

## Digital Educational Environment as a Factor in the Formation of Educational Thinking in English

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### Abstract

This article aims to determine the concept of didactic thinking in English essence as a methodological category in the theory and practice of training future foreign language teachers. The examination of recent scientific works by English and international researchers demonstrates the researchers' keen interest in issues of pedagogical thinking in English. The evolution of this problem in pedagogical science is linked to global changes such as technological progress, digitalization, globalization, and intercultural contacts, all of which impose new requirements for modern teacher education. The article's authors use key concepts to reveal their main content. Researchers distinguish and analyze the main components of didactic thinking in English in their connection and interaction to determine the essence of didactic thinking in English in the process of future teacher training. The authors introduce the term "didactic thinking in English" as the ability to acquire and apply scientific knowledge in innovative activities.

**Keywords:** Digital Educational Environment; Educational Thinking; Learning English.

### 1. Introduction

Since the 1990s, the concept of pedagogical thinking in English has played an increasing role in educational discourse, which is associated with social changes, technological progress, and globalization; the world has become more complex and networked. Growing individualization and social diversity have been accompanied by a parallel developing economic and cultural assimilation, the availability of a rapidly growing amount of information, and the increasing complexity and dynamics of social changes in general, all of which have imposed high demands on future foreign language teachers. Modern foreign language teachers are expected to be capable of acting and organizing themselves in various complex contexts and situations.

Given the above background, a paradigm shift in the educational debate has occurred in recent years: from Input orientation (which knowledge should be acquired) to Outcome orientation, aimed at the result (which competencies should be developed) (Shemshurenko et al., 2021). According to the new educational paradigm, learning success is determined not so much by the volume and type of knowledge acquired in the educational context as it is by acquiring skills that allow us to talk about didactic thinking in English (Scharpf, 2022). In this case, modern education allows us to process learning content more deeply than traditional, content-oriented educational approaches. It prevents the accumulation of inert knowledge, fosters a new information culture through the active use of multimedia technologies in the training and education process, and thus contributes to didactic thinking in English formation (Michelsen, 2014). In this article, we investigate whether the digital educational environment influences the development of educational thinking in English.

## **2. Literature Review**

The growing availability of free curricula, lectures, and information in the form of texts, videos, and multimedia on the Internet has provided learners with access to a diverse range of high-quality content. Weller (2011) asserts that content is no longer scarce and that learners can often obtain it for free from a variety of sources, including institutional repositories (e.g., MIT OpenCourseWare), open course providers (e.g., EdX), and social media sites (e.g., YouTube instructional videos). However, instruction is more than just content delivery. Merrill (2008, 23) observes, "There appears to be an assumption that information is sufficient and that direct instruction [effective, efficient, and engaging] is no longer required. The Internet is flooded with information, and there are only isolated islands of [effective, efficient, and engaging] instruction among the flood." Indeed, one of the pillars of learning technologies is design and the design of learning experiences (Conole, 2013).

In a learning environment, how much structure do learners require? How much direction do they require? Though the field has debated these issues in the past, the topic has recently received renewed attention with the development of Massive Open Online Courses (MOOCs). Within this context, practitioners and researchers are currently considering the following questions: How much and what types of support can peers provide to one another in a learning environment? What is the instructor's role in open online courses? In open courses, how much structure do different types of learners require? In examining digital learning environments, the debate over the relative merits of guided vs. minimally guided instruction is critical. "Providing information that fully explains the concepts and procedures that students are required to learn, as well as learning strategy support that is compatible with human cognitive architecture," according to the definition of direct instructional guidance. Unguided or minimally guided instruction, on the other hand, is defined as "one in which learners must discover or construct essential information for themselves rather than being presented with essential information" (Kirschner et al., 2006).

According to Kirschner et al. (2006), guided instruction is more effective and efficient than minimally guided instruction. They contend that minimally guided instruction (defined as constructivist, discovery-based, problem-based, experiential, and inquiry-based learning methods) overloads working memory and is ineffective at changing long-term memory structures (i.e., learning). Working memory is a limited capacity and duration location in which humans store and process information. Minimally guided instruction impedes learning by taxing working memory. Kirschner et al. (2006) claim that guided instruction does not overload working memory and supports the foundations of human cognition.

