

Volume 7, Issue 3, December 2025 p. 250-271

İstanbul / Türkiye

Article Information

Article Type: Research Article

 **This article has been checked for similarity.**

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Article History:

Received

29/12/2024

Received in revised form

30/12/2025

Accepted

31/12/2025



EVALUATION OF A VISUAL-SUPPORTED DIGITAL DICTIONARY FOR A1-LEVEL TEACHING OF TURKISH AS A FOREIGN LANGUAGE BASED ON TEACHERS' VIEWS¹

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Abstract

The aim of the current study is to evaluate the perspectives of teachers concerning a digitally-supported and visually-supported Turkish A1-Level Dictionary for students of Turkish as a foreign language. Vocabulary knowledge at the beginning stages of second or foreign language acquisition has been identified as a critical component to the successful progression of the learner's language acquisition process; particularly when the learner's beginning vocabulary knowledge is restricted. As the interest in the utilization of digital materials that provide visual support to the teaching-learning process continues to grow in educational research, there has been increasing interest in these materials as a tool to enhance vocabulary knowledge acquisition. This study used a qualitative approach to examine the perspectives of six teachers who are experienced in teaching Turkish as a foreign language and are currently instructing at the A1 level. The data collection methods included semi-structured teacher interviews, observational data and comments from the teachers' written feedback and were analyzed using thematic analysis. The dictionary was created to be a tool that would present the words (and their definitions), with accompanying images, pronunciation and example sentences, as a whole unit. The results of the study indicated that the teachers had positive views of the dictionary concerning its usability, accessibility, and

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functional value to the classroom. Many of the participants emphasized that the visual representation of vocabulary facilitated the vocabulary learning process, while others noted limitations in the dictionary including alignment of visuals to the correct word, clarity regarding which words were selected, and the extent of the dictionary's use. In general, the results suggest the potential benefits of utilizing a visually-supported digital dictionary in the instruction of Turkish as a foreign language at the A1 Level.

Keywords: Digital dictionary, A1-level Turkish language learning, visual support, user experience, language learning motivation.

Introduction

In today's world where people from all over the globe are interacting and exchanging ideas through languages, Language is perhaps the most essential tool that allows individuals to convey their thoughts, feelings, and knowledge (Aksan, 1995). A word is a linguistic unit that provides a real or abstract idea and creates a coherent image in a person's mind between two or more people that speak the same language (Bulut, 2021). To apply a language efficiently, it is required that one has a great deal of and high-quality vocabulary (Karatay, 2007). Vocabulary, particularly, will positively affect a student's ability to comprehend and express themselves in both written and spoken form (Memiş, 2018). For students of Turkish as a second language, developing vocabulary is a key first step to developing other language skills.

As important instruments in teaching a language, Dictionaries evolved historically in the main aim of establishing the standardization of word meanings. In addition to the presentation of lexical equivalents, contemporary lexicography has been emphasizing usage context, exemplification, and learner needs in recent years (Aksan, 1995). In Turkey, lexicographical studies began to take shape systematically during the Republican Period, and the Turkish Language Association provided an important base for the study and teaching of Turkish (Yılmaz, 2009). Today, taking into consideration the changing needs of language learners, Dictionaries have been moved into digital media and have become a number of resources to assist language learners.

The transition of Dictionaries to digital media has taken place due to the changes in the needs of language users. As digitalization continues to advance in the 21st Century, Online Dictionaries and Mobile Applications have replaced traditional Print Dictionaries as a result of their accessibility

to language learners. Specifically, digital dictionaries with visual and interactive elements enable learners to acquire vocabulary not just through definitions, but within the visual and cultural context of a word (Kuzu et al., 2011). Therefore, digital dictionaries developed in this process are more interactive and motivating than traditional print dictionaries in language learning. Digital Dictionaries differ greatly from traditional printed dictionaries, as they are able to contribute to the language learning process in several ways. Due to technological developments, digital dictionaries are able to provide words with images and example sentences (Liu et al., 2014; Karadağ, 2013).

Among the most substantial benefits of digital dictionaries in foreign language learning is the rapidity of access to learning materials. Finding a word in a traditional dictionary can take considerable time, whereas digital dictionaries are capable of providing this information in less than a few seconds. As a result, learners are able to participate more rapidly in the learning process, thereby facilitating language learning (Çalışkan, 2022; Elbir & Yıldız, 2013).

