

Evaluation of the Digital Story in Values Education Project

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Abstract

Values education is a structure of abstract concepts, and it is difficult for students to internalize these abstract structures. This situation brings some difficulties in values education. Activity-based practices developed by using values education approaches will facilitate the learning of the relevant value. Digital stories are also materials that can be used at different levels of education and for different purposes. In this regard, the "Digital Story in Values Education" project adopted within the scope of TÜBİTAK 4005 Innovative Educational Applications Support Programme, was aimed to give information to primary school teachers about the concept of digital stories for use in values education processes, to introduce digital story preparation programs, to provide basic program information and training that can be used to create digital stories, to prepare sample digital stories that can be used in classroom values education, and sharing the prepared digital stories with all teachers by publishing them. This study aimed to determine whether the targeted widespread impact of the "Digital Story in Values Education" project, which was accepted within the scope of the TÜBİTAK 4005 program and completed in 2019, has been achieved.

Keywords: Digital Story, Digital Storytelling, Values Education, Project Evaluation, TÜBİTAK

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INTRODUCTION

Today, among the main goals of education in Turkey and the world is to increase the academic knowledge levels of students as well as to gain values that are indispensable for the coexistence of society. Value is generally defined as the degree of importance or superiority recognized to an object, entity, or activity in spiritual, moral, and social terms or aesthetically (Öncül, 2000). In the Curriculum of the Primary Social Studies Course of the Ministry of National Education (MoNE) published in 2004, value is defined as the common thought, purpose, basic moral principles or beliefs that are accepted as correct and necessary by the majority of the members of a social group or society to ensure and maintain its own existence, unity, functioning and continuity. Changes in the social structure, especially due to the use of technology and the increase in communication opportunities, may cause the loss of some values and an increase in negative social events. These changes increase the importance of the studies carried out for the education of value and cause the studies on values education in schools to become widespread. The aims of providing values education in schools are listed as creating a healthy, consistent, and balanced personality in students, providing each student with the necessary knowledge, skills, attitudes, behaviors, and habits to ensure that they are both "good people" and "good citizens", and raising them in accordance with their own moral understanding (Aydın, 2010). Conscious teaching of values in schools, apart from the family, is essential for creating a healthy and conscious society (Fidan, 2017). There is also a natural link between values education and increased academic performance (Lovat, 2017).

The basis of the studies on values education within the MoNE in Turkey is the National Education Basic Law No. 1739 (MEB, 2019). In line with the general objectives of Turkish National Education, values education was included in the primary education programs implemented in the 2005-2006 academic year in sections within the scope of Life Studies and Social Studies courses. It can be stated that by including values education in the primary education Social Studies curriculum, values education is brought to the forefront compared to previous programs but it is not sufficiently integrated with the program in terms of practice (Yaşar & Çengelci, 2012).

Values education is a structure of abstract concepts, and it is difficult for students to internalize these abstract structures. This situation brings some difficulties in values education. Activity-based practices developed by using values education approaches will facilitate the learning of the relevant value. In an effective values education, appropriate approaches, strategies, methods, and techniques should be put forward, then it should be supported by a rich learning-teaching process by including activities related to the real life of the child and concluded with an appropriate assessment and evaluation method (Aktepe & Tahiroğlu, 2016). The different approaches, strategies, methods, and techniques required for an effective values education process suggest the necessity of questioning the competence of teachers in these subjects. In a study examining graduate theses on values education in Turkey, it was concluded that teachers and students do not have enough information about values education, and it was emphasized that especially teacher candidates and current teachers should be informed about contemporary methods and techniques that they can use during the teaching of values education (Elbir & Bağcı, 2013). In addition, it is seen that the existing contents are examined in terms of values education. Gül den (2016) examined five animated movies in terms of values education and found that the values of struggle, cooperation, kindness, solidarity, and tolerance were included in the animations. When 22 Turkish lullabies were examined in terms of values education, it was noticed that the values of patriotism, responsibility, and love are mentioned a lot, and values such as honesty, patience, freedom, and cleanliness are given less place (Duran & Yalçıntaş, 2016).

