

## Technologies for developing language communication through creative thinking

**Bogenbayeva Aigerim** \*, Abai Kazakh National Pedagogical University, Dostykave13, Almaty 050010, Kazakhstan,  
<https://orcid.org/0000-0003-4419-396X>

**Orazbayeva Fauziya**, Abai Kazakh National Pedagogical University, Department of Kazakh Language and Literature, Dostyk 13, Almaty 050010, Kazakhstan, <https://orcid.org/0000-0002-7988-3023>

**Imankulova Meruyert**, Abai Kazakh National Pedagogical University, Department of Kazakh Language and Literature, Dostyk 13, Almaty 050010, Kazakhstan, <https://orcid.org/0000-0003-0836-096X>

**Abdrahman Gulnara**, Dulaty Taraz Regional University, 7 Suleymenov Street, Taraz 60109891, Kazakhstan, <https://orcid.org/0000-0002-5598-1745>

**Kokanova Zharkinay**, Abai Kazakh National Pedagogical University, Department of Kazakh Language and Literature, Dostyk 13, Almaty 050010, Kazakhstan, <https://orcid.org/0000-0001-7348-6644>

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### Abstract

The study's goal is to use technology to improve language communication among primary school students through creative thinking. The research was applied in the spring term of 2021–2022. The study, which was carried out with the participation of 162 primary school students, was carried out using the quantitative research model. In the study, primary school students received 3 weeks of distance education and technology applications to improve language communication. In order to collect data for the study, a data collection tool developed by the people who created the problem was used. The findings collected from the data collection tool used in the research were added to the research in the form of tables and comments. When the results obtained are taken into consideration, it is seen that the language communication of the primary school students is improved with the use of technology and that they will use this field in their education.

Keywords: Primary school students, language communication, technologies, distance education;

\* ADDRESS FOR CORRESPONDENCE: Bogenbayeva Aigerim, Abai Kazakh National Pedagogical University, Dostykave13, Almaty 050010, Kazakhstan  
Email address: [web\\_info@kaznpu.kz](mailto:web_info@kaznpu.kz)

## 1. Introduction

It is seen that there are serious innovations in the field of education, as in most aspects of the developments that have emerged with the technologies and continue to emerge every day. It is seen that the courses that emerge with the combination of technology and online technology develop supportive and regenerative teaching systems (Knissarina et al., 2022). The renewal and development of these models every day, especially the use of the Internet in the education system, has significantly improved the ways of obtaining information and the use of interactive technology, and it is seen that the frequency of use increases every day (AL-Momani & Jawarneh, 2022). With the increase in the choice of online technology, it is seen that the sharing of education has increased and the information has become accessible for the students at the desired place and time. The concepts of technology have gained momentum with language and communication. It is now seen that language education and development are possible at any place and time; it is known that the reflections of these important developments and changes are very effective in the field of education. The language learning dimension has started to be supported by technology-based methods (Valencia-Robles & García-Laborda, 2022). Based on education development, it is seen that students increase their knowledge and improve their skills day by day with a wide variety of technological applications, strategies and tools. It is seen that the lessons are blended or completely supported by online technology by applying the language and interaction education method. Within this concept, it also provides an opportunity as a model that specifically addresses people who have difficulty in allocating time (Xislyatovna, 2022). This method makes lifelong learning possible for educational needs.

It is thought that it will be more essential and logical for primary school students to design online technology dimensions and, of course, environments according to their needs as content (Telep, Balashenko, Fedaka, Ukhach, & Sivak, 2021). It is thought that it is important to create more effective and functional learning environments by examining the language communication and characteristics and needs of primary school students in detail and to investigate the factors that may affect their willingness to participate in online technology (Chen, Lai, Lai, & Su, 2022). It is among the thoughts that primary school students are comfortable in the online environment and how many problems they encounter will affect their desire for online technologies. It is known that one of the factors affecting this situation is the language communication activities and dimensions that students will use in the online technology process (Yang, Chen, & Hung, 2022). Another thought is that the effective use of students based on their experience, motivation and knowledge about themselves or the activities around them depends on how positive the primary school students have towards online technology, rather than how advanced the activities used in the online technology environment are (Salokhojaeva, 2022). In another dimension brought about by language, communication and online technology, since the primary school students are responsible for the better development of creative thinking concepts, the students' desire and attitude towards learning in the online technology environment gains importance (Sondakh et al., 2022).

With these methods, an environment can be created and education can be carried out in which primary school students' language and communication activities and online technology concepts develop, and creative thinking can support them. In this study, it is seen that the use of technologies to improve language communication through creative thinking for primary school students will continue according to the dimension.

