



TECHNOLOGY IN FOREIGN LANGUAGE TEACHING: A NEEDS ANALYSIS

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Abstract: The main aim of this study was to explore the technology-based language-learning needs of individuals learning Turkish as a foreign language. In this scope, the study sought to identify the reasons the participants chose to learn Turkish, the language-learning areas that they found the most difficult, the language-learning areas that required most support, their reasons for needing technology, their competencies in using technology, the pathways followed, the technological materials/tools required, and whether there was a need for a specific curriculum of study. The study included 312 students registered in Turkish language teaching centres at five different universities, as well as eight instructors in these language centres. The results revealed that the participants chose to study in Turkey due to the high-quality educational opportunities, their appreciation for the country, and the scholarship opportunities available. The participants indicated that writing was the most difficult skill in learning Turkish. On the other hand, reading was the less difficult skill. The findings revealed that technology was much-needed by both the students and instructors. In particular, technological support was required for listening and speaking skills. The study also showed that the instructors needed a curriculum of study in order to teach Turkish as a foreign language.

Key words: Technology; foreign language; needs analysis

1. Introduction

In the new era of communication that we live in, individuals are often required to learn a foreign language. Long (2005) says that migrants, international students, students who partake in bilingual education and vocational training, and individuals whose professions require a high level of language proficiency should gain fluency in a foreign language, in addition to their native language. Effective language education is the only way to develop such a skill.

In general, a 'need' refers to something that is required for the well-being of an individual (Arsal, 1998). In the context of language-learning, a need can be described as a deficiency in a specific language skill; in other words, it refers to the difference between the existing and potential capabilities of a learner. This highlights the fact that needs are objective realities that have to be identified and analysed (Richards, 2001). According to Albayrak (2003), a need is shaped by the demands of students as they emerge during the education process, and by the actions that students take relating to the language that they are learning.

According to Wang (2014), needs analysis became widespread with the adoption of the modern language program by the Council of Europe in the 1970s. Needs analysis is a topical concept in language education, yet it has been used informally by teachers for many years to identify their students' needs with regard to language-learning (Iwai et al., 1999). Morell (1999) emphasized that it is difficult to decide what to teach and how to teach it without conducting a needs analysis. Needs analysis can also be defined as an instrument to measure the needs of a specific group of students, and to determine what information should be gathered to develop a curriculum of study to meet those needs (Iwai et. al 1999). A needs analysis involves all the activities that are used for collecting information about the learning needs of students, their demands, and so on (Susandi & Krishnawati, 2016). Cangal (2013) mentions that needs analysis forms the basis for various language-learning areas including the design of curriculums development of materials, education of teachers and developing policies. The information obtained as a result of needs analysis can be used for designing a new

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language curriculum and/or evaluating the effectiveness of an existing curriculum (Watanabe, 2006). In the literature, many studies emphasize that needs analysis is a necessary process in designing an effective curriculum (Alqunayeer & Zamir, 2016; Astuti, 2009; Çalışkan & Çangal, 2013; Long, 2005; Sugiura, 2010; Susandi & Krishnawati, 2016; Tzotzou, 2014; Watanabe, 2006).

Today, English is the most popular foreign language to learn worldwide (Jacobsen, 2015). The majority of the studies on foreign language teaching in the literature thus refer to teaching English as a foreign language (Al-Hamlan & Baniabdelrahman, 2015; Al-Saadi & Samuels, 2013; Astuti, 2009; Bedoya, Valencia & Montoya, 2015; Halvorsen, 1995; Sugiura, 2010; Teng, 2000; Tzotzou, 2014; Wang, 2014; Yonesaka, 1994). Although English preserves its worldwide popularity, there is a growing need to learn different languages for a variety of reasons. Turkish is one of these languages. This study was designed as a needs analysis based on teaching Turkish as a foreign language.

The reasons for learning Turkish as a foreign language vary from individual to individual. For example, in Iran, people learn Turkish to follow Turkish television shows, and in Romania, they learn Turkish to do business with Turkish companies. Teaching Turkish to individuals with diverse needs and characteristics using the same methods and materials is a challenging task (Başar & Akbulut, 2016). Thus, a learner-centred approach that considers the interests, skills, and expectations of learners should be adopted for teaching Turkish as a foreign language (Karababa & Karagül, 2013). However, the provision of learner-centred foreign language teaching is not feasible without conducting a needs analysis (Çalışkan & Çangal, 2013).

