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The Effect of Visual Design Self-Efficacy of Language Teachers on Mobile Learning Attitudes During the Pandemic Period

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Abstract: The main purpose of this study is to examine the relationship between language teachers' self-efficacy perceptions towards graphic development and their mobile education attitudes during the pandemic period. For this purpose, in working together, language teachers' gender, year of birth, branch, seniority, the education level they teach, the province where they work, their education status, whether they have done any work on graphics, whether they have attended a course on graphic development, m-learning experience and distance were examined in terms of how often it included visual elements while creating their lessons in education and which tool was mostly used when teaching in mobile education. The sample of the study consists of 307 language teachers, selected by the snowball sampling method, working in schools in different provinces. The data of the study were obtained using the Information Form, Self-Efficacy Scale for Graphic Development and Mobile Education Attitude Scale. Arithmetic mean, percentage, frequency, reliability analysis, normality test and Pearson's product-moment correlation coefficient analyses were used in the analysis of the data obtained. The mobile education attitude level of language teachers is 'I am undecided' and the level of self-efficacy is 'I can do less'. As a result of the analysis, it has been shown that there is a low-level, positively significant relationship between the self-efficacy of language teachers in developing graphical elements and their mobile learning attitudes during the pandemic period.

Keywords: COVID-19, Electronic learning, Language learning, Language teachers during the pandemic, Mobile distance learning, Open language learning, Importance of visuals in language learning, Visual development.
Categories: K.3, K.3.1, K.3.m, L.1.2, L.1.5, L.2.0, L.2.2, L.2.5, L.2.7, L.3.0, L.3.4, L.3.5, L.3.6, L.3.7
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1 Introduction

Since December 2019, the coronavirus pandemic has caused significant changes to and impacts on the economy, social life and education practices, especially health at the global level [Cao et al. 20]. The deep effects and reflections of the crisis created by the pandemic all over the world on health, economic, psychological, social life and education continue, and there is no definite data regarding when it will end [Dushime and Hashemipour 20].

The 2019–2020 coronavirus (COVID-19) pandemic has affected education systems around the world, causing widespread closure of schools and universities [Pradeep 20, Sahu 20]. In order to reduce the negative effects of school closures, the UNESCO has announced that it will support countries to ensure continuity of education for all through mobile learning, asking countries to take measures, especially for vulnerable and disadvantaged groups [Huang et al. 20]. When the epidemic spread around the world, the majority of countries announced that schools were temporarily closed [Viner et al. 20]. For instance, the pandemic has affected more than 91% of students in Turkey [OECD 20]. In order to provide effective education and training in this field, as in other countries [Verawardina et al. 20], Turkey also carries out this process of mobile education using digital technology. The pandemic has accelerated the use of mobile devices, e-learning resources and activities, open learning and entailed a more effective use of social media technology to ensure the execution of electronic learning [Ali 20, Pascu et al 18)]. Thus, during the pandemic period, learning activities and learning environments have varied depending on the changing and developing learning needs of individuals [Dhawan 20, Eren and Oztug 20]. In terms of philosophical foundations, the place, role and responsibilities of learners and trainers in education have rapidly changed with learning approaches [Sepulveda-Escobar and Morrison 20]. Moreover, the approaches adopted in open and mobile learning, the place and responsibilities of learners and trainers in this education, and learning environments [Conradie 14] are emphasized.

In open and mobile learning, learners are distant from each other and from learning resources in terms of time and space [Scanlon et al. 15]. In this learning process, learners interact with each other and with learning resources based on distance communication systems [Thoms and Eryilmaz 14]. In mobile and open learning, the responsibility of learning lies with the individual and the individual is at the centre of learning. In this learning process, education is perceived as designing and conducting learning activities in line with the needs, abilities and expectations of the individual. In this process, the role of the teacher is transforming into the form of a consultant who provides information, is in the centre and facilitates learning from content expertise [Chang et al. 14].