## **3. Methodology**

In simple terms, digital education is the use of digital technologies and tools in the teaching and learning process, also known as technology-enhanced learning or "TEL" for short. Technology is used to deliver lessons to students in digital education, removing time and location constraints. Digital education is rapidly displacing traditional education today. The authors used both empirical and theoretical research methods while working on the study: theoretical analysis of works by English and foreign researchers, generalization and systematization of conceptual approaches to didactic thinking in English formation in a digital educational environment. The authors used qualitative research methods in their article. More specifically, the author's goal in this study is to analyze unstructured data using a qualitative research method.

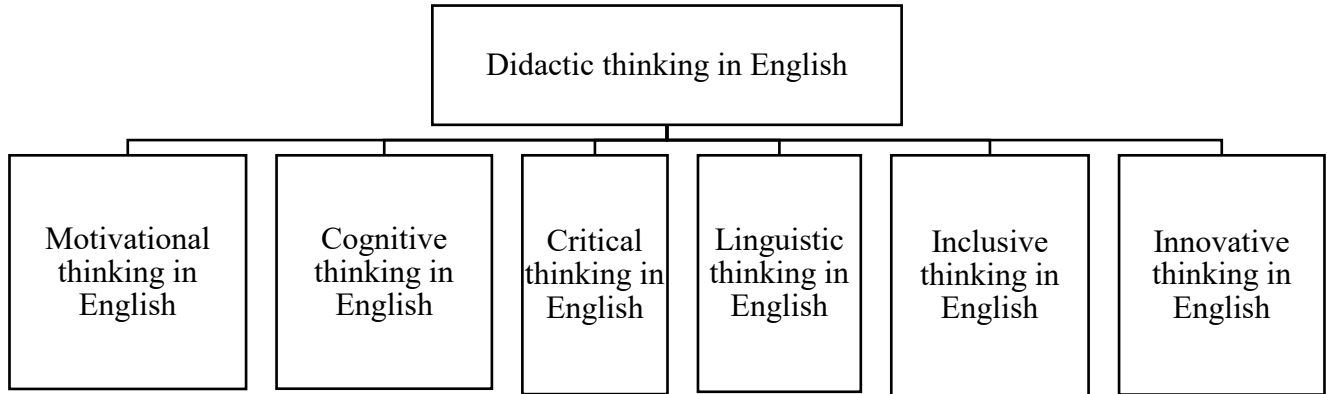
## **4. Results**

Didactic thinking in English enables learners and future teachers to develop both subject and interdisciplinary skills, allowing them to be competitive in professional life while also promoting personality development. Thus, future teacher education aims to prepare students to meet the challenges of the new millennium in a digital educational environment. Because of the diversity of internet use and its integration into the educational process, the Internet is perceived and integrated into the educational context from the perspective of media education (Gafiyatova & Solniskina, 2015). We believe that the digital world has a direct impact on modern education in general, and foreign language teaching in particular, because the Internet and computer technology have become essential tools in the training of students - future teachers (Bartz, 2013).

The digital educational environment alters our lives, our English thinking, our actions, and our sensations, opening up new avenues for interactive learning and intercultural communication. However, the fundamental question of what constitutes didactic thinking in English and which of its components is particularly important in the context mentioned arises. As we understand it, didactic thinking in English is the ability to transform scientific knowledge into

innovation, scientifically analyze, synthesize, and apply innovative concepts, and interpret scientific knowledge, concepts, and methods, including a digital educational environment. Didactic thinking in English entails various types of thinking in English, including motivational, cognitive, critical, linguistic, inclusive, and innovative thinking. These types of thinking in English are part of didactic thinking in English and should not be viewed as independent of one another but rather as interacting.

This is thought to be necessary to present in the form of a diagram (Figure 1).



*Figure 1.* Didactic Thinking in English Scheme (authors' findings)

Motivational thinking in English is an important psychological factor that is the primary driving component of academic achievement because it encourages students - future teachers - to seek and acquire new knowledge. The development of motivational thinking in English contributes to students' desire to become a part of a foreign-language culture, master a foreign language, understand it, communicate fluently with native speakers, and achieve a certain social status. They learn to effectively contact representatives of foreign cultures through the digital educational environment, thereby developing intercultural communication skills. Students develop a lifelong interest in other cultures, providing opportunities for self-development and self-realization (Schart, 2021).