Digital Stories

Stories have been a teaching material that is often used in educational processes. Although the stories are not designed with the concern of teaching something, readers still learn from them (Yürük & Atıcı, 2016). The first stories were engraved on the cave walls, and centuries later with the invention of the printing press, they began to be printed on the pages of books. Today, digital storytelling has emerged as a new phenomenon as a result of developments in digital and electronic

fields, and the tradition of storytelling and listening has gained a new meaning with the combination of technology (Turgut & Kışla, 2015). The digital story is primarily a medium of expression, a medium of narrative. People can create their own stories and digitize them. Digital storytelling as a pedagogical tool enables students to tell their own stories using multimedia (Benmayor, 2008). Digital storytelling enables computer users to become creative storytellers through the process of choosing topics, doing research, writing screenplays, and developing an interesting story (Robin, 2009).

In digital stories that can be prepared using different software, the stages of determining the subject and writing the story, recording the audio, creating or selecting the appropriate visuals, bringing the audio and visual elements together in the software to be used for the digital storytelling, adding the effects if necessary, and finalizing the digital story are followed (Wawro, 2012). According to the Center for Digital Storytelling, there are 7 components to consider to create an effective digital story. These components are; the narrator's point of view, the questions that will keep the viewer interested, the selection of appropriate content, the quality of the pictures, videos and visuals used, the use of sound-music, the rhythm of the story, and the emotional bond established with the listener (Lambert, 2013). In digital storytelling studies, it is important to determine the purpose well and to prioritize story creation instead of the use of technology. However, as can be understood from the digital storytelling processes, the students who will participate in digital story preparation studies should have the competencies related to the use of some technological tools and software. Therefore, in the study groups organized for the preparation of digital stories, studies aimed at improving the digital literacy of the participants are inevitably included as a side goal (Şimşek et al., 2018).

Digital stories can be used as tools in the classroom and teaching. New content can be presented to the students by showing the digital stories that have already been prepared, or the attention of the students can be drawn to the content at the beginning of the lesson. According to multimedia theory, learning takes place through the use of two separate channels, visual and auditory, and the combined use of visual and auditory elements in the learning environment increases learning (Mayer & Anderson, 1991). With teaching enriched with visuals, we learn better and faster, and what we learn stays in the mind for longer (Bunmark, 2004). Therefore, the use of digital stories in teaching is considered to have positive effects on students' learning effectiveness. Digital storytelling, when incorporated into the classroom setting, can be an effective teaching method to capture and retain students' attention (Xu et al., 2011). Teachers who can create their own digital stories may find that digital stories help students focus more on the topic, create a discussion environment about the topics shared in the story, and make abstract and conceptual content more understandable (Robin, 2008).

There are many studies conducted in Turkey on the use of digital stories in different fields and educational levels in education. The use of digital stories in preschool education (Türe Köse, 2019), social studies lessons (Pala, 2021), teaching Turkish to foreigners (Aydın & Cigerci, 2020; Kızılcakaya, 2021), science education (Korucu, 2020; Köroğlu & Avcı, 2021; Ulum & Ercan Yalman, 2018), foreign language teaching (Çokyaman & Çelebi, 2021; İşçitürk, 2021), education for the visually impaired (Bahşi & Sis, 2023), and teaching mathematics (Dinçer & Yılmaz, 2019) has been examined in various studies. One of the areas where digital stories are used the most is Turkish education. It was determined as a result of the meta-analysis of 11 studies on this subject that digital stories have a high effect on Turkish language development (Özkaya, 2020).

Although there are studies on the use of digital stories at different levels of education and for different purposes, there are limited studies on the use of digital stories in values education. In these studies, students were often asked to develop digital stories about the determined values. In the study where the effect of digital storytelling on the democratic value judgments of university students was examined (Balaman, 2016), it was observed that the democratic value judgment levels of the students increased significantly after the digital story development studies. In a study in which 6th-grade students prepared digital stories on values (Kutlucan et al, 2019), it was determined that student's learning and behavior of values were positively affected.

There are studies in which students do not develop stories for values education, but only watch the content that has already been prepared. In the study conducted by Yürük and Atıcı (2016), digital stories prepared for the values of tolerance, hospitality, responsibility, and benevolence were shown to 5th-grade students in experimental groups in the form of weekly themes. As a result, it was concluded that the use of digital stories in values education in schools where the values education program is not implemented can positively affect the value gains of the students.

