Teacher assessments of the process of preparing a blended teaching Turkish as a second language program assisted by quantum learning cycle

Olcay Saltık[1], Sevgi Çalışır Zenci[1] and Hülya Pilancı[2]*

[1]Department of Turkish Language, Anadolu University, Turkey.
[2]Department of Turkish Language and Literature, Anadolu University, Turkey.

ABSTRACT

About 2 million Syrians of approximately 3.6 million who were forced to immigrate to Turkey due to unfavorable conditions in Syria are composed of adults. In order to maintain Syrians' socio-cultural adaptation and minimize adaptation problems that they experience, their learning Turkish has become a need. As is known, the time that adults can spend on learning languages is much more limited compared to children. As an eclectic approach, blended learning arising as a result of minimizing the disadvantages of face-to-face and online learning and combining the advantageous sides of both is accepted as an appropriate model for adult learners. In the present study, the blended and Quantum learning cycle assisted teaching Turkish as a second language program for adult Syrians (at the age of 17 and above) who are under temporary protection in Turkey will be discussed and learners' contribution to program development process will be presented. In the program, by benefitting from Quantum learning cycle, it has been possible to maintain language learning's being dynamic, easy and long-lasting, and teachers' encouraging learner success, learners' experiencing learning and having the opportunity to practice. Considering the specific features of adult learners, the program content has been aimed to be meaningful for learners. Teacher assessments obtained before the application of the program have been significantly impacted the development of the program and their thoughts after the application has contributed a lot. This study can contribute to the literature on the use of blended learning model in language teaching programs for adults.

Keywords: Blended learning, quantum learning cycle, teaching Turkish as a second language, adult education.

*Corresponding author. E-mail: hpilanci@anadolu.edu.tr.

INTRODUCTION

Today, adults feel a need to learn a language to improve themselves and to follow scientific, technological, cultural developments in the countries they live, or to live in another country because of some reasons including immigration, wars, education and job. However, time that adults can allocate on learning a language is more limited compared to children. One of the ideal models on learning a language is blended learning model. Blended learning is an eclectic approach that is a result of a view

aiming at minimizing the disadvantages of face-to-face and online learning and combining the advantageous sides of both (Finn and Bucceri, 2004; Harding et al., 2005; Kaya and Akdemir, 2016; Pesen, 2014; Whitelock and Jelfs, 2003; Williams et al., 2008). Based on this definition, blended learning can be explained as a model that can be used to eliminate the limitations of both face-to-face and online learning, and to develop learning by combining the advantageous sides of both (Cırak Kurt,

2017).

Owing to unfavorable conditions in Syria, approximately 3.6 million Syrians have immigrated to Turkey. The number of adult Syrian among these is about 2 million (Multeciler Dernegi, 2020). As is known, variables such as language proficiency, communication capacity, cultural closeness and the duration of living in a country directly impact socio-cultural adaptation and decreases adaptation problems experienced. Learning the language of a culture is a need in terms of recognizing the culture of the immigrated country, and learning the values and rules of that country (Masgored and Ward, 2006; Seker, 2015; Zengin and Ataş-Akdemir, 2020).

The present paper deals with the teaching Turkish as a second language program blended with Quantum learning cycle and prepared for adult Syrians (at the age of 17 and above) who come to Turkey due to unfavorable conditions in Syria, and presents learners' contribution to program development process. The program was prepared considering the language learning tendencies of adult learners. In relation to this, the following features of adult learners were taken into account in the program:

Features of adult learners

- They are experienced, they have knowledge.
- Their values, beliefs and opinions were formed.
- They expect to be treated as adults.
- They want to manage learning activities and take control of their own learning.
- Their learning orientations are life or task/problem oriented.
- They tend to show an interest in practice rather than theory.
- Since individual differences increase with age, there are differences in their learning styles.
- They want to know why they should learn before they start learning something.
- They learn what is necessary and meaningful for them, and they are selective.
- They accept the responsibility of learning if the learning times are suitable for them.
- Although they react to some external incentives such as promotion and wages, the strongest incentives are internal pressures such as job satisfaction and increase in self-confidence (Knowles, 1996; Knowles et al., 2015; Tezcan and Deveci, 2018; UNDP-MEB, 2019).
Depending on the characteristics of adult learners, the program has the following characteristics:
- Grammar topics that they will need are presented with e-lecture as one of the most common methods used in adult education.
- Real-life themes have been taken to develop language skills of adults in critical thinking and problem solving.
- Sample case have been created that bring the real-

world problems of adults to the language learning environment and enable the active participation of learners.
- Activities have been prepared to encourage adults to make decisions, solve problems, and develop and confront attitudes towards the results of their own decisions.

The program aims to make language learning dynamic, easy and permanent, to encourage student success, to make the learners live learning experience, and practice what they learn, and to make the content meaningful for learners by using the Quantum learning cycle (DePorter et al., 1999). The program consists of six stages depending on the Quantum learning cycle:

Before the lesson, through technology

Stage 1 - Capturing: attract attention, arouse curiosity, make them feel the need to learn.
Stage 2-Associating: activating preliminary information, increasing the sense of curiosity.

Face to face in the lesson

Stage 3 - Labeling: adding new information on prior knowledge, developing thinking skills of learners and making them using learning strategies.
Stage 4 - Application: developing the ability to receive information and use it in different situations.

After the lesson, through technology

Stage 5 - Repetition: reinforcing knowledge, realizing what is learned, improving self-confidence.
Stage 6 - Celebration: rewarding those who succeed in digital games that reinforce learning.

In the program, whose technological infrastructure is based on a learning management system, in-class and out-of-class learning is carried out with thematic content prepared based on four basic language skills.

Figure 1 shows the place of the Quantum learning cycle in the course process.

Topics included in the theme are presented through the lecture on Arabic, sample case videos and listening texts explaining the usage of the subject in Turkish in the learning management system before the lesson.

In the face-to-face lesson, the tutorial explains the subject, demonstrates its use in Turkish through sample case videos, and guides students through the textbook activities and in the end of theme exam. After lessons, students are asked to re-watch the lecture and sample
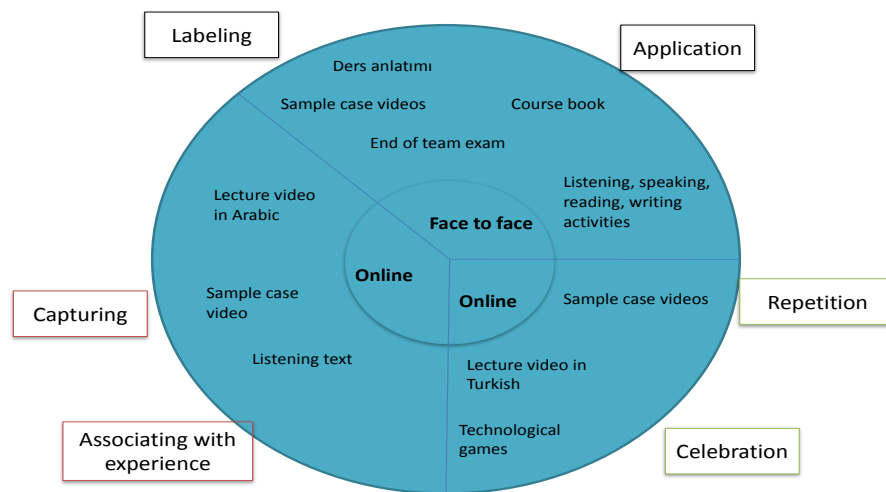
Figure 1. Quantum learning cycle.

case videos over the learning management system. Besides, students are provided games that will reinforce the subject after each lesson.