Research studies on teaching Turkish as a foreign language that have been conducted in the form of a needs analysis can be divided into two groups. One group includes studies conducted in different foreign countries where Turkish was taught as a foreign language. These studies on teaching Turkish as a foreign language were carried out in countries such as Bosnia-Herzegovina (Çalışkan and Çangal, 2013; Çangal, 2013); Iran (Boylu and Çangal, 2014); Georgia (Başar and Akbulut, 2016); Kosovo (Jilta, 2016); Afghanistan (Farzan, 2019) and Djibouti (Sayar, 2019). On the other hand, a second group of studies was carried out in Turkey with individuals who were learning Turkish as a foreign language (Albayrak, 2003; Altıparmak, 2013; Aydın, 2014; Deliktaş, 2019; Kalfa, 2015; Koçer, 2013; Phutkaradze, 2018). However, according to Sayar (2019), the number of studies on teaching Turkish as a foreign language is limited. Although research has been carried out on the issue, to date, needs analysis in the field of Turkish language teaching have received little attention (Başar & Akbulut, 2016).

There is no constant roadmap in foreign language teaching that remains valid at all times and under all conditions. Therefore, a roadmap should be followed that can be adapted to constantly changing conditions (Albayrak, 2003). In other words, the needs that emerge in foreign language teaching vary according to the time, country and the languages involved. Identifying these differences through studies carried out at different times is of great importance (Jilta, 2016). Periodically-performed needs analysis can provide assistance to obtain diverse data. This study was conducted as a needs analysis to identify issues in teaching Turkish as a foreign language. In this respect, the study is expected to add value to the literature. Another aspect that distinguishes this study from other needs analysis studies conducted in Turkey and other countries is the direct aim of this study to identify the role of technology in foreign language teaching. According to Aslan (2017), foreign language teaching is one of the fields in which technology is highly necessary. The effective use of technology in foreign language teaching will make important contributions to both the learning and teaching processes, and this will lead to increased achievements (Birinci, 2019). This study aimed to identify the need for technology among both individuals who were learning Turkish as a foreign language and their instructors, and to assess whether their need varied in terms of the four basic language skills. In line with this main objective, the study sought to answer the following specific sub-questions:

1. What are the reasons for the students to study a foreign language abroad?
2. What are the most difficult language-learning areas in learning a foreign language?
3. In which language-learning areas do both students and instructors believe that there is a need for greater support?

4. What are the status and reasons of students and instructors to need technology in foreign language learning?
5. How competent are the students in using technology?
6. Which methods of learning do students follow while learning a foreign language?
7. What type of materials/tools do students need in language learning areas?
8. Do instructors need a curriculum of study in order to teach a foreign language?

2. Method

2. 1. Research Model

This study set out to identify the needs for technology for language-learning among students who were studying in Turkish and Foreign Languages Research and Application Centre (TFLARC) and their instructors. For this purpose, this study was carried out using a convergent parallel design of mixed research methods design (diversification). Mixed-methods research involves the use of both quantitative methods and qualitative methods in a study, and provides clarification in understanding a problem (Fraenkel & Wallen, 2008). A convergent parallel design which is a type of mixed-methods design means that the quantitative and qualitative approaches are of equal weight, that both quantitative and qualitative data are collected in parallel, that they are analysed independently, and that the results are then compared and interpreted together (Creswell & Plano Clark, 2011).

2. 2. Participants

The target population of the study consisted of public universities in Turkey. The sample was selected using a maximum variation sampling method. According to Yıldırım and Şimşek (2011), this sampling method is used to maximize diversity when the sample size is very small. To maximize the diversity among the universities, this study used the level of academic success of universities as the base. In line with this purpose, the ranking of public universities in Turkey, as defined by URAP (University Ranking by Academic Performance) in the 2018-2019 academic year was defined as the criterion. URAP The ranking determined by URAP and which includes 109 universities in total is divided into three levels and universities in the upper, middle and lower groups are determined as the level of success. The sample of the present study consisted of five universities located in five different provinces of Turkey. One of the universities was considered a top-level university, two of them were considered mid-level universities, and two of them were considered bottom-level universities. The study was carried out with 260 students who were learning Turkish in TFLARC centres, and eight instructors who were teaching in these specific universities. In TFLARC centres, the Turkish course is based on three levels: beginner (A1, A2), intermediate (B1, B2) and advanced (C1, C2). This study was conducted with students at the B2 level of proficiency. The opinions of the instructors informed the decision to include B2 level students. Susandi and Krishnawati (2016) emphasized that teachers are more experienced than students, and that they can therefore identify their own needs better.