Digital Story in Values Education Project

Today, values education has become a significant part of education systems intending to help younger generations develop their valuable behaviors. Values education aims to teach students ethical and human rights respect, social responsibility, tolerance, fair treatment, and democratic values. The acquisition of these values helps students develop their characters and approach social problems more sensitively and responsibly. The rapid development of digital technologies has presented new opportunities for values education. Digital stories are an effective tool for learning and applying values. Digital stories allow students to play an active role in their learning experience and express their own values. However, there has not been enough research on the effects of digital stories on values education. Therefore, this article aims to determine whether the targeted widespread impact of the project "Digital Story in Values Education" have been achieved.

The "Digital Story in Values Education" project adopted within the scope of TÜBİTAK 4005 Innovative Educational Applications Support Programme, was aimed to give information to primary school teachers about the concept of digital story for use in values education processes, to introduce digital story preparation programs, to provide basic program information and training that can be used to create digital stories, to prepare sample digital stories that can be used in classroom values education, and sharing the prepared digital stories with all teachers by publishing them. In line with these objectives, 30 participants working as classroom teachers were trained on the concept of value, classification of values, the teaching of values, achievements related to the teaching of values, use of stories in education, digital story concept and its use in education, digital story preparation stages, audio-visual processing software to be used in digital story preparation, and digital story preparation software. The trainings provided within the scope of the project lasted 10 days. The content of the training programme of the project can be summarized in Figure 1.

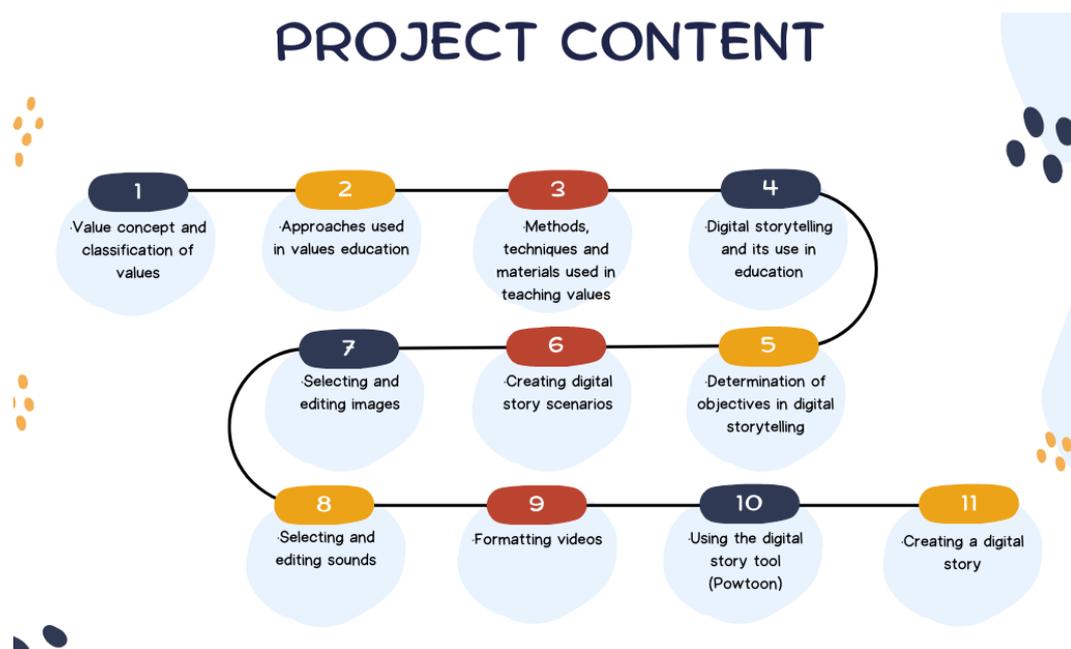


Figure1. The content of the training programme of the project

In line with this training, the participants wrote their scripts and created their digital stories about the value they chose. The stories created can be visited at <https://www.youtube.com/channel/UC1I4IIA1SkToob3YyYQP8g/videos>. Figure 2 shows screenshots from digital stories prepared by the participants.



Figure2. Screenshots of digital stories prepared by project participants

The targeted widespread impact of the TÜBİTAK 4005 Innovative Educational Applications Support Programme includes many dimensions. Accordingly, the pervasive impact includes the following dimensions: The role of the project results in popularizing science and increasing interest in science in a large part of society; The nature of the project contributes to the dissemination of national resources in the field of science and society and encourages new projects and new application studies in the fields of science and society with the interest it arouses in this subject; Planning the follow-up system to ensure that the gains obtained by the participants are permanent and develop after the project is concluded, thus increasing the widespread impact. In this regard, this study aimed to determine whether the targeted widespread impact of the "Digital Story in Values Education" project, which was accepted within the scope of the TÜBİTAK 4005 program and completed in 2019, has been achieved. For this purpose, answers to the following research questions were sought.