Considering the social aspect of learning in distance education, it is seen that it has a great potential and is used as a formal and informal learning tool [Simenson et al. 19]. Thanks to the social aspect of learning, users can perform social learning activities while connected to the mobile education system. The system supports instant and easy communication while providing the basis for individual social learning [Zhang et al. 18]. In social learning, students learn from each other [Alanazi and Thompson 19], build trust and social cohesion [Hernández-Sellés et al. 19], work together in order to benefit from the views of those who take the same course and make sense with

collective interpretation. In this process, the internalization of social learning, the principle that students learn by offering opportunities [Gašević et al. 14], has affected the development of mobile and open education.

Students have various options when connecting to the e-learning system [Viberg and Grönlund 17]. The preferred ones are computers and mobile devices, i.e., phones and tablets [Pratama and Scarlatos 20]. Some students may only use a tablet and some may act according to the other students at home [Samuelsson 14]. There can be more than one student at home, which means that, if there is one computer at home, one uses a computer while the other uses a mobile device or a television. This shows that there is no mobile device or computer per person in every household [Urszula and Dominika 20]. Therefore, education should be planned very well in order to realise the learning in the messages conveyed to the recipient in mobile and open learning and it should not be ignored that there is a lot of work load on the instructors.

There are various basic elements of open and distance education in language learning [Lin and Yining 14]. The trainer prepares the necessary background for his lessons [Andrade 15]. The student determines an appropriate learning strategy and chooses an environment such as mobile devices [Read 20] or a computer. The student who chooses the environment begins to reach the necessary materials and move forward in learning [Casalino 14].

In the ever-changing and developing world of education, ways of obtaining knowledge change the teaching/learning process and play a role in the emergence of important strategies [Cepeda-Galvis 18, Keser and Semerci 19, Laborda et al. 16, Simo et al. 18, Uzunboylu and Gundogdu 18]. Information technologies are developing elements for the education world, which are also used for distance education, interactive education and asynchronous education [Vanichvatana, 19]. Online learning environments have emerged to provide uninterrupted and flexible education to meet the needs of individuals, and to gain new knowledge and skills in line with individuals and their wishes [Gokbulut 20, Supriyatno et al. 20].

The biggest element that advancing technology adds to our lives is visuality [Serafini 14]. It is very important and necessary to prioritise visuality in lessons in the 21st century, where visuality is so prominent [Akyildiz 19]. In mobile learning, which is one of the areas where effective learning is used, visual expressions should be included for more effective and permanent learning in a system where learners are left on their own. For this, the technology we use should create visual, auditory and kinaesthetic elements [Wright 16]. According to Kruse's study, the lack of visuality of most content has been shown as a limitation in e-learning [as cited in Baltaci and Akpinar 11].

Lessons on systems such as mobile learning are carried out on PC, mobile, etc. devices [Garcia-Cabot et al. 15, Salama et al. 20]. Being at the forefront of visuality has become a necessity in these learning styles. E-learning technologies, which started to be used intensively in education and training during the pandemic period, made it obligatory for teachers to prepare their lessons according to distance education systems [Bryson and Andres 20]. Language teachers should include appropriate visual elements while creating their lessons [Hafner 14]. The visuals used provide permanence on learning [Konomi 14]. The more instructional technologies address the sensory organs, the more they leave a mark on an individual's learning [Saminu 20]. Thus, visual elements help to increase the efficiency of education and training activities with educational tools.

Including graphic/visual elements and enriching the content of language learning is important in terms of increasing the quality of education. With the active use of graphic software programmes in language learning, materials that can be converted into visual, audio or printed format can be created [Chun et al. 16, Eroglu 19]. In this way, the learning process is positively affected and it enables activities that are far from uniformity in the course.

Similar studies on the attitudes of language teachers in Turkey and abroad, such as open, mobile education and m-learning, have been included. Looking at the studies conducted, the self-efficacy of language teachers in developing graphic or visual designs was examined. However, there has been no graphic or visual design development work for language teachers.

The question of whether there is a relationship between the graphic development self-efficacy of language teachers during the pandemic period and their mobile education attitudes gains importance for the development of teachers' m-learning skills and to raise the teaching to higher quality levels for learners.