### *1.1. Related studies*

Murcia, Pepper, Joubert, Cross, and Wilson (2020), in the year of the work they have done in the digital encoding and learning at an early age 3 and 4 years old children in the centre of this focus group, aimed at a study that explores the creativity of how they affect; and as a result, their learning of technology to analyse the conceptual framework of 'a' from-E led to the development of children's creativity and learning with technology expressed, proposing that a conclusion has been reached.

Shimichev (2020), in the year of the work they have done for the development of creative abilities of students in foreign language education and the importance of redirecting undertaken, investigated the necessity and as a result working with texts in foreign language courses professional based on the use of these technologies, studied and material-independent it provides a synthesis of cognitive activity, is helping to create a success so that students' confidence and an increase their learning skills they achieved and developed.

Tabieh, Al-Hileh, Abu Afifa, and Abuzagha (2021), in the year of the work they have done in class teaching in third grade, students' active listening skills and fluency, originality, flexibility and creative thinking digital storytelling as a method used to help acquire the skills, investigated the impact of the implementation sought. Three of the students in the experimental group, as a result of the strategy of storytelling, achieved fluency which also affected their creative thinking skills.

It is seen that the results extracted from the studies in this section also form a meaningful whole on the people working for this purpose of digital and technology methods. In this context, in this research, as well as the results in the relevant research section, the value expected also benefits people.

### *1.2. Purpose of the study*

In this study, it is aimed to use technologies aimed at improving language communication through creative thinking for primary school students and answers to the following questions aimed at the general purpose have been sought:

1. What are the use cases of the language communication activities of the participant group participating in the study?
2. What is the situation of the participant group who participated in the study in devoting time to online technology?
3. What is the purpose of the online technology use of the participant group participating in the study?
4. Is there a significant difference between the dimensions of language communication according to the gender variable of the group of participants participating in the study?
5. How are the language communication and technology views of the study participant group after the study?

## **2. Method**

In this section, information is given that some of the data are transferred meticulously. Regarding primary school students, it is seen that information such as gender, class, how the application is formed and information about the forehead of the application are mentioned and included.

## 2.1. Research model

When the research is considered and examined as a model, it is seen that the quantitative research model is supported and this model is used in the research. The quantitative research model, on the other hand, is known to be used in studies to reveal what living beings, thoughts, existing communities and various fields to bring clarity to them. In addition, this method is used to decipher a situation and evaluate and define the relationship between events (Ozcan & Uzunboylu, 2020). In this study, it will be continued by drawing on the use of technologies aimed at improving language communication through creative thinking for primary school students.

## 2.2. Working group/participants

It is observed that the research was conducted in the 2021–2022 spring academic year. The data of the research randomly consists of 246 volunteer primary schoolteachers who continue their studies in Kazakhstan. All primary schoolteachers continue their courses with distance education.

### 2.2.1. Gender

In this section, the differences of the participant group included in the study according to their gender are given in Table 1.

Table 1. Distribution of the group of participants participating in the study according to the gender variable

Gender	Boy		Girl	
	F	%	F	%
Variable	84	51.85	78	48.15

As shown in Table 1, the data of the participant group participating and included in the study were added according to the gender variable, and in the light of the added information, it is seen that gender data are given to Table 1, in this context, it is seen that 51.85% (84 people) consist of male participants, while 48.15% (78 people) consist of female participants. In the gender section, the findings reflect the actual gender distribution.

### 2.2.2. The usage times of language communication activities of the participant group participating in the research

In this section, language communication activities on technology related to the problem situation of the research were prepared for the primary school students participating in the research, and their situations were requested and investigated according to the time periods of daily use related to this dimension. Detailed information is given in Table 2.

Table 2. The usage times of the language communication activities of the participant group participating in the research

Language Communication activities	1–2 hours		3–4 hours		5 hours or more	
	F	%	F	%	F	%
Variable	14	8.64	51	31.48	97	59.88

When Table 2 is examined, research communication activities in relation to the research problem the participant group was prepared and language technology with the help of the time zone that is used during the day is seen examining this context. 8.64% (14 people) expressed using language as communication events for 1–2 hours, 31.48% (51 people) expressed using language as communication events for 3–4 hours and 59.88% (97) expressed that they use language communication activities for 5 hours or more. In this context, it is observed that the daily amount of language communication activities is preferred by the participant group as 5 hours or more.

### 2.2.3. The time spent by the group of participants participating in the research on online technology

In this section, since all the activities of the participant group participating in the study were with online technology, the situations related to the problem situation of the study were investigated and examined according to the time periods of daily use of online technology. Detailed information is given in Table 3.

