

General information about the project

Name	Meaning
IRN	AP09260464-KC-21
Название темы проекта	Development of information and educational environment in primary school on the courses "Scratch" and "Robotics" in the conditions of Smart education
Implementation period	2021 - 2023
Customer	Ministry of Education and Science of the Republic of Kazakhstan
Applicant	Non-profit Joint Stock Company "South Kazakhstan State Pedagogical University"
Type of financing	Grant financing
The object of research, development or design	Information and educational environments for primary schools
The purpose of the work	Disclosure of certain aspects of the application of IOS in primary school in the context of Smart education; development of content scenarios for the courses "Scratch" and "Robotics" for primary school students.
Research methods	Research methods-study and analysis of psychological-pedagogical and scientific-methodical literature, normative and program-methodical documents, carrying out practical work on the development of content scenarios
The results obtained and the novelty	The psychological, pedagogical and methodological literature on the development of the information and educational environment in primary school for the courses "Scratch" and "Robotics" in the conditions of Smart education has been studied and analyzed, pedagogical conditions of teaching in primary classes in the conditions of Smart education have been determined and justified, content scenarios for the courses "Scratch" and "Robotics" for primary school students have been developed. The IOS interface was developed for these courses.
The main design and technical and economic indicators	conditions will be created for high-quality education in primary school computer science and the development of information and cognitive culture of students
Scope of application	The results can be used in the training of future teachers in the system of higher pedagogical education, as well as in general education schools.

Brief information about the implementation of the project in accordance with the calendar plan for 2021

Job code, stage	Name of work under the Agreement and the main stages of its implementation	Main results
1.1	Research and analysis of psychological, pedagogical and methodological literature on the selected research topic.	In the Kazakh language Psychological, pedagogical and methodological literature on the development of an information and educational environment in elementary school for the courses "Scratch" and "Robotics" in the context of Smart-education has been studied and analyzed. The monograph "Theoretical and Methodological Foundations of Teaching the Course" Information and Communication Technologies "in Primary School" has been published. An article on the topic "Research of the information and educational environment in elementary school in the context of SMART education" was published in the journal included in the RSCI database.
1.2	Determination of the pedagogical conditions of education in primary grades in the context of Smart-education	in the Kazakh language Pedagogical conditions of education in primary grades in the context of Smart-education have been determined and substantiated. An article was prepared on the topic "Using the information and educational environment in the context of SMART education in primary school" and accepted for publication in the journal recommended by COXON.
1.3	Development of content scripts for "Scratch" and "Robotics"	Content scripts for "Scratch" and "Robotics" courses for primary school students have been developed. For these courses, an ITS interface was

	courses for primary school students	developed. An article was prepared on the topic "Methods of teaching the course of robotics in primary school" and accepted for publication in the journal recommended by COXON.
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The composition of the research group for conducting scientific research

№ п/ п	Full name, degree/academic degree, academic title	Main place of work, position	Role in the project or program	Employment (full, part-time)	Identifiers	Project work period (months)		
						2021 year	2022 year	2023 year
1	Abisheva Almira Baidabekovna, PhD, Acting Associate Professor	SKSPU, Senior lecturer of the Department of Computer Science	Project Manager	Incomplete, 0.5	Scopus ID number: 57200071391. ORCID number: 0000-0002-1399-3545. link to Scopus (Ibashova A.): https://orcid.scopusfeedback.com/#/start	12	12	12
2	Nurmukhanbetova Gulira Kenzheevna, PhD, Associate Professor	SKSPU, Associate Professor of Computer Science Department	Executor	Incomplete, 0.5		12	12	12
3	Kadirbaeva Rosa Iztleuova, PhD, Associate Professor	SKSPU, Associate Professor of the Department of Mathematics	Executor	Incomplete, 0.5	Number ResearcherID Web of Science: M-6824-2015. Number Scopus ID: 55841353600. ORCID number: 0000-0002-5975-2683. link to Scopus (Kadirbayeva R.): https://www.scopus.com/authid/detail.uri?authorId=55841353600 .	12	12	12
4	Suleimenova Laura Askerbekovna, Candidate of Technical Sciences	SKSPU, Senior lecturer of the Department of Computer Science	Executor	Incomplete, 0.5		12	12	12
5	Ualikhanov Bayan Saparbekovna	SKSPU, Phd, Senior lecturer of	Executor	Incomplete, 0.5		12	12	12

		the Department of Physics						
6	Belesova Damira Tursynkhanovna	Doctoral student, 6D0150300 - training of a computer science teacher, SKSPU	Executive	Incomplete, 0.25		12	12	9
7	Tasbulatova Aliya Altayevna	Polytechnic College, Master's degree-lecturer of the Department "Programming and Automated Systems"	Executive	Incomplete, 0.25		12	12	9
8	Karataev Nurlan Sagynbekovich	SKSPU, Master's degree-teacher of the Department of Computer Science	Executive	Incomplete, 0.25		12	12	9
Дополнительный персонал								
9	Jasuzakova Zh.G.	SKSPU		Incomplete, 0.25		12	12	9
10	Kalikulov N.E.	SKSPU		Incomplete, 0.25		12	12	12

