



# IMPROVING THE METHODOLOGY OF TEACHING "COMPUTER SCIENCE" ON THE BASIS OF MOBILE SOFTWARE

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## ANNOTATION

*The current state of the software industry creates a demand for IT specialists ready to use modern software development technologies. For the purpose of teaching programming based on unified software development process the author uses a special a methodological system which connects its phases with stages of education.*

**KEY WORDS:** *teaching programming, software development technologies, object modeling, method of projects.*

## INTRODUCTION

The rapid development of new information technologies and their introduction in Uzbekistan over the past five years have left a certain imprint on the development of the personality of a modern child. The powerful flow of new information, advertising, the use of computer technology in television, the distribution of game consoles, electronic toys and computers have a great impact on the upbringing of a child and his perception of the world around him. The nature of his favorite practical activity - games - also changes significantly, and his favourite heroes and hobbies also change.

## LITERATURE REVIEW

Today, due to the widespread use of information and communication technologies (ICT) in human activities, they are becoming increasingly important for solving personal and professional problems [4,5]. Therefore, the preparation of highly qualified personals in the field of information and communication technologies is becoming one of the priorities of the government. Scientists such as I.M.Bashtanar, L.V.Bocharova, V.V.Buchelnikov, L.R. Votyakova, N.A.Goncharova, D.V.Daxin, A.A.Mukasheva, A.V.Ovcharov, E.A. Kozlova, L.N.Palamarchuk, T.V.Pankova, A.A.Kuznetsov, V.Yu.Nikishina, O.N.Griban carried out researches in the development of student's competence in the field of information and communication technologies.

## RESEARCH METHODOLOGY

The use of a mobile classroom in the educational process helps to solve the following educational and teaching tasks: to connect the known and understandable content of the educational material with new information; use Internet resources when explaining and consolidating new material; to work out the studied content in practice, familiar and understandable for the student; organize independent and active activities of students. The mobile classroom provides additional opportunities:

- Inclusion of experiments in the educational process;
- Increased visibility;
- Laboratory work;
- Organization of testing students using diagnostic electronic manuals and Internet resources;
- Preparation for classes with Internet access.

The mobile class includes: students' mobile computers (laptop with wireless network support) in the amount of 15 pieces; teacher's computer (laptop with wireless networking. Working with a mobile class, you can use Internet sites and disks with laboratory works, multimedia libraries. The whole class works. When working with a mobile class, it is necessary to use a larger variety of programs that provide a wider range of opportunities for studying and consolidating new material. And its inherent interactivity and multimedia visibility contribute to a better presentation of information and, as a result, a better assimilation of educational material. The mobile classroom increases the motivation of learning, saves teaching time. Benefits for students:



there are no wires, so there is nothing to accidentally catch on and get injured or damage equipment - an especially important point for younger students; increasing interest in the subjects taught; the possibility of a creative approach to the tasks being solved.

Benefits for the teacher:

- ease of use;
- a wireless network that allows the teacher from his laptop to easily manage the information transmitted to the students' mobile PCs;
- a variety of forms of presentation of educational material;
- there is no need for a special room, it can be easily and quickly moved to any school office.

Benefits for the school: the mobile class does not require a specially prepared room:

- it can be easily and quickly moved to any school office;
- the ability to organize information support for any subject;
- information support of traditional extracurricular activities, competitions, Olympiads;
- holding meetings, teachers' councils and methodological sessions for teachers;
- an excellent tool for accompanying public events: conferences, seminars.

Teamwork Opportunities: showing the teacher's screen to some or all of the students' computers; broadcasting videos from the teacher's computer to students' computers; connection to any student computer in the mode of viewing his screen or in full control mode (using a mouse, keyboard); recording audio and video clips from the computer screen of students and the teacher for the purpose of their further use in the educational process; organization of a negotiating text zone between students and a teacher; transfer of files from the teacher's computer to students' computers, as well as their subsequent collection from specified catalogs; creating and conducting interactive tests in any subject using the multimedia capabilities of a computer and receiving a test report for each student and the class as a whole; the ability of the teacher to work independently with the product for the preparation of educational materials (plans, notes, tests), including on home computers.

The use of a mobile computer class has become an integral and important form of education along with the traditional one. The use of mobile PCs and wireless Internet access in education brings clear benefits to the educational process. Mobile PCs in combination with wireless access technologies make the learning process more entertaining, more interesting, conduct lessons outside the school premises, diversify extracurricular and extracurricular activities. At the service of 84-5.

schoolchildren and their teachers - all the variety of information of the World Wide Web, available in any form (text, graphic, audio, video) at any point covered by the wireless network radio coverage area, at any time, not limited by the scope of the school lesson. Mobile classroom technology improves interaction between students and teachers, simplifies teamwork, and helps students get help from teachers more quickly. The use of mobile PCs and wireless communication technologies changes the methodology of the teaching process: instead of giving "lectures", teachers have the opportunity to involve students in the process of discussion, joint creativity, which makes learning not only more effective, but also pleasant for students.

## CONCLUSION

Thus, many shortcomings and concerns related to the use of mobile devices in teaching, described in the works of various authors, are not confirmed today, which is explained by the emergence of many educational services focused on working with mobile devices. The readiness of students and teachers to implement the system of mobile learning methods is confirmed by the high level of their interest, identified through an anonymous questionnaire. The considered system of methods did not have a negative effect on the development of the school course of computer science by students, but increased the effectiveness in project activities by increasing the motivation to study mobile devices and technologies, as well as application programming.

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