Table 3. The time spent by the group of participants participating in the research on online technology

Taking time for distance education	1–2 hours		3–4 hours		5 hours and above	
	F	%	F	%	F	%
Variable	11	6.79	48	29.63	103	63.58

When Table 3 is examined, surveyed group of participants within the time allocation and time use of technology in relation to education online technology they use on a daily basis, detailed information is given in Table 3 were examined and the conditions of use. In this context, as seen in Table 3, 6.79% (11) expressed their time on online technology as 1–2 hours, 29.63% (48 people) expressed their time on online technology as 3–4 hours and 63.58% (103 people) expressed their time on online technology as over 5 hours of their time. In this context, research and daily online in a good momentum of online technology use of technology and the amount of gain up to 5 hours as it is observed that the choice of over group of participants prefer.

### 2.2.4. Class status

In this section, the class information of the participant group who are educated in various primary school classes in the Kazakhstan region is examined and detailed information is given in Table 4.

Table 4. Distribution of primary school students according to their class status

Class	2nd year		3rd year		4th year	
	F	%	F	%	F	%
Variable	50	30.86	53	32.72	59	36.42

When Table 4 is examined, the distribution of the participant group participating in the research according to their class status has been taken into consideration, and the information regarding this section has been added to the table. In this context, when Table 4 is considered, 30.86% (50 people) are in the 2nd year, 32.72% (53 people) are in the 3rd year and 36.49% (59 people) are in the 4th year. In the class situations section, the findings reflect the actual distribution.

### 2.3. Data collection tools

It is seen that information about the data collection tool used in the research is included in this part of the study. On the other hand, the data collection tool is seen to be a form developed by the people who create the problem situation of the research. The data collection tool has been simplified by removing unsuitable items from the research by examining language communication and technology experts. It is seen that the personal information form called 'Language Communication and Technology' data collection tool, which is applied to the participants participating in the study and developed by the researchers, is used. The scope validity of the developed measurement tool was examined by experts with the title of five professors working on language communication and technology education, and unnecessary items were removed from the measurement tool and simplified and rearranged.

1. Personal information form (demographic data): In the personal information form, information such as gender, class, language communication activities, usage environments for devoting time to online technology are included.

2. Language communication and technology data collection tool: In order to create some values in the participant group, a 5-point Likert-type data collection tool has been prepared in order to get information about language communication and technology views and to provide them with information about this training. 16 items of the measurement tool consisting of a total of 22 items were used and 6 items were removed from the measurement tool, thanks to the expert opinion. The opinions of primary schoolteachers were consulted from two factorial dimensions, such as the 'Language communication' and 'Technology' situations of the participants participating in the research. The Cronbach alpha reliability coefficient of the measurement tool as a whole was calculated as 0.92. The measurement tool ranged as follows: 'strongly disagree' (1), 'disagree' (2), 'I'm undecided' (3), 'agree' (4) and 'strongly agree' (5) in the form of rated. The measurement tool was also collected from primary schoolteachers in the form of an online environment.

### 2.4. Application

The research in this part of the application with the technology and training on the part of the data we are given by the researchers and 162 volunteers who continue their education at various primary schools in their education Kazakhstan region and Adobe Connect videoconferencing elementary school students selected for the programme aimed to prepare with the help of live events, online activities through technology, language, communication, creative thinking, and time and use cases in education, it was prepared with the adobe connect videoconferencing application programme and this event environment was organised by showing it on adobe connect by experts in the field, and when the event part of the work is over, it is planned to show activities and videos and content to elementary school students. During the 3-week education, primary school students were given language training activities and technology activities, and primary school students were expected to participate in this topic every week. After 3 weeks of training, the online measurement tool and information form were applied to the primary school students and the data were given in the findings section in tables. The measurement tool applied to primary school students was collected through an online questionnaire and was coded in the calculation programmes environment and transferred to the Statistical Package for the Social Sciences programme.

## 2.5. Analysis of the data

In the analysis of the data, statistical data obtained from the participant group, i.e., primary school students, were analysed in the Statistical programme using frequency (f), percentage (%), mean (M), standard deviation (SD) and *t*-test using IRA. Numerical values are given to the data obtained from the programme in tables, accompanied by comments in the findings section.

## 3. Findings

In this section, the findings related to the language communication and technology education use cases of the participants participating in the research are included, each finding obtained in the study is presented in this section accompanied by numerical values and tables and values.

### 3.1. The purposes of using online technology of the participant group participating in the research

In this section, the purposes of using the online technology activities prepared for the participants who participated in the study were investigated and detailed information was given in Table 5.