1.1. Conceptual Framework

1.1.1. Self-efficacy

Languages have started to be learned remotely at a largest scale due to the pandemic [Wargadinata et al. 20]. This caused the teachers to change their course contents. Since appealing to the eye is more permanent in learning, teachers' ability to use graphic tools in software programmes means motivating and increasing interest in the course for learners. In other words, it is important for language teachers to have self-efficacy for graphic development.

The concept of self-efficacy was first used by [Bandura 89] in the social cognitive theory. It reflects one's beliefs about the ability to perform and learn at a certain level. It includes belief in cognitive skills to learn and perform academic work. It can also be said that individuals have control over their thoughts, feelings and deeds [Bandura 86]. People with low self-efficacy become tense and stressed at work. This situation is directly proportional to their performance.

1.1.2. Attitude

According to [Anderson 88], attitudes are structures that contain cognitive, emotional and psychomotor behaviours that shape attitudes. At the same time, it is a positive or negative opinion about another individual, object or event. A positive attitude puts the person in a good mood to face the problem [Sagone and De Caroli 14]. Having this attitude provides encouragement to solve a problem and triggers action. The problem is that the positive attitude makes the person tolerant, even if he cannot find a suitable answer.

Language teachers had to start teaching distance education compulsorily during the pandemic period [Wang and East 20]. As their positive attitudes towards mobile education increase, they will have a better mood when they encounter a problem and have a better mood towards their lessons. Thus, instead of being troubled about their lessons, they will continue with high motivation during the teaching phase.

1.1.3. The Relationship Between Self-Efficacy for Visual Enhancement and Mobile Education Attitude

In the subjects taught by teachers, it is necessary to adapt to the technology required by the age so that they can keep up with new generations [Fernández-Cruz and Fernández-Díaz 16]. During the pandemic period, the face-to-face position that teachers are usually accustomed to has changed and it has now become necessary to open up to a virtual world. In this new system, only text, audio lecture notes, etc. will be insufficient for students. In order to adapt them to this already difficult process, visual designs etc. included in the course contents will provide convenience to the learner. Language teachers' attitudes towards mobile education during the pandemic period will determine how they will behave while preparing and presenting the course materials for the mobile learning environment. It can be assumed that a teacher who develops a positive attitude towards mobile learning will try to fulfill his duty effectively while preparing the course contents. That is, if teachers show a high level of positive attitude towards mobile education, they will be able to develop more graphically the lesson teachings they offer to students and have high self-efficacy.

There are many benefits of lesson-related and compatible materials prepared for language learners. Such preparations for the lesson invite the students to learn, concentrate on the subject, reinforce and facilitate learning, help remember information more easily and establish relationships between topics, thus increasing success [Kuscu 17].

Under these circumstances, it can be considered that language teachers' self-efficacy towards visual enhancement has an important effect on the development of positive attitudes towards teaching. Thus, the visual designs created by the language teacher will be related to the content of the course, which will increase the students' interest and motivation towards the lesson.

In this context, in this study, it is aimed to understand the relationship between the mobile education attitudes of language teachers during the pandemic period and their self-efficacy perceptions to develop visual (graphical) contents regarding the lessons they give in this environment. It is thought that this understanding will contribute to practitioners, literature and researchers who want to do research in this field in order to increase the quality and efficiency on mobile learning.

2 Purpose of the Study

The general purpose of this study is to determine the relationship between mobile education attitudes of language teachers during the pandemic period and their self-efficacy for graphic development. In order to achieve the aims of the study, the following questions were sought:

1. What are the mobile education attitudes of language teachers during the pandemic period?
2. What is the level of self-efficacy of language teachers in graphic development during the pandemic period?

3. Is there a significant relationship between mobile education attitudes of language teachers during the pandemic period and their self-efficacy towards graphic development?

3 Methods

3.1. Research Model

Since the study aims to reveal the graphic development self-efficacy and mobile education attitudes of language teachers working during the pandemic period in terms of various variables, it is a descriptive study made with the relational survey model, one of the survey models. Descriptive studies include screening models that are suitable for studies that aim to describe a past or current situation as it exists. The relational scanning model is included in the general scanning method. General scanning models contain a universe consisting of many elements, and it is the scanning arrangement made on the whole of the universe or a (group of) samples to be taken from in order to reach a general judgment about the universe. The relational scanning models in this group are used for research models aiming to determine the existence or degree of co-change between two or more variables, and it is considered appropriate for such researches [Karasar 16].