There is no other study using blended learning model in the field of teaching Turkish as a second language. With this study, it was aimed to improve the program and contribute to the professional development of teachers by benefiting from the opinions of the teachers during the development of the program. It is thought that the data obtained in this study will contribute both to the improvement of the program and to the literature. The participation, suggestions and criticisms of the teachers who will use the program in the preparation process are planned in advance as a process evaluation of the program. Accordingly, the study seeks answers to the following questions:

1. What are your views on the blended Turkish as a second language education system supported by Quantum learning cycle?
2. What are your views on the content, visuals, videos, activities, lesson plans, exams and learning outcomes of Quantum learning cycle assisted, blended Turkish as a second language education program?
3. What other system materials should be prepared for Syrian adults to learn Turkish?

MATERIALS AND METHODS

Method

In evaluating an education program, it is not possible to mention the superiority of one single research method. The choice of approach that serves the purpose of evaluation is what is critical. If a program is aimed to be developed by understanding the details and dynamics of the process, qualitative methods can provide rich explanations. Depending on the purpose of the assessment, as long as the situation allows, combination of methods can produce more reliable and valid results (Zayim, 2017). The method of this research was determined according to the following objectives:

- To determine from which elements of the system problems arise by consulting the teachers, and to make the necessary corrections,
- To determine the effectiveness of the Turkish education system applied after the problems are resolved.

The study was conducted in two stages. In the first stage, the examination-based method was applied and the teachers were expected to examine the system as a user. By doing so, it was aimed to minimize possible problems during production (Bagis, 2002). A training program was organized for the teachers, and the documents introducing the system and A1, A2, and B1 level lesson plans based on blended Turkish as a second language education system supported by Quantum learning cycle.

In the trainings, the teachers were presented exemplary themes, and they were made to practice the themes by themselves. At this stage, the interview forms, in which preliminary information about the general structure of the system, the contents and the materials that needs to be added, were conducted.

After the program developed with the obtained data started to be implemented, the second phase was started, and the interview forms, where the last information about the general structure of the system and

the contents were administered.

Study group

The study group of the study consists of 70 teachers teaching Turkish to Syrian adults. All the participant teachers are graduates of various face-to-face programs. In Turkey, there is no a degree program in the field of teaching Turkish as a second language. For this reason, the undergraduate graduation fields of the teachers vary. All the participant teachers have never previously worked in a technology-supported Turkish as a second language teaching program; and they have encountered a program like this program for the first time. Personal information about the study group is given in Table 1.

Data collection tools

In the research, the data source consists of semi-structured interview forms developed to determine the opinions of the teachers. The interview forms consist of three parts. In the first part, the information about the research is given. This section includes information about the purpose of the research, research ethics and the researchers. In the second part, personal information of the participants is asked. This section contains information about the gender, age, graduation and professional seniority of the participants. In the third part, there are three open-ended questions. The research questions were presented to the opinion of two academicians who are experts in teaching of Turkish as a second language, and the interview questions were finalized in line with the corrections and suggestions from the experts.

Data collection and analysis

The personal interview form, information obtained before application and final information questions after the application of the program comprised the data. The interviews with the teachers during the training period and after the application were conducted.

In the first stage of the interviews, the teachers were given information about the purpose of the research and why it is conducted. In addition, the teachers were informed about research ethics and not to share personal information revealing their personal identities. It is stated that when there is a part that teachers have difficulty in making sense of, they could ask questions to the researcher during the interview. After the informing phase, the interviews with the teachers were conducted and the data were recorded in writing. The data obtained from the interviews were coded in the format of (K1), (K2) in accordance with the number of participant teachers,

Table 1. Personal information about the study group.

	f	*%*
Gender of the participants		
Female	38	54.28
Male	32	45.71
Ages of the participants		
Between 21 and 25	25	35.71
Between 26 and 30	15	21.42
Between 31and 35	11	15.71
Between 36 and 40	5	7.14
41 and above	9	12.85
Unanswered	5	7.14
Programs graduated		
Turkish Language and Literature	40	57.14
Primary School Education	12	17.14
Turkish language education	10	14.28
Turkish Language and Literature Education	5	7.14
English Language Education	2	2.85
Social Studies Education	1	1.42
Years in profession		
Less than 1 year	11	15.71
Between 1 and 5	35	50
Between 6 and 10	5	7.14
Between 11 and 15	9	12.85
Between 16 and 20	6	8.57
21 and above	3	4.28
Unanswered	1	1.42

and the personal information of the teachers was not included. The data obtained from the interview forms were analyzed by content analysis method, and classified and interpreted according to the themes.

