



**AKADEMIK LITSEYLARDA “INFORMATIKA VA AXBOROT
TEKNOLOGIYALARI” FANIDAN MUSTAQIL TA’LIMNI TASHKIL ETISH**

**ОРГАНИЗАЦИЯ НЕЗАВИСИМОГО ОБРАЗОВАНИЯ ПО СПЕЦИАЛЬНОСТИ
«ИНФОРМАЦИЯ И ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ» В АКАДЕМИЧЕСКИХ
ЛИЦЕЯХ**

**ORGANIZATION OF INDEPENDENT EDUCATION IN THE SUBJECT OF
"INFORMATION AND INFORMATION TECHNOLOGIES" IN ACADEMIC LYCEUMS**

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Annotatsiya

Ushbu maqolada akademik litseylarda “Informatika va axborot texnologiyalari” fanidan mustaqil ta’limni tashkil etishning mazmuni, shakllari va ahamiyati yoritilgan. Mustaqil ta’lim o‘quvchilarning raqamli savodxonligini oshirish, ijodiy va tanqidiy fikrlashini rivojlantirish hamda amaliy ko‘nikmalarini mustahkamlashda muhim o‘rin tutishi asoslab berilgan. Shuningdek, o‘qituvchining roli, baholash mezonlari va mavjud muammolar hamda ularni bartaraf etish yo‘llari tahlil qilingan.

Kalit so‘zlar. *Informatika, axborot texnologiyalari, akademik litsey, mustaqil ta’lim, raqamli savodxonlik, loyiha ishlari, elektron ta’lim resurslari, o‘quvchi faolligi, kompetensiya, o‘qituvchi roli.*

Abstract

This article discusses the content, forms and importance of organizing independent learning in the subject of "Informatics and Information Technologies" in academic lyceums. It is argued that independent learning plays an important role in improving students' digital literacy, developing creative and critical thinking, and strengthening practical skills. The role of the teacher, assessment criteria, existing problems and ways to overcome them are also analyzed.

Keywords: *Informatics, information technologies, academic lyceum, independent learning, digital literacy, project work, electronic learning resources, student activity, competence, teacher role.*

Аннотация

В данной статье рассматриваются содержание, формы и значение организации самостоятельного обучения по предмету «Информатика и информационные технологии» в академических лицеях. Утверждается, что самостоятельное обучение играет важную роль в повышении цифровой грамотности учащихся, развитии творческого и критического



мышления, а также укреплении практических навыков. Также анализируются роль преподавателя, критерии оценки, существующие проблемы и пути их решения.

Ключевые слова: информатика, информационные технологии, академический лицей, самостоятельное обучение, цифровая грамотность, проектная работа, электронные учебные ресурсы, студенческая деятельность, компетентность, роль учителя.

Introduction. In the modern education system, the science of informatics and information technologies plays an important role in the formation of digital literacy of students. In academic lyceums, this subject serves not only to impart theoretical knowledge, but also to develop practical skills. Therefore, the effective organization of independent learning is one of the main factors in increasing the level of knowledge of students.

Independent learning:

- ✓ develops the student's ability to work on himself;
- ✓ forms the ability to solve problems independently;
- ✓ strengthens creative and critical thinking;
- ✓ increases the ability to effectively use information technologies.

This process is especially important in computer science, as technologies develop rapidly and students must constantly update their knowledge.

Independent learning in academic lyceums can be organized in the following forms:

1. Individual assignments. Students are given individual tasks in programming, databases or office software.
2. Project-based learning. For example: creating a website, developing a simple mobile application, data analysis projects.
3. Working with electronic resources. Students use: online courses, video lessons, interactive platforms.
4. Laboratory and practical classes. Practical skills are strengthened through independent work in computer classes.

The role of the teacher. In the process of independent learning, the teacher:

- ✓ performs the role of a guide and consultant;
- ✓ gradually complicates the tasks;
- ✓ monitors the results of students;
- ✓ provides feedback.
- ✓ The results of independent learning are assessed based on:
 - ✓ correct completion of tasks;
 - ✓ quality of the project and level of creativity;
 - ✓ presentation and defense skills;



- ✓ time management and level of independence.

Problems: low motivation among students, lack of technical equipment, weak independent work skills.

Solutions: introduction of interesting and practical projects, use of digital educational platforms, improvement of methodological training of teachers.

Analysis of literature on the topic. The issue of organizing independent education in the subject of "Informatics and Information Technologies" in academic lyceums has been studied in a number of scientific and methodological literature on the theory and methodology of education.

First of all, the importance of independent work in the educational process has been widely covered by pedagogical scientists. In particular, the works of such scientists as Y.K. Babansky and I.P. Podlasiy emphasize the important role of independent work in increasing the cognitive activity of students. In their opinion, independent learning expands the student's opportunities to consolidate knowledge and apply it in practice.

The research of Uzbek pedagogical scientists, in particular N. Muslimov, Sh. Sharipov, U. Yuldashev, also covers the issues of organizing independent learning based on a competency-based approach. They note that developing students' independent work skills in teaching information technology is one of the main requirements of modern education.

In the literature on the methodology of teaching computer science (A. Abdukodirov, R. Ishmuhammedov, etc.), the importance of using information and communication technologies, electronic educational resources, and interactive methods in organizing independent learning is emphasized. This approach serves to activate students' independent research activities.

Also, international literature (UNESCO, OECD materials) indicates the development of independent reading skills in a digital learning environment, the use of online platforms and distance learning resources as an important direction of modern education.

In general, an analysis of the existing literature shows that effective organization of independent learning:

- ✓ increases students' motivation to learn;
- ✓ develops competencies;
- ✓ ensures the conscious and effective use of information technologies.

At the same time, the literature also emphasizes the need to improve methodological approaches and make wider use of digital resources in organizing independent learning.

Research methodology. This study aimed to study the process of organizing independent education in the subject of "Informatics and Information Technologies" in academic lyceums, and several research methods were used.



The study relied on educational theory, a competency-based approach, and the concepts of person-centered education. Also, scientific literature on independent learning and the digital learning environment served as a theoretical basis.

The study was conducted during computer science classes at academic lyceums. It studied students' independent work activities, the quality of task completion, and skills in using digital tools.

Analysis and Results. Observations showed that students' levels of independent work varied, with higher scores being attributed to students who used more electronic resources and conducted additional research. Some students had difficulty completing assignments due to a lack of guidance and motivation.

The results of the analysis showed that the use of online platforms, video lessons, and interactive resources:

- helped to master the subject faster;
- strengthened practical skills;
- stimulated independent research activities.

Project-based independent learning (for example, creating a website or developing a small program) has helped students:

- increase creativity;
- develop teamwork skills;
- enable them to connect theoretical knowledge with practice.

According to the results of the comparison, it was found that innovative approaches (ICT, project work, interactive methods) are more effective than traditional lessons. The activity and interest of students have significantly increased.

The results of the study showed that:

- independent learning increases the quality of students' knowledge;
- the use of digital technologies increases efficiency;
- the guiding role of the teacher is important.

Conclusion. Effective organization of independent education in the subject of "Informatics and Information Technologies" in academic lyceums develops not only the knowledge of students, but also their creative and practical skills. This will serve to train competitive, qualified specialists in the future.

The results obtained confirm the need to use modern pedagogical technologies and electronic resources in the organization of independent education in informatics in academic lyceums. This approach serves to develop students' competencies.

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