1. What are the views of project participant teachers about the knowledge and skills they acquired in the project?
2. What are the opinions of project participant teachers about other projects?

METHOD

A case study, one of the qualitative research methods, was used in this study, which was conducted to determine the views and experiences of the project participant classroom teachers about the widespread impact of the "Digital Story in Values Education" project. In the case study, the factors related to one or several situations are examined with a holistic approach, and in-depth research is carried out on how they affect the relevant situation and how they are affected by the relevant situation. The case study allowed for an in-depth analysis of teacher candidates' experiences over time using various data collection procedures (Yin, 2014).

Study Group

The study group consists of a total of 13 classroom teachers, six females, and seven males, who are participants of the "Digital Story in Values Education" project and who have successfully completed the project by preparing a digital story. While 12 teachers work in public schools, only 1 teacher works in private schools. The convenience sampling method was used to determine the study group. In this method, the participants are selected because of their convenient accessibility and proximity to the researcher, with the aim of speed and practicality (Yıldırım & Şimşek, 2006). The study group consisted of project participants who were still working at their schools, could be reached, and agreed to participate in the study.

Data Collection Tools and Data Collection Process

The data collection tool of the study is an interview form consisting of four open-ended questions prepared by the researcher. The data were collected in writing from teacher candidates. The questions to be used in the interview were prepared by conducting a literature review to respond to the sub-objectives of the study. The prepared questions were presented to the opinion of three experts working in the field of educational technologies before the implementation and edits were made in line with the feedback given.

Data Analysis

Content analysis technique was used in the analysis of the data. This approach aims to present the data obtained as a result of the interview and observation to the reader in an organized and interpreted way. The data are classified, summarized, and interpreted according to predetermined themes. In this study, the answers received for each question were recorded in the relevant indexes, and the data collected were made ready for analysis by making a classification based on the question. The data were examined by the researcher, divided into meaningful sections, and coded. The encoded data was categorized by combining themes, and the themes were converted into coding keys. The content analysis was performed by another expert as well as the researcher and the results of the two analyzes were compared to increase the reliability of the analysis. To test the reliability of the data, Miles and Huberman's (1994) formula (reliability = consensus / (consensus + disagreement)) was calculated and the value of 90% was reached.

FINDINGS

This section presents findings from semi-structured interviews with project participants. The qualitative data of the study were presented under 2 themes formed within the framework of research questions and 5 sub-themes that emerged as a result of the analysis. The theme and sub-themes are as follows:

1. Knowledge and skills obtained from the project

a-Use in lessons

b-Share with colleagues

c-Efforts to improve

2. Other projects

a-Participation

b-Recommendations

Findings on the Knowledge and Skills Acquired in the Project

Use of the Knowledge and Skills Obtained in the Project in the Lessons

Table 1. Use of the knowledge and skills obtained in the project in the lessons

	<i>f</i>	%
I used	9	69.2
I did not use	4	30.8

As can be seen in Table 1, nine (69.2%) of the 13 classroom teachers who participated in the interviews used the knowledge and skills obtained in the project in their lessons after the project was completed, while four (30.8%) did not use them.

Within the scope of the project, participants were provided with many digital skills such as image, video, and audio editing. The findings regarding the areas where these skills were used by the participants after the project are presented in Table 2.

Table 2. Areas where the digital skills obtained in the project are used

	<i>f</i>	%
Audio editing	7	53.8
Video editing	4	30.8
Image editing	4	30.8
eTwinning projects	4	30.8

As can be seen in Table 2, seven of the 13 classroom teachers (46.2%) who participated in the interviews used the digital skills they had acquired in the project for audio editing after the project was completed, four participants (30.8%) used for video editing, four participants (30.8%) used for image editing, and four participants (30.8%) used for eTwinning projects. The area where the most opinions were mentioned under this heading has been audio editing. For example:

“P13: Or, this year on October 29, we had a project work, we had a stage work. In this stage work, we needed a sound recording, and we needed some music, so I applied that music using Audacity by cut and paste. In fact, it has come into my life quite a bit.”

