1. According to the motivational-orientation link, students accept or set a single educational task for themselves and collaboratively assess the circumstances and their own capacities.

2. Executive level: updating prior knowledge while carrying out various educational activities and tasks either independently or in groups. Particularly needed in this situation are reciprocal support and strictness toward one another, the capacity for constructive self-criticism, and a sense of accountability for the outcome of a shared purpose.

3. The relationship between control and evaluation: both parties have influence over how the previous stage's actions are carried out and assess the outcomes of their collaborative efforts. Speech exercises and tasks that need a collaborative search for knowledge and a group solution to a particular problem circumstance are typically completed in groups.

One kind of group work is pair work, which is mostly utilized for language and conditional speech activities. When students are given cards containing exercises for transformation, filling in the blanks, substitution, etc., pair work is a common method of teaching language skills. We may determine the elements of the content of group learning activities by considering the particulars of the academic field of "foreign language":

1. An understanding of linguistic content, its characteristics, and the ability to use it effectively in communication contexts.

2. Techniques for learning speech, language, and self- and reciprocal control approaches.

3. Understanding how to work together to solve speech challenges that involve imitation, substitution, and reproduction.

Conclusion: Based on the aforementioned, it is necessary to emphasize the skills and abilities that are part of social competence, such as the capacity to support one another, collaborate to accomplish a common goal, critically analyze oneself, assess one's own role in the success or failure of a cause, and collaboratively analyze the situation's conditions and correlate them with possibilities. Therefore, in order to help students develop their social competence–that is, their ability to function in society–it is essential to use educational organizations that can mimic real-world communication situations. These organizations should allow students to interact with one another, listen, defend their opinions, modify their behavior, and put society's interests ahead of their own.

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INTELLIGENT E-LEARNING PLATFORM: DESIGN AND IMPLEMENTATION FOR SELF-STUDY IN PROGRAMMING AND DIGITAL DESIGN

Annotation. *The present study sets out to examine the possibilities of improving platforms for self-learning in programming and information technology, with a view to proposing enhancements to existing educational systems by integrating interactive tools, including code validation, practical assignments, and step-by-step instructions. The functionality of the platform is described, with reference to its provision of structured educational materials, a specialized code editor, and an integrated emulator for displaying execution results. The emphasis is on experiential learning, which fosters the development of competencies in the utilization of contemporary technologies and enhances the efficacy of the educational process.*

Keywords: *self-learning, e-learning, interactive platforms, programming, code validation, emulator, practical assignments, code editor, educational materials, specialization.*

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INTELLEKTUAL ONLAYN TA'LIM PLATFORMASI: DASTURLASH VA RAQAMLI DIZAYNNI MUSTAQIL O'RGANISH UCHUN LOYIHALASH VA AMALGA OSHIRISH

Annotatsiya. *Ushbu tadqiqot dasturlash va axborot texnologiyalari bo'yicha mustaqil ta'lim platformalarini takomillashtirish imkoniyatlarini o'rganishga qaratilgan bo'lib, mavjud ta'lim tizimlarini interaktiv vositalar, jumladan, kodni tekshirish, amaliy topshiriqlar va bosqichma-bosqich yo'riqnomalar bilan boyitish taklif etiladi. Platformaning funksionalligi ta'riflanib, unda tuzilmaviy ta'lim materiallari, maxsus kod muharriri hamda bajarilgan kod natijalarini aks ettiruvchi integratsiyalashgan emulyator mavjudligi ta'kidlanadi. Ushbu yondashuv eksperimental o'qitishga urg'u berib, zamonaviy texnologiyalarni qo'llash bo'yicha kompetensiyalarni rivojlantirishga va ta'lim jarayonining samaradorligini oshirishga xizmat qiladi.*

Kalit so'zlar*: mustaqil ta'lim, elektron ta'lim, interaktiv platformalar, dasturlash, kodni tekshirish, emulyator, amaliy topshiriqlar, kod muharriri, ta'lim materiallari, ixtisoslashuv.*

