

COMPETENCE IN DIGITAL TECHNOLOGIES AND INFORMATION COMMUNICATION FOR A FOREIGN LANGUAGE TEACHER

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Abstract

The incorporation of diverse digital technology tools, such as forums, quick communication mobile applications, teleconferencing, into the educational process facilitates immediate feedback among participants. It enables ongoing dialogue between teachers and students, synchronous/asynchronous interactions among all group members, fostering the development of communication skills, logical thinking, the capacity for dialogue and discussion, as well as the ability to make independent decisions and analyze materials.

Keywords

digital education, education system, internet, information, technology

The primary focus of contemporary educational system development is the systematic integration of digital technologies into the learning process. It goes beyond mere "reading" of entire courses or fragments and monitoring learning progress using computers or mobile devices. Rather, it emphasizes achieving a "higher level of representation in the educational process of the object being mastered, transitioning from a descriptive representation to modeling its essential properties" [Kirshev, Kirsheva, 2001, p.4][1]. This involves incorporating elements of gamification and creating augmented reality. In higher education, the key objective is utilizing digital technologies to model professional and research activities, shifting from a reproductive to a creative-problematic approach to education. Social learning and connectivism enable the establishment of a system wherein learners acquire universal principles of learning foreign languages, applying them throughout their lives and constructing their own learning strategies.

Digital technologies serve as effective tools for addressing the intensification and optimization of education, cultivating individuals adapted to life in an information society. However, a prerequisite for the informed application of digital technologies in teaching is the development of theoretical considerations regarding the organization of the educational process and forms of educational activity. This

development should take into account the psychological and didactic aspects of employing information and communication technologies (ICT) in education. Regardless of the concepts and theories formulated, it is essential to place the personality of the student at the forefront, emphasizing that the integration of cutting-edge technologies into the educational process requires a cohesive combination of advancements in information technology, psychology, and pedagogy.[2]

Hence, a pivotal aspect of the theory of learning using information and communication technologies (ICT) revolves around the organization of the educational process and the effective integration of these forms. Many educators observe [Zagvyazinsky, 2001] that the traditional teaching system lacks conditions for fostering the effective development of students' thinking abilities. Typically, in the context of widespread university education, instructors often aim to provide students with a wealth of information on their subject. However, the reproductive methods employed in its transmission entail minimal cognitive and creative engagement. This approach can lead to the cultivation of negative qualities in students, eroding their self-confidence, and redirecting their efforts from knowledge production to assessment performance. Consequently, society ends up with passive specialists, individuals adept at following instructions but lacking the skills to make independent decisions in their professional domains.

The traditional learning process is known to encompass several classical contradictions, which can be articulated as follows:

- Teacher's activity versus student's passivity.
- Curriculum designed for the average student.
- Lack of an individual approach to the personality of the student.
- Information presented in an abstract-logical form.
- Limited time, etc.[3]

For the optimal development of the structural units of students' thinking abilities through the use of information and communication technologies (ICT)[4], it becomes crucial to consider the individual psychodynamic characteristics of each student. Practical experiences with computer teaching aids reveal instances of emotional and physical tension, as well as fatigue. Therefore, it is suggested to account for key personal characteristics such as the nuances in cognitive mental processes, intellectual potential, and emotional responses, among others.

The opportunities presented by Digital Humanities (DH) align exceptionally well with the objectives of reforming modern education systems. These technologies have given rise to new forms of education, including distance and

blended learning, the establishment of Open Educational Resource (OER) repositories, and the creation of a unified information and educational space for universities and schools [5].

The rationale for incorporating Digital Technologies (DTs) into teaching stems from their didactic properties and functions within the educational process, coupled with the availability of methodological developments for this purpose. A key didactic property of DTs is their multimedia capability. Multimedia tools imbue mobile and computer devices with features such as animation, enabling the display of videos, full-color images, speech, comprehension of individual phrases, music playback, and animations. These elements collectively contribute to increased motivation for learning, accelerated learning pace, and skill development. Multimedia facilitates the acquisition of skills that may be challenging to develop through alternative technologies, such as pronunciation in foreign language learning.