It is seen that P13 used the Audacity sound editing software, which was trained within the scope of the project, for a work. Another teacher used audio editing tools for specific days and weeks.

P7: At the time, yes, I remember now, I used it to set the music on April 23 to set the music on certain days, weeks.

It is seen that teachers often need sound editing tools in their studies with students in schools. Thanks to the digital skills obtained within the scope of the project, the teachers also carried out video editing work. For example:

P10: As you know, we had a distance education process; In distance education, I tried to prepare a course video by using the methods you showed in the course videos.

It is seen that P10 used the digital skills gained within the scope of the project to prepare course videos during the distance education process. One of the teachers, who stated that she was able to edit the images thanks to the digital skills she gained within the scope of the project, said the following.

P7: It was paint.net I could say I used it. I also used it to work on visuals.

P7 used paint.net software, which she learned to use within the scope of the project, to edit the images after the project. It is seen that teachers can use their acquired digital skills not only to prepare digital stories but also in many different areas. In this regard, it can be stated that the project has a wide-ranging contribution to teachers.

Four participants stated that they used the digital skills they gained within the scope of the project in their eTwinning projects. The comment of one of these participants is as follows:

P6: Obviously we used a lot of it because we had an eTwinning project. We tried to use Web 2.0 tools there, we did things like this with the kids, like voice recordings. The children used these software to introduce themselves from there.

eTwinning projects are frequently carried out in schools. It is seen that the digital skills acquired by the participating teachers within the scope of the project also contribute to their work on eTwinning projects.

Sharing the knowledge obtained in the project with colleagues

Table 3. Sharing the knowledge and skills acquired in the project with colleagues

	<i>f</i>	%
I shared my acquired knowledge and skills with my colleagues	12	92.3
I didn't share anything	1	7.7

As can be seen in Table 3, 12 (92.3%) of the 13 classroom teachers who participated in the interviews shared the knowledge and skills they gained in the project with their colleagues after the project was completed, while one (7.7%) did not.

P13: Yes, right after we learned it, we told our other colleagues how it was used, how Powtoon was, how Toondo was, and we did it practically.

It is seen that K13 shared the skills gained within the scope of the project with his/her teacher friends right after the project. This is a very positive and desirable situation in terms of spreading the impact of the project.

P9: Actually, I did this, I shared my sharing about the project with our information technology teacher in our school. Because he, too, was using the video editing method, as it was a pandemic at that time, but he was using another tool. Since Web 2.0 is very comprehensive, we cannot master every tool. I transferred what I learned to her and she transferred what she knew to me, it was very good. I shared Audacity with our music teacher. Of course, our music teacher was using more professional software, but we talked that good things could come out by using this program software.

It is seen that P9 shared his/her skills with the information technologies and music teachers at his school after the project.

Participants' post-project activities to improve the knowledge gained in the project

Table 4. Status of trying to improve the knowledge gained in the project after the project

	<i>f</i>	%
I worked to improve it	5	38.5
I didn't do any work to improve it	8	61.5

As can be seen in Table 4, five (38.5%) of the 13 classroom teachers who participated in the interviews worked to improve the knowledge obtained in the project, while eight (61.5%) did not

work. Table 5 shows the findings related to the fields of study of the participants who worked to improve the knowledge they obtained in the project.

Table 5. Areas of work to improve the knowledge gained in the project

	<i>f</i>	%
Mobile apps	2	15.4
Web 2.0 tools	2	15.4
Video editing	1	7.7
Audio editing	1	7.7

As can be seen in Table 5, to improve their knowledge, two (15.4%) of the 13 classroom teachers who participated in the interviews worked in the field of mobile applications, two participants (15.4%) worked in the field of Web 2.0 tools, one participant (7.7%) worked in the field of video editing, and one participant (7.7%) worked in the field of audio editing. The opinion of one of the participants who expressed an opinion on this issue is as follows:

P2: My work is not on the computer, but rather on the applications I can use on the mobile phone. I used applications like InShot.

It is seen that the user focuses on mobile applications to improve the knowledge obtained in the project. Another participant, on the other hand:

P8: I turned to Web 2.0 tools, and I discovered Web 2.0 tools that are especially useful for us. I liked Renderforest for example. There was Moovly about them, I was a little bit interested.