The demographic characteristics of the students and instructors who participated in the study are presented in the tables provided below. The demographic information of the instructors are in Table 1, and the students are in Table 2.

Table 1. *Distribution of the instructors based on demographic information*

Teaching experience	f	%
1-5	4	50
5-10	4	50
Total	8	100
Level of Education	f	%
Master's Degree	4	50
PhD	4	50
Total	8	100

Table 1 shows that half of the instructors had one to five years of experience, and half of them had five to ten years of experience. And half of the instructors had a master's degree, and half of them had a PhD.

Table 2. *Distribution of the students based on demographic information*

Age	f	%
Under 17	0	0
17-30 years old	239	97.3
31 and above	16	6.3
Total	255	100
Gender	f	%
Female	108	42.4
Male	147	57.6
Total	255	100
Country	f	%
Middle Eastern Countries	77	30.2
Turkic Republics	59	23.1
African Countries	58	22.7
European Countries	23	9.0
Other	38	14.9
Total	255	100
Number of Languages	f	%
0	38	14.9
1	116	45.5
2	78	30.6
3	17	6.7
4	6	2.4
Total	255	100
Duration of Stay in Turkey	f	%
1-3 months	3	1.2
3-6 months	21	8.2
6-12 months	196	76.9
1-3 years	23	9.0
More than 3 years	12	4.7
Total	255	100
Department Score Type	f	%
Nonregistered	40	15.7
Maths and Science	69	27.1
Turkish/Social Sciences	64	25.1
Maths/Turkish	72	28.2
Unspecified	10	3.9
Total	255	100

Table 2 shows the distribution of students according to demographic information. The majority of the students were males (57.6%), yet the distributions were similar. Most of the students were from the Middle Eastern countries (30.2%). The percentage of students from the Turkic republics and African countries were also similar to each other. A plurality of the students (45.5%) spoke only one additional language. The table shows that the majority of the students (76.9%) were in Turkey for six to 12 months. Most of the students were registered to undergraduate degree programs that required score types: maths and science, Turkish/social sciences, and maths/Turkish.

2.3. Data Collection Tool

A survey form consisted of open-ended and close-ended questions to identify students' needs for technology to learn a foreign language was developed by the researchers after reviewing the national and international literature (Albayrak, 2003; Çangal, 2013; Deliktaş, 2019; Iwai et. al., 1999; Sugiura, 2010). Susandi and Krishnawati (2016) note that conducting surveys and/or interviews with teachers

are among the ways to identify students' needs. The survey used in the study consisted of two sections. The first section included questions about the personal characteristics of the participants. The second section included five close-ended and four open-ended questions to reveal which of the four basic language skills students found difficult, the technology they needed to help them with these language skills, and the kind of technology they were using.

To assess the content validity and appropriateness of the data collection tool the opinions of three experts who taught Turkish as a foreign language were obtained. As a result of their feedback, some necessary revisions were made. Lastly, the questions were read out loud to three students who were learning Turkish as a foreign language to test the comprehensibility of the questions.

2. 4. Data Collection

Within the scope of the research, the survey forms prepared for the students were filled in voluntarily by 312 students studying at five different universities in the spring semester of the 2018-2019 academic year. Survey forms with missing information and forms which had been left blank were identified, and 52 survey forms were excluded. 260 survey forms were thus included in the evaluative process. The survey forms prepared for the instructors were also filled in voluntarily by eight instructors working at the five different universities in the spring semester of the 2018-2019 academic year.

2. 5. Data Analysis

Frequency and percentage values were calculated to analyse the close-ended questions provided in the survey forms. To analyse the open-ended questions, the content analysis method was used. In this context, firstly, codes were determined for each question and then similar ones from the determined codes were brought together and themes were created. The codes and themes developed in the research process were presented in tables. To determine the reliability of the codes and themes formed in the research process, three researchers performed content analysis of the survey questions. Afterwards, the codes and themes that had been created were compared with those that had been formed independently by three different researchers in a separate content analysis. The reliability of the codes and themes obtained by the three researchers was calculated using the formula suggested by Miles and Huberman (1994): $\text{Reliability} = [\text{Consensus} / (\text{Consensus} + \text{Disagreement})]$. The concordance percentage was calculated as .92. According to Yıldırım and Şimşek (2011), this value demonstrates that the data analysis was reliable.