Digital dictionaries provide much more than word definitions. They may include pronunciation, usage examples in various contexts, and synonyms. Providing pronunciation, definition, and usage context simultaneously, digital dictionaries provide learners with a more comprehensive learning experience (Yalçın, 2022). Additionally, another benefit of digital dictionaries is their user-friendly interface and customized features. Digital dictionaries are capable of displaying content adapted to learners' language proficiency and learning rate, and enabling them to create personalized learning paths (Barham, 2017; Cobb et al., 2003).

The A1 level corresponds to the beginning stage of language learning, according to the Common European Framework of Reference for Languages (CEFR) (Council of Europe, 2020). One of the biggest obstacles A1-level learners face is communicating using minimal vocabulary knowledge. At the A1 level, the development of vocabulary is greater than all of the other components of the language acquisition process; because students need a good foundation of vocabulary before they can understand and begin to learn the elementary forms of the language. Research supports that increasing vocabulary for new English Language Learners at the A1 level will positively affect the student's ability to develop other areas of

language acquisition including but limited to listening, speaking, reading and writing (Schmitt & Schmitt, 2020).

One of the most effective ways for A1-level English Language Learners to expand vocabulary is through use of digital visual technology. Images and illustrations provide students with an understanding of word meanings and create cognitive associations which help the learner connect a word to its definition. The theory of Multimedia Learning by Mayer (2002) states that using both visual and auditory media will enhance learning particularly among beginners. Digital dictionaries assist learners in associating vocabulary with everyday experiences (Arslan & Gürdal, 2012).

In addition, the transition over the last decade from print media to digital media in education (Kuzu et al., 2011). In terms of digital media, there exists considerable potential for visually supported digital dictionaries to be used as an effective tool to enhance the language skills of learners of languages (Kocaer, 2022). Vocabulary acquisition has been identified as one of the most important components of developing the language skills required for learning Turkish as a foreign language (Özcan, 2009). At the beginning of their language learning journey, A1-level students will benefit from the learning process if they are able to learn through concrete concepts (Meara & Buxton, 1987). Visual vocabulary instruction enhances the learner's cognitive understanding of the material and promotes long-term retention of vocabulary (Aksan, 1995; Karadağ, 2013).

Presently available digital dictionary applications are primarily based on traditional approaches of dictionary usage. The lack of a comprehensive digital dictionary that includes visually supported definitions and examples for A1-level learners of Turkish on digital platforms such as the App Store and Play Store presents a substantial opportunity gap in terms of the use of technology for the enhancement of language learning (Elbir & Yıldız, 2013). By filling this gap, it can help improve the language skills of A1-level learners of Turkish and provide support for instructors to create the best possible learning environment for their students. This research aims to determine the views of A1-level learners of Turkish as a foreign language regarding a visually-supported digital dictionary developed for A1-level learners of Turkish.

Method

Research Design

This study employed a case study design, an example of qualitative research designs. The purpose of a case study design is to look at a single instance of a phenomenon, program, process, product, etc., thoroughly and holistically in the environment in which it exists, thereby enabling the researcher to concentrate on a bounded case; to provide detailed descriptions of processes; and to interpret the data using context (Yıldırım & Şimşek, 2021). The visually supported digital dictionary created for A1 students in this study represented a particular Instructional Material and the experiences of all participants (teachers) concerning this material were examined.

Study Group

The study group of this research are teachers of Turkish as a foreign language. As such the study group was selected based on criterion sampling, one of the purposive sampling methods. Under the auspices of CEFR, the A1 Level is the beginner level where basic language skills are introduced, and learners are expected to be able to comprehend fundamental expressions of daily life and to construct simple sentences. Given this, the development of instructional materials that will support the vocabulary needs of A1 level learners are seen as a facilitative element in the language learning process.

Table 1. Teachers' demographic information

Code	Gender	Age	Professional Experience
M1	Male	24	1–3 years
M2	Male	28	3–5 years
F1	Female	29	3–5 years
F2	Female	22	1–3 years
F3	Female	22	1–3 years
F4	Female	27	3–5 years

Within the scope of the study, opinions were obtained from teachers who teach Turkish as a foreign language regarding the A1 Turkish Digital Dictionary developed as part of the research. A total of six teachers participated in the study. Table 1 presents the teachers' gender, age, and professional experience. In line with the principle of confidentiality, the

participants were coded. As the study adopted a qualitative approach, in-depth data collection was preferred with a limited number of participants. In qualitative research, studies conducted with small and homogeneous groups are reported to enable a detailed examination of the phenomenon under investigation (Yıldırım & Şimşek, 2021). Accordingly, the study group exhibited similar characteristics in terms of language level and age, and this homogeneous structure was taken into account during the data analysis process.

