



## Reflection of eTwinning Activity on Teachers' Professional Development in Project-Based Teaching Process

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### Öz

Using project-based applications in education and enriching teaching-learning environments with technology, besides supporting 21<sup>st</sup> century skills of teachers, positively affects their professional development. The integration of technology into education facilitates the implementation of both national and international projects in schools. The purpose of this study is to determine how eTwinning projects reflect on teachers' professional development. about eTwinning projects in Turkey are encountered quite a few studies. The research was conducted with 24 teachers from various branches who took part in eTwinning projects in the 2019-2020 academic year. Participants were determined according to the voluntary principle and appropriate sampling from non-random sampling methods. The data of the study were collected through semi-structured interviews, which took approximately 30 minutes. Five open-ended questions were asked to the participants to find the impact of eTwinning projects on teachers' professional skills. Descriptive and content analysis were used to analyze the data. Expert opinion and researcher triangulation were also included in data analysis. As a result of the research, it is seen that teachers describe their eTwinning projects with words such as cooperation, sharing, technological development and innovation. Participants express that eTwinning projects are embraced by teachers, they are willing to take part in the project process, teachers from all levels and branches should take part in eTwinning projects. In line with the analysis of the data obtained from the participants, it has been concluded that eTwinning projects have a positive effect on the professional development of teachers.

### Key Words

Project based teaching  
eTwinning  
Professional development  
21<sup>st</sup> century skills

### About Article

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## Introduction

The project is a study that aims to realize change in a planned period, is related, aims and targets are determined, and different outputs are seen when the implementation is realized. In the project that includes scientific studies; It is the situation of obtaining data by observation, processing and organizing the collected data, investigating the cause-effect relationship in the data, and transferring information and results to the next generations (Milli Eğitim Bakanlığı, 2007).

Purpose of the project; It is to obtain in-depth information about the subject rather than finding the right answers to the questions posed by the teacher. Important feature of project work in the education process; It is a research effort where children or teachers focus on finding answers to questions about the chosen topic (Katz, 1994). According to Hamurcu (2000), project working process provides students with vital skills such as planning, budget design, process monitoring; the ability to use technology such as internet, computer, and web 2.0 tools; cognitive skills such as decision making, critical thinking, and problem solving; self-control skills such as decision-making, planning and organizing business and operations, and managing time; They bring interest in learning, curiosity towards education for their future, a sense of achievement and self-efficacy beliefs.

Projects run through the eTwinning Portal are the greatest example of project-based learning. The portal is a multilingual website that provides collaboration tools and services for teachers to create partnerships and joint projects on different topics. It is a free, secure European platform. The portal serves in 31 languages according to May 2020 data. eTwinning; consists of two words: "e" for "electronic" and "twin" for "mutual partnership". The eTwinning European Online Platform was established in 2005 by the European Commission as part of the Lifelong Learning Program to increase cooperation between schools in Europe and support the exchange of good examples. Since 2005, the platform is regarded as a fundamental innovation tool in learning with the integration of teaching strategies, disciplines, and disciplines with many changes in the Erasmus program.

The eTwinning Activity was initiated in 2005 within the scope of the e-learning program affiliated to the European Commission and continues to be carried out within the framework of the Erasmus + program of the Education, Audiovisual and Culture Executive Agency (EACEA) as of 2014. The eTwinning Activity is coordinated by the Central Support Service affiliated with the European School Network established with the Ministry of Education in 34 countries in Europe. eTwinning has been implemented in Turkey since 2009. eTwinning Turkey National Support Service operates under the General Directorate of Innovation and Educational Technologies of the Ministry of National Education. Since 2005, more than 800,000 teachers have participated in the activity, and approximately 280,000 projects have been carried out in more than 200,000 schools. eTwinning Activity is a community that open to innovation, constantly renews itself and grows every day. eTwinning is Europe's largest e-learning platform where teachers carry out projects with their students, contribute to their personal and professional development, work collaboratively, and share experiences, knowledge, and skills. Thanks to this platform, teachers work in partnership and organize activities for students to do. They conduct research in interaction with participatory roles, respect decisions made, develop 21st century skills and support their students' development. eTwinning projects take place with the contribution of each partner in the team. The main purpose of eTwinning projects is to implement joint projects with educators and schools from different member countries, focusing on effective and efficient cooperation through information and communication technologies. (Carpenter ve Tanner 2013).

At the core of eTwinning are joint projects run by at least two schools. Projects can have any subject but must have a good balance between the use of ICT and classroom activities and must be particularly integrated with the national curricula of the schools participating in the project. During its implementation, it has proven that eTwinning Projects have developed in students the basic competences specified by the European Parliament and the Council (Kearney ve Gras-Valazquez, 2015).

eTwinning is mainly based on the premise that the internet and communication tools provide an ideal environment for a new online collaborative learning and change model. The eTwinning initiative aims to develop new and innovative methods for the use of ICT in European schools,

through school partnerships, by encouraging online cooperation between teachers and students (Galvin 2006) eTwinning is an institutional collaborative learning environment, but it is an educational social network that collaborates remotely at the same time interval or at different times, using information technology to work on a common project. In this educational social network, students and teachers are given the opportunity to implement effective teaching practices and projects that improve 21st century skills. Manfredini (2007) calls eTwinning an opportunity for students to get to know new cultures, increase teachers' motivation for new approaches in education and continue their professional development. eTwinning is not only a project-driven portal, but an open source that facilitates teachers to continue their professional development. As the number of teachers participating in the portal increased, the online training needs increased at the same rate. At this point, professional development seminars are published and updated in the professional development section of the portal. Massive Online Open Courses (MOOC) prepared by the content development team of Turkey National Support Service is published at <http://etwinningonline.eba.gov.tr/>. The course is on air for a total of 57 hours, 43 hours in Turkish and 14 hours in English. Courses continue to be published by updating and including new topics (eTwinning Eba, 2020).

In this context, supporting the general competencies of the teacher profession specified and In order to increase the professional development of teachers, in local, national and international platforms eTwinning projects is being implemented in Europe since 2005, in Turkey since 2009. Numerical data of the Central Support Service (2020) are given in Table 1.