3. Findings

3. 1. Reasons for studying a foreign language abroad The findings about the first sub-problem of the study "What are the reasons for the students to study a foreign language abroad?" are presented in Table 3.

Table 3. *Distribution of students' reasons for studying a foreign language abroad*

Theme	Code	f
Reasons for Studying a Foreign Language Abroad	High-quality education	111
	Affection for the country	38
	Scholarship	36
	Educational opportunities	25
	The similarity of the culture	24
	To experience life abroad	18
	Desire to learn the language of the country	15
	High level of the country's development	12
	Economic reasons	10
	Job opportunities	9
	War in the native country	2
	Validity of the degree	2

Table 3 shows that the main reason for students to study a foreign language abroad was the high-quality of education in the country. Furthermore, factors such as their affection for the country, scholarship and educational opportunities, similarities between their own culture and the culture of the foreign country, and students' desire to learn the language of the country played an important role in choosing to study abroad.

3. 2. Difficult language-learning areas in learning a foreign language

Findings about the second sub-problem, "What are the most difficult language-learning areas in learning a foreign language?" are presented in Table 4.

Table 4. *Distribution of the frequency of the most difficult language learning areas*

Theme	Sub-theme	Instructor (f)	Student (f)
Most difficult language-learning area	Listening	2	47
	Speaking	1	61
	Reading	-	41
	Writing	5	72

Table 4 demonstrates that for both the instructors and students the most difficult language-learning area was "writing".

3. 3. Language-learning areas that there is a need for greater support

Findings about the third sub-problem of the study: "In which language-learning areas do both students and instructors believe that there is a need for greater support?" are presented in Table 5.

Table 5. *Distribution of the language learning areas in which students and instructors believed support is needed*

Theme	Sub-theme	Instructor (f)	Student (f)
The language-learning areas that required support	Listening	2	41
	Speaking	2	72
	Reading	1	36
	Writing	3	69

Table 5 shows that, according to the instructors, the language-learning areas that students needed most support for were "writing", "listening", and "speaking". According to the students, the language-learning areas that they needed most support for were "speaking" and "writing". Table 5 demonstrates that both the instructors and students thought that more support was required for "speaking" and "writing".

3. 4. The status and reasons to need technology in foreign language learning

Findings about the fourth sub-problem of the study "What are the status and reasons of students and instructors to need technology in foreign language learning?" are presented in Table 6.

Table 6 shows that all of the instructors and the majority of the students thought that there is a need for technology in foreign language-learning. The instructors believed that technology is needed to ensure the richness of materials and increase the permanence of learning. On the other hand, the students believed that there was a need for technology that allows them that offers them help when doing translations.

Table 6. *Distribution regarding the reasons for the need for technology in foreign language learning/teaching*

Instructor			Student			
f	Code	Sub-theme	Theme	Sub-theme	Code	f
-	-	Not needed	Status of Needing Technology	Not needed	-	79
5	Richness of material	Needed		Needed	Translation	77
4	Economy				Ease-of-use	43
2	Permanence				Watching videos/TV	37
2	Productivity				Developing listening skill	28
					Obtaining information from the internet	21
					Learning support	10
					Social media	5
					Reading a book/article	4
					Learning grammar	2

3. 5. Student competencies related to using technology

Findings about the fifth sub-problem of the study, “How competent are the students at using technology?” are presented in Table 7.

Table 7. *Distribution of students' technology competency*

Level	f
Very good	57
Good	110
Fair	81
Poor	4
Very Poor	-

Table 7 shows that a plurality of the students considered that their ability to use technology was “good”. There were no students who considered their ability to use technology to be “very poor”.

3. 6. Methods of learning learning pathways follow while learning a foreign language

Findings about the sixth sub-problem of the study “Which methods of learning do students follow while learning a foreign language?” are presented in Table 8.

