



## **FORMATION OF STUDENTS' COMPETENCE IN THE USE OF CLOUD TECHNOLOGIES IN THE INFORMATION EDUCATIONAL ENVIRONMENT**

**Mamarajabov Odil Elmurzaevich**

TDPU named after Nizami

Teacher of the Department of Information Technologies

<b>Article history:</b>	<b>Abstract:</b>
<b>Received:</b> 18 <sup>th</sup> January 2022 <b>Accepted:</b> 18 <sup>th</sup> February 2022 <b>Published:</b> 30 <sup>th</sup> March 2022	The use of cloud technology allows you to reduce the cost of the reading process, the formation of teaching materials, providing access to it, improve the quality of reading on account of the rapid change of curriculum.
<b>Keywords:</b> Cloud technology, Storage as a Service (SaaS), Platform as a Service (PaaS), SECI, Internalization, Combination, Socialization	

Cloud technology allows you to organize access to various social applications using all the advantages of information technology, which can serve as a platform for organizing mobile reading. When using cloud computing technology, it has the following advantages:

- backup (data is stored in the cloud, even if the computer crashes);
- Storage (cloud provides the user with the ability to store all types of data);
- Access rights (access to data in the cloud, access from a mobile device);
- Collaboration (the cloud allows multiple users to work together at the same time, with the help of this function the ability to create projects as a group, optimally plan collaboration between faculty and students in the classroom);
- The formation of a conscious attitude to time and resources (professors do not need to spend time and resources on copying teaching materials, and students have online access to educational materials);
- Assignments (students can store their assignments in the cloud, and professors have the right to access them at any time).

Cloud computing can be implemented in the following model views:

- Storage as a Service (SaaS) - can be provided in the form of a disk on demand.
- Software-as-a-Service (SaaS) - provides access to the software, ie allows you to configure and manage remote servers through private providers.
- Platform as a Service (PaaS) - a set of physical means of data processing based on the platform (servers, hard disk, etc.).

The SaaS model of cloud technology is also a perspective in increasing efficiency in the teaching process.

Creating a learning environment based on cloud services. Among the use of online services in education, the SECI (Socialisation, Externalisation, Combination,

Internalisation) model, developed by Ikujiro Nonaka under the authorship of research on information creation in innovative companies, is widespread.

The model defines four phases of knowledge acquisition: Socialization is the exchange of knowledge in a non-transparent way that can be acquired only through the exchange of experiences. Externalisation is the process of consolidating vague knowledge with concrete knowledge, that is, based on the acquisition of new knowledge. Combination is the process of filling transparent knowledge into relatively complex and combined systems with transparent knowledge. Internalization is the process of consolidating vague knowledge with concrete knowledge.

Cloud computing services can be used as part of the SaaS learning process. To do this, the Cloud Services disk environment is used to create a tool with the following characteristics:

- Joint access for participants of the educational process: teachers and students.
- Ability to edit texts together, which allows you to share information on filling and enriching information.
- Access of teachers and students to personal information resources (social networks, e-mail) allows you to prepare a separate personal-oriented resource for each participant in the learning process.

Cloud services can be tools for creating contextual learning tools that can create the conditions for the formation of new knowledge in this form. Since the creation of new subjects for students takes place through the completion of knowledge creative assignments, we use cloud services through the completion of creative assignments.

The reason for the continued success of the use of cloud technologies is simple: their application has a wide range of capabilities and saves on infrastructure, services and staff costs. The hardware that allows data processing and data storage in a remote data center can



be simplified sufficiently. Almost all such problems are fully borne by the service provider. This approach allows enterprise computers to be standardized even if different operating systems (OS) are installed (Windows, Linux, MacOS, etc.). It makes it easy to provide equal access to company data for employees and customers who walk outside the office but have access to the Internet.

Despite its many ease of use, it also has a number of drawbacks. In particular, the user can be fully connected to the service provider. Indeed, according to the principle of creating a cloud service, the activities of the enterprise will depend on how the service provider and the Internet provider work.

Modern cloud technologies are rapidly entering the market not only of ready-made network and server devices, but also of embedded cloud systems. The idea of connecting and managing various district devices to a global network is called the Internet of Things (IoT). According to Kevin Dallas, general manager of Microsoft Windows embedded, the idea of an Internet of Things has existed for many years, but the reason for not implementing such a network was the lack of a single link - cloud technology.