**Table 1.** The Numbers belonging to Turkey and Europe in eTwinning Portal

	Turkey	Europe
Number of Registered Schools	49.241	205.126
Number of Registered Teachers	214.305	800.250
Number of Registered Projects	39.465	332.248

It has been found in the form of studies In the literature research about eTwinning Projects implemented by more than 800 thousand teachers in 44 countries around the world; Reflections and effects of eTwinning and eTwinning (Gülner & Yatağan, 2014, Gülner, 2015, Akdemir, 2017) eTwinning and technology integration (Bozdağ, 2017), eTwinning's cultural dimension and disciplinary research (Yılmaz Altun Yılmaz, 2012), Basing eTwinning on educational opportunities for students and teachers (Fat, 2012; Scott, 2009; Gilleran,2007; Gajek ve Poszytek, 2009; Bacescu, 2016, Gajek, 2018), teachers' perceptions of eTwinning (Prieto & Escobar, 2017; Akdemir, 2017, Crişan, 2013, Holmes & Sime, 2012), key competences in international projects in the eTwinning Program (Gajek, 2009) eTwinning in language learning: perspectives of successful teachers (Akdemir,2017), multidimensional foreign language training: an example of an eTwinning Project (Demir, 2019) , eTwinning proje uygulamalarının öğrencilerin yabancı dil becerileri ile öğretmenlik mesleki gelişimine katkısı (Akıncı, 2018) birincil sınıf ortamında küçük ortak çalışma grupları için bir eTwinning projesine katılmanın avantajlarını keşfetmek (Kane, 2011). It has been found in the studies that the eTwinning Projects are not directly focused on the effects of teachers' professional development.

The main purpose of this research is to answer the question of Does eTwinning project work, implementation in their classrooms by teachers with different working hours at different school levels, in different branches, contribute to the professional development of teachers?

## Method

### *Research Pattern*

In this research, qualitative research method, which examines the views of teachers from various branches who took part in eTwinning project activities, was used. Qualitative research is the study of realistically and completely revealing the phenomena and perceptions in which qualitative data collection methods such as interview, observation and document analysis are used (Yıldırım & Şimşek, 2011).

Since in-depth interviews were made with 24 teachers from different branches about eTwinning projects through semi-structured interviews, the design of the research was determined as a

case study. Case study, which is one of the qualitative research approaches, is a method that makes use of many data collection tools to carry out the study in detail and allows scientific inferences about the data obtained by examining the study in detail and in depth (Cresswell, 2012; Woodside, 2010; Yin, 2003). The situation examined in the research is the examination of the reflection of eTwinning projects on the professional development of teachers.

### *Study group*

The research was carried out with 24 teachers in the branches of English, Primary school, Preschool, Mathematics, Turkish, Physics and Turkish Language and Literature who work in various provinces of Turkey In the 2019-2020 Academic year.

Participants were determined according to the voluntary principle and appropriate sampling from non-random sampling methods. This sampling method gives the researcher practicality and speed. In addition, it has advantages such as providing easy accessibility, determining the participants in the close circle, saving time and being economical (Miles & Huberman, 1994; Yıldırım & Şimşek, 2011).

In the study, the names of the teachers who participated in the study were not used depending on the ethical principle. According to their branches, teachers, English teachers E1, E2... E13, Primary School Teachers PS1, PS2... PS5, Kindergarden Teachers K1, K2, K3, Turkish Language Teachers T1, Turkish Language and Literature teachers TL1 and Physics teachers P 1. The demographic information of the participants is presented in Table 3. The detailed distribution number of the participants according to their branches and the levels they worked is shown in Table 4.

**Table 2:** Demographic information of the participants

Participant	Gender		Grade	Branch
	Female	Male		
E1	+		High School	English
E2	+		High School	English
E3		+	High School	English
E4	+		Secondary School	English
E5	+		Secondary School	English
E6	+		Primary School	English
E7	+		High School	English
E8	+		High School	English
E9	+		High School	English
E10	+		Secondary School	English
E11		+	High School	English
E12	+		Primary School	English
E13	+		Secondary School	English
PS1	+		Primary School	Primary School Teacher
PS2	+		Primary School	Primary School Teacher
PS3		+	Primary School	Primary School Teacher
PS4	+		Primary School	Primary School Teacher
PS5	+		Primary School	Primary School Teacher
K1	+		Kinder garten	Kinder garten Teacher
K2	+		Kinder garten	Kinder garten Teacher
K3	+		Kinder garten	Kinder garten Teacher
T1	+		Secondary School	Turkish Language
TL1	+		High School	Turkish language and Literature
P1	+		High School	Physics

As Table 2 is examined, it is seen that most of the participants (13 people) are teachers from the English branch. The numbers regarding the branches and school levels of the teachers who participated in the study are summarized in Table 3.

**Table 3.** School grade of the participants and the total number of branches

Branches of Participants	School Grade			
	Kidergarten	Primary School	Secondary School	High School
English Teacher	-	2	4	7
Primary School Teacher	-	5	-	-
Kindergarten Teacher	3	-	-	-
Turkish Language Teacher	-	-	1	-
Turkish Language and Literature	-	-	-	1
Physics Teacher	-	-	-	1
<b>Total:</b>				24

#### **Data Collection Process**

For the implementation of the research, firstly, teachers who took part in eTwinning projects were contacted and an informative study was carried out about the purpose, application and duration of the research. Semi-structured interview technique was used to collect research data. The low number of participants and the sincere ability of the participant to convey their thoughts in the practice were effective in choosing this type of interview. Research data were collected at scheduled times between 01.03.2020 - 10.03.2020. The participants who took part in eTwinning projects were interviewed, which lasted about 30 minutes, by asking research questions prepared previously. Participants were given the opportunity to examine their answers later. The application took place in a single session for each participant.

#### **Data Collection Tool**

The data of the study were obtained by applying five open-ended questions in order to find the reflection of teachers' professional skills through eTwinning projects. These questions are ;

- What are the views on the eTwinning project?
- What are the challenges and solution suggestions encountered during the eTwinning project implementation phase?
- What are the skills eTwinning project applications bring to students?
- What professional skills did they gain in the eTwinning project implementation process?

