



Participatory Educational Research (PER)
Vol.11(2), pp. 195-211, March 2024
Available online at <http://www.perjournal.com>
ISSN: 2148-6123
<http://dx.doi.org/10.17275/per.24.26.11.2>

Id: 1416291

Participant Opinions on the Effectiveness and Classroom Applicability of Erasmus+ School Education Staff Mobility (KA101) Projects on New Technologies - Digital Skills

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Article history

Received:
08.11.2023

Received in revised form:
17.01.2024

Accepted:
08.02.2024

Key words:

Erasmus+, new technologies, digital skills, project, web 2.0

This study aimed to determine the contribution of teachers and administrators who took part in the projects on ICT - new technologies - digital skills carried out in the field of Erasmus+ main action 1 school education staff mobility KA101, one of the EU education programmes. In this study, mixed research method was used, and an embedded mixed design was applied. The interview form was used to collect qualitative data and the Participants' Opinions on the Effectiveness and Classroom Implementation of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects were used to collect quantitative data. The research group consists of teachers and administrators who have carried out ICT New Technologies - Digital Skills themed Erasmus+ projects between 2014-2020 in different schools and levels in Konya city centre and districts. As a result of the analysis, it was concluded that the participants learned new teaching methods and techniques after the project and started to apply them in their classrooms. In addition, it was observed that the training received by the participants was innovative, improved their digital skills, increased the quality of education at school, provided permanent learning and increased the motivation of the participants. It was also revealed that teachers' and administrators' participation in projects improves their digital skills, they learn new teaching methods and techniques, they can transfer the skills they have acquired to the classroom environment and thus contribute positively to permanent learning and increasing the quality of education.

Introduction

Educational methods, techniques and technologies are constantly developing and changing according to today's developing technologies (Kurt, et al., 2022). The change may be fast or slow according to the cultures, development levels and historical developments of

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countries. High-quality education requires the continuous development of different aspects of the education process to better meet individual and social needs.

From the late 19th century to the present day, changing and developing educational technologies have become an integral part of the educational process (Sims & Stone, 2011; Hui, 2009; Bond, Zawacki-Richter, & Nichols, 2018). Educational technologies, which gained momentum with the introduction of the Internet and Web 2.0 into our lives, have now evolved into areas such as artificial intelligence, metaverse, virtual reality and augmented reality.

Institutions and their staff who want to keep up with the ever-evolving educational technologies evaluate training opportunities at national and international levels (Cetin, 2015). Educators who prepare projects for the needs and objectives of their institutions participate in training in different countries and transfer innovations by seeing good practices on site. The key action 1 learning mobility of individuals (KA1) in the Erasmus+ programme within the scope of EU education and youth programmes offers opportunities to educators in this context.

Key Action 1 targets the mobility of vocational high school students, young people and youth workers, university students, learners in adult education, teachers, academics and administrators within the scope of learning mobility of individuals (Turkish National Agency, 2017; Georgieva, 2019; Lopez and Lopez, 2022). Within the scope of this action, individuals could take part in activities such as attending a course in the field they need, taking part in job shadowing, doing an internship, and carrying out activities with non-formal learning methods (Erasmus+ Programme Guide, 2016). This project, which is carried out over a period of time determined by needs and specific objectives, aims to improve the institution and teachers' practice through internationalisation activities and, as a result, has a positive impact on students (Lopez & Lopez, 2021).

Research conducted by Özdoğru (2022) investigated the "Erasmus+ School Education Staff Mobility (KA101)" projects and found substantial benefits in terms of professional and personal development for teachers. The professional development aspects included exposure to different educational systems, active learning, and project culture enhancement, while personal development facets covered socialization, confidence building, and foreign language skills improvement (Özdoğru, 2022). Research by Naydenova and Stoyanova (2020) on the activities of a teachers' team within the Erasmus+ Programme highlighted the importance of teamwork, motivation, and qualification for enhancing ICT skills and employing innovative educational technologies (Naydenova & Stoyanova, 2020). Draghici, Dermol, and Stankevičiūtė (2022) discussed an Erasmus+ project aimed at extending the digital/multimedia competencies of university staff, underlining the radical changes in communication within universities and their communities due to digital transformation (Draghici et al., 2022). In order to have the coding skills required in the 21st century, different educational institutions and different education levels include coding teaching in their education curriculum. (Korucu & Taşdöndüren, 2019)