3.2. Study group

For the sampling method, the snowball sampling method was chosen among the non-random sampling methods due to time and cost constraints. This sampling method is used in situations where it is difficult to create a sampling frame [Faugier and Sargeant 97]. In the first step, the first basic group of participants is formed by chance; and new units are reached with the guidance of the interviewed core participants or based on the information obtained from them, and the sample volume is gradually enlarged like a snowball [Heckathorn 11]. While using this method, no restrictions were made on the education level, province and seniority, in order for the sample to represent the whole population of the study. In fact, it tried to reach different ages, branches and education level groups as much as possible.

The subject group of the research consisted of language teachers working in the 2020–2021 academic year. 187 (60.9%) of the 307 language teachers participating in the study during the pandemic period were female and 120 (39.1%) were male. In addition, 2 of the language teachers (0.7%) were born between 1940 and 1949, 2 (0.7%) were born between 1950 and 1959, 35 (11.4%) were born between 1960 and 1969, 64 (20.8%) were born between 1970 and 1979, 135 (44%) were born between 1980 and 1989 and 69 (0.7%) were born between 1990 and 1999. The branch of the teachers was 10 (3.3%) German, 4 (1.3%) Arabic, 6 (2%) French, 160 (52.1%) English, 2 (0.7%) Japanese, 4 (1.3%) Russian, 117 (38.1%) Turkish, 2 (0.7%) Turkish and English and 2 (0.7%) of them are in Japanese & English.

The levels of the lessons taught by language teachers are as follows; 44 (14.3%) primary education, 61 (19.9%) secondary education, 56 (18.2%) high school, 12 (3.9%) associate degree, 57 (18.6%) undergraduate, 2 (0.7%) primary & secondary & high school, 10 (3.3%) primary & secondary & high school & undergraduate, 10 (3.3%) primary & secondary education & high school & associate degree, 8 (2.6%) undergraduate & graduate, 4 (1.3%) undergraduate & graduate & doctorate, 2 (0.7%)

high school & undergraduate, 2 (0.7%) high school & undergraduate & graduate & doctorate, 8 (2.6%) secondary & high school, 13 (4.2%) associate & undergraduate, 2 (0.7%) associate degree & undergraduate & graduate & doctorate, 14 (4.6%) foreign language preparatory program and 2 (0.7%) preschool & primary education.

Among the language teachers, 11 (3.6%) worked in Adana, 2 (0.7%) worked in Amasya, 36 (11.7%) worked in Ankara, 2 (0.7%) worked in Bolu, 2 (0.7%) worked in Canakkale, 2 (0.7%) worked in Cankiri, 2 (0.7%) worked in Corum, 2 (0.7%) worked in Denizli, 4 (1.3%) worked in Diyarbakir, 2 (0.7%) worked in Duzce, 14 (4.6%) worked in Edirne, 6 (2%) worked in Erzurum, 2 (0.7%) worked in Filibe (Bulgaria), 2 (0.7%) worked in France, 2 (0.7%) worked in Gaziantep, 4 (1.3%) worked in Giresun, 2 (0.7%) worked in Girne (TRNC), 2 (0.7%) worked in Gumushane, 97 (31.6%) worked in Istanbul, 11 (3.6%) worked in Izmir, 6 (2%) worked in Kahramanmaraş, 4 (1.3%) worked in Kayseri, 4 (1.3%) worked in Kocaeli, 2 (0.7%) worked in Pristina (Kosovo), 2 (0.7%) worked in Manisa, 4 (1.3%) worked in Mersin, two (0.7%) worked in Mus, 2 (0.7%) worked in Nigde, 34 (11.1%) worked in Ordu, 6 (2%) worked in Sakarya, 16 (5.2%) worked in Samsun, 4 (1.3%) worked in Sanliurfa, 2 (0.7%) worked in Tekirdag, 2 (0.7%) worked in Trabzon, 2 (0.7%) worked in Van, 2 (0.7%) worked in Bitlis, 2 (0.7%) worked in Hakkari, 2 (0.7%) in Bursa and 2 (0.7%) worked in Antalya. Language teachers' professional seniority was 0–5 years (58 people, 18.9%), 6–10 years (79 people, 25.7%), 11–15 (57 people, 18.6%), 16–20 (40 people, 13%), and those over 20 years (73 people, 23.8%).

