



## WHAT REMAINS IN STUDENTS FROM AN eTWINNING PROJECT: THE CASE OF ŞEBİT PROJECT

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**Abstract:** The aim of this research is to find out how the eTwinning project prepared to prevent bread waste is evaluated from the students' perspective. The research was conducted within the scope of qualitative research. The research was carried out with 6th grade students consisting of six people who voluntarily participated in the eTwinning project. In line with the main purpose of the research, semi-structured interviews were conducted with the students at the end of the project and data were collected. The data obtained were subjected to content analysis, and codes and themes were created. At the end of the research, it was revealed that the students found the ŞEBİT eTwinning project educational, instructive and entertaining. In addition, it was determined that the project contributed to awareness of bread waste, learning web 2.0 tools, taking responsibility, teamwork and communication. In addition, it was determined that students had difficulties in using web 2.0 tools and time within the scope of the project. In line with the students' opinions, it is suggested that the eTwinning platform should be made more functional for both teachers and students within the scope of this research.

**Key words:** eTwinning, Bread waste, Project, Web 2.0 tools

### 1. Introduction

In the process following the industrial revolution, people's lifestyles have changed significantly. This change has taken place from a focus on production to a focus on uncontrolled consumption due to the excessive use of resources. When we look from the past to the present, while consumption was first a concept used to meet physiological needs, its area of use has expanded as a tool to achieve cultural, social and personal goals with the effect of technology (Taş, 2020). As a result of consumption behaviours that have expanded their area of use, many environmental impacts such as carbon dioxide emission, decrease in biodiversity, causing global warming, emergence of signs of scarcity in water and food, depletion of natural resources emerge, which causes negative effects on sustainability (Tekin, 2022). The habitualisation of excessive consumption (Süzer & Doğdubay, 2022), which is a natural element of the consumption society, brings along waste (Fidan, 2014). In ancient times, people needed food to sustain their lives, but today there is an abundance of food and people consume more than they need. Consumption of more food than needed leads to food waste today (Aksoy and Solunoğlu, 2015). Food waste, which is used in the sense of excessive consumption of food, is known as food wastefulness in its most basic meaning. According to the World Health Organisation 2014 report, 1.4 billion people experience health problems caused by being overweight every day, while about 1 billion people are in hunger distress and one of the main reasons for this is explained as food losses (Aksoy and Solunoğlu, 2015). Food waste reduction through prevention, resource recovery and valorization are recognized as critical measures to reduce the climate impact related to food (Bos-Brouwers, Burgos, Colin, & Graf, 2020). When bread wastage is considered as food loss, annual bread consumption per capita in the world is 180 kg in Egypt, 150 kg in Iran, 130 kg in Syria, 98 kg in Kuwait, 73 kg in Italy, 44 kg in Australia and 34 kg in the USA, while this value is 180-210 kg in Turkey (Ministry of Trade, 2018). According to the 'Turkey Waste Report' published by the T.R. Ministry of Commerce in 2018, approximately half of the people participating in the research (47.5%) stated that they finished the bread they bought and there was no bread or bread slice left, 40.8% stated

*Received February 2024.*

**Cite as:** Esen, H; & Öztuna Kaplan, A. (2024). What Remains in Students from an Etwinning Project: The Case of Şebit Project. *Acta Didactica Napocensia*, 17(1), 92-103, <https://doi.org/10.24193/adn.17.1.8>

that they utilised the rest of the bread they bought even if they could not finish all of it, and 11.7% stated that they tended to throw away the part they could not eat. When the data in the waste research published in 2017 was examined, it was observed that bread waste increased (Republic of Turkey Ministry of Trade, 2018). According to FAO, 1.3 billion tonnes of food with an economic value of 1 trillion US dollars is wasted in 1 year in our world. Even with the prevention of a quarter of the food loss and waste in the world, the food needs of 870 million people who are malnourished can be met, and approximately 40% of the food produced in developed countries such as the USA and Canada and 30% of the bread produced in the EU is wasted (Tepecik & Gümüş, 2017). Bread is one of the most frequently wasted food products in the European Union (EU) (Narisetty, Cox, Willoughby, Aktas, Tiwari, Matharu, Salonitis, & Kumar, 2021), and therefore the environmental impact of the bread supply chain is of great scientific interest.