In Erasmus+ Key Action 1 School Education Staff Mobility (KA101), teachers, trainers and administrators could participate in a structured training course, a teaching assignment activity or a job shadowing activity (Erasmus+ Programme Guide, 2016). Through virtual classes, educators and students come together in a virtual environment and distance education is a field that offers the same opportunity to every individual and aims to minimize the inequality of opportunity between individual (Arslankara & Usta, 2020; Arslan & Korkmaz, 2019;



Korucu & Ertekin, 2020). During the 2014-2020 Erasmus+ programme period, 1671 KA101 projects received grants (Erasmus+ EU programme for education, training, youth and sport, n.d.). Looking at the results of all countries included in the Erasmus+ programme, 7362 out of a total of 23,641 projects accepted in the same field were in the field of ICT - new technologies - digital skills. When all countries are included, it is seen that the projects receiving grants in the field of ICT constitute 31% of the total projects. This shows that schools and teachers across Europe need development in this field (Erasmus+ EU programme for education, training, youth and sport, n.d.).

Purpose of the Study

This study aimed to determine the views of the participants on the implementation of the contribution provided by Erasmus+ key action 1 school education staff mobility KA101 ICT - new technologies - digital skills projects in Türkiye. It aimed to contribute to the solution suggestions by revealing the problems faced by teachers and administrators who participated in the project carried out by their schools in the field of ICT in transferring the training they received to the school and classroom environment.

To realise the aim of the research, answers to the following questions were sought.

What are the opinions of teachers and administrators on the extent to which the training received abroad within the scope of projects on ICT - new technologies - digital skills within the scope of Erasmus+ school education staff mobility KA101 projects implemented between 2014-2020 in Konya province of Türkiye are transferred to school and classroom environments?

Erasmus+ school education staff mobility KA101 projects on ICT - new technologies - digital skills according to the views of teachers and administrators:

- to increase the digital skills of teachers,
- the application in the classroom of new skills acquired after the training received,
- to what extent does the project contribute to the learning of these new skills by teachers and administrators who do not participate in overseas activities?

According to the opinions of teachers and administrators, to what extent were the project activities implemented in line with their aims and objectives?

Is there a significant difference in terms of gender, age, branch, and seniority years in terms of increasing the digital skills of teachers in Erasmus+ KA101 projects?

Method

Research Model

In the study, a mixed research method, in which qualitative and quantitative research methods are used together, was used. Mixed-method research is conducted by using a combination of qualitative and quantitative data (Greene, Caracelli, & Graham, 1989). According to Creswell and Plano Clark (2018), mixed research methods are characterised as "an inquiry approach that combines or relates both qualitative and quantitative forms. In addition, mixed research methods can provide more validity and reliability in research findings. Teddlie and Tashakkori (2006) revealed that the use of two methods together can increase the validity of the research. In this study, nested mixed design, which is one of the mixed method designs, was used.

Population and Sample of the Study

The study group of the research consists of 62 teachers who participated in Erasmus+ school education staff mobility (KA101) on ICT - new technologies - digital skills conducted between 2014-2020 in Konya province. In the selection of the schools, filters were used on the Erasmus+ project results platform to determine which schools carried out projects in this field. According to the projects implemented in this topic, 105 teachers and school directors joined the mobilities in total. Of these participants, 52 volunteer teachers took part in the quantitative part of the research and 10 in the qualitative part. In the selection of 10 teachers for the qualitative part, one teacher per school was chosen to increase the impact of the research.

Demographic information for the quantitative method

In the quantitative part of the study, the general survey model, which is one of the quantitative research methods, was used. Using the general survey model, it is aimed to make a general judgement about a sample group that has the qualifications to represent the whole universe or a sample group that can represent it in a universe with a large population (Karasar, 2005).