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ИНТЕЛЛЕКТУАЛЬНАЯ ПЛАТФОРМА ЭЛЕКТРОННОГО ОБУЧЕНИЯ: РАЗРАБОТКА И РЕАЛИЗАЦИЯ ДЛЯ САМОСТОЯТЕЛЬНОГО ОБУЧЕНИЯ ПРОГРАММИРОВАНИЮ И ЦИФРОВОМУ ДИЗАЙНУ

Аннотация. *В данной работе рассматриваются возможности совершенствования платформ для самостоятельного обучения в сфере программирования и информационных технологий. Предлагается усовершенствование существующих образовательных систем за счёт интеграции интерактивных инструментов, включая проверку кода, практические задания и инструкции. Описывается функционал платформы, включающий структурированные учебные материалы, специализированную консоль для написания кода и интегрированный эмулятор для отображения результатов. Акцент сделан на практико-ориентированном обучении, что способствует развитию навыков работы с современными технологиями и повышению эффективности образовательного процесса.*

Ключевые слова*: самостоятельное обучение, электронное образование, интерактивные платформы, программирование, проверка кода, эмулятор, практические задания, консоль, учебные материалы, специализация.*

Introduction. In order to ensure the competitiveness of our country's economy in the international arena, the strategy 'Digital Uzbekistan-2030' was adopted and is being implemented in stages. This strategy provides for priority directions in the field of training and professional development in the field of information technologies, as well as training of specialists with a sufficient level of competence in higher education institutions.

This is due to the fact that for the successful development of the digital economy there is a shortage of IT specialists with the necessary knowledge. Currently, the demand for these specialists is very high. On this basis, as part of the first direction, a project is being implemented to train personnel for the digital economy, which involves an annual increase in the target enrolment rate in higher education institutions. Thus, in 2023, this indicator increased by 1.8 times.

The second direction sets a task for institutes and universities to train IT specialists capable of competing in the labor market. If we consider the labour market in the IT sphere, then, according to the HeadHunter platform, the private sector and state organizations of the republic offer about 7,000 jobs for narrow-profile specialists.

In addition, the demand for IT specialists in the labour market increases by 15-20% annually. The most demanded areas are:

– Frontend-development (creation of the user part of web pages);
– Backend-development;
– PHP, Java, .Net, C++, Python, JavaScript;
– System Administration;
– Fullstack development;
– Android and iOS development.

There is a particularly high demand for web-oriented developers. Our research work is devoted to studying this area and creating a systematic framework for training such specialists.

Literature review. In the course of this research, we studied the works of a number of foreign and domestic scientists. Among the authors: N.S.Vlasova and L.E.Rodionova, who in their works consider educational programmes for training specialists in the web-sphere, S.D.Karakozov, who studied the demand and changes in the requirements for specialists in the field of information technology, G.P.Bludnov, who in his work singles out web design as a separate field. Among domestic authors, M.R.Faizieva, who studied the creation of adaptive web systems in the educational process, N.S.Khaitullaeva, who studied the use of web technologies in the methodological training of future teachers of computer science.

Problem Statement. Web technologies open new opportunities in education, including access to open electronic resources, creation of information bases, platforms for interaction and use of online interactive systems. From the pedagogical point of view, web technologies allow preparing scientific and educational materials and creative works by placing them on educational portals. The use of interactive systems through the web allows to improve the methodology of independent learning of programming, which is one of the priority tasks.

Digitalization of the current state causes changes in approaches to the content of training in the field of programming. In our republic the content of professional training of bachelors in IT-directions is developed taking into account partial requirements of employers and international standards. At the same time, this area remains a sphere requiring constant mastering of new technologies and changes.