With the effect of globalisation in the world, development and change have occurred in many fields in the second half of the 20th century. Another situation caused by the globalisation process, which has a great impact on the lives of individuals and societies, is global problems. Globalisation, which increases the interaction and communication between countries, causes the problems that countries experience within themselves or with each other to spread all over the world (Yazıcı, 2013). In order to eliminate global problems that increase with the effect of globalisation, all individuals of the world should develop awareness, consciousness, attitude and behaviour towards problems. It is a fact that active participation in the solution process cannot be ensured without gaining awareness, consciousness, attitude and behaviour regarding the causes, effects and possible consequences of global problems. Gaining the mentioned characteristics related to global problems is an issue that needs to be given utmost attention, and education is an effective method in gaining these characteristics (Durmuş & Çolak, 2021). It is known that human hands are largely responsible for the emergence and spread of the problems characterised as global problems and affecting the lives of living and non-living things. For this reason, people have a great role in solving the problems and everyone should do their part by putting their hands under the stone. At this point, it has become a necessity to raise individuals who can take action on behalf of humanity and produce solutions to global problems (Kan, 2009). In order for us and future generations to live in a healthier environment, it has gained great importance to raise individuals who are responsible and sensitive to the problems that exist today and may occur in the future (Kaya, 2014). It is possible to raise people's awareness about wastage and its damages and to show high level attention to this issue through education. Education contributes to the growth and development of countries by providing individuals with good consumer behaviours (Akhan, 2015). In addition, education has a positive effect on household earnings and savings rates, which are important building blocks for the progress and development of the national economy (Kank & Temiz Dinç, 2017).

The field of education should introduce significant innovations and applications aimed at upgrading the educational work offered to students by educational institutions. To a large extent, these innovations have been supported by the high penetration of new technologies into school facilities. At this point, it is worth mentioning the existence of a number of technologies and applications that help learning through knowledge and skills formed by meeting new people and the acquisition of multiple skills through cultural exchange over the Internet (Zhang, Yang, Chang, & Chang, 2016). The differentiation in the structure and functions of educational institutions is caused by the fact that the field of education is significantly affected by technological developments and changes. Today, the increasing use of information and communication technologies in education and training activities is a proof of this situation (Pekdağ, 2005). At this point, eTwinning projects, which are thought to be effective in making sense of knowledge and provide students with opportunities to learn by doing and experiencing in schools, including the digital developments of our age, have gained importance. eTwinning is a digital platform that operates nationally and internationally, which enables all students and all teachers at pre-school, primary, secondary and high school levels to come together online, to carry out studies with a multidisciplinary approach in a digital environment, and is carried out by the Ministry of National Education YEGİTEK in our country and is used free of charge (Erasmus+, 2016).

eTwinning aims to develop new and innovative ways of using information and communication technologies (ICT) in European schools through schools promoting online collaboration between

students and teachers (Galvin, Gilleran, Hogenbirk, Hunya, Selinger, & Zeidler, 2006). Manfredini (2007) sees eTwinning as a concrete opportunity for teachers to improve their language skills, to learn new things about Europe and to have intercultural interaction with colleagues from other countries. Preschool, primary and secondary school teachers can participate in eTwinning to exchange and collaborate, learn ICT skills, communication skills, teaching skills and interdisciplinary working skills (e.g. 21st century skills) (Pham, Klamma, & Derntl, 2012). Fat (2012) stated that the aim of the eTwinning platform is not only to provide school twinning, but also to equip young people with technological skills and embrace intercultural diversity. In today's world where information and communication technologies (ICT) are developing very rapidly, the "eTwinning" education platform, which is a network-based learning environment, contributes to the integration of technology into education, and the web 2.0 tools that can be used within it can provide learning that will make the lessons interesting. Since "eTwinning" projects are a network-based learning environment, digital applications (web 2.0 tools) can provide our students with a learning by doing and experiencing environment. According to Parlak (2017), one of the most important achievements of the digital age is the "digital revolution in education". This 21st century digital revolution has a critical importance that will change the fate of all people. It is thought that accessing information will become more enjoyable in classrooms where digital technology is used. For example, thousands of students participate in the European Union's EU Code Week For All activities every year, and students process information on their favourite computers, using the numbers they learnt in mathematics lessons, and gain coding skills (codeweek.eu/training, 2021). As a result, eTwinning is a learning platform that provides qualities such as cooperation and communication in education, being aware of new technologies, using web 2.0 tools, recognising cultural awareness, and acquiring 21st century skills.