46.2% (N=24) of the participants were female teachers and school directors and 53.8% (N=28) were male teachers and directors. Regarding education background, 75% (N=39) of the participants are bachelor's degree graduates, 23.1% (N=12) are master's degree graduates and 1.9% (N=1) are doctorate graduates.

Demographic information for the qualitative method

In the qualitative part of the study, a phenomenological design was preferred. Phenomenological studies are generally a qualitative research design that focuses on a deeper understanding of lived experiences (Jasper, 1994; Miller, 2003) and are used to obtain more comprehensive information about the phenomena we are already aware of or have heard (Yıldırım & Simsek, 2018).

According to the findings, 50% (N=5) of the participants were female teachers and directors and 50% (N=5) were male teachers and directors. According to age range of participants, 20% (N=2) of the participants in the study group were between the ages of 30-39, 50% (N=5) were between the ages of 40-49, and 30% (N=3) were between the ages of 50-59. It is seen that 80% (N=8) of the participants are bachelor's degree graduates and 20% (N=2) are master's degree graduates.

Data Collection Tools and/or Techniques

In the study, a questionnaire was used to collect quantitative data and an interview form was used to collect qualitative data. The questionnaire form used in the research consists of four sections and 40 items; the interview form consists of three sections and 10 items.

For the collection of quantitative data, 40 questions were prepared. The questions were prepared in the form of a 5-point Likert scale with a rating of 1= "strongly disagree" 2= "disagree" 3= "no opinion" 4= "agree" and 5= "strongly agree". Ten questions were created for the collection of qualitative data. The questions were applied to the participants as open-ended questions.



The content validity of both the questionnaire and the interview form was ensured through a rigorous development process by the researchers. Initial items were derived from a comprehensive review of relevant literature, ensuring that all questions were grounded in existing research and theories pertinent to the study's focus. Subsequently, a panel of experts in the field was consulted to evaluate the relevance and clarity of each item, leading to refinements where necessary. The reliability of the questionnaire was assessed using Cronbach's alpha to measure the internal consistency of the items within each section. A Cronbach's alpha value of 0.70 or above was considered acceptable, indicating that the items were well-correlated and reliably measured the same underlying construct.

Data Collection

Quantitative data were collected through Google Forms by official letter to the schools and by contacting the participants by the researcher. To collect qualitative data, the interview form was collected face-to-face and online via Zoom.

Analysing the Data

Quantitative data were recorded and analysed in SPSS (statistical package for social sciences) 26 programme. In the analysis of the data, firstly, the assumptions to be met in order to decide which tests (parametric/nonparametric tests) will be applied were tested. Kolmogorov-Smirnov and Shapiro-Wilk tests were used to determine the normality of the distribution. Since the skewness and kurtosis coefficients of the data were between ± 2.0 (George & Mallery, 2010), the distribution was accepted as normal.

Independent sample t-test was used for the comparison of two independent groups, one-way variance (Oneway ANOVA) analysis was used for the comparison of more than two unrelated groups and Bonferroni test was used when the variances were homogeneous and Tamhane's test was used when the variances were not homogeneous for post-hoc analysis to determine the source of the difference. To determine the homogeneity of variance, Levene's statistic was used to determine whether the variances were homogeneous. The significance level of 0.05 was used as a criterion in interpreting whether the values obtained were significant or not.

Qualitative data were collected through Zoom video recording and interview notes. These data were analysed by content analysis method. Content analysis is a systematic and repeatable technique in which some words of a text are summarised with smaller content categories through coding based on certain rules (Buyukozturk et al., 2013). In this framework, the data obtained from the interviews were categorised into themes, categories and codes. In this process, the steps used for qualitative research data analysis such as coding the data, creating categories, finding themes and interpreting the findings were used. In the selection of 10 teachers for the qualitative part, one teacher per school was chosen to increase the impact of the research. As 10 schools already implemented the project on this topic, the researchers decided to include one volunteer participant per school. Peer debriefing during the analysis process was done with experts in the field to validate interpretations and ensure that the findings accurately reflected the participants' experiences and viewpoints. Participants reviewed and validated the interpretations of their responses, ensuring that the findings resonated with their experiences.