Qualitative Data Analysis Techniques

Thematic analysis was used to analyze the data in this study. It provides a way to organize qualitative data into categories and interpret those categories. Thematic analysis is often used when researchers want to explore participant experiences and perspectives. The first part of the analysis included coding participant responses. Coding was the process of taking participant feedback and categorizing it into logical groups based upon commonalities. Additionally, the analysis of digital dictionary usage data and participant times spent using the digital dictionary were also used in the analysis of the data. Usage of the digital dictionary included analyses of the frequency in which participants repeated words, how they utilized visuals, and to what extent they benefited from the audio pronunciation option.

Reliability and Validity

In this study, validity and reliability were addressed according to the four criteria of qualitative research (credibility, transferability, dependability, and confirmability) (Yıldırım & Şimşek, 2021). Credibility was established by obtaining learner observations, learner written feedback, and usage data of the digital dictionary. Each of the three forms of data provided support for the findings of the study and were substantiated by direct quotes from the participants' comments. Transferability was enhanced by providing a detailed description of the study sample, data collection procedures, and analysis phases. Dependability was established by conducting the data collection and thematic analysis procedures systematically, carefully grouping similar expressions within the same code. Confirmability was maintained by making all decision-making related to the research process and analysis phases transparent and by ensuring that the findings were grounded in the data. Semi-structured interview was utilized in this study

as the primary data collection tool. The use of semi-structured interview provided a qualitative approach and added some degree of structure in order to make comparisons among all the participants possible (Yıldırım & Şimşek, 2021). In many studies, interviews are one of the most common approaches to collect qualitative data since it allows researchers to pose questions directly to participants. Researchers chose the semi-structured interviews over other forms of qualitative data collection tools like focus group and survey based on the ability of semi-structured interviews to have a greater level of detail when compared with quantitative data collection tools, and the ability to tailor the needs of each participant (Yıldırım & Şimşek, 2021).

Data Collection Methods

The data collected in this research study were collected in an environment where the participants were using the digital dictionary for the first time. The data were collected through various qualitative data collection methods such as observation and questionnaire completion (Creswell & Creswell, 2017). After each participant completed their use of the digital dictionary, they completed a questionnaire that included questions about how the digital dictionary worked for them; how easy it was to use the digital dictionary; and what their thoughts were about the digital dictionary. The researcher observed the participants while they used the digital dictionary in class and also while they used the digital dictionary at home. While the participants used the digital dictionary, the researcher documented how the participants used the digital dictionary by documenting the different ways the participants searched for words; the types of searches the participants conducted; and the problems the participants encountered while using the digital dictionary. The data were then grouped according to the objectives of the research and prepared for the analysis stage (Miles & Huberman, 1994).

The Design of the Developed Digital Dictionary

A1 Turkish Digital Dictionary (2024) is an on-line version of the digital dictionary developed by the researcher. The design of the main interface of the A1 Turkish Digital Dictionary has been developed to be both functional and simple and to place the user first. The search box for finding specific words is located at the top of the page and allows users to quickly and easily

locate the desired vocabulary entry. Users can enter the word they are searching for into the search box and will be taken directly to the appropriate vocabulary card. Additionally, the alphabetically arranged buttons located in the middle of the page provide users with a method for navigating to the desired word by letter. These features make it possible for beginner students to find the vocabulary entries needed to enhance their ability to communicate in a second language and create a learning environment that is easy to use.

Findings

In this section, the findings obtained from the views of teachers who teach Turkish as a foreign language regarding the visually supported digital dictionary developed for the A1 level are presented. The findings are reported in line with the themes generated through thematic analysis.