The reflection and working time of eTwinning projects on teachers form the basis of five questions. It was applied by researchers to 24 experienced teachers who worked in eTwinning projects for at least one year, selected from different branches, who took part in eTwinning projects. The data collection tool was created by taking the opinions of the teachers who took part in the literature review and the eTwinning projects that have been working in the field for more than 10 years. This question was asked to three researchers who experts in the field are, and the interview questions to be made necessary arrangements were finalized.

#### **Data analysis**

Descriptive and content analysis were used in the analysis of the data obtained. The data collected through the semi-structured interview was translated into text in electronic environment and re-read and the data that did not fall into the research problem was removed and the data was reduced. The raw data obtained were analyzed at different times by the researchers and an independent researcher. Different themes and codes were created in line with this analysis. The researchers, who came together at different times, compared the analysis they had done, and determined the points that were reached and not reached. The researchers used the formula developed by Miles and Huberman (1994) in finalizing their analysis ( $\text{Reliability} = \frac{\text{Consensus}}{\text{Consensus} + \text{Disagreement}}$ ). The

consistency reliability among researchers was found to be 0.84. This reliability value is considered acceptable for scientific studies. (Miles & Huberman, 1994). While one of the researchers teaches qualitative data analysis in the field of Educational Sciences, the other researchers are graduate students who took qualitative data courses. The independent researcher involved in the analysis of the data has many qualitative studies. It can be said that the fact that the researchers who analyze the data are experienced in qualitative studies directly increases the reliability of this study. The themes and codes obtained from the analysis of the data are tabulated to facilitate the understanding of the readers. The responses given by the participant for each question were made into tables, allowing the reader to see easily.

#### *Validity and Reliability of the Study*

Validity and reliability of qualitative research; It is provided with the concepts of being credible, transferable, consistent, and verifiable (Denzin & Lincon, 1994). To make the study believable, expert opinion and researcher triangulation were used in project-based teaching. Researcher triangulation is the involvement of more than one researcher in the collection, analysis, and interpretation of data. (Merriam, 2013; Yıldırım & Şimşek, 2011) Opinions of different researchers were also taken in the evaluation of the study data. In addition, the data were analyzed by researchers who took part in eTwinning projects and had qualitative approach. To increase the reliability of the study, the participants were chosen from volunteer teachers. For the verification of the research, the raw data, findings, comments, and suggestions were recorded and the said documents were re-examined by the participants. To ensure the validity of the research, techniques such as participant confirmation, researcher trilogy, detailed introduction of the participants and avoiding the prejudices of the researcher were used.

### **Findings**

In this section, the answers given by the participants to the questions to determine the effect of eTwinning projects on the professional development of teachers were analyzed. The findings from the semi-structured interview will be given in line with the purpose of the research.

“What does eTwinning mean to you? ” The themes created in line with the answers received from the participants to the question are given in Table 4.

**Table 4.** Teacher’s Views on eTwinning Practice

<b>Definition</b>	<b>Frequency</b>
Cooperation	11
Sharing	9
Technological development	8
Innovation	8
Communication	5
Friendship	3
Creativity	3
Productivity	2
Development	2
Sacrifice	1
Money	1
Happiness / Excitement / Motivation	1
Active Participation	1
Success	1
Project	1
Learning by Fun / Learning / Teaching	1
Activity	1

As seen in Table 4, the participants expressed the concepts expressed in themselves by eTwinning projects: “Cooperation, sharing, technological development, innovation, communication,

friendship, creativity, productivity, development, sacrifice, money, happiness, excitement, motivation, active participation, success, project, learning by fun, learning, teaching, activity”.

What do you think of the eTwinning project activity?” with the question, the opinions of the participants about eTwinning projects are given in Table 5.

**Table 5.** Opinions of Participants on eTwinning activity

Theme	Code	Frequency
Teacher Perspective	Providing Professional development	8
	Professional creativity	3
	Increasing professional sharing	2
	International information sharing	2
	Technology usage improvement	1
	Improved ability to collaborate	1
	Gaining the skill of thinking	1
	Increasing motivation	1
	Providing opportunities	1
	Ensuring success	1
Student Perspective	Provide creativity	2
	Give self confidence	1
	Increasing academic success	1
	Permanent learning	1
	Contribution to sensory intelligence	1
In terms of Process	Ensuring active participation	1
	Sharing	3
	Learning by doing	2
	Providing environments that bring teachers together	1
	Providing rich educational environments	1
	Reinforcing friendship / love concepts	1
	Professional Sharing Globally	1

When examined Table 5., it is seen that participants express the eTwinning activities as “Providing professional development, professional creativity, increasing professional sharing, international knowledge sharing, development in technology usage, development in cooperation skills, gaining thinking skills, increasing motivation, providing opportunities, achieving success, providing creativity, giving self-confidence, increasing academic achievement, permanent learning, contribution to sensory intelligence, active participation, sharing, learning by doing, learning by doing, providing environments that bring teachers together, providing rich educational environments, reinforcing the concepts of friendship / love, professionally global sharing ”.

Most teachers participating in the research express their views that eTwinning projects provide teachers with professional development and increase professional sharing. In addition, it was stated that eTwinning projects increased the teacher motivation with the knowledge and skills acquired by the teacher during the projects they participated in and made the teaching learning process more efficient with the work they did with students using Web 2.0 tools they learned. Making collaborative work with teachers from different country of Europe and different cities of Turkey on eTwinning Portal is considered beneficial in terms of sharing of information and experience. It was emphasized that eTwinning projects give the student self-confidence by ensuring active participation in the lesson. It can be said that the educational environments are enriched with the applied innovative activities, the rich environments are provided that contribute to the development of the creativity of the students, and thanks to the Web 2.0 tools used, the students' involvement in the process by doing and living provides permanent learning, and thanks to collaborative work with group and team activities, this process reflects positively on their academic success. In terms of the process, eTwinning Projects offer teachers collaborative working environments, with the project partner teachers coming together through webinars and face-to-face interviews. In terms of the process, eTwinning Projects offer teachers collaborative working environments, with the project partner teachers coming together through webinars and face-to-face interviews. The expressions that the sharings and studies in this

process reinforce the feelings of friendship and love were used. It is seen that eTwinning Projects offer opportunities to increase the competence of teachers by sharing their knowledge and experiences and exchanging ideas. "What do you think about the eTwinning activity?" When the answers given by the participants to the question are examined, these are clearly seen.