FINDINGS

What are your views regarding the blended Turkish as a second language education system supported by Quantum learning cycle?

Participants were asked to evaluate the program in general. 13 of 70 teachers stated opinions on this subject. 6 of the interviewees responded positively, 3 negatively, and 4 interviewers responded both positively and negatively (Table 2).

Examples of views on the system

"I found the system successful." (K7)

Table 2. Participants views on the system before formal application.

	Positive *f*	Negative *f*	Positive and Negative *f*
Overall structure of the program	6	3	4
Total	13		

"It is a system that saves us in many ways. It meets most of the teacher-needs both in-class and out-of-class. But if the system is developed a little more, it will be more useful. Therefore, if the system is loaded with more listening activity, writing activity, diversity increases. (K26)
"I think it's a bit complicated. I think the app will be effective if it is explained enough." (K29)
"I think it is useful in terms of teaching Turkish but needs to be improved more." (K46)
"There should be more videos in the system. (K49)

What are your views on the content, visuals, videos, activities, lesson plans, exams and learning outcomes of Quantum learning cycle assisted, and blended Turkish as a second language education program?

Regarding the course contents, 19 out of 70 teachers stated opinions. 8 of the participants found the lecture parts positive, and 1 stated positive opinion on the textbook in the system. 8 participants evaluated the materials and provided negative opinions in terms of lecture parts (6 participant), activities, and videos (1 participant). Besides, 19 participants evaluated the materials and stated both positive and negative opinions regarding lecture parts (7 participants), lesson plans (4 participants) exams (3 participants), activities (2 participants), listening texts (2 participants), and learning outcomes (1 participant) (Table 3).

Examples form the views on the content

"I think the program will provide a great convenience to teachers in terms of content and plan." (K31)
"Textbooks have been prepared very clearly and understandably." (K59)
"I agree that the program is clear and understandable. The other books and their contents on Teaching Turkish to foreigners are confusing." (K68)
"I found the videos a bit inadequate in word teaching." (K30)
"Lesson plans should be developed further." (K42)
"Great. It just needs to be improved a little more. The program can be improved further if there is an address where we can send materials to such as videos and

audio recordings." (K10)
"The textbooks are very short and concise. They provide easy access to information." (K20)
"The books are very clear and understandable. The only thing is that there should be more examples in lesson plans." (K59)
"The videos and images are compatible with the theme and subject." (K60)
"The materials are clear and understandable." (K68)

What other for these system materials should be prepared for Syrian adults to learn Turkish?

68 of 70 teachers stated opinions on this subject. It is noteworthy that the views are mostly directed to the face-to-face part of the program. 12 participants mentioned inclusion more of the videos, and 12 participants suggested increasing the pictures and photos. The other views stated were diversification of the materials (11 participants), usage of the alphabet, word cards and puzzles and game cards (10 participants), diversification the activities (6 participants), inclusion of reading books prepared according to the levels (5 participants), voice recording device to be used in the lessons in order to perform listening activities (4 participants), giving more space to Arabic narrated videos (3 participants), preparing handbooks (1 participant), preparing posters (1 participant), prepare animation activities (1 participant), adding excursion activities (1 participant), the content including visuals from the Eastern culture (1 participant). Table 4 shows the materials offered for online and face-to-face lessons.

Examples of participants' views on the materials to be prepared

"Informative handbooks that Syrians can keep at hand at any time can be distributed." (K4)
"The number of the examples given in the content should be increased, and activities needs to be diversified." (K5)
"Banners can be prepared." (K7)
"We often have to use materials. I think materials need to be diversified and increased." (K13)
"Images and videos are very effective. Using simple and concrete tools makes the student effective." (K14)
"Tangible materials need to be used. We can obtain more

Table 3. Participants views on the content before formal application.