Views of Teachers of Turkish as a Foreign Language on the A1-Level Digital Dictionary

Table 2. Teachers' views on the interface and overall design of the digital dictionary

Code	Participants	Description
Simple and User-Friendly	M1, F3, M2	The interface was described as simple, user-friendly, and easy to understand.
Suggestions for Improvement	M1	The use of warmer colors and clearer differentiation of buttons was suggested.
Ease of Access	M2, F3	It was stated that easy access to letters and words was provided.
Overall Functionality	F2, F4	The dictionary was considered useful for vocabulary teaching and teaching Turkish as a foreign language.
Positive Impressions	F3, M2	Initial impressions were generally reported to be positive.

Upon reviewing the results presented in table 2, as well as the comments from teachers about their experience with the interface, the majority of teachers described the interface of the dictionary as being both simple and user-friendly. Teachers described the process of moving back and forth between the letter and word search functions of the dictionary as seamless and that they were able to quickly locate the information they required. The primary theme(s) to emerge from this study were how easy it was for the teachers to access the dictionary, as well as the overall function of the

dictionary. In addition to providing positive feedback regarding the functioning of the dictionary, several teachers also provided suggestions for improving the appearance of the interface. Specifically, some teachers recommended the use of warmer colors to make the dictionary more aesthetically appealing and that they would like to see the buttons to be more visible/noticeable visually. Overall, the results of this study indicate that while the interface is functionally adequate, there are multiple ways in which the interface could be improved with respect to its visual appeal.

Many of the participant's indicated that their first impression of the dictionary was favorable and that they thought the dictionary would provide a useful resource to support vocabulary instruction when teaching Turkish as a second or foreign language. In general, the results of the research have shown that the teachers had a similar view of the dictionary, i.e., that the dictionary has a usable, understandable, and functional design relative to the interface. Below, the teacher views are presented in detail:

"The interface is quite simple. It is very easy to use, and what is located where is immediately clear at first glance. There is no complexity." (Teacher coded M1)

"The interface is quite successful; however, instead of the blue color used, employing a warmer color and differentiating the letters and the previous-next buttons with different colors could be more eye-catching and aesthetically pleasing." (Teacher coded F1)

"The dictionary is generally understandable. It will facilitate vocabulary learning in foreign language learning." (Teacher coded F2)

"Yes, when I started using the dictionary, my initial impressions were quite positive! It has a user-friendly interface, and meanings of words, example sentences, and grammar notes can be accessed easily. Overall, I can say that it has a clear and practical structure." (Teacher coded F3)

"My first impression when using the dictionary was that it is very simple and understandable. Yes, the dictionary is simple, clear, and useful. It is easy to access the desired letter." (Teacher coded M2)

"I think it is a useful application that can be utilized in teaching Turkish to foreigners, considering that the selected visuals are vivid in appearance and have the capacity to clearly represent the target words." (Teacher coded F4)

Table 3. Teachers' Views on the Benefits of Visuals in Vocabulary Learning

Code	Participants	Description
Retention and Reinforcement	M1, F4	Visuals were reported to be effective in reinforcing information and ensuring long-term retention.
Concretization	F2	It was stated that visuals facilitate learning by making words more concrete.
Motivation and Enjoyable Learning	F1	Visuals were emphasized as making learning more enjoyable and motivating.
Importance of Appropriate Visuals	M2	It was suggested that some visuals should be more closely aligned with the target words.
Functionality in Language Teaching	F3	The dictionary was described as a tool that generally facilitates language teaching.

Participants' statements about the advantages of visuals in learning vocabulary from Table 3 clearly show that in the process of learning, visuals have a very important place. Participants said that when a word has been made concrete, then the learning of a word can be made permanent; and in addition, when visual memory is used to store information, learning becomes reinforced. Many participants felt that as long as visuals are used in the learning process, then the learning will become a much more enjoyable and motivating experience, and that these visuals make learning both more effective and interesting for students.

However, there were many participants who noted that the use of visuals must be carefully selected and related to the target word. In other words, if one is using the word "battery," it would be better to select an image of a phone battery instead of just a generic battery image. These comments suggest that more thoughtfulness in selecting images could improve the effectiveness of the dictionary.