The quotations regarding the answers given by the participants are as follows.

E1. *"It is a platform that significantly contributes to the professional development of teachers and to students' academic success and emotional intelligence."*

E2. *"It is very beneficial for the professional development of teachers; it is a great blessing for the development of creativity and self-confidence for our students."*

E3. *"eTwinning activities have a wide range of activities that save schools from monotony, bring color to schools, provide permanent learning by keeping students more active in the educational process, increase cooperation and learning among teachers, and help us gain innovative and technological equipment. I can call it learning by doing, in a way. "*

PS1. *"eTwinning has always made me happy. Friendship, love, sometimes a medicine, sometimes sharing emotions, sometimes crying at the same thing, sometimes being annoyed at the same thing, sometimes entering a friend's webinar using the same link, is to be the same, to be one, to be united. "*

E4. *"It helped me a lot, especially in terms of using technology. It is also great to follow my colleagues about the methods and techniques of similar issues in my country and even in the world. "*

E5. *"I think it is a platform that enables teachers to get out of their cocoons. While there is limited interaction in the local area of study, with etwinning you are communicating with a teacher from another part of the world, only for educational purposes."*

E6. *"eTwinning is a great platform for teachers to improve themselves, to enrich the educational environment, to maximize the activities that students take part in by doing and living, and for the teacher to guide other teachers as the leader teacher."*

PS2. *"You can see the work of many teachers in the virtual environment, and you can share knowledge, experience and experience at zero cost. There is no shortage of time and space. Whenever you want, I can access all the activities from wherever you want. It is an activity that I find very useful."*

TL1. *"The projects that can be applied to all branches and involve students in more projects are among the activities we do not want to end."*

When the answers given by the participants are examined, it can be said that eTwinning projects contribute to the professional development of teachers. eTwinning projects make the learning-teaching processes more active in their educational lives, and the communication between teachers and other teachers working in different countries provides an opportunity to share knowledge and experience. This situation increases the motivation of teachers and provides their professional development. eTwinning Projects include processes that develop teachers' creativity by acquiring different perspectives. The widespread use of information communication technologies has both increased their knowledge and skills in this field and provided rich learning environments. It has laid the groundwork for performing rich activities in the classroom and the application of different methods and techniques. eTwinning projects affect teachers affectively and enable them to exhibit more positive attitudes towards their profession.

"What are the difficulties you faced while implementing the eTwinning project, how do you solve these difficulties?" The difficulties faced by the participants in their eTwinning projects and their solution suggestions are given in Table 6.



**Table 6.** Difficulties Encountered by Participants in eTwinning Projects and Views on Solution Suggestions

Theme	Code	Frequenc
Difficulties	Inability to get along with partners	6
	Young age insufficient use of technology	2
	Students' environment time constraints	2
	Internet outages	2
	Lack of motivation of the student	1
	Financial project choice of students	1
	Procedure difficulties	1
	Web 2.0 inability to use	1
	No parent involvement	1
Solution proposals	Providing parent support	2
	Being meticulous in choosing a partner	1
	By alerting partners to the problem	1
	By making use of free time	1
	Using personal internet	1
	Students doing activities at home	1
	With help from my colleagues	1
	With help from my coordinator	1
	Improving myself	1

When Table 6. is examined, there are participants' opinions about the difficulties they faced during the eTwinning projects process and how they solved these difficulties.

Participants experienced difficulties during the project process “*Expressions such as not being able to agree with partners, insufficient use of technology at younger ages, students' environment time constraints, internet interruptions, student not being motivated, students' financial project preference, procedural difficulties, inadequate use of web 2.0, lack of parent involvement were used. In terms of finding solutions to the difficulties faced, they express "providing parent support, being meticulous in choosing a partner, warning partners about the relevant problem, using free time, using personal internet, students doing activities at home, getting help from my colleagues, getting help from my coordinator, improving myself"*. As a result of interviews with teachers, it can be said that some problems are frequently experienced. It follows that the problems experienced in eTwinning projects are not related to the content of the application. It is seen that the most common difficulty experienced by the participants is not getting along with the partners. For the solution of this problem, it was stated that the participants selected the partners because of meticulous studies and warned at the beginning of the project about the problems they may encounter during the process. Insufficient use of technology in younger age groups causes the project process to be tiring and often difficult. Teachers generally stated that they had difficulties in connection to the internet. Inadequate technological infrastructure in some schools may cause disruptions in the implementation of project activities. Teachers try to find a solution to this situation with their own means such as personal use. Lack of parent support for the project process is among the mentioned difficulties. It is also seen among the difficulties that students prefer projects with financial returns. As a solution proposal, the project, which received a certain score because of the evaluation made in the eTwinning Project due to the 30th anniversary of the ErasmusPlus Projects, was provided with grant support to its teachers and students and the chance to visit their partners abroad. It was stated that such grant support and the resulting overseas mobility will motivate students towards eTwinning projects. During the realization of project activities, space and time related problems may occur. In the interviews, some teachers added that the point of view of the school administrators to the project could put pressure on the project implementation process. It is seen that they try to overcome some of the difficulties they encounter with the help of their colleagues and the provincial coordinator.

Researcher: The answers of the participants to the question "What are the difficulties you encountered while implementing the eTwinning project, how do you solve these difficulties?" Are as follows:

E1. *"Sometimes we encounter difficult partners, and when we are patient, we win the person, even at the end of the project."*

E2. *“Actually, I don't have much of a challenge but sometimes I have a hard time when there are European partners who are not working. I try to choose partners very carefully.”*

E3. *“Bringing students together, time constraints (8 hours lesson) and providing materials for activities. I take care of my own means (by dividing students into groups and studying at different times; by coming together in my free lessons, at lunch breaks; without burdening anyone as much as I can for the materials we will use for activities).”*

PS1 *“Using technology with younger age group students. I overcame this difficulty with the support of parents.”*

E4 *“My problem is not caused by eTwinning. My school is in a disadvantaged area and almost nobody has the internet. That is why I have a lot of difficulty while doing the activities. I try to find methods and find solutions in my own way. Like having activities done on my phone from my own computer, talking to parents who have a few opportunities and convincing them to provide internet.”*