Content	Positive *f*	Negative *f*	Positive and negative *f*
Learning outcomes	-	-	1
Lesson plans	-	-	4
Lecture parts	8	6	7
Course book	1	-	-
Activities	-	1	2
Sample case videos	-	1	-
Exams	-	-	3
Listening texts	-	-	2
Total	9	8	19

Table 4. Teachers' suggestions before formal application.

Online	*f*
Increase sample case videos	12
Increase photos and pictures	12
Diversify materials	11
Diversify activities	6
Add reading books prepared according to the levels.	5
Increase Arabic lecture videos.	3
Face to face	
Prepare alphabet cards, flashcards, puzzles and playing cards for face-to-face lessons.	10
Voice recorders should be prepared for listening activities in face-to-face lessons.	4
Prepare handbooks for face-to-face lessons.	1
Make banners for face-to-face lessons.	1
Prepare animation activities for face-to-face lessons.	1
Add cultural travel activities for face-to-face lessons.	1
The contents should be structured with visuals specific to the Eastern culture.	1
Total	68

materials with less money. New, inexpensive, concrete materials can be prepared from the materials that can be recycled and articles we do not use." (K17)

"Visuals can be increased." (K30)

"I think learning will be better and more permanent if playing cards, puzzles, materials are used more." (K32)

"I think the visuals are very important and should be used as much as possible" (K 35)

"Apart from videos, short games can be used for fun activities such as jigsaws, mazes, and puzzles." (K41)

"Worksheets that we can contribute can be prepared and can be distributed to students. Concrete objects can also be brought to the classroom." (K55)

"Having audio activities also saves education from being boring." (K57)

"I think it would be appropriate to use Arabic videos during the lessons. I hope that they will understand better with these videos because I think we will be inadequate

at some points." (K61)

"Content appealing to Eastern culture can be produced with visuals." (K63)

"Reading books should be provided to improve students' reading skills. Books should be based on student levels." (K64)

"For the explanation of the grammar topics, the Arabic subtitle or language option must be available for every subject; we are already solving the practical part in the lesson." (K76)

DISCUSSION AND CONCLUSION

According to the opinions, the system of teaching Turkish as a blended second language supported by the Quantum learning cycle prepared to teach Turkish to Syrian adults facilitates teaching , but needs to be

developed. In the evaluation of the program, it is seen that the teachers were initially reluctant to express their opinions and those who gave their opinions focused on the content rather than the technical structure. It may show that this is because the teachers have encountered a technology-supported program, blended learning and the Quantum learning cycle for the first time. It is noteworthy that the teachers mostly mention face-to-face education materials when talking about the materials that need to be prepared for Syrians learning Turkish.

Following the present research, the system was revised in line with the suggestions of the teachers. Turkish lecture videos for online courses and Arabic lecture videos have been increased accordingly, and sample case videos and activities have been increased and diversified. After the system started to be used formally, the teachers were asked to give feedback. 64 of the 70 tutors gave their opinions. 28 instructors reported positive, 14 instructors reported negative, 22 instructors reported both positive and negative opinions (Table 5).

Table 5. Teacher assessments after formal application.

	Positive *f*	Negative *f*	Positive and negative *f*
Overall structure of the program	28	14	22
Content	9	8	19
Total	37	22	41

Examples of the teachers' views after they started using the program

"The lessons are good. However, there are more than enough details and repetitions." (K14)

"Blended learning model is a contemporary model that includes both technology and traditional education. Since students spend a lot of time on the phone and tablet, they can easily adapt to this learning model. One of my students watched the videos and made the activities while her baby was sleeping in the hospital where she gave birth. The students are happy as they can access the content everywhere." (K18)