The education levels of the language teachers who participated in the study during the pandemic period are shown in the figure below. According to the Figure 1, 165 (53.7%) of the language teachers are undergraduate, 165 (53.7%) of the language teachers were undergraduates, 122 (39.7%) were graduates and 20 (6.5%) were doctoral graduates.

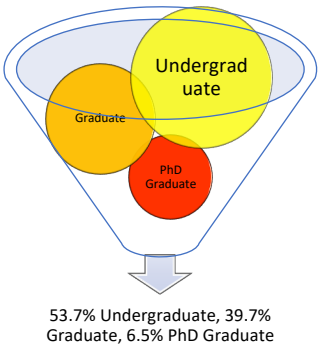

Figure 1: Education levels of language teachers

The number of people who do any work related to graphics (visuality/design) in the personal or work of language teachers is 80, and the number of people who did not do any work is 227. Percentages of language teachers according to their experience are shown in the table below.

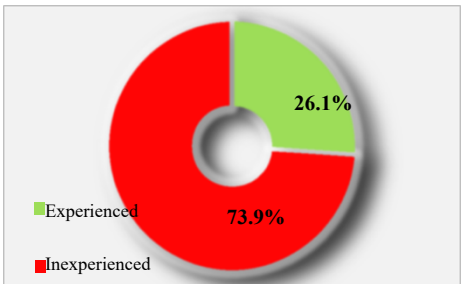

Figure 2: Graphical experience of language teachers before giving mobile education

The number of teachers who attended a course/training related to graphic, design or visual development is 10 (3.3%), and the number of people who did not is 297 (96.7%).

75 (24.4%) language teachers during the pandemic period had less than 1 year of experience in mobile education since the pandemic started, 186 (60.6%) had 1–2 years, 10 (3.3%) had 3–4 years, 16 (5.2%) had 5–6 years, 8 (2.6%) had 7–8 years, 8 (2.6%) had 9–10 years and 4 (1.3%) had 19–20 years of experience in distance education.

The amount of graphics (visual elements) used by language teachers in their mobile education lessons during the pandemic period is shown in the figure below.

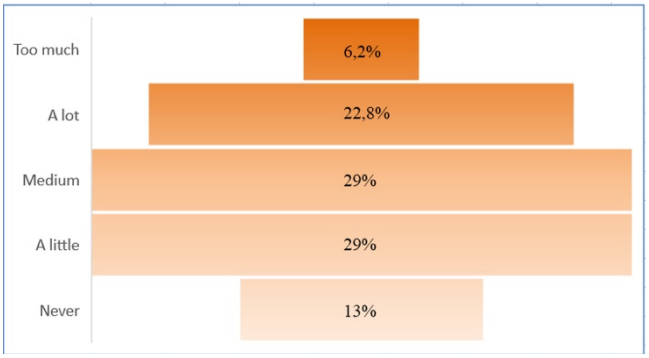

Figure 3: Use of visual elements in mobile education lessons

According to the Figure 3; It has been shown how much language teachers use visuality in mobile education lessons. Of the teachers participating in the study, 19 (6.2%) gave too much, 70 (22.8%) a lot, 89 (29%) medium, 89 (29%) a little. In addition, 40 (13%) of them did not include visuality in their lessons.

Finally, while language teachers teach in mobile education, 179 people (58.3%) used computers, 8 people (2.6%) used mobile phones, 4 people (1.3%) used tablets, 78 people (25.4%) used computers and mobile phones, 26 people (8.5%) used computers and tablets and 12 people (3.9%) used computers, mobile phones and tablets mostly.