It is seen that the participant is interested in this topic on the Web 2.0 tools introduced in the project and wants to learn different Web 2.0 tools.

Findings Relating to Other Projects

This section presents the opinions of the participating teachers about other projects.

Effect on Participation-Application to Other Projects

This section presents the data on the willingness of the participating teachers to participate in other projects after the project.

Table 6. The impact of the project on participating in other projects and applying

	<i>f</i>	%
It encouraged me to participate in other projects	12	92.3
I do not have a request to participate in any project	1	7.7

As can be seen in Table 6, 12 (92.3%) of the 13 classroom teachers who participated in the interviews stated that the project encouraged them to participate in other projects, while one (7.7%) stated that he did not have a request to participate in any other project.

P4: After the project, I started to be more interested in such activities... If possible, I would like to participate again.

It is seen that P4's interest in projects to improve teachers' knowledge and skills increased after her participation in the project.

P3: I would like; We had very valuable and interested teachers. It was very valuable to see the excitement, self-confidence, and happiness my students experienced when they heard their own voices and succeeded in a task.

It is seen that P3 is very satisfied with the project, as a result of applying the skills he has gained in his school, he has received positive feedback from his students and therefore wants to participate in other projects.

Findings on the Opinions and Suggestions of the Project Participant Teachers for the Projects

This section presents the opinions and suggestions of the participating teachers about other projects.

Table 7. The impact of the project on participating in other projects and applying

	<i>f</i>	%
Carrying out projects to teach different Web 2.0 tools	6	46.2
Carrying out projects for the use of digital stories for other courses	4	30.8
Carrying out similar projects for teachers of other branches	3	23

As can be seen in Table 7, six (46.2%) of the 13 classroom teachers who participated in the interviews wanted projects to be carried out for teaching different Web 2.0 tools, four participants (30.8%) wanted projects to be carried out for the use of digital stories for other lessons, and three participants (23%) wanted similar projects to be carried out for other branch teachers. The views of some of the teachers on this issue are as follows.

P9: I think the digital story may be made through other tools as well. I would appreciate it if there is also training with different Web 2.0 tools. In this way, I believe that I will be familiar with the new Web 2.0 tools.

P9, who wanted to participate in projects about different Web 2.0 tools, stated that he wanted to receive training specifically about Web 2.0 tools that could be used in digital stories.

P3: It can be used in mathematics class. Since our school has also a smart board, digital content can be produced and used more effectively in this way.

P3 wanted similar projects to be carried out for mathematics teachers and stated that these training would increase the performance of teachers, especially in the use of smart boards.

P12: We can increase the variety of teachers and branches, not only with classroom teachers. Plus, I want you to go to private schools, sir. Because there were public schools in the density, I was the only one from the private schools. But for example, many people like us want to join. There are people who want to be involved in a project and want to contribute to a project. And if you just expand the branch limitation a little more, maybe it will.

P12 also wanted projects to be carried out for teachers from different branches. It was noted by the participant that in such projects there is more participation of public school teachers, but it is also necessary to involve private school teachers in such projects.

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

This study aimed to determine whether the targeted widespread impact of the "Digital Story in Values Education" project, which was accepted within the scope of the TÜBİTAK 4005 program and completed in 2019, has been achieved. In line with this main purpose, 13 classroom teachers who were

participants of the project were reached again and the participating teachers were asked semi-structured interview questions prepared by the researchers.

When the findings regarding the knowledge and skills acquired by the participating teachers in the project were examined, it was seen that most of the teachers used the knowledge they gained from the project in their lessons and shared this information with their colleagues. Therefore, it can be stated that the project has a widespread impact in terms of the information dimension, plays an effective role in popularizing science and increasing interest in science in a wide section of society, and contributes to the dissemination of national resources in the field of science and society. After the widespread impact scale administered in the TÜBİTAK 4004 nature education project carried out for the 7th and 8th-grade students, it is seen that the majority of the students determined that the skills they gained were applicable in their daily lives (Avan et al., 2019). The fact that the knowledge and skills gained by the participants within the scope of the project are put into practice by the participants in their lessons and daily lives is a significant indicator that the objectives of the project have been achieved. Thus, it is understood that the content of the project can be applied in daily life, in the lessons, and in the field of classroom education specific to the project examined and can contribute to education. In addition, it is seen that teachers use the digital skills they have gained within the scope of the project in areas such as audio, video, and image editing, and eTwinning projects. This shows that the participants use the digital skills they gained due to the training within the project in other areas related to the teaching profession, apart from preparing digital stories. According to this result, the outputs of the project have been more comprehensive than expected and have increased the knowledge and skills of classroom teachers on the integration of technology into their lessons and the eTwinning project works.