PS 5 *“It is a bit tiring as I prepare many things because of my age group. It is necessary to spare a lot of time to prepare the activities with their materials at the appropriate time and to upload them to the Twinspace page. What do I do? Sometimes I get support from my parents.”*

E6 *“The technological infrastructure at the school where I work was weak. There was no ICT class. Students with laptops at home were bringing them to school and learning some applications in groups at school. I was unable to attend eTwinning online video conferences. It was not opening all the videos on the internet connection. I was downloading the videos that could not be opened at home and had them watch at school through a projector.*

E2 *“Keeping students motivated. (I give the key rings, notebooks, pens, whatever good works I bought from abroad as a reward to students, sometimes I order chocolate or food as a reward, I do not want to do the work for the grade, I can only do this). 2- Students such as Erasmus, TÜBİTAK, Google ScienceFair They prefer to take part in projects with financial support. 3- I take part in the project school and students come to the school by shuttle service. When there are groups of students from different classes, it is only possible for the students to work during the lunch break. Those who stay in the hostel cannot participate in the studies because they do not want to miss their lunch. 4- My school is behind the construction of the City Hospital, and problems can occur on the internet, so students may have to do most of the activities at home. 5- Partners who do not do their duties (I stay away from those partners in the next project)*

E7. *“Think of a game, each level is difficult, each level gets harder as you go. Sometimes you are on fire. Sometimes you do not have the right to play. But most of the stages are very exciting, very beautiful. You come to play as you play. The best part of the eTwinning project is solving these challenges.”*

As can be understood from the answers given by the participants, the problems encountered in eTwinning applications are varying. However, most of the participants did not point to the application as the source of the problems. Difficulties of working with different people may arise. Each participant solves his / her problem within their own means. It can be said that the positive attitudes of the participants towards the practice and the effort they make are in the right proportion.

“What skills do you think the eTwinning Project brings to students?” The question was asked to the participants as the 4th Question and the opinions of the participants are given in Table 7.

**Table 7.** Opinions Regarding What eTwinning Brings Students to Gain

Theme	Code	Frequency
Öğrenci Gelişimi	Technology Usage Skill Development	7
	Communication Skill Development	4
	Foreign Language Development	3
	Responsibility Awareness	3
	Creativity	3
	Thinking Skill	3
	Collaborate	3
	Gaining Self-Confidence	2
	Cooperative Learning	2
	Love / Sharing / Solidarity	1
	Problem Solving Skills	1
	21st Century Skills	1
	Being Open to Innovations	1
	Active Curiosity	1
	Presentation Skills	1
	Learning by Doing and Living	1
	ICT Usage	1
	Sense of Belonging	1
Producing Tangible Products	1	

As can be seen in Table 7, the participants will learn about the skills that eTwinning Projects give students: *“Development of technology use skills, development of communication skills, development of foreign language, development of responsibility awareness, creativity, thinking skills, cooperation, gaining self-confidence, cooperative learning, love / sharing / solidarity, problem solving skills, openness to innovations, active curiosity, presentation skills, learning by doing, using ICT, sense of belonging, making tangible products”*.

The researcher said, "What do you think are the skills the eTwinning project brings to the students? asked the question to the participants. It is stated that eTwinning projects provide rich learning environments thanks to the activities and provide students with various skills in the teacher learning process. It was emphasized that due to the activities carried out during the project process, students' technology use skills are developed by being intertwined with information technologies. It is stated that the technology literacy of students has improved thanks to the positive use of technology. It is suggested that providing students with opportunities to work sometimes in groups and sometimes as a team supports their gaining a sense of belonging and the development of affective skills such as love, respect, sharing and solidarity. It has been observed that communication is provided effectively, and students' communication skills are improved in classroom environments where learning is provided through collaborative work.

In addition, it is emphasized that eTwinning projects carried out with partners from Europe change students' foreign language prejudice and contribute to their ability to use foreign language. It is stated that students gain problem solving skills thanks to the activities during the project process, and their self-confidence is supported when they produce concrete products. The project activities are interpreted positively by the teachers as they are found to be functional in terms of preparing students for life, because of which they have gained 21st century skills and thus, the students achieve permanent learning. Below are quotations from the participants that support these inferences.

E1. *“Using technology in a positive way, producing concrete products, working as a team, providing self-expression skills.*

E2. *“It stimulates feelings of Curiosity. It makes it more open to innovations. Their skills in using technology are improving. With the projects, behavioral gain occurs. Creative thinking skills improve. ”*

E3. *“Most importantly, they learn to solve problems and thus prepare for life. Apart from that, they develop 21st century skills, become individuals who research, interpret, create products using*

*digital and communication skills and share it with their friends, teachers and other people. They use the knowledge and skills they have learned as actively as possible in their future lives. "*

PS 1 *"A sense of responsibility for research, collaborative work, completing a job left unfinished, asking questions"*

E4: *"Cooperative learning, sense of sharing, taking responsibility, technological skills, development of self-confidence"*

E5: *"They especially learn to use the foreign language (English) without fear. Computer skills are improving. "*

E6: *"Planning skill is the most important. The focus of today's children is on generating ideas and having fun. ETwinning project that highlights results-oriented thinking skills and planning skills. "*

PS2: *"From my point of view, we prepare our project activities one-on-one with my students, it does not need to be magnificent, the sense of research, cooperation, creativity, listening and comprehension and self-expression skills will improve."*

E7: *"Since I am a pre-school teacher, it has an indirect effect not directly but, in this branch, where the role of the teacher is very important. The self-improving teacher already paves the way for the development of the student. "*

Ensuring active participation in the educational environment is of course possible with the activation of the student's curiosity. It can be said that eTwinning projects positively affect the student in this respect. As a matter of fact, the opinions received from the participants confirm this. The curiosity of the students and their active participation enabled the development of various skills. The fact that the students were active in the process was effective in transforming the knowledge learned into practice through meaningful learning.

"What professional skills do you think you have acquired or developed during your eTwinning Project implementation?" The last question of the research was asked to the participants. The opinions of the participants on this issue are given in Table 8.