Research Methodology. In higher education, web technology training is provided as part of undergraduate IT training standards, which is very useful. However, training programs specifically designed to train web designers and web developers are unfortunately not yet sufficient. Some companies organize their own training courses from which they select the best graduates, which is a great idea. Web technologies can be implemented using different systems or platforms in three main ways:1. Manual programming using programming languages. This method involves writing all the components of the platform manually, using code. This approach often involves collaboration within a team or the involvement of a Fullstack developer, where the design of the site is developed by one group of specialists, the software part is handled by another, and administration is performed by a third group.2. Creating a site using content management systems (CMS). In this case, ready-made shells such as WordPress or Joomla are used. According to W3Techs data for 2022, these platforms are used by about 43.2% of existing websites in the world, with WordPress being one of the most popular. Statistics show that almost 62% of websites using CMS are powered by WordPress, which has an administration panel that is considered convenient and easy to use, as well as a wide range of plugins and the ability to integrate with various web technologies. This approach is often regarded as the simplest and most convenient.Another method involves creating a platform using frameworks such as Angular, React, Vue, Laravel, or Drupal. These are software environments that provide ready-made frameworks, allowing you to develop platforms or websites using inbuilt classes, repetitive elements, and libraries.This method is considered the second model of platform development.Some of the popular web frameworks include Laravel, Django, Spring Boot, and Symphony.

In general, depending on the practical work of web professionals, the process of developing a single platform or website involves several steps (Table 1.).

Table 1. Stages of Website Development and Tasks to be Completed

Stage	Tasks
Requirement Analysis	Define project goals, target audience, and key functionalities.
Planning	Develop a project plan, choose technologies, and determine the website structure.
Design	Create wireframes, UI/UX prototypes, and design the user interface.
Development	Implement frontend and backend functionality, integrate the database, and optimize website performance.
Testing	Conduct functional, usability, security, and cross-browser testing.
Deployment	Host the website on a server, configure the domain, and set up hosting.
Maintenance & Updates	Monitor performance, fix bugs, update content, and implement new features.

The distribution of labour across the project's various stages is determined by the tasks inherent to each stage. The design and interface development tasks are currently the responsibility of UX/UI designers who utilise graphic editors. The frontend developer's role involves translating the layout prepared by the web designer into HTML and CSS templates. The backend developer's function is the creation of the site's

functional elements. The content manager's role is the provision of content for the site. The subsequent stage involves the placement of the site on the Internet and its promotion by an SEO optimiser. To train specialists to perform the above tasks, it is necessary to introduce additional training courses at the level of higher education. At the same time, the use of training systems for self-study is an effective solution.The following courses are available:

• Designer course. In this module, the user interface of a website and its layout are developed. Today, such programs as Figma, Sketch, Adobe XD, Balsamiq, Invision Studio, Marvel, Axure, and Framer are used. Website design, animations, graphics, and image processing are created. The Frontend Developer course utilizes HTML5, CSS3, and JavaScript technologies to create website layouts, and frontend developers must also be versed in CSS preprocessors (LESS, Sass, Stylus), the Bootstrap framework, React, TypeScript, Git, and server-side add-ons such as Node.js.

• The backend course focuses on. The program encompasses the study of the PHP programming language, databases such as MySQL, the C# language, content management systems (WordPress, Joomla), and plugin skills.

• The Content Manager course is designed to train specialists in populating websites with content, equipping them with competencies in text manipulation, information processing, graphic editing, and CMS management.

• The SEO Optimiser course represents a specialist programme with a core focus on the development of competencies in the domain of search engine optimisation. This programme encompasses the adept utilisation of tools for the analysis of website statistics, with a focus on platforms such as Yandex and Google Analytics, along with the strategic promotion of websites in search engines.

Analysis and results. For in-depth training of such specialists in the direction of computer science, it is especially effective to use the pedagogical technology of the project method. In the framework of the project method, students are divided into groups, each of which is engaged in independent learning in separate courses. Tasks for such groups include the creation of a website for an educational institution or a training course.

The above-mentioned self-study courses are used to fulfill the project task. Thanks to the project method, students go through all stages of website development, from planning to implementation. During this work, they not only gain practical skills in website development but also learn how to work on projects, learning where to start working on the next development.