In this research, the data obtained from students about an eTwinning project called ŞEBİT, which aims to raise awareness of students about bread waste, were evaluated. The word "ŞEBİT", which gives its name to the project, is a type of bread specific to certain regions of Turkey. Şebit is a type of bread produced by kneading and resting water, salt and flour, then keeping large meringues, then rolling them out and baking them on the grate (Güleç, 2006). It is known that its waste is also at a significant level. In this context, the aim of this research is to reveal how the eTwinning project prepared to prevent bread waste is evaluated from the students' perspective. For this purpose, the problem statement of the research was determined as "How do students evaluate the ŞEBİT project for preventing bread waste carried out with 6th grade students on the eTwinning platform?"

## 2. Method

This research was conducted within the scope of qualitative research. Within the scope of this research, 11 semi-structured interview questions (see Appendix) were asked to the students who actively participated in the 'ŞEBİT' eTwinning project. If necessary, probing questions were also asked according to student responses. Within the scope of the research, interviews were preferred to reach accurate data and to collect data from primary sources in a sincere way. The interview with each student lasted approximately 30 minutes and the interviews were audio recorded. Then, the answers given by the students to the interview questions were subjected to content analysis and codes and themes were created.

### 2.1. Research Group

A total of 6 students (5 boys and 1 girl) attending a public school in Arifiye district of Sakarya province participated in this research, which was conducted in the 2nd semester of the 2021-2022 academic year. The students are studying in the 6th grade. The students are studying in the class where one of the researchers is a teacher. For this reason, it can be said that an easily accessible sampling type was also preferred in terms of practicality and speed for the researcher. With convenience sampling, advantages such as easy accessibility to the research group, identification of participants from the close environment, time saving and economy (Miles & Huberman, 1994; Yıldırım & Şimşek, 2011) were provided. However, not all students in the class participated in the Şebit Project. So criterion sampling was used when determining the students, and volunteers who had a computer or tablet and internet at home were enabled to participate in the project. The names of the students were

not used in the research and they were coded as S1, S2, S3, S4, S5, S6.

## 2. 2. Research Process

The "ŞEBİT" eTwinning project was carried out in the 2nd semester of the 2021-2022 academic year. The aim of the project and the work carried out within the scope of the project are given below:

**Aim of the Project:** The project is a social responsibility project to pay attention to the production and consumption of bread in Turkey and European countries, to raise awareness in healthy nutrition and to strengthen intercultural bonding by introducing bread varieties from different cultures. The main objectives of the project are to organise activities that support qualified and quality education activities of our children, to raise them as conscious individuals, to increase their social and cultural unity, to raise generations that share and produce in cooperation, to comprehend agricultural productivity and conscious consumption of food raw materials, to draw attention to the importance of healthy nutrition. The project also aims to prevent food waste and contribute to the "end hunger" studies from development plans. Students are expected to raise awareness about responsible production and consumption through these studies (Göksu et al., 2022).

**Participants of the project:** In the table below, information about the work carried out within the scope of the project, which lasted 4 months, is given. At the beginning of the project, the project calendar was announced and all participants (including different countries) had to do their work according to the calendar and upload it to the eTwinning portal. The links of the seminars were sent to the participants and participants from each country were ensured to attend.