Table 8. *Distribution of the the learning pathways students follow while learning a foreign language*

Theme	Sub-theme	Code	f
Learning pathways followed by students	Listening	Video	117
		Drama/Theatre	64
		Computer game	45
		TV show/Film	37
		Video call	34
		Song	33
		Reading text/Newspaper	11
		Mobile applications	4
	Speaking	Video call	137
		Drama	46
		Video	44
		Computer game	27
		Reading text/Book	25
		TV Shows	8
		Social media	3
Mobile applications	2		
Reading	Reading text/Book/Newspaper	168	

		Computer games	13
		Novel/Article	22
		Videos	11
		Mobile applications	4
		Video calls	2
		Dictionaries	2
	Writing	Reading text/Book	72
		Computer games	33
		Writing text/ Articles/Poem	32
		Videos	14
		Drama	11
		Translation programs	10
		Video calls	6
		Dictionaries	2

Table 8 shows that students followed different learning pathways while learning a foreign language, and that most of these were technology-based learning pathways. The findings demonstrate that the most common learning pathways followed by students included “*Video*” and “*drama/theatre*” for the listening learning area; “*video call*” and “*drama*” for the speaking learning area; “*reading text/book/newspaper*” and “*computer games*” for the reading learning area, and “*reading text/book*” and “*computer games*” for the writing learning area.

3. 7. Materials/tools need in language learning areas

Findings about the seventh sub-problem of the study “What type of materials/tools do students need in language learning areas?” are presented in Table 9.

Table 9. Distribution of the materials/tools students need to improve their language-learning skills

Theme	Sub-theme	Code	f
Required Materials	Listening	Computer	134
		Smart phone	73
		Reading text/Book	29
		TV show/Movie	16
		Radio/Music	11
		Videos	5
		Speaker/Headphones	4
	Speaking	Smart phone	59
		Computer	54
		Reading text/Book	52
		Videos	4
		Video calls	3
	Reading	Movie/TV shows	3
		Text/Book/Newspapers to read	276
		Computers	56
		Smart phone	15
		Novels	10
		Social media	3
	Writing	Video	3
		Writing text	125
		Text/Book/Newspaper	83
Computer		59	
Smart phone		26	
Dictionaries		6	
Essay/Article		8	
Mobile applications	3		

Table 9 shows the most common tools used by the students. For listening, the students mostly preferred to use “computer” and “smart phone”. For speaking, they used “smart phone” and “computer”, similarly to the findings about listening. For reading, the most common materials used by the students included “Text/book/newspaper” and “computer”. For the writing skill, the students used “writing text” and “Text/book/newspaper” most often.

3. 8. Status of need a curriculum in order to teach a foreign language

Findings about the seventh sub-problem of the study “Do instructors need a curriculum of study in order to teach a foreign language?” are presented in Table 10.

Table 10. *Distribution of the reasons instructors need a curriculum in the foreign language teaching process*

Theme	Code	f
Reasons of needing a program of study	To provide guidance to instructors	4
	To standardize the process	2
	To teach according to the levels of students	1
	To prepare a book etc.	1
	Inadequacy of the curriculum	1
	To define objectives	1

Table 10 shows that all of the instructors needed a curriculum of study to teach a foreign language. The instructors indicated that they needed a curriculum to guide to themselves.

4. Discussion

Overall, the findings of this study revealed that foreign students who were learning Turkish in Turkey chose to study in the country for several reasons, including the high quality of the education, their affection for the country, and scholarship and educational opportunities. These results could be interpreted as showing that the participants were inclined to learn Turkish because of the personal benefits it would bring them. Language learning was one of the reasons to chose the country for the participants. A literature review concluded that there was a similarity between the reasons individuals learned a language and the reasons the participants of this study chose to study in Turkey. In a study published by the UK Subject Centre for Language, Gallagher-Brett (2004) emphasized that personal benefits were among the most decisive reasons for learning a language. Similarly, Koçer (2013) asserted in a needs analysis study that the main reason for the participants to learn Turkish was to find a good job; this was followed by wanting to live and study in Turkey. A study conducted with participants in Iran by Boylu and Çangal (2014) identified that the reasons for learning Turkish included personal interests and needs, as well as educational and job opportunities. Çalışkan and Çangal (2013) found that the reasons for learning a foreign language included doing business, accessing educational and job opportunities and fulfilling personal needs and interests. Başar and Akbulut (2016) revealed that individuals in study groups learned Turkish primarily to meet their personal needs and interests, and in order to access educational and job opportunities. Deliktaş (2019) listed the reasons for learning Turkish as educational and job opportunities, personal needs and interests, and business-related matters. These results are similar to the reasons found in the present study, including job and economic opportunities, affection for the country and educational opportunities, as well as for academic, professional and private reasons.