Findings

Findings Based on Quantitative Data

In this study, a 40-question questionnaire titled Participant Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects was used to collect quantitative data.

Findings related to reliability

Within the scope of the research, Cronbach's Alpha internal consistency test was used to test the reliability of the mean scores obtained from the Participant Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects.

Cronbach Alpha coefficient is measured with values between 0 and 1 and reliability is ensured at the following values (Özdamar, 2002);

If $0,00 \leq \alpha < 0,40$, the scale is not reliable.

If $0,40 \leq \alpha < 0,60$, the reliability of the scale is low.

If $0,60 \leq \alpha < 0,80$, the scale reliability is at an acceptable level.

If $0,80 \leq \alpha < 1,00$, the scale reliability is high.

Cronbach Alpha coefficients of the scales and sub-dimensions are presented in Table 9.

Table 9. Cronbach-alpha coefficient of the scales

	Cronbach's Alpha	Conclusion
Effectiveness and applicability of projects in the classroom	0,99	High Level
Opinions on the preparation before the Erasmus+ project and the use of ICT tools	0,81	High Level
Views on the Erasmus+ project mobility process abroad	0,99	High Level
Opinions on the aftermath of Erasmus+ project mobility abroad	0,99	High Level

According to Table 9, the reliability of the mean scores obtained from the Participants' Views on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects is at a high level.

Findings Related to Normality

Table 10. Findings Related to Descriptive Statistics of the Scales

	Descriptive Statistics			
	Min	Max	\bar{X}	Ss
Participants' Views on the Effectiveness and Applicability of Projects in Classroom	1,02	5	3,85	1,16
Opinions on the preparation before the Erasmus+ project and the use of ICT tools	1	5	3,31	1,03
Views on the Erasmus+ project mobility process abroad	1	5	3,92	1,24
Opinions on the aftermath of Erasmus+ project mobility abroad	1	5	3,95	1,23

According to Table 10, the mean scores of the participants obtained from the Participants' Opinions on the Effectiveness and Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects in the Classroom are between 1.02-5 and the average is 3.85 ± 1.16 .

Table 11. Findings Related to Compliance with Normal Distribution

	Kolmogorov-Smirnov			Shapiro-Wilk			Skewness	kurtosis
	Test Statistic.	sd	p	Test Statistic.	sd	p		
Effectiveness of the projects and their applicability in the classroom	0,23	52	0,00	0,77	52	0,00	-1,49	1,08
Before Erasmus+ project	0,14	52	0,02	0,91	52	0,00	-0,86	-0,07
Mobility process	0,28	52	0,00	0,74	52	0,00	-1,57	1,33
After mobility	0,21	52	0,00	0,79	52	0,00	-1,37	0,82

According to Table 11, the results of Kolmogorov Smirnov and Shapiro-Wilk tests were analysed to determine whether the mean scores obtained from the Participants' Opinions on the Effectiveness of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects and Their Applicability in the Classroom showed normal distribution or not ($p < 0.05$).

However, when the histogram, normal Q-Q graph, and box-plots normal distribution curve, which are other indicators of normal distribution, and kurtosis-skewness coefficients were taken into consideration, it was evaluated that the data did not deviate excessively from the normal distribution. Since the skewness and kurtosis coefficients of the data were between ± 2.0 (George & Mallery, 2010), they were accepted as normal.

Findings Related to the Comparison of Scales and Dimensions with Some Variables

Independent sample t-test was used for the comparison of two independent groups, one-way variance (Oneway ANOVA) analysis was used for the comparison of more than two

unrelated groups and Bonferroni test was used when the variances were homogeneous and Tamhane's test was used when the variances were not homogeneous for post-hoc analysis to determine the source of the difference. In order to determine the homogeneity of variance, Levene's statistic was used to determine whether the variances were homogeneous.