3.3. Data Collection Tools

3.3.1. Information Form

The 'Information Form' developed by the researchers in order to determine some demographic information of the language teachers participating in the study consists of two parts. The first part consists of questions prepared in order to obtain personal information (gender, year of birth, branch, seniority, level of education, province where they worked, education status, whether they did any work on graphics, whether they went to a course on graphic development, m-learning experience, how often they use visual elements while creating lessons for mobile education and which tool they use mostly while teaching in mobile education) about language teachers. The second part determines whether the language teachers have done any work related to graphics, whether they have attended a graphic development course, how many years of mobile education experience, how often they include visual elements while creating their lessons in mobile education and which tool they use the most when teaching in mobile education. It consists of questions prepared for the purpose.

Before using the form, prepared with an expert's opinion, it was applied to a small group outside the study to test the comprehensibility of the questions, and after the necessary corrections were made with the expert's opinion, it was applied to the study subject group.

3.3.2. Mobile Education Attitude Scale

This scale was used to determine teachers' attitudes towards distance education in the study [Agir et al. 08]. The scale, consisting of 21 items, was prepared on a 5-point Likert-type scale. The answers given to the questions are 'I do not agree at all (1)', 'I do not agree (2)', 'I am undecided (3)', 'I agree (4)' and 'I completely agree (5)'. Cronbach's alpha reliability coefficient of the scale was calculated as 0.835. As a result of the reliability analysis for this research, Cronbach's alpha value was found to be $\alpha = 0.93$. A total of seven items on the scale (items 11–15, 17 and 19) contained reverse expressions.

Before using this scale, three educational technologists were consulted. Each item in the scale was examined one by one, and it was concluded that all items were related to mobile education. Educational technologists decided that it is okay to use them in this study because the content of the scale items is similar.

3.3.3. Self-Efficacy Scale for Graphic Development

This scale was developed by [Uzunboylu and Terzioglu Oz 16] in order to determine self-efficacy for graphic development. The scale consists of 47 items and all statements in the scale include positive statements. The scale items were prepared on a 4-point Likert-type scale with 'I can totally (4)', 'I can partially (3)', 'I can do less (2)' and 'I can never (1)'. Cronbach's alpha reliability coefficient of the scale, which consists of three sub-factors, namely 'Image and Text Processing', 'Basic Web Tools' and 'Advanced Web Tools', was found to be 0.98. As a result of the reliability analysis of the scale for this study, the alpha reliability coefficient was determined as $\alpha = 0.98$. In this study, the scale was considered as a whole.

3.4. Data Collection and Analysis

For data collection, the scales and the information form were made online using Google Forms, which were also used as information-gathering tools. The snowball sampling method was adopted for data collection. Language teachers were invited to study through business mails, face-to-face interviews at schools and via social media so that they could access the data collection tool. They have been asked to share this invitation with other people in their network.

It was applied to only accessible language teachers working in various provinces during the pandemic period in the 2020–2021 academic year. 11 of the applied 318 scales were deemed invalid because they were not filled properly. The answers of the remaining 307 language teachers were taken into consideration and analysed.

Towards this end, the SPSS Statistics 27 package was used. The data belonging to the personal information of the language teachers in the pandemic period were interpreted by considering the arithmetic mean ($\bar{x}$), percentage (%) and frequency (*f*) values. Before analyzing the study group, whether the data had univariate normal distribution was examined by descriptive methods. In the study, the skewness and kurtosis values were calculated to determine whether the groups showed normal distribution or not. When Kurtosis and Skewness values are between -1.5 and +1.5, it is accepted to be a normal distribution [Tabachnick and Fidell 13]. It was determined that the skewness and kurtosis values of the scales and their sub-dimensions were between -1.0 and +1.0, and it was observed that the data had a univariate, normal distribution. For this reason, Pearson analysis, one of the parametric tests, was used in the analysis of the data. Reliability analyses of the scales used for this study were made, and Cronbach's alpha reliability coefficient of both scales was calculated at the 'perfect' level, which was a greater than 0.9. The relationship between 'graphic development self-efficacy' and 'mobile education attitudes' of language teachers during the pandemic period was analysed using the Pearson's product-moment correlation coefficient. To calculate the direction and strength of the relationship between the two variables, the results were tested at the p=0.05 level.