List of published works in accordance with the calendar plan for 2021

№	Title of the publication	The name of the publication, the country where the article is planned to be published	Volume (printed sheets)	Authors
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1.	Research of the information and educational environment in primary school in the context of smart education	The scientific heritage (Budapest, Hungary) ПИИИ, VOL 4, No 63 (63) (2021)	7	Ivashova A.B., Kadirbayeva R.I., Nurmukhambetova G.K. Suleimenova L.A. Belesova D.T.
2.	Purpose of teaching the course "robotics" in primary schools under the updated educational program	Materials of the international scientific and practical online conference " modern scientific research: actual problems, achievements and innovations " April 26-27, 2021 Turkestan, 2021	5	Ivashova A.B., Karatayev N.S., Ualikhanov B.S.
3.	"Application of the information and educational environment in the context of smart education in primary schools".	"Bulletin of the L.N. Gumilev Eurasian National University. Pedagogy series. Psychology. Sociology" COXON, 4 (137) 2021	8	Ivashova A.B., Kadirbaeva R.I., Suleimenova L.A..
4.	Development of children's computational thinking in computer science lessons using the Scratch program	Collection of scientific articles of students of the traditional Republican scientific and practical conference" gylmga kochtar Zhas Galym " Volume 1 Shymkent – 2021	5	Asilmametova R. D., Abisheva A.B., Batyrbekova L.M.
5.	Creation and use of the information and educational environment for the course "robotics" in primary classes	Collection of scientific articles of the international scientific and practical conference dedicated to the 30th anniversary of independence and the 310th anniversary of Abylai Khan "tauelsizdik Zhane tarikh Tulga" Volume II Shymkent – 2021	5	Kurmetova M.M., Ivashova A.B.
6.	Methodological foundations of creating an information and educational environment in primary school for the course "Scratch" in the conditions of smart education	Collection of scientific articles of the international scientific and practical conference dedicated to the 30th anniversary of independence and the 310th anniversary of Abylai Khan "tauelsizdik Zhane tarikh Tulga" Volume II Shymkent – 2021	5	Sydykova Zh.I., Ivashova A.B.
7.	"Methods of teaching robotics courses in primary schools"	Bulletin of Toraigyrov University "pedagogical series" KOKSON, No. 4, 2021	5	Ibashova A.B., Ualikhanov B.S., Karatayev N.S.
8.	About the development of the information and educational environment in primary school in the context of SMART education.	International scientific and practical conference "Pedagogical education: the history of formation and vectors of development (to the 100th anniversary of the opening of the Pedagogical Faculty at the 2nd Moscow State University)" October 14 - 15, 2021 Moscow, 2021	7	Ivashova A.B., Belesova D.T.
9.	The use of mixed learning technology in a pandemic: Kazakhstan's experience	Astana i. Uluslararası hukuk ve sosyal bilimler sempozyumu 13-14 Kasım / November 2021, Antalya / Turkey	7	Kadirbayeva R.I.

10.	About the creation of an information and educational environment for primary school students in the courses "scratch" and "robotics" in the conditions of a pandemic	Astana i. Uluslararası hukuk ve sosyal bilimler sempozyumu 13-14 Kasım / November 2021, Antalya / Turkey	9	Ivashova A.B.
11.	Problems of teaching scratch programming environment in primary school	Bulletin of toraigyrov University "pedagogical series" KOKSON, No. 4, 2021	11	Ibashova A.B., Belousova D.T., Tasbolatova A.
12.	Theoretical and methodological foundations of teaching the basic course "Information and communication technologies"	Monograph, ISBN 978-9965-19-495-5 Shymkent 2021	9 б.т.	Ibashova A.B., Suleimenova L.A.
13.	Methodological foundations of teaching computer science in elementary grades	Copyright certificate, scientific work, November 9, 2021 No. 21504		Ivashova A.B.