Digital materials should be made available for all courses. In-depth learning of these courses through independent learning should be organized with the division of courses and monitoring of learning through independent learning. There are many technologies for performing independent learning using information technology. E-learning provides opportunities to provide quality information and teaching and learning base. For this purpose, e-learning and distance learning technologies are used, which allow collecting, systematizing, storing, and using learning resources with the use of information and telecommunication technologies.

Recent years have seen a shift in focus within e-learning environments towards the integration of multimedia elements, including e-textbooks, e-learning materials and e-publications. However, contemporary trends are marked by the active introduction of online learning platforms. Within the higher education system, the learning process is segmented into three distinct phases: theoretical, practical, and independent learning.

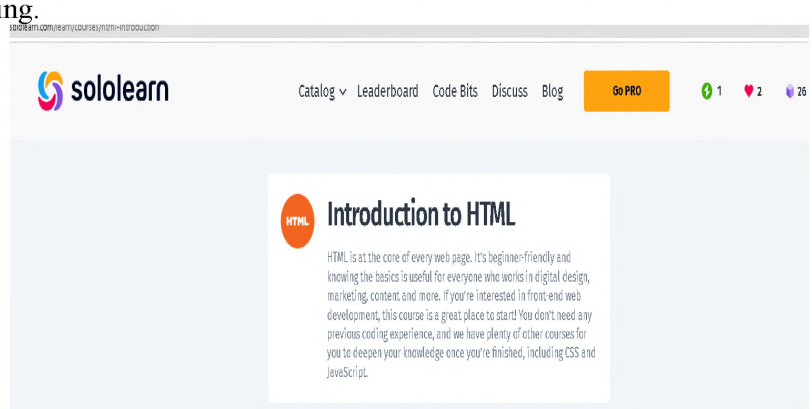


Figure 1. Sololearn platform.

The latter constitutes the fundamental basis for the development of students' knowledge and skills. The integration of online technologies, such as individual assignments, small group assignments utilizing the case method, or group assignments employing the project method, can facilitate the effectiveness of independent assignments. Results and practical examples. In contemporary higher education, the structures for creating e-learning environments exhibit diversity. Among the software products of distance learning are special tools for supporting electronic educational environments, which are employed to address technological challenges associated with the organization of distance learning processes.In the context of the 'Informatics' discipline, programming stands as a pivotal professional competence, necessitating substantial time and resources for mastery. The distinctive nature of programming entails not only the comprehension of programming language syntax but also the discernment of algorithms and the capacity to address specific problems. In order to achieve this, students must possess competencies in mathematics, logic, and English, in addition to the aptitude for algorithmic composition. Contemporary learning methodologies encompass diverse platforms and approaches for acquiring programming skills. These include online courses, video tutorials, and code verification platforms. Web-based platforms facilitate independent learning through MOOCs (Massive Open Online Courses), mobile applications, training videos, and other thematic resources.

A user analysis of the most popular projects for learning programming reveals that the leading platforms are Codecademy, Code-basics, Coursera, HTML Academy, Stepik, Codewars, ITVDN, JavaRush and Hexlet. It should be noted that some of these are fee-based. English-language resources include edx.org, freecodecamp.org, w3schools, Freecodecamp.org, sololearn.com, and datacamp.com (Figure 1).

These courses facilitate self-paced learning by providing a platform where users can immediately assess their coding knowledge.Initially, the system presents theoretical concepts, followed by an interactive coding environment and a console emulator that displays the results of code execution. Such systems enable individuals to independently learn HTML, CSS, PHP, and other programming languages. Users can simultaneously access all necessary modules, write code, and validate its correctness through an integrated validation system.