In terms of the dictionary's function and usability in relation to providing learners with support for meaning, usage and pronunciation of a language, participants' evaluations were very positive. Participants stated that visuals provided substantial assistance to learners, especially in foreign language learning situations. However, participants agreed that although the positive effect of the visuals on the learning process is evident, the visual content of the dictionary could be improved upon, and that the use of more selective and accurate images would improve both the functionality and learner experience of the dictionary. The teachers' perspectives on this matter are summarized in the next section:

"Having a visual next to the word both reinforces information through visual memory and makes learning easier." (Teacher coded M1)

"I have always thought that vocabulary teaching becomes more enjoyable and easier through learning by doing, experiencing, and seeing. I also convey vocabulary visually in my lessons. Therefore, I believe that visuals make vocabulary learning more permanent." (Teacher coded F1)

"Since the use of visuals helps to concretize words and visualization makes learning more permanent, visuals should be used in language teaching." (Teacher coded F2)

"The dictionary facilitates learning by providing support for meaning, usage, pronunciation, and grammar in vocabulary teaching." (Teacher coded F3)

"Visuals will be beneficial in vocabulary learning; however, some visuals could have been chosen to better match the words. For example, using a generic battery image for the word 'battery' is not appropriate in my opinion. A phone battery image could have been used instead." (Teacher coded M2)

"I think visuals are beneficial in terms of retention. For foreigners encountering a new language, showing visuals rather than merely repeating words will make it easier to teach the target language, Turkish, by ensuring retention in their minds. It will be useful in vocabulary teaching through associations." (Teacher coded F4)

Table 4. Teachers' Views on the Appropriateness of the Dictionary Content for A1-Level Language Learning

Code	Participant	Description
Lack of Adequacy	M1	Stated that they did not have sufficient knowledge to make an evaluation specifically for the A1 level.
Visual Mismatch	F1	Indicated that some words might not establish a direct connection with the visuals (e.g., "poster").
Criticism of Word Selection	F2	Stated that words of non-Turkish origin are not appropriate for the A1 level and suggested using Turkish-origin words instead.
Simplicity and Appropriateness	F3	Expressed that the dictionary is appropriate for the A1 level, simple, and user-friendly.
Criteria for Word Selection	M2	Stated that providing information on how words were selected would make the content more supportive.
Realistic Visuals	F4	Expressed that using realistic visuals rather than animated ones would be more effective.
Overall Appropriateness	F4	Indicated that the dictionary includes words suitable for the A1 level.

Participants indicated that the overall evaluation of the A1-level language learner's dictionary was largely appropriate. Many participants felt that the words and materials in the dictionary appropriately reflected the developmental abilities of an A1 learner. However, several participants made recommendations concerning the selection of words and the direct effectiveness of visual aids. The first area mentioned by the participants concerned word selection; they mentioned that many of the words (such as "ambalaj") selected were not of Turkish origin, and therefore, would prefer using a more accurate Turkish equivalent instead. In addition, the participants also mentioned that there may be too little correlation between the visual representation of a word (such as "afış"), and its actual definition.

The second most important concern mentioned by the participants concerned the need to clearly articulate the criteria used to select the words to include in the dictionary. Participants expressed that if the criteria are clearly articulated, the dictionary will have a higher level of cohesion and will be more pedagogical. The third main area of concern expressed by the participants concerned the types of visuals used. Specifically, the participants indicated a preference for using realistic photographs rather than animation. Participants also noted that the use of animations may result in creating the wrong relationship or association in the learner's mind, while the use of realistic photographs will enable the learner to better understand and develop their ability to learn the language. While the general content of the dictionary is seen as adequate for A1 learners, participants felt that a more intentional and purposeful process should be implemented to support decision-making regarding the selection of words and the connection of visual supports to the words selected. Teachers' views on this issue are presented below:

"I do not have sufficient competence to evaluate this issue adequately." (Teacher coded M1)

"I think that some words (for example, 'afış') may not be able to establish a direct connection with visuals." (Teacher coded F1)

"It is suitable for the A1 level; however, since the word 'ambalaj' is not of Turkish origin, a purely Turkish word could be used instead." (Teacher coded F2)

"Yes, it is a dictionary at a basic level." (Teacher coded F3)

"The content of the dictionary is appropriate for the A1 level; however, the approach used to limit or select the words could also be added to the dictionary. It is suitable for the developmental level, but selecting words based on clear criteria would support this development positively." (Teacher coded M2)

"When animated visuals are used for the A1 level, they may not fully reflect reality and may create different images in learners' minds. Therefore, using realistic visuals is more appropriate for foreigners learning a new language. In terms of vocabulary, visuals have been provided for words that are mostly encountered at the A1 level and compiled into a dictionary." (Teacher coded F4)

