Pedagogical practice research

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The use of information and communication technologies, graphs, info graphics, tables in teaching Geography and their effectiveness in order to improve learning results.

Introduction

Geography, as a complex science, is constantly developing and growing following the changes in natural and social systems. Accordingly, learning/teaching process in this subject, which is based on contemporary approaches and challenges, the use of diverse educational resources, increases the interest of students in the subject and the formation of the skills of perceiving and understanding the events and processes taking place in time and space. An important resource for teaching Geography is the map, which is not enough, because along with the acquisition of new knowledge, the science of Geography and teaching methods have undergone a qualitative change. In addition to the map, the teaching process in Geography requires other additional learning resources, for example, when discussing such topics as modern global problems - sustainable development goals, racial structure of the population, natural and anthropogenic events, processes and others. Without using a variety of resources and activities, students will not be able to develop reasoning, analysis and creative skills; therefore it will be difficult for them to perform such tasks, which are based on a diagram, a scheme, a table, the text of an educational film, etc. It requires analysis, problem identification, finding solutions, and evaluation. When the student is not given another opportunity to reveal his abilities, the interest in teaching decreases and the academic results are relatively low. In case of using a variety of resources, especially digital technologies, students listen, process, and understand information with more interest, acquire new knowledge that goes beyond what is written in the text format of the book and is closer to their perception and thinking type.

Global changes have altered the requirements for the education system. Today, without information and communication technologies, the functioning of society is impossible and, naturally, the majority of countries are actively integrating IT into the educational system. Quantitative literacy is very important in our case, the information conveyed by graphic images, tables, etc., which makes it easier for students to depict numbers in different ways, to establish connections between facts, to compare events quantitatively and qualitatively. Learning/teaching process that integrates technology-based resources such as: film, video, info graphics; Graphs, tables, schemes help students to establish relations between concepts, events, processes, new and existing knowledge, to establish connections visually and to make the material that is demonstrated easy to understand, which clearly takes into account the types and needs of students' information perception.

The relevance of the issue

In the 21st century, progress in any field of human activity is impossible without information and communication technologies.

Information and communication technologies, on the other hand, refer to electronic tools, the use of which in the educational process will provide students with 21st century skills, such as information, media and technological skills, information acquisition and analysis, creativity, critical thinking and problem solving, communicative skills, etc. (T. Neparidze; 2014). An important advantage of teaching using digital technologies is the increase of internal motivation among students. They are more enthusiastically involved in the learning process and carefully follow all the assignments and instructions given by the teacher. In addition, the observation showed that students also use electronic tools at home, independently, because they believe that learning in this way is interesting and fun, and it is more effective in terms of saving time. The research is significant for my colleagues, because they also have the mentioned problem, it is a priority for the school; it is useful for the national curriculum. It ensures the improvement of the learning process of the students improving knowledge and skills; in addition it enables my professional growth as a teacher in terms of introducing new ideas, innovations, and strategies into my own pedagogical practice.

The essence of the problem:

Despite the fact that information and communication technologies have made a great contribution to the development of the science of Geography, the frequency of using IT in schools today is still low. This might be caused by the low IT-technologies competences of teachers, less awareness in the direction of using modern electronic resources. My school is technologically equipped, the classrooms are equipped with "smart boards"; computers, projector, which ensure their frequent use by teachers, although it should be noted that the frequency of use is one thing, and the other is the extent to which the process is carried out using multiple resources; The analysis of the learning process of the previous year, which was based on the Geography lessons I conducted in the 10th grade, the resources used, the analysis of the students' summative works, which were of different types, namely: test; the essay, the project presentation highlighted one of the most important problems: the students had factual knowledge, but in most cases they wrestled with the tasks that required reasoning, the correct use of Geographical terminology. A creative approach could be performed by a small group of students which does not mean that the majority of students in the class have developed the skills of critical and creative thinking, analysis, evaluation. A review of the used resources also revealed that they were mostly monotonous; Presentations prepared with Power Point, various thematic maps, texts, the load went to the processing of texts. I decided to change the strategy in the learning/teaching process with the idea of loading myself with digital technologies, which would include film, video, info graphics; graphs, tables, charts, fun learning Geography electronic programs. While using this approach, the part of the students who could not do the types of tasks mentioned above were given the opportunity to perceive information, use different ways in the process of thinking and improve the results, more interest and enthusiasm for teaching would appear.

The purpose of the study is to conduct a learning process using modern digital technologies in the 11th grade, which will reveal the efficiency/inefficiency of the offered electronic educational resources, to determine the causes of low academic results in tasks based on high thinking skills, to plan appropriate

interventions for students, to plan appropriate interventions to improve students' knowledge, skills and finally results, evaluating the results.

This research is a report of a pedagogical practice study carried out based on the identification of students' needs at the secondary level in the 11th grade. The paper shows how important it is to use modern digital technologies, electronic programs, and graphic images in the teaching process, which increases student involvement and interest in the learning process, taking into account students' learning and information perception, thinking types (audio, visual, kinesthetic) and to what extent such an approach to teaching helps in the formation of creative and critical thinking, in the use of one's own abilities and, what is important, in the application of the acquired knowledge in concrete, practical situations, in the transfer, the academic results of the student gradually improve. The research report presents the measures implemented in this direction, the basis of which is the needs of the 11th grade students, which was revealed as a result of the observation in the educational process and the analysis of the summary works of the other explanation type. I started the research in May 2018 and finished in May 2019.

First of all, the students will benefit from the mentioned research, they will increase their interest in learning, they will work independently, will develop high-level thinking skills, mastering key competencies; Their academic results will improve, I, as a teacher of the subject, will improve my pedagogical practice, I will gain new knowledge and experience; I will share the research results and experience with my colleagues, which will be a kind of a guide for them in their professional activities.