According to the research conducted by methodologists [Polat, Bukharkina, 2001], it is evident that the utilization of verbal, graphic, pictorial, and sound supports facilitates semantic perception, alleviates operational memory load, activates long-term functioning, develops probabilistic forecasting mechanisms, and enhances learning motivation.

The incorporation of multimedia programs and resources in teaching foreign languages offers several undeniable advantages. These benefits stem from the multidimensional presentation of educational information, creating a more natural learning atmosphere. Students can simultaneously see, hear, and speak, engaging in all four types of speech activity within a single task [6].

However, the full benefits of multimedia usage are realized when perception involves mental activity combined with various types of cognitive engagement – from motor functions to inductive, logical, and creative thinking. Passive observation of what unfolds on the computer screen does not lead to the effective assimilation of educational content. The solution lies in providing students with the opportunity to actively participate in the learning process, achieved through the next didactic property of Digital Technologies (DT) – interactivity.

Utilizing a computer for knowledge assessment can significantly enhance the objectivity of control measures. Beyond the subjectivity inherent in traditional knowledge assessment methods due to unclear evaluation criteria, universities often face additional subjectivity arising from purely psychological factors. In the context of teaching a foreign language, employing computer-based control procedures enables the consideration of time parameters when evaluating task

quality. This is crucial for objectively determining the level of foreign language proficiency, encompassing not only an assessment of students' knowledge about the grammatical structure and lexical composition of the target language but also an evaluation of the development of corresponding skills and abilities. Moreover, computer programs empower students to compare their current results with previous ones and maintain a record of errors, offering valuable insights into their progress.

Analyzing statistical data provides insights into the extent of language skill mastery. Clear evidence of success convinces students of their achievements, and this confirmation serves as a stimulus for their ongoing self-improvement. According to the consensus among most scientists, the interaction with the computer in this context should adhere to psychological principles of communication. Such interaction should unfold in a natural manner, resembling human communication, and should not induce anxiety or tension.

A crucial prerequisite for establishing a successful mobile learning environment is the adoption of a collaborative, exploratory approach to cultivating professional competencies. This shift involves moving away from passive learning methods towards problem-oriented learning models that closely resemble the research process [Sambell, 2010]. Mobile technology empowers educators to foster a collaborative atmosphere, encouraging students to explore independently and infusing a genuine exploratory dimension into the subject. This approach signifies a fundamental shift in the philosophy of teaching and learning. Mobile devices, in particular, play a pivotal role by offering opportunities for instant feedback and assessment, thereby qualitatively transforming the dynamics of learning interactions. Notably, emphasis is placed on stimulating the development of informal communication, as the mobile interactive environment motivates students to engage in communication with group members, teachers, and other specialists anytime, anywhere. It also provides access to data, facilitating the sharing and exchange of content [Titova, Talmo, 2015].[7]

•The successful integration of the latest technologies into the educational process hinges on the appropriate development of Information and Communication Technology (ICT) competence for both teachers and students. This raises two critical questions:

- What is the structure of ICT competence for a teacher, especially a teacher of foreign languages?
- How can teachers' ICT competence be developed effectively?

International standards for teacher training in the field of Information and Communication Technology (ICT) began development in the late 20th century. The global educational community, including organizations such as the International Society for Informatization in Education (ISTE), UNESCO, and professional international organizations focusing on the informatization of education like EUROCALL, CALICO, TESOL, and IATEFL, played key roles in this endeavor.