The results of this study also established that both students and instructors considered “writing” to be the most difficult learning area. Writing has generally been recognized as the most difficult language-learning area both in native language and foreign language teaching. On the other hand, different language-learning areas have been more prominent in some previous studies. For example, Susandi and Krishnawati (2016) reported that English learners perceived themselves as least competent at listening, and most competent at reading. Likewise, the study conducted by Alqunayeer and Zamir (2016) in Saudi Arabia reported that more than half of the participants studying English had difficulties in speaking, listening, reading and writing. The different results of various studies regarding the different language-learning areas can be linked to the different characteristics of the

groups participating in the research. Indeed, the difficulty of each skill area may vary depending on the learning context, such as whether or not the language is learned in a country where it is commonly spoken or used.

The results of the study revealed that the most common difficulties that participants had were related to writing, yet, speaking was the area in which the students needed most support; that is to say, it was the skill they most wanted to improve. In this context, the skill of writing was in second place. This finding may also be associated with the learning environment. In fact, in a country where Turkish is both the official and native language, speaking skills are likely to become prominent. In this respect, Altıparmak (2013) identified that the participants in her study needed to improve their Turkish speaking skills compared to other skills. Karababa and Karagül (2013) found in their study conducted with individuals who were learning Turkish as a foreign language in Turkey that participants most wanted to improve their speaking skills. A study on irregular migrants conducted by Phutkaradze (2018) identified that the main skill that participants needed to improve was speaking. Koçer (2013) emphasized the following conclusions about the skills that participants needed to improve: half of the participants needed to improve their skills in writing essays, understanding pronunciation and the emphasis in conversations, and continuous listening. The study also found that a group of participants wanted to improve their speaking, reading and writing skills. Furthermore, Albayrak (2003) indicated that the most important language skills for individuals currently learning Turkish, in order of importance, were speaking, listening, writing, and reading. On the other hand, for those who had already learnt Turkish, the most important language skills were found to be speaking, listening, reading and writing, respectively. For the teacher, the order of importance was speaking, writing, reading and listening, respectively. However Koçer (2013) identified that individuals who learned Turkish as a foreign language paid most attention to listening, writing, speaking and reading skills in that order.

In the literature different results have been found for languages other than Turkish. Tzotzou (2014) found that students paid the most attention to reading and writing skills. In the context of the listening needs of the Taiwanese college students who were learning English, Teng (2000) found that students needed dialogue-based listening more than academic listening. A study carried out by Alqunayeer and Zamir (2016) in Saudi Arabia revealed that more than half of the participants who were learning English as a foreign language believed that reading, listening, speaking and writing skills would be practical for them in the future. The study also revealed that the majority of the participants wanted to enhance their skills in understanding conversations and written materials, and in speaking, writing and translating.

The results of the study also showed that most of the instructors and students felt they needed to use technology in teaching/learning Turkish. The findings revealed that the students had a high level of need for technology, particularly for online dictionaries and translation tools. There are a number of online dictionaries and translation applications on the market. Özkan, Demir and Özdemir (2017) emphasized the importance of technology with regards to instructors. Özkan et al. (2017) suggested that instructors who teach Turkish as a foreign language come together to use technology and develop a platform to share new methods, materials, and techniques. The findings of Özkan et al.'s (2017) study suggest that instructors may need platforms on which they can share methods and techniques that can be used in teaching Turkish as a foreign language. In a study conducted by Al-Hamlan and Baniabdelrahman (2015) students stated that the main challenge they had when learning a language was that teachers disregarded the differences between students. Under the heading "learning methods" students stated that they mostly asked teachers to translate difficult words. On the basis of these findings, it can be argued that technology is of great assistance when instructors do not have the opportunity to concern themselves with each individual student.

The study revealed that the majority of the students perceived themselves as being good or very good at using technology. This suggests that if the technological tools and materials that are necessary for teaching a language are provided, the participants would be able to use them effectively. Although there is a great need for technology in language-learning for many different purposes, the competence of the individuals who will use that technology is also a central issue.

