

# Digital age of language learning: Exploring multimodal approaches in philological and pedagogical disciplines

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## Abstract:

The digital age necessitates new approaches in various fields, including social domains. Multimodality has become essential in modern communication, offering diverse information transmission methods across all types of interaction. The study aims to investigate the notion of multimodality and its use in foreign language instruction for students in philological and pedagogical fields. This theoretical investigation utilized both inductive and deductive reasoning strategies, alongside diverse techniques for gathering and organizing information from prior research phases. The research investigated the notion of multimodality, its relationship to pedagogy, and the prerequisites for implementing multimodal methods in foreign language instruction. Multimodal strategies were discovered to effectively engage pupils, rendering the learning process stimulating and captivating. The study emphasized the significance of integrating verbal and non-verbal methods of information conveyance in the analysis of lecture discourse. It underscored that multimodal texts are constructed with diverse semiotic methods, and their interpretation is collaborative and iterative. In foreign language teaching, multimodality serves various purposes, including enhancing student engagement, fostering creativity, stimulating imaginative thinking, and promoting associative cognition. The study contributes to the development of multimodality research, demonstrating its practical significance in education. It underscores the importance of foreign language learning in higher education and the need for a comprehensive approach to studying lecture discourse.

**Keywords:** linguistic nuances, technology integration, semiotic, associative cognition, creativity in learning.

## Introduction

Information is conveyed and interpreted through diverse systems and channels that provide meanings and can interact concurrently. Communication transcends mere sign systems, embodying a distinct sort of symbiotic relationship. Monomodality is being supplanted by a more intricate and cohesive method of information presentation (Tan & Matsuda, 2020; Indra Devi et al., 2020). Communicative processes increasingly rely on the intricate interplay of several sign systems, namely multimodality, rendering speech communication inherently multimodal. The issue of multimodality is a principal concern in contemporary non-verbal semiotics (Lima et al., 2019). Multimodality primarily encompasses the examination of verbal, non-verbal, and hybrid verbal-non-verbal communication, as well as the physical elements of gestural communication and the development of models for verbal, non-verbal, and mixed behaviors (Okoye et al., 2019; Grapin, 2019). Modality is a perceptual or psychological phenomenon associated with the perception of information. The term "modality," derived from psychology, denotes the sensory pathways of perception. In cognitive linguistics, the phrase is delineated as one of the informational codes encompassed under the idea of hybrid text. In psycholinguistics, modality pertains to a certain sensory system and delineates the attributes and features of sensations, signals, stimuli, information, and receptors. This modality is socioculturally predetermined and has its own traditions of modelling and dissemination of information in society (Liu, 2021; Newfield & Byrne, 2020). Accurate knowledge of modality necessitates an awareness of a specific culture. The fundamental components of every culture include ideas, worldviews, beliefs, norms, values, and social aspects that shape societal life and human interactions (Gualberto and dos Santos, 2019; Gray, 2021). There are several types of modalities: olfactory, tactile, gustatory, visual, and auditory.

The primary role of multimodality is to create meanings through diverse semiotic resources—such as writing, language, and imagery—that align with socio-cultural traditions. Multimodality refers to the overarching patterns and principles governing the interaction of verbal and non-verbal indicators, encompassing a synthesis of several codes for information presentation. Communication theory characterizes a code as a fundamental component of the communication model that imparts meaning. Communicative codes consist of three categories: verbal, paralinguistic, and extra-linguistic. Verbal

code refers to the conveyance of information via written and spoken language. Paralanguage encompasses all vocal modalities used to convey information articulated through verbal code. This category encompasses pace, tone, timbre, and intonation. Extralinguistic (non-verbal) code is conveyed by techniques unrelated to language, including facial expressions, gestures, posture, eye contact, spatial proximity, temporal context, and location. Multimodality delineates the overarching principles and particular regulations governing interactions in oral communication through verbal or non-verbal indicators. Kress (2009) regards the interplay of vocal texts, images, video, language, gestures, text size, and color as multimodal phenomena. Text that integrates many semiotic codes is multimodal and necessitates the concurrent activation of multiple perceptual channels, both visual and auditory. In discourse analysis, the utilization of various media or channels for information transmission is commonly termed multimodality. Multimodality refers to communication using textual, audiovisual, linguistic, and spatial modalities utilized to construct and convey a message. The use of multimodal means in foreign language lessons allows the teacher to diversify the arsenal of tasks offered to students, considering their speciality and sphere of interests. Teaching foreign languages to pedagogy students has its own peculiarities, which are important to take into account when selecting material and practical tasks in the classroom. Multimodal language learning is very emotional, active, and multisensory in nature, such language learning is able to integrate the learner, making him/her realize and critically relate to the cultural characteristics and mechanisms underlying different methods of communication. The objective is to investigate the idea of multimodality and its specific applications in the instruction of foreign languages to students in educational disciplines.