Table 5. Information technologies and Internet usage purposes of the participant group participating in the research

Variable	<i>F</i>	%	
Purpose of using online technology	Language communication	85	52.47
	Activities continuing the lesson with creative thinking	75	46.30
	Other	2	1.23
	Total	162	100

When examining Table 5, the study of events and online technologies of the participating group were investigated according to the research problem the purpose of this dimension of state and the relevant information will have been added to the picture, and in this context 52.47% (85 people) said 'language and communication activities' prepare for when choosing 46.30% (75 people) said 'to continue with the course with creative thinking', it is observed that responds to the size of the last 1.23% (2 people) said you choose, it is observed that the other field. In this context, based on Table 5, it can be said that the research uses 'Language communication Activities' and 'Continuing the lesson with creative thinking', according to which most segments turn to the problem situation according to the problem situation.

### 3.2. The situations of the language communication dimension of the participant group according to the gender variable participating in the study

In this section, the data obtained from the research and the meta-qualification status of primary schoolteachers were compared according to the gender variable and detailed information is given in Table 6.

Table 6. The language communication dimensions of the study participant group according to the gender variable

	Gender	N	M	SD	Df	t	p
Language communication dimensions	Boy	84	4.48	0.34	162	-	284
	Girl	78	4.42	0.39			

When Table 6 was examined, the language communication dimensions of the group participating in the study were examined according to the gender variable and it was found that there was no significant difference according to the gender criterion [(Df(162)= -284,  $p < 0.05$ ]. When the language communication dimensions of the participant group participating in the study are examined, it is seen that the average score of male primary school students in this area is ( $M = 4.48$ ), while the average score of female primary school students in terms of language communication activities is ( $M = 4.42$ ). In this context, it can be said that there is no difference between the scores of language communication activities of male primary school students compared to female students in this study, and the findings of the research are also high Decisively.

### 3.3. Educational views of primary school students on language communication and technologies without studying

In this section, it is seen that the group of participants included in the research were included in the language communication and technology information after the study and were examined and added to Table 7.

Table 7. Educational views of primary school students on language communication and technologies from the study

	Language communication and technology views	M	SD
1	I can generate new ideas with language communication training	4.42	0.42
2	Language increases my interest in the field of education by generating ideas with communication.	4.41	0.41
3	It makes me happy to combine my lessons with language communication training	4.38	0.44
4	I understand language communication education better, thanks to online technology	4.41	0.31
5	Thanks to language communication training, I work harder to understand the lesson more successfully	4.43	0.36
6	I saw that there are opportunities to learn language communication concepts, opportunities to study	4.44	0.38
7	Language communication I can express my ideas very easily with the help of technology in education	4.48	0.42
8	I watch language communication and online technology videos again and again	4.46	0.63



9	I would like to use language communication training classes in different courses	4.43	0.48
10	Language communication and online technology I can connect from the smart device I want	4.41	0.52
11	Language communication and online technology give me the opportunity to do it again	4.34	0.61
12	The education I receive in language communication education classes allows me to improve myself	4.41	0.59
13	With language communication training, I gained a difference from my old habits towards the field	4.42	0.54
14	Take more responsibility to be more successful in language communication education classes	4.43	0.57
15	The use of language communication education with the online technology learning method allows me to understand the lesson better	4.42	0.55
16	I believe that, thanks to this technology education I have received, a positive connection has been formed between me and my educators Decently	4.41	0.49
Overall average		4.42	0.48

As shown in Table 7, the group surveyed katilic language, communication and technology are among the findings and opinions about the following points are high and there was a significant difference is observed. Although there is a significant value in all statements, it is seen that one of the most prominent statements of the participants participating in the study is 'I can express my ideas very comfortably with the help of technology in language communication education' ( $M = 4.48$ ). In addition, secondly, it is seen that one of the most prominent statements of the people participating in the study is 'I watch language communication and online technology videos over and over again' ( $M = 4.46$ ). In addition, it is seen that 'I take more responsibility for being more successful in language communication education classes' ( $M = 4.43$ ) and 'Using language communication education with online technology learning method allows me to understand the lesson better' ( $M = 4.42$ ).

Positive results in each item of the survey, although it is seen from the opinions of elementary school students 'Language learning opportunities the concepts of communication, I saw the opportunity of Education' ( $M = 4.44$ ), language, communication and technology, thanks to some elementary school students with their lessons positive bond between them is obvious. In addition, among the opinions of primary school students, it is observed that 'I can connect to Decile communication and online technology from the smart device I want' ( $M = 4.41$ ). In addition, among the opinions of the people participating in the study, it is observed that 'I believe that, thanks to this technology education I received, a positive connection was formed between my educators and me' ( $M = 4.41$ ). Finally, it is seen that the average score of the people participating in the research is  $M = 4.42$ , and it is seen in Table 7 that the ideas of primary school students with language communication and technology education have developed positively.