**Table1.** Works carried out within the scope of the project

Sequence	Activities Carried out	Activities within the Scope of the Research	Date
1	Introducing the project to students and parents	Introducing the project purpose and content to students and parents. Obtaining parent permission documents.	07-11/02/2022
2	Making project poster	Students create posters for the project using the canva programme.	14-18/02/2022
3	Making project logo	Students create a logo for the project using the canva programme.	21-25/02/2022
4	Making project slogan	Students create slogans for the project using the canva programme.	01-04/03/2022
5	Healthy nutrition seminar	Students attend the online seminar via zoom programme.	22/03/2022
6	Organic agriculture seminar	Students attend the online seminar via zoom programme.	25/03/2022
7	Ramadan month activity	Students make a drawing on the theme of preventing waste on the theme of Ramadan.	04-08/04/2022
8	Bread waste awareness activity	Students making pastries with their families for awareness.	25-29/04/2022
9	Bread bakery visit	Bakery visit for students to see the bread making process.	12/05/2022
10	Evaluation of all studies	Evaluation of all the study done during the project process with the help of mozaically web 2 tool.	13/05/2022

1st activity:

The project was introduced to students and parents. Information was given about the purpose of the project and the work to be done. The presentation was carried out online with a zoom link and all members participating in the project were asked to participate.

2nd activity:

The poster of the project was prepared with the students. In this context, the canva application was introduced to the students. The students prepared a poster at home based on the issue of bread waste.

The students e-mailed the poster they prepared to their responsible teachers.

3rd activity:

The logo of the project was prepared with the students. Students prepared the logo with canva application. While preparing the logo, they were again asked to take the issue of bread waste as a basis. Students e-mailed the poster they prepared to their responsible teachers.

4th activity:

The slogan of the project was prepared with the students. In this context, tonytool application was introduced to the students. Students were asked to prepare the slogan with canva or tonytool application. While preparing the slogan, they were again asked to take the issue of bread waste as a basis. The students e-mailed the poster they prepared to their responsible teachers.

5th activity:

A seminar was organised at this stage. Assoc. Prof. Dr. Reci Meseri Dalak gave the seminar named healthy nutrition. The seminar was held online with zoom programme. Within the scope of the seminar, students were informed about healthy and conscious nutrition, food types, metabolism. The online seminar lasted approximately 1 hour and 15 minutes. After the expert's speech, the students asked questions to the expert about healthy and unhealthy foods, obesity and the expert answered the students' questions.

6th activity:

One more seminar was organised at this stage. Dr. Sabiha Ünal gave the seminar named organic agriculture. The seminar was held online and within the scope of the seminar, students were informed about organic agriculture, common diseases in primary education and healthy foods. The online seminar lasted approximately 1 hour and 10 minutes. After the expert's speech, students asked questions to the expert on topics such as the future of agriculture, vaccines, and the expert answered the students' questions.

7th activity:

In this activity, students did drawing and colouring work in order to raise awareness about preventing bread waste. Students were given bread, pita bread, bakery etc. templates and asked to colour them.

8th activity:

In this activity, students made pastries with their families at home. The aim of this activity was to make students understand the efforts made during the production of bread. The students sent the photographs of the activity to the responsible teacher.

9th activity:

Within the scope of this activity, a bread bakery near the school was visited with the students. The aim of this activity is to enable students to see the production process of bread on site. Within the scope of the trip, the students were informed about the production stages of bread, how many hours it takes to produce from beginning to end, at what temperature it is baked, the difficulties of bread production, what is in the bread, and how it is delivered to people.

10th activity:

At the end of the project process, all the work done with the students was discussed and their opinions about the project were taken. The photos shared by other participants through the Mozaically application were reviewed. The works of participants from different schools and countries were evaluated.

### **2. 3. Data Collection Tools**

Within the scope of the research, an 11-question form consisting of semi-structured questions was used as a data collection tool. The question form was developed by the researchers and examined by two experts in the field of science education for expert opinion. Afterwards, the researchers finalised

the form in line with the expert opinions and used it as a data collection tool. In the questions, students' opinions about the project were obtained.

### 3. Results

#### 3.1. Students' Opinions on the ŞEBİT Project

When the opinions of the students about the ŞEBİT Project and the activities carried out within the scope of the project were taken, it was seen that the opinions were generally grouped under two themes. These are,

- Being educational (S1, S2, S3, S4, S6)
- Being fun (S2, S3, S4)

The statements of S2 and S6 can be given as examples from the feedback about the project being educational teaching:

*"I learnt many new things. For example, we had a trip, I learnt how bread is made under very difficult conditions."* [S2]

*"ŞEBİT project taught us many things. We learnt not to waste, not to squander, economic dimensions."* [S6]

Students coded S2, S3, S4 stated that the project was fun as well as educational and instructive. S2 "...I had fun here.", S3 "It was very fun. I learnt many applications, we did activities." and S4 "It was enjoyable, it was fun."