Another important result of the study is about the pathways that participants followed to learn a foreign language. The findings showed that students chose many different ways to learn the language. Certain learning pathways were used more frequently than others. In this respect, the participants preferred to use video and drama for improving their listening; video calls and drama for improving speaking; reading texts and books for improving reading; and, lastly, reading texts and computer games for improving their writing. The findings of the study reveal that the participants placed weight on technology-based learning methods in addition to the conventional learning techniques. Yılmaz and Babacan (2015) highlighted that the use of podcasts in teaching Turkish as a foreign language helped the development of several language skills including listening. Göker and Ince (2019) found that the use of Web 2.0 tools in teaching Turkish as a foreign language enhanced academic achievement compared to conventional teaching methods alone.

The results of this study revealed that while learning Turkish, the participants needed conventional materials such as books, reading texts, worksheets, and writing texts in order to help them improve their reading and writing skills. On the other hand, to improve their listening and speaking skills they needed technological tools such as computers, smart phone (a tool that provides text, pictures, videos to be seen on the screen). Birinci (2019) found that memory sticks, email, search engines, word processors, presentation software, online dictionaries and social networking sites were frequently used by instructors who taught English as a foreign language. Birinci's (2019) study identified that levels of self-efficacy regarding information technologies were high, and that these technologies were mostly used for finding materials for the course, preparing materials for the course, motivating students and preparing activities. Sayar (2019) indicated that the biggest challenge faced by individuals learning Turkish in a foreign country was the lack of course materials. In foreign language teaching, besides the methods adopted, the type and quality of the materials used are of utmost importance. Indeed, in some cases, one single effective source material can help students to learn a subject in a much shorter time than usual and in a highly effective manner. Karababa and Karagül (2013) found that the participants preferred to use books as learning materials. Using books was followed by technological materials such as study books, videos/films/television, listening materials/CD players and so on. Koçer (2013) identified that students found books and other written materials more interesting than audio-visual programs and participated in activities that involved using a textbook more than in listening activities. Altıparmak (2013) revealed that the participants mostly wanted to use books and other written sources while learning Turkish. In addition, instructors speaking Turkish and TV/radio programs were near to this value and had a high value. Al-Hamlan and Baniabdelrahman (2015) found that students stated that they would prefer teachers to use resources other than textbooks alone.

The final sub-problem of the study was related to the needs of the instructors for a curriculum of study to help them teach a foreign language. In this context, all of the instructors who participated in the study thought that a curriculum of study was needed in foreign language teaching, and gave various reasons. The instructors found that a curriculum of study was necessary in order to provide guidance for the students in their learning. Other reasons stated by the instructors included standardising the process, ensuring that the education was appropriate for the students' level, assisting in the preparation of materials, identifying inadequacies in the existing curriculums, and defining learning goals.

6. Conclusion

The participants in this study chose to study in Turkey because of the high quality of the education, their affection for the country and the scholarship opportunities available. Both the students and instructors thought that writing skills were most difficult. In addition, most of the participants wanted to improve their Turkish speaking skills. The students and instructors both agreed that there was a high level of need for technology in learning and teaching Turkish. The most needed technologies were online dictionaries and translation tools, while technological tools/materials were most needed for improving listening and speaking skills. The instructors needed a curriculum of study to follow while teaching Turkish as a foreign language.

7. Suggestions

This study was limited in that the sample consisted only of B2 level students who were learning Turkish as a foreign language. Furthermore, the information obtained was limited to the information forms filled by the participants. Further research, including simultaneous technology-based needs analysis for Turkish learners at different levels who are studying both in Turkey and in other countries, is required.

The results of this study indicate that individuals who learn Turkish as a foreign language need to use various forms of technology. Increasing the diversity and number of the technological tools and materials available to them would be desirable. To this end, seminars could be organized to enhance the technological competencies of those who are studying and working in language institutions. Furthermore, these institutions could develop projects to better equip classrooms with technology and to hire personnel who are able to provide technical support.

This study indicates that curriculums of study should be prepared to guide Turkish learners at every level. In this way, the education provided would be standardised across all institutions, and defining specific achievements would help prevent important topics from being overlooked. Furthermore, needs analysis should be conducted on an ongoing basis to help prepare learner-centred curriculums, activities and materials, and so that other assessment and evaluation studies can be carried out.

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