Motivational thinking in English greatly individualizes the educational process in the context of teaching and learning foreign languages in a digital educational environment. Motivational thinking in English, on the one hand, provides an incentive to master a language; on the other hand, it supports the ongoing laborious process of learning it. It is no coincidence that modern Methodists believe motivation is essential for successful language learning. Furthermore, because multimedia technologies have increased student involvement in the educational process, the digital educational environment provides new opportunities in the educational process, motivating students - future teachers - to self-discovery and self-improvement (Sarancev, 2010). The digital educational environment entails developing skills for using various learning models, creating conditions for creative, independent work, and transforming multimedia into an innovative tool for the entire learning process. The digital educational environment has a positive impact on future foreign language teachers because of its limitless capabilities:

1. Individual training;
2. Practice-oriented training;
3. Research training;
4. Integrated Collaborative Learning Environment (Tamozhnyaya, 2010).

In English, cognitive thinking includes differentiated perception of reality, imagination, and creativity. It is present in all areas of pedagogical education and serves as the foundation for thinking in English processes. It is associated with the ability to meet challenges and find their own way of acquiring knowledge. This means that multimedia affects all spheres of human society and influences how we learn the world and acquire new knowledge (Ivanova et al., 2018).

## 5. Discussion

In a digital educational environment, critical thinking in English is achieved by differentiating different multimedia sources that increase the flow of information and, as a result, contribute to the development of the skill of

accepting and processing the information stream because multimedia sources become not only a means of information but also a means of selecting and evaluating this information in new conditions. Linguistic thinking in English not only allows you to express your ideas correctly, but it is also important in modern life because only those who can be convinced in any situation can achieve higher goals and fully utilize their potential (Tamozhnyaya, 2010).

Linguistic thinking in English is becoming increasingly important in today's information society, making the world around us easier to understand, and this is one of the most important tools for contacting others. That is, what cannot be expressed in words cannot be comprehended. The development of digital thinking in English contributes to the development of personality traits such as the willingness to change with the changing world, to use digital technologies in professional activities, and to adhere to digital age ethical standards (Kolpakova et al., 2022). A future foreign language teacher should be able to identify, evaluate, and choose digital resources for learning a foreign language so that they can be used for didactic purposes in the classroom; he should be able to create or help shape new digital educational resources; and he should not only own a digital content organization but also be aware of what data protection and copyright law requirements should be implemented.

The most common method of assessing or controlling the quality of language training is to administer tests with a specific structure and standards based on the language and the tasks to be performed to control the types of speech activity. In the field of language education, the Kazan Federal University employs language tests modeled after international ones, allowing the university to monitor the dynamics of the learning process and evaluate the results obtained. Individual accomplishments are visible not only to a teacher but also to a student. We felt it was necessary to review inclusive thinking in English as an integral part of didactic thinking in English as part of our research. Modern education involves the social and psycho-emotional integration of students with special needs, which means ensuring equal access to quality education for all.

Notably, inclusion encompasses not only a wide range of collaborative activities but also the entire contemporary world of children's lives. This concept encompasses not only children with physical development issues but also a sizable number of children – migrants and gifted children, among others. The development of inclusive thinking in English helps students - future teachers - develop qualities such as:

1. Tolerance, as a complex integral personality quality, implies the ability to maintain and demonstrate empathy for others. Tolerance fosters the development of necessary skills for the development of dialogue and peaceful conflict resolution, encourages creative approaches to problem-solving, and creates conditions for collaborative, constructive activity among educational process participants and personal achievements. Tolerance fosters mutual understanding and trust, aids in conflict prevention, and aids in the resolution of negative consequences.

2. Empathy, which entails the ability to create the special emotional environment required to foster the most trusting, open, productive, and safe relationships between participants in educational contact.

3. Pedagogical zeal. A teacher's professional and personal qualities are defined by a personal desire for professional self-improvement.

4. Perceptual abilities aid in penetrating the personal essence of others, establishing a person's uniqueness, and determining his inner world.

Innovative pedagogy has recently become essential in the field of education; thus, the development of innovative thinking in English reflects the essence of innovation in the process of education in general and the training of future foreign language teachers in particular. The acquisition and systematization of scientific and practical knowledge on innovative technologies, the connection with a teacher's scientific and research culture because the result of innovative thinking in English formation is the creation, dissemination, and introduction of innovations in educational activities.

## **6. Conclusion**

Didactic thinking in English in pedagogical education is the commitment to acquire scientific and practical knowledge and the ability to apply them innovatively in a digital educational environment because it enables the development of skills of independent search, selection, analysis, and comparison of information significant for a professional, and the use of digital resources to shape the personality of the future teacher. Today, whether in 1400 or 2021, digital education has become a common concept. The current revolution has transformed traditional and one-way

education into interactive and constructive education. This innovation has been used in a number of public and private educational institutions and is regarded as a secure solution.

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