Table 12 Findings Related to the Comparison of the Mean Scores Obtained from the Participants' Opinions on the Effectiveness and Applicability of their Projects in the Classroom According to the Branch of the Teachers

	Branches	n	$\bar{X} \pm Ss$	t	df	p
General Opinion	Classroom	15	3,61±1,46	-0,97	50	0,41
	Branch	37	3,95±1,03			
Before Erasmus+ project	Classroom	15	3,23±1,24	-0,41	50	0,69
	Branch	37	3,36±0,96			
Mobility process	Classroom	15	3,61±1,55	-1,16	50	0,25
	Branch	37	4,05±1,1			
After mobility	Classroom	15	3,7±1,54	-0,96	50	0,34
	Branch	37	4,06±1,09			

*P<0.05 Independent sample t-test

According to Table 12, the average scores (3,95±1,03) obtained from the Participants' Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects are higher than the scores of classroom teachers (3,61±1,46). However, the difference between the branches was not statistically significant (p>0.05).

Likewise, the mean scores obtained from the teachers' opinions on the use of ICT tools before the Erasmus+ project, in the preparation phase and during the Erasmus+ project, the mean scores obtained from their opinions on the Erasmus+ project mobility abroad process and the scores obtained from their opinions on the Erasmus+ project mobility abroad after the Erasmus+ project mobility abroad do not differ according to the branches of the teachers (p>0.05).

Table 13 Findings Related to the Comparison of the Mean Scores Obtained from the Participants' Opinions on the Effectiveness and Applicability of their Projects in the Classroom According to the Gender of the Teachers

	Gender	n	$\bar{X} \pm Ss$	t	df	p
General Opinion	Female	28	3,79±1,22	-0,42	50	0,68
	Male	24	3,93±1,11			
Before Erasmus+ project	Female	28	3,25±0,98	-0,48	50	0,63
	Male	24	3,39±1,11			
Mobility process	Female	28	3,88±1,28	-0,25	50	0,80
	Male	24	3,97±1,22			
After mobility	Female	28	3,89±1,33	-0,45	50	0,65
	Male	24	4,04±1,13			

*P<0.05 Independent sample t-test

According to Table 15, male teachers' mean scores (3,93±1,11) obtained from Participants'



Views on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects are higher than female teachers' scores (3,79±1,22). However, the difference between genders was not statistically significant ($p>0.05$).

The mean scores obtained from the teachers' views on the preparation before the Erasmus+ project and the use of ICT tools, the mean scores obtained from their views on the Erasmus+ project mobility abroad process and the mean scores obtained from their views on the Erasmus+ project mobility abroad after the Erasmus+ project mobility abroad do not differ according to the gender of the teachers ($p>0.05$).

Table 14 Findings Related to the Comparison of the Mean Scores Obtained from the Participants' Opinions Regarding the Effectiveness and Applicability of their Projects in the Classroom According to the Number of Projects of the Schools

	Number of Projects	n	$\bar{X} \pm Ss$	t	df	p
General Opinion	First-One	29	4,04±1,07	1,32	50	0,19
	2-+	23	3,62±1,26			
Before Erasmus+ project	First-One	29	3,25±0,91	-0,52	50	0,60
	2-+	23	3,4±1,18			
Mobility process	First-One	29	4,12±1,18	1,30	50	0,20
	2-+	23	3,67±1,3			
After mobility	First-One	29	4,2±1,13	1,66	50	0,10
	2-+	23	3,65±1,3			

* $P<0.05$ Independent sample t-test

According to Table 16, the average scores (4,04±1,07) obtained from the Participants' Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects of the teachers in schools preparing projects for the first time are higher than the scores (3,62±1,26) of the teachers in schools preparing 2 or more projects. However, the difference between the number of projects was not statistically significant ($p>0.05$).

The mean scores obtained from the teachers' opinions on the preparation before the Erasmus+ project and the use of ICT tools, the mean scores obtained from their opinions on the Erasmus+ project mobility abroad process and the mean scores obtained from their opinions on the Erasmus+ project mobility abroad after the Erasmus+ project mobility abroad do not differ according to the number of projects in the teachers' schools ($p>0.05$).