The system under development will be available in Uzbek and will function similarly to the aforementioned platforms. The online system will first introduce theoretical concepts, followed by a coding interface and a console emulator that visualizes execution results. The Informatika.uz platform (Figure 2) offers a user-friendly online environment for learning HTML, CSS, JavaScript, React JS, and other programming languages. The key features of this platform include:

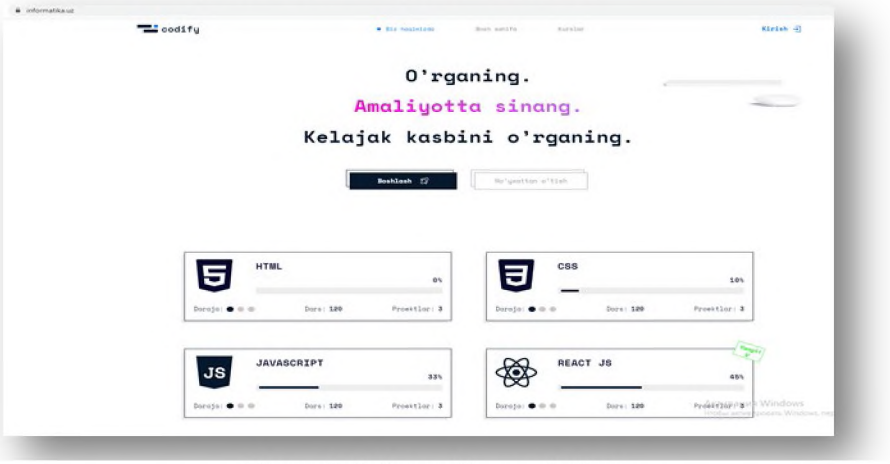


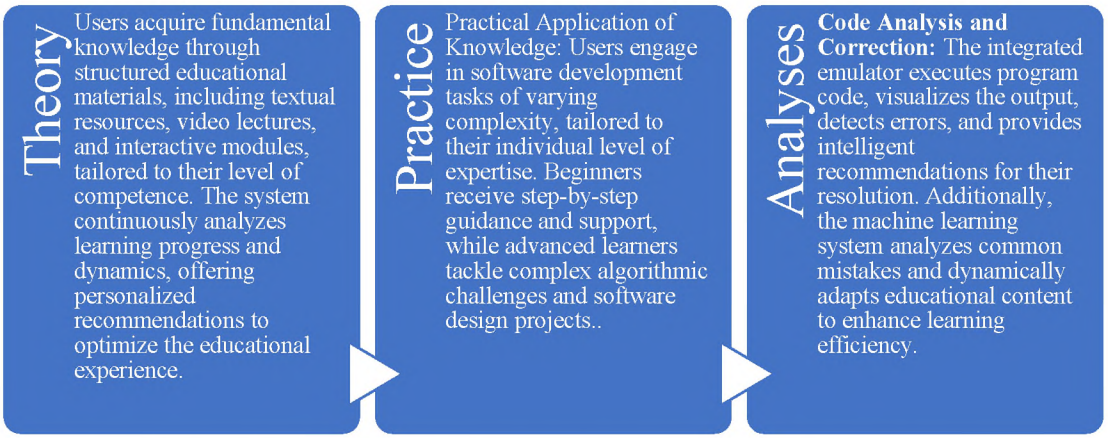
Figure 2. Informatika.uz platform.

The functionality of the platform is based on the following key principles:

- Theoretical Training: Users develop a solid understanding of fundamental concepts through structured educational materials, including textual resources, video lectures, and interactive modules. These materials are carefully adapted to match the user's level of competence, ensuring a progressive learning experience. The system actively monitors users' progress and learning patterns, leveraging this data to generate personalized recommendations that optimize their educational journey.
- Practical Application of Knowledge: The platform facilitates hands-on learning through a variety of programming tasks of increasing complexity. Assignments are tailored to the user's individual

proficiency level, ensuring a balanced progression from basic exercises to advanced problem-solving. For beginners, step-by-step instructions and guided support are provided to reinforce foundational skills. Meanwhile, experienced learners engage in complex algorithmic challenges and software design tasks, fostering critical thinking and problem-solving abilities.

▪ Code Analysis and Correction: The integrated emulator executes program code in real-time, visually representing output results and identifying errors with precision. A built-in machine learning system analyzes common mistakes and offers intelligent, context-aware recommendations for correction. By continuously adapting the educational content based on user performance, the system enhances learning efficiency, helping users refine their coding skills and avoid recurring errors.