**Table 8.** Views Regarding What eTwinning Projects Bring Teachers

Theme	Code	Frequency
Öğretmen Mesleki Gelişim	Technology Skill	16
	Professional Development	5
	Quality Lesson Process	5
	Using Different Methods and Techniques	4
	Literacy Skills	4
	Effective Use of Educational Technologies	3
	Foreign Language Skill	2
	ICT Skill	2
	Plan Development	2
	Creativity	2
	Time Management	1
	Crisis Management	1
	Problem Solving Skill	1
	Active Learning	1
	Personal Development	1
	Development of Collaborative Skills	1
	Working with the Team	1

Participants' views on what eTwinning practice has brought to teachers are given in Table 8. In the answers given, the participants stated that *"technology skills, professional development, quality course process, using method techniques, literacy skills, effective use of educational technologies, foreign language skills, ICT skills, plan development, creativity, time management, crisis management, problem solving skills, active learning, personal development, cooperation, working with a team"*.

It is stated that eTwinning projects have a positive effect on teachers' professional skills. Teachers state that they find eTwinning projects useful, especially in terms of using technology and integrating technology into the lesson, as they share activities through the portal. The development of technology skills broadens the teacher's perspective on education and the educational process, thus providing students with an active teaching learning environment. Supporting personal and professional development provides an increase in teacher self-confidence. It is stated that project planning and implementation processes improve teachers' time management and planning competencies. Participants used expressions that eTwinning projects *"saved the lesson from monotony"*. Projects: It was stated that as a result of increasing teacher motivation, quality teaching learning processes are provided and as a result, active participation of students in the lesson is supported and efficient teaching process is supported. It was stated that the projects increase the sharing of knowledge by providing a professional communication environment between teachers, provide professional equipment for teachers, and make it easier to follow professional innovations. Thanks to the communication established with the partners in the project process, it was observed that foreign language skills improved.

Participants' views on the subject are as follows:

E1. *"We can say that technological skills have developed in this process where all fields including education evolve into technological developments and innovations. The eTwinning project creates a desire for the teacher to plan the future. It guides the classroom management and keeps teaching methods and techniques alive. It provides the opportunity to make good use of class time and gain a lot in a short time and at the same time. The anxiety that may occur in the teacher is decreasing. The teacher is not lecturing monotonously and stays alive. With project-based learning, the active participation of students in the classroom, which is 'students are the basis of the implementation of etwinning projects', which provides classroom discipline and creates a vibrant classroom environment. Active classroom environments have a positive effect on teachers' motivation. Professional deformation is decreasing. "*

E2. *"I think there is a serious improvement in my ability to integrate technology with my lessons. I can say that I learned a lot about applying different methods and techniques from my colleagues on the eTwinning portal and this reflected positively in my lessons. I can follow the innovations in my field more. I feel better equipped in terms of professional development. "*

E3: *"I got closer with technology. It allowed me to see what I was missing and improve them. Seeing different applications broadened my perspective on education. And most importantly, it was instrumental in learning the intricacies of teamwork. "*

PS1: *"It has increased professional motivation a lot. His teaching prevented him from being an ordinary and routine profession. Learning new things constantly made me happy. Technologically I found myself very inadequate but with eTwinning I got over it. I have learned to use many applications and web tools. What I learned was sometimes from colleagues, sometimes through research and sometimes trial and error. I was not unhappy in case of a problem. In fact, I would be happy and motivated because every problem taught something new. "*

E4: *"I have learned many things online or online for free etwinning and using them while practicing my profession saves me on everything. Especially using technology effectively in lessons makes a difference. My students' interest in the lesson is increasing. I believe I can teach more effectively and efficiently. "*

E5: *"I think I have improved myself more in literacy skills, information literacy, media literacy, technology literacy in this process."*

E6: *"I learned to use web2.0 tools, which I looked at without understanding anything from the outside, astonished the people who did, and made me think whether I am a teacher next to them and put me into depression. Now I can work wonders and make them say no more. "*

PS2: *"I have especially improved in digital competences and language development."*

E7: *"I got to know many of them with eTwinning while I had no idea about web tools."*

As can be seen from the answers given by the participants, eTwinning applications offer professional development opportunities for teachers. The eTwinning project makes great contributions to teachers in terms of integrating technology into education life and developing different method techniques.

Also, in the research, it has been asked that "What are your opinions and suggestions about eTwinning?"

Participants made their views and suggestions about eTwinning projects as "teaching is a journey, indispensable processes are experienced, not a project but a kindness movement, a different perspective on technology, the teacher candidates should increase their readiness by taking part in the project during the internship period, if there will be studies that will support mobility such as Move2Learn Learn2Move. I think students can take part in projects in a more motivated way".

It can be said that the participants have developed different perspectives with their eTwinning projects. Participants' emphasis on the practice that every teacher of all disciplines and levels should participate in is interpreted as functional eTwinning projects. It has been stated that the project's support to the budget and ensuring foreign mobility will be more effective in the applicability of the project. The participants are of the opinion that teachers' meeting during the internship period and taking part in eTwinning projects during the education process will increase their positive readiness. The quotations regarding these views of the participants are given below.

E1: *"Teaching is a journey. Making projects and actively participating in projects are the details that add color to the landscape of this journey. Therefore, our journey passes on patterned roads with lush trees, colorful flowers and butterflies. Because we are the travelers of the colorful world of eTwinning, we are eTwinners."*

E2: *"People who do eTwinning projects are not normal people. Every year is enough now, I am very tired, but the next year they start new projects with sleepless nights, meetings held without lunch at school, gifts bought to motivate students with money spent out of pocket. "*

E3: *"We learned that technology is not just about reading newspapers or watching videos."*

PS1: *"Teachers from all disciplines and at all levels must be active in the eTwinning virtual environment while doing their profession. In the internship training of the teaching departments of universities, every trainee should definitely organize a short eTwinning activity. When starting the profession, the readiness of teaching should be increased. "*

E4: *"I think that if there were activities to support the mobility like Move2Learn Learn2Move, the students could take part in the projects in a more motivated way."*

E5: *"It is very important that the projects are made to cover every branch."*

E6: *"Twirus, the most beautiful virus in the world, I wish everyone would be infected. eTwinning is not just a project portal, it's a kindness movement. It's as if all the good and helpful people are gathered here. May your success always be, Teacher Zehra "*

Based on the information received from the participants, it is concluded that eTwinning projects are adopted by teachers. As positive reflections of the process, it is stated that active participation colors the process and teachers want to take part in new projects even if they are tired. The eTwinning activity can be carried out by teachers from all levels and branches of education. The desire to make eTwinning projects is likened to a contagious virus, and it is stated that it is very important for teachers to be exposed to this situation.