The most significant widespread impact of the project is that classroom teachers working in different schools share their knowledge about the use of digital stories in values education with their colleagues and create a multiplier effect. In the post-project evaluation study of a TÜBİTAK 4004 nature education project organized for teachers, it is seen that the participating teachers plan to transfer the information they have obtained within the scope of the project to their students and their environment (Türkoğuz et al., 2018). It was emphasized that the collaborative work of project participant teachers on face-to-face, online, and social media with other colleagues after the project is very essential to increase the widespread impact of the project (Aşık et al., 2017). As can be seen, it is desirable for the participants to share the knowledge and skills they have gained with their environment after the project to increase the widespread impact of the projects. In this regard, it can be stated that the project has reached two of its most significant widespread impact.

However, it was concluded that the majority of the participating teachers did not carry out any studies to improve and update the knowledge they gained in the project. One of the dimensions related to the development of the widespread impact of the projects is that the gains obtained by the participants are permanent and developed after the project is concluded. Therefore, it is expected that the participating teachers will improve their knowledge and skills by making new studies after the project. The low motivation of teachers to improve their knowledge and skills, and knowing what topics to work on for this purpose can be cited as the main reasons why this situation does not occur. Teachers' positive attitudes and motivations toward professional development are considered significant factors in carrying out activities aimed at developing innovative knowledge and skills related to the teaching profession (Çoban, 2019; Liu et al., 2018; Zhang et al., 2020). Likewise, motivation problems are considered an obstacle to the professional development of teachers (Eroğlu & Özbek, 2020). In addition, the fact that teachers do not have time for additional studies due to work and lack of research opportunities are shown as obstacles to updating their knowledge and skills (Can, 2019).

The second question of the research is the opinions of the participants about other projects. Accordingly, their participation in the project encouraged the participants to participate in other projects. This result suggests that teachers are pleased to have participated in the project and have a positive attitude towards participation in TÜBİTAK projects. Similar results have been achieved in

previously organized TÜBİTAK science and society projects. For example, after the widespread impact scale applied in the TÜBİTAK 4004 nature education project, which was carried out for 7th and 8th-grade students, it was determined that the majority of the students wanted to participate in the training again (Avan et al., 2019). In addition, the participants wanted the use of different Web 2.0 tools to be taught in future TÜBİTAK projects. The use of Web 2.0 tools in education is a topic of great interest to teachers (Horzum, 2010), graduate students in the field of education (Altunışık & Aktürk, 2021), and lecturers (Korucu & Karalar, 2017). In addition, it is seen that teachers' knowledge of Web 2.0 tools is limited (Yükseltürk et al., 2017) and they need these tools intensively, especially during the Covid-19 pandemic (Şenyurt & Şahin, 2022).

The use of digital stories in values education may be a significant tool in terms of supporting students' character development. However, more research is needed in this area. Therefore, the following recommendations can be presented for a study on the use of digital stories in values education: Assessing the effectiveness of digital stories: Assessing the effectiveness of digital stories in values education is essential to understand how digital stories contribute to students' understanding and practice of values. This study should examine students' attitudes toward digital stories, their effectiveness in learning values, and how they can help students better understand digital stories. To assess the effects of digital stories on learning outcomes, students' knowledge, attitudes, and behaviors can be evaluated and their ability to apply the given values and exhibit appropriate behaviors can be observed. In addition, the effects of digital stories on value education in different age groups and different cultures can be examined. Comparing the results of studies conducted in different age groups and different cultures will yield significant results in terms of determining the effects of digital stories on value education.

Teachers' attitudes towards the use of digital stories are also proposed as another research topic. For the use of digital stories in values education to be successful, teachers need to be willing to use these tools. Future studies should examine teachers' attitudes towards the use of digital stories, the potential of digital stories to contribute to students' learning of values, and how teachers can use digital stories in their classrooms. In this study, some of the Web 2.0 tools for creating digital stories were introduced and implemented. However, by planning training on the use of constantly developing and changing Web 2.0 tools and digital story platforms, teachers' competencies in this area can be kept up to date.

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