"If such a system was used to teach English to Turks, both our students and we would be able to speak English fluently. Theoretical knowledge learned in the classroom with videos is associated with real life. Not only students' motivation is increasing but also what is learned can be remembered more easily." (K21)

"Students can do the activities in the learning system at any time and complete their gaps. They can watch the videos as much as they want. This system made it easier for students to follow the course and for us to follow them. They can get instant feedback outside of school. At first, I was scared how the students in their 40s could use a technological application… E. A. was 40 years old and he visited me and told me that he watched them all with joy. Their motivation increases as they receive feedback. Blended learning is definitely a model that keeps up with time." (K33)

"With technology, students will be told many topics, but the student will get what he sees in daily life, and the grammar he has learned with technology will remain in the background. I can only explain this to the students as a teacher-student in the classroom." (K44)

"I would like more of the activities in the textbook. I think sample activities will guide us as teachers." (K61)

Student views regarding the program

"This project is very good, I'm glad because I see videos everywhere. I always learn Turkish at the bazaar and at home. I benefited a lot from this." (K39)

"This system allows me to study anywhere. I watch videos whenever I want at home. I watch them again and again, and in Arabic. I can also ask the tutors at school. I love videos. They teach me Turkish." (K44)

"This program is a very useful program. Activities help us understand. This program made everywhere school." (K47)

"I am very pleased with this course. I loved the videos because they teach me. I can always open the program and I can always watch the videos." (K58)

"This is a great program. The explanation of the rules is simple and easy. Videos are very useful in daily life. Arabic explanations were very good, it helped us a lot. I think it is a very useful program for anyone who wants to learn Turkish." (K62)

In the process of integrating into a new country and society, language learning has an important place among other complex adaptation activities (Derwing and Thompson, 2005). People have several motivations to learn the language of the country the target country. Their willingness to communicate (Aguirre-Muñoz et al., 2006; Akdemir, 2016; Akdemir, 2019), needs to achieve professional goals (Barker, 2003), or recreational needs (Chik and Ho, 2017) may affect language learning initiatives. For immigrants, it is effective to learn the

language of the immigrant country, to solve their own problems and to adapt to society and new culture (Galletta-Bruno, 1995). In this case, the key to the harmony of adult Syrians under temporary protection in Turkey is learning Turkish. Language learning with blended programs is one of the most suitable models for adults with limited time. The quantum learning cycle is compatible with the interests and tendencies of adult learners for learning. Getting the opinions of the teachers played an important role in the development of the program we prepared to teach Turkish to Syrian citizens as a second language, blended with the Quantum learning cycle. The teachers who have not meet this model previously avoided giving an opinion at the beginning, mostly expressed their opinions about the face-to-face part of the program. The program, which has been developed by evaluating all the opinions of the teachers, enabled the teachers use the program easily, has increased their control over the program, has contributed to their professional development and has brought student satisfaction.

REFERENCES

Aguirre-Muñoz, Z., Boscardin, C. K., Jones, B., Park, J. E., Chinen, M., Shin, H. S., and Benner, A. (2006). Consequences and Validity of Performance Assessment for English Language Learners: Integrating Academic Language and ELL Instructional Needs into Opportunity to Learn Measures. CSE 678. National Center for Research on Evaluation, Standards, and Student Testing (CRESST).

Akdemir, A. S. (2016). Willingness to communicate (WTC) in L2: An affective construct of language learning process. Journal of Graduate School of Social Sciences, 20(3): 839-854.

Akdemir, A. S. (2019). Age, gender, attitudes and motivation as predictors of willingness to listen in L2. Advances in Language and Literary Studies, 10(4): 72-79.

Bagış, A. (2002). Arayüz tasarımlarının karşılaştırmalı değerlendirilmesinde kullanılabilirlik yaklaşımı (Usability approach in comparative evaluation of interface designs). Makine ve Mühendis Dergisi, 522: 25-31.

Barker, D. (2003). Why English teachers in Japan need to learn Japanese. The Language Teacher, 27(2): 7-11.

Chik, A., and Ho, J. (2017). Learn a language for free: Recreational learning among adults. System, 69: 162-171.