When the students' opinions about the activities were evaluated, it was seen that all of them stated that they enjoyed the activities carried out within the scope of the project, especially the activities of "bread bakery trip, making pastry at home, poster and logo design in Canva" came to the fore. S6 stated that "All of the activities were very good, fun. Dough rolling, coloring etc. were entertaining and awareness raising. I liked it because there were different activities. There was no activity that I did not enjoy, they were all enjoyable." is an example of a positive opinion about the activities. The statement of S1 regarding the most popular bread bakery visit can be given as an example:

*"I liked the bread bakery visit the most. We went with our friends and saw the bread production process. It was a difficult process."* [S1]

The difficulties experienced by the students during the project process and their suggestions about the project were also evaluated. The findings obtained in this context are presented below.

Difficulties experienced in the project process: Three students (S1, S5, S6) stated that they did not encounter any difficulties in the project process. S6 expressed this idea with the sentences "I did not encounter any difficulty in the project. I did everything easily". The other three students (S2, S3, S4) mentioned that they had difficulties in some of the applications they made with web 2.0 tools. S2 also stated that he had problems with 'time': "I had difficulty with web 2.0 tools. I sometimes had trouble with time." The student coded S2 stated that he had difficulty in some activities (downloading photos from Google, Tonytool), while the student coded S3 stated that he was bored in the bitmoji activity.

Suggestions about the project: When the students were asked about their suggestions about the project, five students made suggestions and S4 did not make any suggestions. Suggestions were categorized under four headings. These are,

- Increasing the number of activities (S1, S2)
- Increasing trips (S2, S5)
- Use of more web 2.0 tools (S3, S5)
- Development of the eTwinning portal (S6)

The suggestions for increasing the activities and excursions to be carried out within the scope of the project were in the direction of S2's statement "It would be better if we had more activities and trips" is an example of the suggestions for increasing the activities and trips to be carried out within the

scope of the project. S5 stated that he demanded to learn more web 2.0 tools with the statement "It would be better if we learnt more applications", and S6 expressed his suggestion about the portal by saying "The chat part of the eTwinning portal should be developed a little more".

At the end of the project, when the students were asked whether they would like to participate in such an eTwinning project again, all students expressed that they would like to participate. The opinions of S2 and S3 on this subject explain the volunteerism of the students very well:

*"Yes, I would like to. Because we are in the same project with my friends, our teacher and people outside the school and this helps our solidarity. It is a very honouring thing."* [S2]

*"I would like to very much. I would like to learn a few more applications. If there is a project on a different subject, I would like to participate again. I would like to participate because our awareness has increased."* [S3]

### 3. 2. Contributions of the ŞEBİT Project

When the students' opinions on the contributions of the ŞEBİT Project were consulted, the coding showed that contributions were made in four dimensions. These are;

- Contribution to awareness (S1, S2, S3, S4, S5, S6)
- Contribution to learning web 2.0 tools (S1, S2, S3, S4, S5, S6)
- Contribution to taking responsibility (S1, S2, S3, S4, S5, S6)
- Contribution to teamwork and communication (S1, S2, S3, S4, S5, S6)

The contribution of the ŞEBİT Project to awareness: One of the most important contributions of the ŞEBİT Project was the development of students' awareness on waste. All of the students emphasised the importance of bread in our lives and stated that they became aware of bread waste. The statements of S3 and S6 can be given as examples in this dimension:

*"I learnt under what difficult conditions bread is produced, that bread is wasted in vain. That we should consume as much as necessary. Not to throw it away, to give it to animals if necessary. When we throw away bread, our money also goes to waste. This is harmful to the family economy. If a lot of bread is wasted, many people and animals go hungry. It is harmful to society."* [S3]

*"...I was a little less conscious before. Bread waste is harmful to both our family and our economy. Bread wastage is very harmful to society. It causes some people not to find bread. It causes animals to go hungry."* [S3]

Both students emphasised that they had become conscious about wasting bread and that wasting bread would negatively affect the economy of both their families and the society. There are similar expressions in the discourses of other students. S1 said "Bread waste is very harmful in Turkey and even in the whole world. I saw on a poster that 3 billion liras of bread are wasted annually in Turkey. With that money, workplaces such as restaurants and bakeries can be opened. I think I read that 500 schools can be built with that money." It is seen that there are emphases on the contribution of the project in raising awareness of the students. News on this subject now attracts the attention of students.