Findings Based on Qualitative Data

In this section, 10 teachers who took part in Erasmus+ KA101 school education staff mobility projects between 2014-2020 were consulted and a semi-structured interview form consisting of ten questions and three sections was used. The questions were divided into three categories. In the first category, two questions were asked for the views on the preparation before the Erasmus+ project and the use of ICT tools, in the second category, three questions were asked for the participant views on the Erasmus+ project mobility process abroad, and in

the third category, 5 questions were asked about the views on the Erasmus+ project post-mobility activities and project gains.

As a result of the interviews, the most common answers to the question "How much did you use ICT tools in your lesson before taking part in the Erasmus+ KA101 staff mobility project?" were "to use videos and visuals" and "for presentation purposes". Only one participant stated that he/she actively used the tools suitable for his/her course. In the answers received, it was seen that the participants used similar tools for similar purposes.

S1: "Before taking part in this project, I was using ICT tools very little. I was generally using basic tools such as presentations on the smart board and sharing works via video or pdf. When I compared it with the training received within the scope of the project, I observed that I did not use innovative tools"

S8: "I used projection, e-books, YouTube videos and PowerPoint. In some lessons, I used them very intensively and sometimes I didn't use them at all."

In the second interview question "What was your motivation for taking part in this project for using ICT tools effectively?" all participants answered, "to learn innovative methods". In addition, "personal development", "getting to know different cultures" and "travelling abroad" were common answers. Some of the statements of the participants were as follows:

S1: I wanted to improve myself in this subject. I wanted to see and learn the applications that would attract the attention of the students in the lessons and transfer them to my lessons. Of course, going abroad was another reason that increased my motivation.

S9: Improving myself, integrating new technological tools into my lessons and getting to know different cultures were among the reasons for my preference.

One of the participants explained that although he had developed himself in this field, he participated because he was interested in it and wanted to learn new things:

S3: I was already actively using ICT tools in my lessons. By taking part in this project, I wanted to learn if there were any new applications that I did not know. I wanted to take part in the project because it was a subject of my personal interest. I was also curious about how it was used in other countries.

The most common answers to the question "What are the things that the education you received abroad within the scope of the Erasmus+ project contributed to you?" were "learning new practices", "communicating with teachers from different countries" and "getting to know different cultures". Only one participant stated that "the training was not very useful".

S7: I had the chance to learn innovative digital tools. I learnt sites and applications that I had never used before and that I thought would be useful in my lesson. Seeing a different country, learning with teachers from other countries, getting to know different cultures also added a lot to me.

S10: I learned many new applications. Thanks to the practical training, I learnt how to use them and what to create for my lesson. It was a very useful training.

In response to the question "How would you evaluate the training you attended in terms of effective use of ICT tools and the duration of the training?", the participants mostly found the duration sufficient and stated that the programme was more useful by being applied and practical. While one participant expected a longer duration, two participants stated that the

duration was insufficient.

S2: I attended a 5-day training. In terms of what we learnt; the duration was sufficient. But I would like to have a longer training and I would like to learn more. The duration of the lessons was ideal. We had time both to receive training and to get to know the country we were travelling to.

S7: Thanks to the practical activities, I learnt to use the tools effectively. Therefore, I think that a 5-day training is the most ideal in terms of duration.

In response to the question "What were the innovative aspects of the training you received?", the most frequently mentioned statement was "practical training". Half of the participants found it innovative to "learn web tools suitable for each branch", "having simple and new applications" and "both visual and auditory applications". "Interacting with teachers from different countries" was also found innovative. One participant did not find the course content innovative and stated that he could easily access this information from the internet.

S1: It was innovative for me to have an applied training, to be taught tools that I had never used and never heard of before, to have less theoretical and more practical applications.

S6: Learning applications for different purposes, we learnt different things for the test, for the presentation.

In response to the question "What were the tasks you undertook within the scope of the project?", all of the participants used the phrases "keeping a diary report" and "filling out the EU questionnaire". Within the scope of the project, promotion, and dissemination, preparing and implementing lesson plans and participating in foreign language training were also mentioned as the most common activities. Two participants stated that they took part in every stage of the project since they were the project coordinators.

