

Proceedings of 2021 9th International Conference on Information and Education Technology (ICIET 2021)



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Digital Competence of a Teacher in a Pandemic

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Abstract—The article considers changes in the education system during the COVID-19 coronavirus infection pandemic. The term “digital competence of a teacher” is disclosed and a comparative analysis of the attitude to distance learning of teachers and students using a sociological survey is made. The teachers identified the lack of direct contact with the student as the main disadvantage of distance learning, and students feel discomfort due to the inability to receive knowledge directly from the teacher. A number of problems of distance learning have been identified and a course program has been created to improve the digital competence of a teacher. The course content covers the basics of pedagogical design, rubrics of educational results, platforms for collaboration, tools for creating a video lecture, platforms for monitoring and collecting information, digital footprint and analysis, online resources of virtual laboratory work. As a result of learning, 680 university teachers and teachers of secondary schools in Kazakhstan designed their own course. At the end of the first semester, the approbation of these courses was considered. The authors performed a two-step data analysis procedure using deductive and inductive analysis methods. According to the course indicators, many of the identified problems have significantly decreased.

Keywords— *digital competence, digital competence of a teacher, distance learning, digitalization*

I. INTRODUCTION

Education systems, from kindergarten to university education around the world, are undergoing new learning environments due to the COVID-19 coronavirus pandemic. As of March 20, 2020, governments in 135 countries have announced or implemented school and university closures, including 124 countries that have closed schools and universities nationwide and 11 countries only in some regions [1]. Students and teachers of Kazakhstan were also forced to switch to distance learning [2].

Head of State K. K. Tokayev, speaking on May 11, 2020 at the final meeting of the State Commission on the State of

Emergency, emphasized: “Education should be made much more flexible, it is important to develop protocols and methods of teaching children and students remotely, to complete the real digitalization of all educational institutions of the country. It is necessary to forcefully introduce modern remote sensing technologies. It is necessary to revise the content of educational programs in order to make them accessible and interactive” [3].

In order to accomplish this task, it is necessary to improve the competence of teachers to work in a distance learning environment.

At the first stage of the research, there was analyzed the current state of distance learning in Kazakhstan.

Analysis of the current state of distance learning has shown that there are difficulties in adapting to non-traditional forms of classes that require active actions during the virtual course of the lesson [4, 5, 6]. There was traced the inability to use standard office applications for working with text, graphics, audio-video materials. There were technical problems, for example, incompatibility of the training platform with the operating system, browsers or the use of a smartphone, low speed of the Internet connection. Illiterate use of time management to manage online time. Independent uncontrolled performance of the task alone leads to the temptation to postpone, sometimes the teacher does not see what the student is doing during the lesson, whether he is sitting in front of a computer screen or sleeping in another room, due to lack of discipline and dedication.

At the second stage of the research, there is revealed the concept of digital competence of a teacher [7].

A modern teacher, in order to teach remotely, must have digital competence, which means that he must have computer and digital literacy first of all.

The aim of the research is to find a solution to the problem of increasing the digital competence of teachers in the context of distance learning.