4 Findings and Interpretation

Findings and comments obtained from the applied data collection tools are presented in the following section.

4.1. Findings Regarding Mobile Education Attitudes of Language Teachers During the Pandemic Period

The results of the arithmetic mean score of mobile education attitudes of language teachers in the pandemic period are shown in Table 1.

Variable	N	$\bar{x}$	SD	Min–Max
Mobile education attitude score average	307	3.3	0.72	1.57–5.00

Table 1: Mobile Education Attitudes

When Table 1 is examined, it is seen that the average mobile education attitude scores of language teachers in the pandemic period is $\bar{x}$ = 3.3. This value corresponds to the option 'I am undecided' in the scale. We already knew that there were different developments in the education sector for every period, but the pandemic turned the whole world upside down, and each individual's right to education should continue progressively. The emerging conditions should not make teachers give up and the attitude they exhibit in platforms, such as mobile and open learning, which is the only platform where they can reach their students, should not be at a medium level. The attitude indicator they feel will surely pass to the other side, and this will result in people not using the technology in the right direction. This result can be interpreted as an indicator that the subject of mobile education should be handled more seriously during the training of language teachers.

4.2. Findings Regarding Self-Efficacy of Language Teachers for Developing Graphics During the Pandemic Period

The results of the arithmetic average score of the language teachers in the pandemic period according to their self-efficacy for graphic development are shown in Table 2.

Variable	N	$\bar{x}$	SD	Min–Max
Average score for self-efficacy for graphic development	307	2.26	0.79	1-4

Table 2: Self-Efficacies for Graphic Development

When Table 2 is examined, it is seen that the mean scores of language teachers' self-efficacy towards graphic development is $\bar{x}$ = 2.26. This value corresponds to the 'I can do less' option on the scale. Since the concept of visuality appeals to the senses, it is effective on learning [Ionita et al. 18]. Including visual expressions in language teaching is one of the qualifications that a teacher should seek to be able to use graphic objects. The language teacher can prepare rich content and out of the ordinary teaching materials by processing images and text or using basic web tools. Considering the pandemic period, each of the graphic development skills is undoubtedly very important in order to achieve the purpose of education. Since we do not know what time will bring, various scenarios should be established in the education sector [Beynaghi et al. 16]. For example, it is time to add new ones to our changing education standards as

well as our changing life standards due to the pandemic. This result can be interpreted as that language teachers should learn various graphic application programmes.

4.3. Findings Regarding Mobile Education Attitudes of Language Teachers During the Pandemic Period and Self-Efficacy for Graphic Development

In order to reveal the relationship between mobile education attitudes of language teachers in the pandemic period and their self-efficacy towards graphic development, Pearson's product-moment correlation coefficient was analysed. The findings obtained are shown in Table 3.

Variable	Attitude towards mobile education	Self-efficacy for graphic development	p
Attitude towards mobile education	1	0.166	0.04
Self-efficacy for graphic development	0.166	1	

Table 3: The Relationship Between Mobile Education Attitudes and Self-Efficacies for Graphic Development

As a result of the analysis made according to Table 3, it has been observed that there is a positive significant relationship between the self-efficacy of language teachers towards graphic development and their mobile education attitudes during the pandemic period ($r = 0.166$, $p = 0.04 < 0.05$). When evaluating the Pearson's product-moment correlation coefficient, a coefficient lower than 0.30 indicates that the relationship is at a low level [Buyukozturk 20]. According to this result, it can be said that there is a low-level, positively significant relationship between teachers' self-efficacy towards graphic development and their mobile education attitudes.

As emphasised earlier, language teachers compulsorily teach during the pandemic period. In this case, they have to organise their course contents completely according to distance learning [Karalis 20]. Visuality, design, etc., are included in the course contents in mobile learning systems and the concepts are positive for the learner. However, since language teachers' attitudes towards mobile education are unstable, it is natural that self-efficacy to develop graphics suitable for this platform is also low. This process is an indicator of the relationship between mobile education attitude and self-efficacy for graphic development. The relationship that emerged as a result of the analysis is low. However, it can be interpreted that the positive aspect of this relationship, the increase in mobile education attitude, and self-efficacy towards graphic development will affect slightly positively.