S1: We kept a report about the content we learnt while abroad. On our return, we told what we learnt to the teachers in our school, we shared our project activities on social media. I filled in the EU questionnaire. We made sample applications in my class and took videos of them.

S5: I filled in questionnaires, reported daily activities, made presentations to teachers in other schools for dissemination, participated in English preparation training, prepared and implemented lesson plans.

To the question "Which ICT tools do you continue to actively use in your lessons after the project?", Kahoot, Google applications (forms, keep etc.) and Canva were answered as the three most frequently used ICT tools.

S3: I use Kahoot most actively. It is very effective in both reinforcing each subject and evaluating the remaining time. Students love it.

S6: I use applications according to the subject and duration of the course. I now use Google Forms and Kahoot for quizzes; I use Learning apps to prepare various activities. I actively use Canva when giving homework, preparing presentations and doing visual work.

To the question "How would you evaluate the contribution of the Erasmus+ project in terms of the teaching of your course and the students' attitude towards the course?", the participants mostly answered, "it attracts students' attention", "it makes the lesson fun", "it saves time and

prevents paper waste".

S2: Lessons become monotonous when they are taught with books or presentations. I experienced that I attracted students' attention more in the activities I created with these applications. In addition, some applications contributed to saving time. Students participated more actively when I used these applications.

S10: Students liked the applications. Thanks to Kahoot, we saved both paper waste and time. I think I attracted the students' attention by using it in the difficult parts of the lesson.

In response to the question "What have been the contributions of the Erasmus+ project to your school's use of ICT tools?", the participants mostly stated that "the motivation of teachers increased" and "the race to use ICT tools". In addition, some participants also stated that it only contributed to the teachers who participated in the overseas activity and that there was no change for other teachers.

S3: I can say that there is a race among teachers to use new applications in the school. Since we are a small school, teachers use different applications in their lessons and give positive and negative feedback. Parents are also satisfied with these applications. I give some assignments from these applications and parents can follow them.

Discussion, Conclusion and Recommendations

According to the findings obtained from the research, it was revealed that teachers' views on using ICT tools before and after the Erasmus+ project did not differ according to their branches ($p>0.05$). This result is similar to the research conducted by Damkuvienė, Valuckienė and Balčiūnas in 2015. In this study, it was stated that teachers from different branches had similar views on using ICT tools in KA101 projects.

When the mean scores (4.1 ± 0.85) obtained from the Participants' Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects were examined according to the age variable of the teachers, it was seen that the score of teachers aged 40 and over was higher than the other age groups, but the difference between the ages was not statistically significant ($p>0.05$). Cebeci (2022) found that experienced teachers were more willing to benefit from the programme.

It was concluded that the mean scores of the teachers on Erasmus+ project preparation, the use of ICT tools, their views on the mobility process and their views after the mobility did not differ according to their age ($p>0.05$). Similarly, in Gorder's (2008) study, it was observed that there was no significant difference between teachers' professional experience and ICT use, while Samancıoğlu's (2011) study revealed that the use of ICT tools decreased as professional seniority increased. In the study of Bardakçı and Aksu (2019), it was revealed that there was no significant difference according to age in the research conducted with secondary school principals.

In the study, although it was revealed that male teachers' mean scores ($3,93\pm 1,11$) obtained from Participant Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects were examined according to their gender, it was seen that the score of male teachers was higher than the female teachers, but the difference between the genders was not statistically significant ($p>0.05$). According to the findings obtained in the study, the average scores ($4,21\pm 0,9$) obtained from the Participants' Opinions on the Effectiveness and Classroom Applicability of ICT New Technologies - Digital Skills Themed Erasmus+ School Education Staff Mobility (KA101) Projects were examined according to their branches, it was seen that the score of teachers from the primary school branch was higher than the other branches, but the difference between the branches was not statistically significant ($p>0.05$).