Table 5. Teachers' Views on the Role of the Dictionary in Facilitating Students' Language Learning Process

Code	Participant	Description
Vocabulary Support	M1	Stated that the dictionary could facilitate language learning by compensating for gaps in vocabulary knowledge.
Contribution and Suggestions for Improvement	F1	Expressed that the dictionary makes a contribution, but that this contribution could be enhanced through certain revisions.
Effect of Visuals	F2	Emphasized the role of visuals in vocabulary teaching and stated that they make a positive contribution to the language learning process.
Appropriateness and Effectiveness	F3	Expressed that the dictionary is an appropriate and effective tool.
Use of Multiple Senses	M2	Stated that matching visuals with words makes learning more permanent and therefore has a positive effect on the language learning process.
Immediate Accessibility	F4	Expressed that the dictionary would facilitate language learning for foreigners by providing quick access during lessons or while learning vocabulary.

The overall view of all participants concerning their opinions on the contribution of dictionaries to the foreign language learning process is that they believe it is positive for students to learn new languages. M1 mentioned that because the use of a dictionary can compensate for the learners' lack of vocabulary knowledge, this will then contribute to the language learning process. F1 stated that he believes the dictionary does make a positive contribution; however, it could have made an even larger

contribution if there had been some minor changes. F2 and M2 both stated that because pictures help learners visualize the information (thus making the information easier to learn), visual aids are helpful in the learning process. Both F2 and M2 also stated that when learners match visuals with words they retain the information longer than they do when they don't have any type of visual aid to support them. F3 said that the dictionary is generally useful and appropriate as a resource for learners of foreign languages, while F4 noted that a dictionary would help the learner acquire a foreign language by giving the learner immediate access to the necessary vocabulary knowledge. All of the participants agreed that the visually based format of the dictionary and the ease of using the dictionary is important to the learner, and that it should be considered a valuable resource for the learner to use during the language acquisition process. Teachers's point of views on the theme are presented below:

"Students may have deficiencies in their vocabulary knowledge. With the help of this dictionary, students who acquire the missing words can learn the language more easily." (Teacher coded M1)

"It will definitely make a contribution. I think that if the minor revisions I mentioned above are made, this contribution will increase." (Teacher coded F1)

"Since vocabulary is taught through visuals, I think it facilitates the learning process." (Teacher coded F2)

"Yes, quite appropriate." (Teacher coded F3)

"Yes, I do think so. The more senses are used to access information, the more permanent that information becomes. Here, both the use of the word and the presentation of a visual will help encode the visual and the word together in the brain. This will positively affect the student's language learning process." (Teacher coded M2)

"I think that this dictionary, created for foreigners, will facilitate the language learning process by allowing words used in sentences during lessons to be immediately reinforced visually through the dictionary, whether during vocabulary instruction or when students ask about a word in a sentence." (Teacher coded F4)

Table 6. Teachers' views on the limitations of the digital dictionary

Code	Participant	Description
Positive Evaluation	M1	A generally positive evaluation was reported, with no significant shortcomings observed.
Visual Improvement	F1	It was suggested that the visuals could be clearer and use more vivid colors.
Addition of Audio Pronunciation	F2	It was stated that audio pronunciation should be added to enable correct pronunciation of words.
Inconsistencies and Missing Features	M2	Suggestions included correcting mismatches between visuals and words, specifying word selection criteria, adding example sentences, and incorporating audio pronunciation.
Number of Words and Level Diversity	F4	It was suggested that the number of words should be increased and expanded to cover multiple proficiency levels, allowing learners to access vocabulary from different levels.

While most users found the app to have a mostly positive effect on their language learning, all users had recommendations for how to improve the app. M1 stated the app had a very good general attitude toward learning English, but did not identify any significant shortfalls in the app. F1 said he believed using more vibrant color schemes and creating more visually appealing screens could help the app. F2 thought it would be helpful to add an audio function to provide pronunciation examples when users click on a word. M2 mentioned that there should be a correction process if a user finds a mismatched visual with a word; she also felt that the criteria for choosing which words to use, providing example sentences, and including an audio function to demonstrate the pronunciation of each word should be added. F4 believed that by adding more words to the dictionary and expanding the dictionary to meet the needs of learners at different levels of proficiency the app would be more valuable. Ultimately, the users identified areas that will enhance the functionality and value of the app, primarily concerning enhancements to visual appeal, adding support through audio functions, and expanding the content.