Cırak Kurt, S. (2017). A blended learning experience. Elementary Education Online, 16(2): 860-886.

DePorter, B., Reardon M., and Nourie S. S. (1999). Teaching orchestrating student success. A Viacom Company, 99-100.

Derwing, T. M., and Thomson, R. I. (2005). Citizenship concepts in LINC classrooms. TESL Canada Journal, 23(1): 44-62.

Finn, A., and Bucceri, M. (2004). A case study approach to blended learning. Centra Software, Inc.

Galletta-Bruno, D. (1995). A comprehensive drop-out prevention program to increase the number of Spanish-speaking ESL students remaining in high school. (Unpublished Dissertation). Nova Southeastern University, America.

Harding, A., Kaczynski, D., and Wood, L. (2005). Evaluation of blended learning: analysis of qualitative data. In Proceedings of UniServe Science Blended Learning Symposium, 56-61.

Kaya, Z., and Akdemir, A. S. (2016). Learning and Teaching: Theories, Approaches and Models. Ankara: Çözüm Publishing.

Knowles, M. S. (1996). The adult learners: A neglected species. Houstan: Gulf Publishing Co.

Knowles, M. S., Holton, E. F., and Swanson, R. A. (2015). The adult learner: the definitive classic in adult education and human resource development. New York, NY: Routledge, 199-267.

Masgored, A. M., and Ward, C. (2006). Culture learning approach to adaptation. In Cambridge Hand Book of Adaptation Psychology, eds. D.I. Sam and J.W. Berry, 58 77. Cambridge University Press.

Multeciler Dernegi (2020, June 20). Turkiyedeki Mülteci sayısı (The number of Syrians in Turkey). Retrieved from: multeciler.org.tr/turkiyedeki-suriyeli-sayisi/.

Pesen, A. (2014). Harmanlanmış öğrenme ortamının öğretmen adaylarının akademik başarısına, ders çalışma alışkanlıklarına ve güdülenme düzeylerine etkisi (The effect of blended learning environment on the academic success, study habits and motivation levels of prospective teachers). Yayımlanmamış Doktora Tezi, Dicle Üniversitesi, Eğitim Bilimleri Enstitüsü.

Seker, B. D. (2015). Göç ve uyum süreci: sosyal, psikolojik bir değerlendirme (Migration and adaptation process: a social and psychological evaluation). Göç ve Uyum (Eds. Şeker, B.D. Sirkeci, İ, Yüceşahin, M. M.), Turkish Migration Series, London.

Tezcan, F., and Deveci, T. (2018). Andragoji ve yaşam boyu öğrenme bağlamında yetişkinlerin öğrenmesi (Adult learning in the context of andragogy and lifelong learning). Researcher: Social Science Studies, Cilt 6(2): 123-137.

UNDP-MEB (2019). Eğitici Eğitimi Kılavuz Kitap. Suriye Krizine Yanıt Olarak Türkiye'de Dayanıklılık Projesi: Yetişkinler için Türkçe Dil Eğitimi Projesi, (Educational Training Guide Book as Durability in Turkey as Response to Syria Crisis Project: A project Turkish language teaching for adults), 16.

Whitelock, D., and Jelfs, A. (2003). Editorial for special issue on blended learning: Blending the issues and concerns of staff and students. Journal of Educational Media, 28(2-3): 99-100.

Williams, N. A., Bland, W., and Christie, G. (2008). Improving student achievement and satisfaction by adopting a blended learning approach to inorganic chemistry. Chemistry Education Research and Practice, 9(1): 43-50.

Zayim, N. (2017). Program değerlendirmede nitel yöntemler (Qualitative methods in program evaluation). Türkiye Klinikleri Tıp Eğitimi - Özel Konular 2(1): 45-50.

Zengin, M., and Ataş-Akdemir, Ö. (2020). Teachers' views on parent involvement for refugee children's education. Journal of Computer and Education Research, 8(15): 75-85.