Projects of teachers working in secondary schools were higher than the scores of teachers working in other school types. However, the difference between the teachers working in different school types was not statistically significant ($p > 0.05$). In the study conducted by Aydogmus (2013), it was seen that teachers working in vocational high schools reported more positive opinions on the variable related to the project preparation process, kindergarten teachers on the variable of understanding the application form, and teachers working in vocational high schools on the variable of taking part in new projects.

As a result of the interviews conducted with the participant teachers during the research process, it was observed that the teachers started to use various web 2.0 tools more intensively after the project, while they used basic technological tools such as video, visual tools, and e-books in their lessons before taking part in an Erasmus+ project on ICT. Accordingly, it was stated that the lessons were more interactive and productive. In the study conducted by Kakaras and Gkouna (2022), it was revealed that Erasmus+ projects had a positive effect on teachers' ability to develop ICT tools. Basaran et al. (2021) concluded that teachers started to use web 2.0 tools with Erasmus+ projects, were more willing to use different methods and techniques, and the quality of education started to increase thanks to this. Lopez and Lopez (2021), McDonagh et al. (2021), Ozudogru (2022) also concluded that Erasmus+ KA101 projects have a positive effect on teachers' competencies in Web 2.0 tools and information and communication technologies. It was stated that the projects contributed to both the professional and personal development of teachers. Arabacı and Akıllı (2021) and Kunnari, Jiang and Myllykoski-Laine (2021) also found that the projects contributed positively to the development of teachers' Web 2.0 tools and ICT skills. In the international study of Androniceanu and Dragulanescu (2017), a three-year Erasmus+ project carried out in project-run schools in Latvia, Sweden, the United Kingdom, Italy and Spain showed positive results in the development of ICT skills of high school teachers.

In the interviews with the participants during the research process, it was concluded that the motivation of teachers and administrators to take part in an Erasmus+ project on ICT was to learn innovative learning methods and personal development. Recognising different cultures and going abroad are also the opinions of the participants. Similar data were found in the research conducted in the literature. Lopez and Lopez (2021) and Ozudogru (2022) found that the motivation of teachers to take part in projects is predominantly professional and personal development, Arabacı and Akıllı (2021) and Ozcan and Kırkgöz (2021) found that effective use of web 2.0 tools in educational environments is predominant, Özdemir (2023) found that it is seen as an opportunity for international education and personal development, and Cebeci (2022) found that it is an opportunity for international education and personal development. Differently, in the research report of Piksööt, Jaani, Harro-Loit (2016), it was revealed that teachers who participated in KA101 projects mostly improved their general competences and learnt about different education systems. In general, the literature shows that Erasmus+ KA101 projects have a positive impact on teachers' competencies in Web 2.0 tools and ICT and that teachers are highly motivated to participate in these projects for various reasons related to professional and personal development.

In the interviews with the participant teachers and administrators, when they were asked what the training received within the scope of the Erasmus+ project contributed to them, they were mainly listed as learning new ICT applications, the opportunity to come together with colleagues from different countries, getting to know different cultures and improving their foreign language skills. The results of the research conducted in the literature also support these findings. Cebeci and Alcı (2022), López and López (2021), Gu (2009), Demirer and

Dak (2021), Basaran et al. (2021), Duman (2020), Avcı (2023), Gunbayı and Vezne (2016) emphasised that the greatest contribution of the participants in Erasmus+ and similar mobility projects was to get to know different cultures, exchange ideas with colleagues and improve their foreign language skills.

According to another finding obtained in the study, it was revealed that teachers' motivation to prepare new Erasmus+ projects at the end of the project was high. In the national reports prepared by Piksööt, Jaani, and Harro-Loit (2016) and Damkuvienė, Valuckienė, and Balčiūnas (2015), it was revealed that teachers are more prone to new projects thanks to the new networks they have established through the project they have carried out. It can be said that their motivation to increase the skills acquired from the projects carried out by the schools has increased and thus they are willing to carry out new projects.

Acknowledgements:

This article was created from the master's thesis that the first author completed in Necmettin Erbakan University, Institute of Educational Sciences, Computer and Instructional Technologies Education under the supervision of the second author.

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