"Overall, my views are positive. I did not notice any negative aspects." (Teacher coded M1)

"Clearer visuals could be used for the words. More vivid colors could be selected."
(Teacher coded F1)

"Audio pronunciation could be added to the application. Audio support would be useful for word pronunciation." (Teacher coded F2)

"I think there are a few aspects that need to be revised. First, words and visuals that do not align sufficiently should be corrected. Second, it should be stated according to which criteria the words were selected while creating the dictionary. Third, example sentences showing how the word is used in context could be provided under the visual. Fourth, audio pronunciation could be added." (Teacher coded M2)

"The dictionary could be expanded in terms of vocabulary. Having a dictionary that also covers other levels would be beneficial in terms of usability. A word asked by a student may not be at the A1 level, and including such words to satisfy curiosity would make the digital dictionary more useful." (Teacher coded F4)

Table 7. Teachers' tendencies to use the application regularly

Code	Participant	Description
Suitable for Daily Use	F1	It was stated that the application is suitable for daily use and can be used whenever needed.
Need-Based Use	M1	It was expressed that the application would not be used every day but would be preferred when needed.
Use Affected by Native Language	F2	It was stated that the application was not preferred due to the participant being a native speaker.
Vocabulary Development	F3	It was emphasized that the application is an ideal tool for developing and reinforcing vocabulary and that daily use would be preferred.
Usability and Simplicity	M2	It was expressed that the application would be preferred because it is practical, economical, and simple to use.

F1 felt that the application was suitable for regular usage, or as needed. M1 said he would prefer not to use it regularly, but rather when there is a specific need to do so. F2 stated she had no reason to use the application since her first language is Turkish. F3 noted the application would help with developing vocabulary; thus it should be used on a regular basis. M2 indicated the applications' ease of use and low cost made it attractive to use. Participants generally found the dictionary to be practical, and possibly beneficial in terms of contributing to the vocabulary development process; however, there were varying opinions regarding how often (daily) it should

be used, based on individual requirements. Teachers' views on the subject are presented below:

"Of course, it is an application that can be used daily. It can be used when necessary." (Teacher coded F1)

"I prefer to use it when I need it. I do not need it every day." (Teacher coded M1)

"I do not prefer to use it because it is my native language." (Teacher coded F2)

"Yes, I would prefer to use it daily because it is an ideal tool for continuously developing and reinforcing vocabulary." (Teacher coded F3)

"Yes, I could prefer it. Because it is useful, economical, and simple." (Teacher coded M2)

Table 8. Teachers' tendencies to recommend the digital dictionary

Code	Participant	Description
Practical Use	M1	It was stated that the application would be recommended to others due to its practical use and accessibility.
Lack of Teaching Materials	F1	It was stated that there is a shortage of materials for teaching Turkish, and therefore the digital dictionary could be an important tool.
Effective Learning through Visual Support	F2	It was expressed that visuals are effective in vocabulary teaching and therefore the dictionary would be recommended.
User-Friendly and Practical	F3	It was stated that the application is useful for language learners due to its user-friendly structure and clear content and would be recommended.
Easy Access and Effective Use	M2	It was stated that the application is easily accessible and effective, and would be beneficial for A1-level learners.

Most of the teachers who took part in the study thought that the Digital Dictionary was a good tool to recommend to other people. M1 stated that he liked how practical the app is and how accessible it is to everyone. F1 identified that there are very few resources available to teach Turkish and therefore believed that the Digital Dictionary would assist with this issue. F2 pointed out that the visual aid portion of the Digital Dictionary will positively impact the students' learning of new vocabulary words; therefore she would also like to recommend it. F3 felt that the easy-to-use format of the app and clarity of information greatly assist in a student's ability to learn

a foreign language. M2 felt that the app is both easy to get to and effective, and that the app would be beneficial for A1-level learners. The overall consensus of all of the participants was that they would like to recommend the app to their colleagues based upon the merits of the app. Teachers' views on the subject are presented below:

"Yes, I would recommend it, because its use is practical and it should be accessible to everyone." (Teacher coded M1)