## Discussion, Conclusion and Suggestions

eTwinning aims to provide opportunities for collaborative work and communication between schools in European countries using Information and Communication Technologies. Also, eTwinning projects include processes that support schools' cooperation in education by establishing national and international partnerships. In this context, in this study, it has been investigated whether the implementation of eTwinning project studies in their classrooms by teachers at different school levels, in different branches and with different working hours influences teachers' professional development.

It is seen that eTwinning projects provide rich learning environments in educational activities. Teachers see the application as beneficial for their professional development. The research shows that teachers experience affectively positive processes and increase their motivation with eTwinning projects. This situation is very important in terms of the quality of education (Güzel, Özdöl & İmran, 2010). Another issue addressed in the expressions of the teachers is the view that bringing mobility abroad by supporting the project with a budget will provide more motivation for the applicability of the project. As a matter of fact, another finding we obtained is that students prefer financially supported projects supports this view. Teachers' sharing of their experiences with their colleagues in their educational lives contributes to their professional development (Bozak, Yıldırım, & Demirtaş, 2011). Studies show that professional development positively contributes to the student's understanding of information (İlğan, 2013). Effective use of technology in eTwinning projects, teachers' finding an environment to share knowledge and experience on an international platform shows that the application is functional. Teachers who are inexperienced in the use of information and communication technologies with their eTwinning projects emphasized that their technology use skills developed with the project (Bozdağ, 2017). The provision of computer-aided environments has provided the opportunity to exchange information on a global scale. As a matter of fact, eTwinning projects are also considered as a collaboration practice by providing intercultural sharing (Yılmaz, 2012). Collaborating in achieving common goals has increased the efficiency of the participants and improved their collaboration skills. When the literature is examined, it is seen that the projects carried out with school partnerships contribute to a wide range of areas such as communication, language skills, motivation, project cycle management, collaboration, and professional development in the education processes of teachers and students (Kesik & Balcı, 2016). In line with the answers given by the participants, eTwinning projects are seen to add qualifications to teachers in the process of their educational experiences in the fields of "providing professional development, professional creativity, increasing professional sharing, international knowledge sharing, development in technology use, development in cooperation skills, gaining thinking skills, increasing motivation". During the implementation of eTwinning projects, teachers' opinions were taken on the difficulties they faced and the solutions they developed to these difficulties. Teachers do not think that the difficulties experienced are related to the content of eTwinning projects. In line with the answers given, it is seen that there are difficulties because the duties and responsibilities are not fulfilled by the partners during the project process. The participants state that they solved this problem by being meticulous in choosing a partner. This meticulousness is expressed as taking care to work with partners who have project experience during the project partner selection process. It is emphasized that the approaches of the partners involved in the project, having the same level of interest, lead to motivational processes, while otherwise the practice is perceived as fatigue-inducing for teachers (Akıncı 2018). In similar studies, the condition of achieving success is stated as the stakeholders in the project acting in accordance with the objectives determined (Akıncı, Kurtoğlu, & Şerefoğlu, 2012). The difficulties experienced with the use of technology within the scope of the research can be evaluated in three dimensions as the lack of technology use skills of young age group Students, the deficiencies in the use of Web 2.0 tools of the teacher and the lack of technology infrastructure. Developments in technology enable teachers to use technology effectively in educational environments.

In the study, the inadequacy of technology use skills of younger age group students was emphasized. Participants found a solution to this problem by providing parents' support. Studies show that while emphasizing the role of the teacher in the use of technology in school environments, family participation also affects the use of technology by younger age group students. The field emphasizes that young age groups can be supported by cognitive, technical, and affective guidance processes

aimed at supporting technology competence (Işıkoğlu-Erdoğan, 2015). It is seen as a positive approach for teachers to apply for parent support. Teachers note that they receive help from their colleagues at the stage of solving problems caused by their inability to use web 2.0 tools during the project process. Studies show that teachers' help from their colleagues while solving the problems they encounter during the project process contributes to the professional development of both themselves and their colleagues (Akıncı, 2018). Internet use is one of the fundamental building blocks of eTwinning projects. The problems of the teachers in the project in accessing the internet cause problems in the implementation process. In the analyzes made, teachers involved in the eTwinning project indicate that computer-aided education environments contribute to their technology use skills. It is stated in the literature that teachers have an advantage in terms of the development of technology skills when starting eTwinning projects. However, the lack of technological infrastructure of the school he is in can force the process. Eliminating the infrastructure deficiencies of the schools will enable the process to be more efficient (Bozdağ, 2017). The lack of internet infrastructure in schools is among the most common problems. Teachers solve the problems caused by the lack of internet infrastructure by personal internet use, parent support and project activities at home. In some studies, it is emphasized that the schools' internet infrastructure is inadequate and that there are problems in internet connections, causing problems in the project process (Bozdağ, 2017). In literature, it was stated that the infrastructure deficiencies of the schools in the integration of technology into the lesson were stated, and it was concluded that efficient processes could be achieved by making the relevant regulations (Şekerci, Bozkurt, & Arslan, 2015). The problems that have occurred also lead to the search for different solutions. eTwinning projects include processes that support students' educational lives. It is considered as a positive reflection of the project that teachers produce solutions through their own efforts without being intimidated against several difficulties experienced.

