is important to eliminate the problems in accessing technology and strengthen the infrastructure. The use of technology is crucial in academic life and learning. It may be suggested to support the use of reinforced distance education modules when

necessary. In addition, it is recommended that similar studies be planned in different sample groups, measuring the effectiveness of hybrid education, addressing the positive and negative aspects with the factors affecting them, and presenting new methods for the development of this method. As a result, although there are many studies on the distance education process, to the best of our knowledge, this study is the first study to reveal the data on hybrid education.

## **Authors Contributions**

Topic selection: DAK, MİB, AO; Design: DAK, MİB, AO; Planning: DAK, MİB, SK, GK; Data collection and analysis: DAK, SK, GK; Article writing: DAK, MİB, SK, GK; Critical review: AO.

#### Conflict of Interest

The authors declare no conflict of interest/competing interest.

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