Contribution to learning web 2.0 tools: The second contribution of the project was related to learning web 2.0 tools. Within the scope of the project, a large number and variety of web 2.0 tools were used. Some of these tools were used by the students before, but most of them were introduced for the first time within the scope of the project. When the students were asked which web tools, they used in the ŞEBİT Project, Canva, Toonytool, Bitmoji, Zoom, Mozaically answers were received. They stated that they only knew Zoom among these tools (due to the fact that the lessons were carried out on this platform during the pandemic period) and that they learnt the others for the first time. When the students were asked whether they would use these web 2.0 tools they learnt in their future lives and in other courses, all of them stated that they could use them. In this regard, S1 said "It will be useful for us when we have a project assignment. It can be useful in our future life in architecture, in our future business life, in meetings." while S6 said, "It can be useful in most courses. Maths, Turkish, Science, other courses can also be useful." they expressed their opinions as follows.

Contribution to taking responsibility: One of the contributions of the project was responsibility. All students stated that they took responsibility for the activities within the scope of the project. While S4 stated that taking responsibility within the scope of the project was nice for him and he had fun, S3 expressed his opinions on this subject as follows: "It was boring at first. Then it started to be fun. It was nice." S6's statement "...I felt more hardworking..." was noteworthy in her discourse about the responsibilities she took in the activities.

Contribution to teamwork and communication: Another important contribution of the ŞEBİT project was in the dimension of teamwork and communication. All students made statements about the project's contribution to communication. The students who stated that they supported their communication with their classmates, teachers, other students in the collaborating schools and their families stated that they achieved this through the activities, seminars and messaging. The statements of S2, S3 and S6 containing their opinions on this subject are presented below as examples.

*"Firstly, I collaborated with my classmates and my teacher. Then we had contact with other schools through eTwinning (referring to the portal). I saw the work of people from other schools...it was an honour to do the same project with people from different cities. It was a nice experience."* [S2]

*"I collaborated with students from other schools through the eTwinning portal. I also collaborated with my teacher, my classmates and my family. Collaborating with my environment made my work easier. It became more beautiful. It supports me."* [S3]

*"I collaborated with my family, teacher and classmates. I did the activities with my friends. I made pastries with my family. I got help from them...They (students from other participating schools) were also posting their work on the portal like us. It was nice to see the opinions of different people."* [S6]

#### 4. Discussion and Conclusion

At the end of the research, it was revealed that the students found the ŞEBİT eTwinning project educational and entertaining. In addition, it was determined that the project contributed to awareness of bread waste, learning web 2.0 tools, taking responsibility, teamwork and communication. Kefis and Xanthopoulou (2019), in their eTwinning research in Greece, stated that the students found the eTwinning project educational and fun, which coincides with the results of this research. One of the contributions of the project is the awareness about waste. In the interviews with the students, it was found that their awareness about bread waste increased, they understood the importance of bread in our lives, and they became aware of the family, society and economic dimension of bread waste. Tepecik and Gümüş (2017) stated in their research on bread waste that the target audience became aware of bread waste and their awareness increased. These findings are similar to the results of this research. The issue of bread waste is not only a problem of today, but also a problem that continues from the past to the present and should be given importance. Even small measures to prevent bread waste can contribute to the national economy. In addition, waste can be prevented in future generations with activities such as raising awareness of primary school children to prevent bread waste (Yurdatapan, 2014).

Regarding the second contribution of the project, learning web 2.0 tools, students stated that they learnt to use web 2.0 tools that they encountered for the first time. They also stated that they would use these web 2.0 tools in other areas. Web 2.0 tools have an important place and are widely used in eTwinning projects carried out in digital environments. Peachey (2009) summarises the educational benefits of web 2.0 tools under five headings: sharing, authenticity, socialisation, collaboration and creativity. In this research, it was observed that the students used and learnt the web 2.0 tools for the first time. It can be said that the above-mentioned contributions of web 2.0 tools were realised in this project. Bozdağ (2017) states that the contributions of eTwinning projects to students are mostly in the development of communication skills and technology use. Research supports that eTwinning projects contribute to the development of language skills.