"There are very few materials in the field of teaching Turkish to foreigners. Of course, there are aspects that need to be revised in the study in my opinion, but that is for it to be perfect." (Teacher coded F1)

"I would recommend it because vocabulary teaching becomes more effective through dramatization or the use of visuals." (Teacher coded F2)

"The dictionary provides great benefits especially for language learners with its user-friendly structure, clear content, and practical use, so I would recommend it." (Teacher coded F3)

"I would recommend it to others. The application is easily accessible and effective. It will be useful for an A1-level learner." (Teacher coded M2)

Discussion

The data from this study show how much the learner's ability to apply visual aids has helped to support the acquisition of new vocabulary. The fact that visual aids enable students to make concrete representations of abstract words to help them learn better and are therefore beneficial for student learning, is similar to what Mayer (2002) said about the benefits of integrating visual-aural information to enhance student learning based upon his Multimedia Learning Theory. Additionally, as stated earlier, students used visual aids to understand the definitions of new vocabulary words, which reinforces the idea of the functional importance of multimedia-based learning strategies for students learning a foreign language. Furthermore, Plass et al. (1998) stated that visual aids assist learners in acquiring vocabulary more quickly and retaining it longer than they would without visual aid support, which parallels the views expressed by the teachers in this study about how visual aids assist in helping students retain material better.

Additionally, the results from this study indicate that usability of digital tools is an essential component for promoting the use of digital tools. As

noted earlier, the findings of Walker and White (2013) relating to ease of use in digital learning environments and motivation/continuity are consistent with the views expressed by the teachers in this study. Also, the flexibility provided to learners to use the digital dictionary as needed supports the findings of Woo et al. (2007), which stated that when learners have access to flexible usage of digital tools, it enhances the learning experience.

Finally, the motivational findings were interpreted in accordance with Deci and Ryan's (2000) Self-Determination Theory. A digital dictionary that provides both visual and interactive support enables learners to participate more willingly in the learning process. These findings are similar to those of Arslan and Gürdal (2012), which found that digitally supported educational materials increase motivation in teaching Turkish as a Foreign Language.

Conclusion

The A1 Turkish Digital Dictionary was created to assist A1-level learners of Turkish as a foreign language within their vocabulary learning process and assessed based on the opinions of teachers. Teachers' opinions indicate that digital resources such as those which include visual support are useful for learners at the beginner level in acquiring language.

Teachers' opinions from the study indicate that the A1 Turkish Digital Dictionary makes it possible for students to find vocabulary quickly by means of the simple interface, the search option, and the alphabetical organization. Additionally, the study indicated that images accompanying words enable students to learn word meanings faster and remember them longer than they would have if the words had been without images. Images provided with the dictionary enabled students to associate words with concrete contexts, thus providing additional support for the acquisition of vocabulary.

Overall, teachers reported that they view the A1 Turkish Digital Dictionary as an appropriate, understandable, and functional educational resource for A1-level learners; teachers also reported that the A1 Turkish Digital Dictionary assists in the vocabulary instruction process, visual aids facilitate learning, and the A1 Turkish Digital Dictionary is practical as it enables quick access to vocabulary during class time or when needed. Some teachers however reported that there is need for increased emphasis to be

placed upon the relationship between the images used in the dictionary and the words to which the images correspond, that there needs to be explicit criteria for the selection of words to be included in the dictionary, and that the content of the dictionary should be expanded.

Ultimately, the A1 Turkish Digital Dictionary appears to be a valuable tool for assisting in the development of vocabulary among beginners of Turkish and for enabling the development of elementary language skills. Therefore, visually enhanced and user-friendly digital tools appear to be useful instructional support tools for teaching Turkish as a foreign language.

Recommendations

Several recommendations could be developed based upon the results of this research concerning the use of digital tools in second/foreign language acquisition. As a result of the potential value of digital dictionaries in the language learning process, the following suggestions were made:

- Due to the ways that digital dictionaries can enhance the language learning process (i.e., via the inclusion of visual supports; rapid access to definitions, etc.; the ease of use of digital dictionaries), there is an increasing need to encourage greater integration of digital dictionaries into language instruction programs and to promote their use in these settings.
- The number and quality of visual aids presented in digital dictionaries should be increased due to the benefits of visual aid usage during the language acquisition process.
- Features should be incorporated into digital dictionaries which will enable learners to work at their own speed so as to accommodate individualized learning processes.

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