#### **LIST OF REFERENCES**

1. Nazarov, I. U., Payazov, M. M., & Tadjibayeva, M. Z. (2019). TECHNOLOGY IS GETTING RID OF THE NOISE IN SPEECH PERCEPTION. *European Journal of Research and Reflection in Educational Sciences Vol, 7*(12).
2. Elmurzaevich-TSPU, M. O., & Rustamovich, A. J. (2019). THE BENEFITS OF USING INFORMATION TECHNOLOGY IN THE EDUCATION SYSTEM. *European Journal of Research and Reflection in Educational Sciences Vol, 7*(12).
3. Абдурахманова, Ш. А. (2018). ОБ ОДНОМ АСПЕКТЕ РАЗВИТИЯ ИНТЕЛЛЕКТУАЛЬНЫХ УМЕНИЙ В ЦИФРОВОМ ОБЩЕСТВЕ. In *АКТУАЛЬНЫЕ ПРОБЛЕМЫ ПРОФЕССИОНАЛЬНОГО ПЕДАГОГИЧЕСКОГО И ПСИХОЛОГИЧЕСКОГО ОБРАЗОВАНИЯ* (pp. 12-14).
4. Абдурахманова, Ш. А. (2017). Развитие педагогической науки в Республике Узбекистан. *Молодой ученый, (1)*, 428-430.
5. Mamarajabov O.E. Benefits of Using Information Technology in the Education System // *Vocational Education. Tashkent, 2019. No.1. P. 55-59.*
6. Kadirbergenovna, B. L. (2022, February). CREATE 3D GRAPHICS WITH THE HAND OF 3D MAX SOFTWARE. In *Conference Zone* (pp. 206-208).
7. Mirzahmedova, N. D. (2022). WORKING WITH DIGITAL INFORMATION ON A COMPUTER. *World Bulletin of Social Sciences, 6*, 88-89.
8. Xo'jayev, M. O. (2020). THE ROLE OF THEORY AND PRACTICE IN THE DEVELOPMENT OF IDEOLOGICAL COMPETENCE IN STUDENTS. *Theoretical & Applied Science, (9)*, 18-20.
9. Uroкова, S. B. (2020). Advantages and disadvantages of online education. *ISJ Theoretical & Applied Science, 9*(89), 34-37.
10. Bagbekova, L. (2020). DISTANCE EDUCATION SYSTEM AS A NEW FORM OF TEACHING. *Theoretical & Applied Science, (9)*, 12-14.
11. Bahadirovna, S. D. (2022, February). ENRICH EDUCATIONAL CONTENT THROUGH MULTIMEDIA RESOURCES USING DIGITAL TECHNOLOGIES. In *Conference Zone* (pp. 220-221).
12. Kadirbergenovna, B. L. (2022, February). MASSIVE OPEN ONLINE COURSE BASIC REQUIREMENTS FOR DIGITAL EDUCATIONAL RESOURCES. In *Conference Zone* (pp. 187-190).
13. Халдаров, X. A. (2021). ИССЛЕДОВАНИЕ ЧУВСТВИТЕЛЬНОСТИ К ВНЕШНИМ ПАРАМЕТРАМ ПРОЦЕССА ОБУЧЕНИЯ С ПОМОЩЬЮ ЭРГНОМИКИ В ПРИОБРЕТЕНИИ ЗНАНИЙ. *Журнал Технических исследований, 4*(1).
14. Abduganievich, A. S., & Marsilovna, S. R. (2022, February). FEATURES OF THE PROFESSIONAL ACTIVITY OF A COMPUTER SCIENCE TEACHER IN THE MODERN CONDITIONS OF THE ORGANIZATION OF THE EDUCATIONAL PROCESS. In *Conference Zone* (pp. 195-198).
15. Ilich, M. E. (2022, February). PROBLEMS OF PROFESSIONAL DEVELOPMENT OF FUTURE TEACHERS IN THE FIELD OF INFORMATICS. In *Conference Zone* (pp. 193-194).
16. Abduraxmanova, S. A., & Jo'rayev, X. (2022, February). MODERN WEB TECHNOLOGIES USED IN PROFESSIONAL EDUCATION. In *Conference Zone* (pp. 178-179).