#### **4. Discussion**

In Vovchasta, Kozlovska, Opachko, Paikush, and Stechkevych's (2021) study, the purpose of the work they have done in the year of professional foreign language training in article the possibilities of using information and communication technologies as a tool to analyse theoretically on the example of conceptual experimental testing is intended for the experts and civil defence, and as a result the knowledge of the foreign language affects almost all aspects of the professional activities of an expert, and the use of information technology and foreign language, they significantly increase the level of education achieved. In this context, when combined with the results of the research on the impact of language in communication is high and primary students with this method, the increase of students' knowledge at the same time, it provides the results that have been achieved, it is seen that benefit them the technology, in this context, use of technology such benefit both the size of the study it can be argued in the discussion section.

Almelhi's (2021) study that was made in the year EFL college students to develop their skills in the learning management system for creative writing and discussion boards, forums, and blogs such as the Addie model aims to examine the effectiveness of facilities used in online teaching and as a result creative writing and writing test is designed to work using a checklist-square statistical tests of the average scores obtained by the experimental group with the control group, participants in the experimental group by the last test is for the benefit of write performance to the conclusion that I have reached, in this context, this value when combined with the results of the research by participating in the online survey, the use of technology in the environment is high and the dimensions of Adobe Connect is the owner of the information reached the conclusion that it is easily seen that, in this context, this research is based on activities that is useful to both students and educators can be said in this part of research.

In Xislyatovna's (2022) study, the use of information and communication technologies in pairs, a qualified reader in the formation of socially mature, active and creative personality is one of the most important areas in the development of the research the main aim of his research and as a result, introduction of computer technologies in Russian as a foreign language classes, students' interest to increase creative thinking skills and the development of information and communication, it seems that he reached the conclusions that he supports the formation of a holistic attitude towards education and self-education. In this context, when this value is combined with the results of the research, it is seen that the participant group reach a positive value about creative thinking and language communication activities and that they want to see these applications in another classroom environment.

With this method used in the research, it is seen that it provides meaning positively in primary school students, while it is expected that a student community that develops with the concept of language communication and understands where to use it will benefit the future. Each value cannot prevent the fact that students are better prepared, as well as this research is designed to better prepare and educate primary school students by thinking about students. In this context, it can be said that this language communication and online technology provide meaning and bring benefits to the people participating in the research.

#### **5. Conclusion**

When the research is completed and the results are discussed, it is seen that the data of the participant group are formed first, and in this part, a total of 162 primary school students participated in the research, it was concluded that this value is an ideal data according to the sampling for the

research, while it is important for the research to reach more people in this problem situation, another value of the research is that the language communication activities of the participant group regarding the problem situation of the research were prepared with the help of technology, and it is observed that the time periods used during the day are most preferred by the participant group as 5 hours or more. Another value of research of the participating group participating in the study within the time allocation and time use of technology in relation to education online technology they use on a daily basis in the light of the conditions of use were examined and detailed information for up to 5 hours as chosen by the participating group and over and as a result it is seen that the preferred is reached.

Another result of the research is that the activities of the participants participating in the research and the purposes of using this dimension were investigated according to the problem situation of the research, and in the light of the relevant information, it is seen that the results of 'Language communication Activities' and 'Continuing the lesson with creative thinking' were used, it is also seen that the results of the education provided with this value benefit as a whole were reached. Study the final value of the variable from the previous value of the participating group participating in the survey according to gender and gender according to the criteria of the dimensions of language in communication situations have been investigated in this study it is concluded that there is a significant difference in male than female students is higher than the scores of primary school students of language, communication activities, but it is seen that the absence of any difference between the results have been achieved. The final value of the research group surveyed addressed katilic language, communication and technology are among the findings and opinions about the following points are high and it is seen that a significant difference and the results have been achieved, also the language of some of these statements are very comfortable language able to express my ideas in communication training with the help of technology they took more responsibility to be more successful in communication, education classes, it is seen that they see opportunities to learn language communication concepts as educational opportunities, and they can connect to language communication and online technology from the smart device I want, and they have a lot of positive results, and their ideas about language communication and technology education have developed positively.

Just as language communication and online technology can conceptually touch every education, it is observed that primary school students' language communication improves with the use of technology, and it has been concluded that they will use this area in their education.

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