The third contribution of the eTwinning project was that students took responsibility. In eTwinning projects, collaborative learning environments increase students' desire to acquire knowledge and develop students' sense of responsibility. Moreover, eTwinning projects develop students' self-



confidence, leadership and sharing feelings as well as their academic achievements (Açıkğöz and Güngör 2006). Similar findings are found in the research of Memişoğlu and Broutin (2018). The findings of the research conducted by Bozdağ (2017) also reveal that projects that model network-based learning such as eTwinning play an important role in ensuring technology integration in schools.

Regarding the fourth contribution of the project, teamwork and communication, students stated that they enjoyed working in communication with their friends. Participation in projects such as eTwinning increases students' willingness to learn (Van de Craen, 2008). In her research, Oana (2008) concluded that project activities increase the motivation of participating students and teachers as well as other students and teachers in the school and that they are willing to participate in similar projects. This result is in line with Atacan's (2020) research conducted with 7th grade students, which found that the participants were satisfied with the activities carried out in cooperation and responsibility sharing and that they made the subjects they needed to learn more meaningful for themselves by helping each other. Crişan (2013), in her research on eTwinning, concluded that eTwinning projects have contributions for both students and teachers. In this context, the studies in the literature support the results obtained from the research.

Regarding the difficulties experienced in the project, the students stated that they had difficulties with newly learnt web 2.0 tools and time. Abaratzis (2020) also mentioned the disadvantages of having school infrastructure problems, time loss and language problems as disadvantages. Bozdağ (2017) also pointed out that the biggest problems encountered in eTwinning are technical problems such as infrastructure problems, lack of internet and computers in some schools. Within the scope of the project, students made suggestions such as they wanted to learn more web 2.0 applications, increasing the number of activities, and improving the eTwinning platform. Based on these suggestions, it is recommended within the scope of this project that the eTwinning platform, which is being renewed and developed, should be made more functional by students and teachers.

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### Appendix. Semi-structured Interview Questions

Questions
1- Have you participated in any eTwinning project before? If so, what kind of project was it? - Can you give information about the project?
2- So what are your thoughts about participating in the 'ŞEBİT' eTwinning project? - <b>As probing</b> , when answers such as I liked it a lot, I enjoyed it or I didn't like it, I was bored, I didn't like it, the reason for this is asked.
3- What are your thoughts about the activities carried out in the ŞEBİT project? - <b>As probing</b> ; Which activity or activities did you enjoy the most? Why? - Was there any activity that you did not enjoy? Why not?
4- What did the ŞEBİT project teach you? - <b>As probing</b> ; Have you increased your awareness about not wasting bread? What were the benefits of the project in this sense? - What do you think about the social and economic dimensions of bread waste? Did the project raise your awareness on this issue? How? Can you tell us a little bit about it?
5- What were your responsibilities in the ŞEBİT project? What responsibilities did you take in this project? - <b>As probing</b> ; How did it feel for you to take these responsibilities? How did it make you feel?
6- With whom and how did you collaborate in the ŞEBİT project? Can you tell us a little about this process? - <b>As probing</b> ; How was it for you to work in co-operation? Did you enjoy it? Or did you find it difficult? Why? etc. depending on the answers.
7- Which Web 2.0 tools did you use within the eTwinning project? Have you used these applications before? - <b>As probing</b> ; Do you think the web 2.0 tools you have learnt and used will be useful in your lessons in the future? Why? - Would you like to use the Web 2.0 tools you use and have knowledge about in other courses?
8- What was it like to meet students from different schools in the project? Can you tell us about the things you shared with them?
9- Did you encounter any difficulties within the eTwinning project? - <b>As probing</b> ; If he/she states that he/she has encountered; what were the difficulties you experienced?
10- Would you like to participate in such an eTwinning project again? Why?
11- Based on this project experience, what would be your suggestions for projects of this kind?