5 Conclusion and Recommendations

Some important results obtained in this study, which aim to determine the relationship between language teachers' attitudes towards mobile education and their self-efficacy towards graphic development, are summarised in the following paragraphs.

As a result of the language teachers having to conduct their lessons with mobile learning during the pandemic period, they should change their course content. It is obvious that visual emphasis will be more effective for the learner in more effective language learning. In order to achieve this, language teachers must have high mobile education attitudes and rich content first, by using the learning materials they will provide to this environment visually. It will be practical for teachers to make this content themselves according to the class level. In this study, it was determined that language teachers' attitudes towards mobile education correspond to the option 'I am indecisive', and their self-efficacy for graphic development corresponds to the 'I can do less' option. These results show that the attitude level of language teachers towards distance education is at a medium level [Erdogan 12], and their level of self-efficacy for graphic development is low.

Another important result of the study is that the language teachers' attitudes towards distance education during the pandemic period and their self-efficacy towards graphic development are positively low [Koklu et al. 19] and there is a meaningful relationship. In this context, when language teachers' attitudes towards mobile education increase at a low level, their self-efficacy towards graphic development also increases at a low level. It can be said that one of the reasons for the low self-efficacy of individuals to improve visuality is the inexperience in the creation and use of visual elements in teaching materials, as well as the lack of attitude towards mobile education.

29% of the language teachers, two of the highest rates, gave neither too little nor too much visual elements while creating their lessons in mobile education, and 29% gave less space (shown in Figure 2). In addition, 73.9% of the language teachers did not have a visual studying either personally or at work (shown in Figure 1). Based on this, the fact that language teachers increase the use of visual elements and have more experience in this field has positively increased their attitudes towards mobile education; it can be argued that this increases their self-efficacy for graphic development. Based on this positive relationship, albeit low, it is recommended to focus on the visual development of language teachers.

On the other hand, it can be thought that the reason for language teachers to develop less visual content is their lack of trust in this system, where teachers are generally foreign. In addition, the reason why language teachers' attitudes towards mobile education during the pandemic period are indecisive can be shown as they spend too much time developing visual content in their lessons and therefore they do not want to adapt to mobile education. In this case, the problems can be eliminated by giving e-seminars for the system via mobile education platforms where education is provided. Among the trainings that can be applied to teachers, "Creating interactive visual elements for the contents created in m-learning" can be included.

Visual elements can be very useful when properly planned and used in lessons [Dunlap and Lowenthal 16]. Today, with the peak of concepts such as mobile and open learning due to the pandemic, language teachers, like every educator, have to make changes in the course contents. Language teachers who have to keep up with the

situation in order to use the mobile learning systems in the most efficient way are obliged to integrate their educational activities into the system and convey them to the recipient. Ordinary texts, audio or video course materials should be enriched with visuals in order to encourage students who can benefit from these contents to their situation. It may be suggested to add the skill of using visual programmes to the skills acquired by language teachers in undergraduate education or to organise this course, if available. These skills can be very important in achieving a goal in education.

There are many measures and changes that can be taken in order not to exclude students from lessons recently, when our life criteria have changed around the world. Teachers should be encouraged to use graphical elements in the most accurate and appropriate way and to learn appropriate software for this. In the institutions where language teachers are trained, the increase in their attitudes towards mobile education by improving their graphic creation skills will positively affect their self-efficacy towards graphic development. For this reason, training should be provided to know the means by which language teachers can benefit from elements such as the possibilities of the mobile education system and visual creation to be used in developing positive attitudes towards mobile education.

Research Assumptions

It is assumed that the sample group surveyed is sufficient and represents the population in a meaningful way.

Limitations of the Research

- The research is limited to the 2020–2021 academic year in terms of duration.
- The research is limited to teachers who can be reached by the snowball sampling method and who were willing to solve the scales due to economic imperatives, transportation, time constraints and problems with implementation.
- The majority of language teachers mainly from Turkey. Constituting 97.4% of the participation of language teachers from Turkey, while 2.6% were realized from different countries.

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