When the contribution of eTwinning projects to students is examined, it is seen that the most development is in the use of technology and communication skills. eTwinning projects are supported by research that contributes to the development of students' language skills. The project supports the student's foreign language development through practical methods (Bozdağ, 2017). In addition, research emphasizes that similar projects increase foreign language, digital skills, and professional competencies. It has also been stated that it contributes to the teacher in terms of better understanding of education and training policies (Hatisaru, 2017). According to the findings obtained by Akıncı (2018) in his study on the contribution of eTwinning project applications to the professional development of teaching students with foreign language skills, eTwinning applications can also provide communication to students, despite simple grammatical and vocabulary errors in foreign language development. eTwinning practices reinforced students' feelings of sharing and made positive contributions to their communication skills. In addition, the increase in students' curiosity about the course, the ability to solve the problems they face, and the ability to extract concrete products were also emphasized by the participants. Different research on the project also shows that the application has positive effects on the development of students' problem solving, socialization, active participation in the process and self-confidence (Yılmaz, 2012). eTwinning projects have developed a sense of responsibility in students. Cooperative learning environments increase the desire of the student to obtain information. Cooperative learning is small group work that enables students not only to learn themselves but also to learn from peers. It reinforces students' feelings of leadership, self-confidence and sharing as well as their academic life (Açıkgöz and Güngör 2006). In addition, with similar school partnership projects, it is observed that the creative thinking, communication, problem solving skills of students have improved. In addition, as it provides intercultural communication opportunities, it lays the groundwork for tolerant processes (Aydoğmuş & Sünbül, 2013). In this study, eTwinning projects showed improvements in students' solidarity and communication skills. Memişoğlu and Broutin (2018)'s study coincides with this finding. active participation of students in the implementation process of eTwinning projects has increased their academic self-sufficiency by supporting their self-confidence. eTwinning projects have given the student the opportunity to experience the processes in which he or she is active and not to be passive. As part of the research, students can communicate, problem solving, flexible thinking, creative thinking, such as 21<sup>st</sup> century skills also appear to be improving. Changing living conditions as a result of technological



developments make transformation mandatory in educational environments as well as in social life. Information and Communication Technologies contributes to student success with visual and audio activities in the education process (Şahin, 2019). The goals of education and training to increase the quality are to bring the education system to global standards (National Education Quality Framework, 2017). The fact that eTwinning projects provide students with environments that develop 21st century skills supports the goals of National Education. As a result, eTwinning projects have provided opportunities for students to develop their skills through more active lives in education. The student's multidimensional acquisition experiences color the educational environments.

In this study, the reflection of eTwinning projects on teacher achievements was discussed. Based on the responses given by the participants, it is seen that the gain achieved in the process is laying the groundwork for a new gain. As a matter of fact, the ability of the teacher to use technology in learning and teaching environments has enriched communication processes. Information and communication in the classroom environment using technology in the learning process makes it easier for the teacher to transfer more information in a short time. It also supports the teacher's use of different methods and techniques (Doğan, 2016). The ability of teachers to integrate Information and Communication Technologies into the lesson process and to use different materials enriches the course (Uğur, 2019). The use of technology in eTwinning projects is about teacher competence. The teacher's approach to integrate technology into the lesson is decisive (Bozdağ, 2017). The development of the teacher's knowledge and transmission technology use skills is the basis for success in the learning teaching process. Computer self-efficacy perception is the perception of evaluating an individual's skills in the use of Information and Communication Technologies. Studies show that the teacher's positive attitude towards the perception of using technology increases success in the learning process (Berkant, 2013). Academic self-efficacy is the ability to regulate the actions necessary for a person to achieve the level of education they are aiming for. Owned recursion is in parallel with the behavior that occurs. The positive development of a person's self-belief reinforces the sense of achievement by increasing their creativity. Self-efficacy perception makes the individual's learning experiences eager and increases professional literacy skills depending on the effort in activities (Tabanlı & Çelik, 2013). In this respect, the project improves the technology use skills of teachers and provides a positive change in their academic self-efficacy. On the other hand, it allows the teacher to develop different methods by exchanging professional information in virtual environments. eTwinning projects cooperate with partner schools in Europe by sharing information through information and communication technologies. While the constantly updated professional knowledge and skills of teachers provide convenience in the implementation process of the project, it also brings the advantage of following the age. Similar projects around the goals of eTwinning projects also show that it supports the professional development of teachers. Teachers and school administrators view the project positively (Yılmaz, 2019). In addition to eTwinning projects, it enables teachers to be aware of different approaches in other projects implemented in the learning-teaching process (Aydoğmuş & Sünbül, 2013). Teachers involved in the eTwinning project get the opportunity to observe the educational environments in different countries. In this respect, eTwinning projects prepare the ground for teachers to observe the cultural diversity in educational environments, to see different teaching practices and to develop innovative ideas at this point. eTwinning practices also improve the skills of teachers to produce alternative solutions to the problems they face. In line with the data obtained from the participants, it is seen that crisis and time management skills have also improved during the project implementation process. Time management is the ability to achieve maximum efficiency in a certain period (Demirtaş & Özer, 2007).

As this research has shown, eTwinning projects have the opportunity to be implemented in educational settings, which has enabled the professional development of the teachers involved in the project. In addition, we can say that it contributes positively to educational environments. The fact that the project supports professional development has made multi-dimensional contributions to educational experiences. Course environments in which both the teacher and the student are active provide a facilitating effect in achieving the purpose of education. eTwinning activities have been providing online support trainings for teachers to use technology correctly since 2015. Thus, it provides convenience to the teacher by integrating technology into education (Döğür, 2015). The active participation in the lesson was ensured by the teachers' benefiting from the opportunities

provided by the technological developments in the educational environments, by creating a sense of curiosity in the students. Active participation in the lesson develops students' thinking skills and gains different perspectives within the learning activity (Taş, 2005). Integration of Information and Communication Technologies into course environments has improved the technological skills of the teacher. Effective use of technology in eTwinning projects has increased the collaboration and sharing skills of teachers, providing collaboration between schools. In addition, the ability of the teacher to be in contact with his colleagues in different countries has kept the educational information up to date. The teachers taking part in the project have positive education processes with the project, the effective use of Information and Communication Technologies in the implementation phase of the eTwinning project has also highlighted the existing infrastructure deficiencies of the schools. The fact that teachers often mention such failures in practice illustrates the extent of the technological infrastructure shortcomings of schools. If we look at the positive contribution of the project in the educational environment, we can say that the project will be more efficient with the elimination of technological infrastructure deficiencies of schools.

Based on the results obtained, the following suggestions can be made.

- More teachers can be involved in eTwinning projects that have demonstrated beneficial aspects for teachers' professional development.
- Similarly, students can be supported actively to participate in eTwinning projects that are determined to support the development of students in many ways.
- Promotional activities can be organized to ensure the participation of more teachers in the eTwinning project activities.

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