The European Commission, in 2007 and subsequently revised in 2010, outlined Information and Communication (IC) competencies within a professional context (D.3. Education and Training Provision). This framework includes two levels, aiming to train specialists who are not only proficient in using ICT for organizing the educational process, creating training resources, and developing training software but are also capable of identifying gaps in ICT skills and knowledge. Moreover, they should understand new training programs emerging in the market and be able to assess their potential [European E-competence Framework, 2010, www.ecompetences.eu].

The forefront in developing standards for Information and Communication (IC) competence of teachers, as well as analyzing the conditions for its successful development and the integration of ICT into the educational process, is the Department of Education and Training of the Government of Western Australia (Queensland). Through a thorough examination of the IC competence levels of teachers in general education schools, researchers reached a conclusion in the 1990s that this competence can be categorized into three levels: basic, intermediate, and advanced/professional. The skills corresponding to these levels were extensively detailed, and a comprehensive table-map of IC competence was compiled.

The researchers emphasized that the necessary and sufficient level of ICT competence for teachers should be determined by factors such as the technical support available in schools, the opportunity for advanced training in ICT, and the policies adopted by the school or region in this regard [7]. The findings and standards were documented in "Education Queensland: Minimum Standards for Teachers - Learning Technology, 1999" (<http://education.qld.gov.au>).

According to the authors of the European project E-Consultants (G. Dadny, N. Hockley) [1], the digital literacies of foreign language teachers encompass various competencies, including written-speech, information-text, hypertext, multimedia, gamification, mobile, and code. This interpretation of digital competences for foreign language teachers remains flexible and can be expanded based on emerging needs and technologies, as suggested by Dudeney, Hockley, and Pegrum in 2013.

In alignment with this standard, teachers are expected to possess three levels of Information and Communication Technology (ICT) competence:

- General user competence
- General pedagogical competence
- Subject-pedagogical competence, reflecting the professional ICT competence relevant to their field of human activity

Teachers are required to:

- Master the basics of working with text editors, spreadsheets, email, browsers, and multimedia equipment.
- Apply modern educational technologies, including information and digital educational resources.
- Utilize foreign language sources of information and translation tools, including pronunciation, collaboratively with students.
- Implement modern assessment methods in ICT conditions, which includes maintaining electronic forms of documentation such as an electronic journal and students' diaries.

The requirements for teachers extend beyond just skills; they are detailed at the level of labor actions and functions that aim at "shaping students' attitude towards communication in a hypermedia format and skills related to ICT." Teachers are expected to possess the necessary and sufficient ICT competencies for planning, implementing, and evaluating educational work.

Specifically, a teacher should be able to:

- Master the basics of working with text editors, spreadsheets, email, and browsers, along with multimedia equipment.
- Apply modern educational technologies, including information and digital educational resources.
- Collaboratively use foreign language sources of information, translation tools, and pronunciation with students.
- Employ modern assessment methods in ICT conditions, which involves maintaining electronic forms of documentation such as an electronic journal and students' diaries.

These requirements emphasize not only the technical proficiency but also the ability to integrate ICT into the educational process, fostering a positive attitude towards communication in a hypermedia format.

Leading experts in the integration of mobile technologies into teaching foreign languages, G. Dudney and N. Hockley, have introduced the term "mobile competence of a teacher" (referred to as mobile literacy) to assess a teacher's

knowledge and skills in using mobile technologies for professional purposes [Dudenev, Hockley, Pegrum, 2013]. Mobile competence is essentially an integral part of Information and Communication Technology (ICT) competence, encompassing all its key components. The necessity to regard mobile competence as a component of a teacher's ICT competence arises from the standards of education for the new generation and the requirements of modern social order. It involves the knowledge, skills, and abilities required to evaluate the impact of mobile technologies on teaching foreign languages and adapt methodologies for their successful integration into traditional language classes. The general user and pedagogical levels of mobile competence align with the components outlined in the Teacher's Professional Standard related to ICT competence. Based on these standards, it becomes possible to identify the knowledge and skills associated with the professional level of mobile competence for a foreign language teacher.

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