Platform Functionality. The key functionalities of the platform are outlined below:

Structured Training: The system provides comprehensive educational materials, step-by-step instructions, coding tasks, and tools for code validation.

Practical Orientation: The tasks are designed to facilitate the application of acquired knowledge in real-world scenarios.

Interactive Environment: A built-in console enables users to write and execute code within the platform.

Instant Feedback: The results of code execution are displayed in an integrated emulator, allowing users to identify and correct errors in real time. This approach ensures an effective and user-friendly learning experience in programming.

Platform Features

–Uzbek Language Support: The platform offers educational materials in Uzbek, making programming education more accessible to a wider audience;

–Diverse Learning Resources: Users have access to a broad range of programming languages, instructional content, and coding environments;

–Structured Learning Process: The curriculum is divided into well-defined stages, enabling learners to systematically apply newly acquired knowledge.

This platform serves as an excellent tool for individuals seeking to learn programming in Uzbek.

Conclusion. The integration of e-learning into higher education and the adoption of independent learning formats have been ongoing for several years. An analysis of the effectiveness of independent learning during the first half of the academic year demonstrated a 7–10% improvement in students' mastery of course materials across various disciplines, along with a 10–12% increase in the number of students selecting specialized pathways. These findings highlight that the incorporation of modern technologies in education not only enhances the efficiency of independent learning but also fosters students' competencies in utilizing contemporary digital tools. To further improve the quality and effectiveness of e-learning, the following measures are essential:

• Enhancement of Platforms for Independent Learning. Existing platforms should be upgraded to become more interactive and user-friendly. Integrating code review tools, practical assignments, and step-by-step tutorials will enable students to reinforce their learning more effectively.

• Development of Specialization Pathways. Educational programs and courses should support students in making informed decisions about their specialization. Implementing mechanisms to assess

students' strengths and weaknesses at various stages of their studies will aid them in selecting appropriate career paths.

• Expansion of Educational Resources in the Uzbek Language. Increasing the availability of educational materials in Uzbek will enable students to learn modern technologies in their native language, thereby improving accessibility and learning outcomes.

• Strengthening Practice-Oriented Learning. Greater emphasis should be placed on hands-on experience through specialized courses, training programs, and project-based learning. This approach will equip students with practical programming and development skills, preparing them for real-world professional challenges.

The implementation of these initiatives will contribute to the development of essential competencies, ensuring that students are well-equipped to work with modern technologies and excel in their chosen fields.

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METHODOLOGICAL FUNCTIONS OF CORPUS LINGUISTICS IN TEACHING ENGLISH

Annotation. *Corpus linguistics, with its data-driven approach to language analysis, offers significant methodological functions for enhancing the teaching of English. This paper explores how the use of corpora—large, principled collections of real-world language data–can inform and transform various aspects of Teaching English as a Foreign Language (TEFL). By providing empirical evidence of actual language usage, Corpus Linguistics can move beyond traditional, intuition-based methods to offer insights into patterns of grammar, vocabulary, discourse, and register. This research examines specific ways in which corpus data can be integrated into TEFL, including syllabus design, materials development, assessment practices, and the creation of authentic learning experiences. Furthermore, the study investigates how corpus-based tools can empower teachers and learners alike, providing them with a more nuanced understanding of English language use. It emphasizes the potential of Corpus Linguistics to bridge the gap between theoretical knowledge and practical application, ultimately leading to more effective, engaging, and student-centered English language instruction.*

Keywords: *Corpus Linguistics, Teaching English as a Foreign Language (TEFL), Corpus-Based Language Learning, Data-Driven Learning, Authentic Materials, Syllabus Design, Materials Development, Vocabulary Acquisition,*

INGLIZ TILI O'QITISHDA KORPUS LINGVISTIKASINING METODOLIK FUNKSIYALARI

Annotatsiya. *Til korpusi o'zining til tahliliga ma'lumotlarga asoslangan yondashuvi bilan ingliz tilini o'qitishni takomillashtirish uchun sezilarli metodologik funksiyalarni taklif etadi. Ushbu maqolada kor-*