## **Materials and Methods**

This study is theoretical, i.e., in the course of it the main scientific concepts corresponding to the research topic were defined, the phenomena under study were systematized, and the results obtained were generalized. The essence of theoretical research is to study and collect data about the object of research by using deductive and inductive methods of scientific cognition. Theoretical research aims to discover and recognize new connections and relationships within the topic under study, which will not be the final result of the research as a whole, but will be an important part of solving problematic issues related to the subject of research. In this type of research, the scientist collects and systematizes the already existing results of other scientists, achieves his own results, which are in line with the set goal, and will identify promising directions for research on the topic. In this regard, appropriate methods of theoretical cognition were chosen for this study. Namely, the methods of induction and deduction, as well as various methods of systematization and generalization of the collected data about the object under study.

Deduction is the action or process by which a conclusion is drawn from reasoning. It is a logical process in which, given certain premises and certain rules that guarantee its correctness, a logically necessary conclusion follows. Usually, the term is also defined as reasoning that leads to specific propositions from general propositions. Induction is the reverse of deduction, but also a logical process or action characterized by the study of specific properties of an object, which subsequently leads the scientist to universal statements (or, in statistics, to the formulation of statistical regularities), which are the starting point in applying the method of deduction. Obviously, any reasoning is impossible without the use of these two methods, they are one and the same and determine only the logic of the construction of the researcher's thought. In this study, the methods of deduction and induction were used in the study of individual categories – “multimodality”, “foreign language teaching” and “students of pedagogical specialities”, having considered the features of all the above categories separately, their interaction was studied, which formulated the research topic.

Then, after collecting the necessary information, systematization methods were applied, the main function of which is to organize the obtained information according to some criterion, e.g., chronologically. In this study, the information was systematized logically – introduction, description of the methodology used, presentation of the findings, discussion, and summarization. Accordingly, the method of systematizing information based on logic was applied. When searching for suitable literature sources, the main criterion was the relevance of the source to the research topic, as well as

the relevance of the results described therein. Due to the fact that the concept of multimodality in the humanities is considered to be quite young, research in this area is still under development and scholars are still in search of new areas to explore. However, at the same time, this fact makes it clear that current research on the topic has not yet lost its relevance.

## **Results and Discussion**

Multimodal learning is a learning strategy based on the use of different types of media and educational tools to teach students, usually through a learning management system. Multimodal learning uses not just the words on a textbook page or the voice of an instructor giving a lecture, but a whole mix of these elements using video, images, audio files, and hands-on exercises to give the student the best possible learning experience. Instructors may use any combination of teaching methods; however, with multimodal teaching, it is mandatory for the instructor to use more than one method. This efficient pedagogical approach employs many tactics to guarantee that students comprehend and retain the knowledge presented during lectures. The principles of multimodal learning have been demonstrated to enhance student performance. Multimodal learning is efficacious as it accommodates diverse learning styles. Monomodality is a learning style when pupils acquire information using a singular way, such as a visual diagram or lecture. In multimodal learning, the instructor utilizes a visual aid to enhance the lesson or develops a multimedia presentation that exemplifies the content delivered during the lecture.

One of the challenges of multimodal learning is avoiding the potential overload associated with the use of multiple interactive learning tools. If the class becomes too complex and varied, students will find it difficult to focus on what is important. Overload is caused by having too many introductions or arrangements in a class at once, so it is important to organize the class in such a way that it is moderately multimodal, i.e., to maintain a balance between the use of traditional and interactive media. Examples of multimodal learning:

1. Case-based learning. Learning is facilitated when pupils contemplate real-world instances. When creating new materials or concepts, it is advisable to implement them in practical scenarios, as such examples inspire students by demonstrating the relevance and utility of their learned information in daily life.
2. Multimedia research projects. This approach is also widespread. It requires students to research and find what they need from a variety of media sources. It may include books, newspapers, periodicals, podcasts, audio recordings, video snippets, and news from credible sources. The subsequent step involves the creation and dissemination of a presentation. Students ought to develop presentations that emphasize their discoveries, rendering the content as engaging and captivating as feasible to maintain audience interest.
3. Developmental games. Gamification has a significant impact on the e-learning sector and the growth of student performance. Games enhance the learning experience, engage pupils, and elevate motivation levels. In this atmosphere, stress and annoyance levels are reduced as students unknowingly acquire new knowledge while engaging in gameplay.
4. Think, compare, share. This strategy is also widely adopted in multimodal learning. Through this strategy, students' thinking and co-operation skills with other students are improved. And in the presentation stage, the expression of thought or communication skills are improved.

Multimodal learning evidently enhances the quality of the educational process and elevates student productivity. All these educational methodologies and technologies are readily applicable via e-learning platforms. In the digital sector, several automation solutions enhance processes and decrease the need for manual labor. The professional linguistic community argues that the current educational programmes aimed at teaching foreign languages in general education institutions do not guarantee a high level of training and mastery of the language as a means of communication, a tool of professional activity. But the most important function of language is the communicative function, and the task of education is to develop communicative skills.

Discourse is multimodal, since various semiotic systems interact concurrently to communicate information, considering societal communicative traditions. Lecture discourse is a synthesis of

multiple media. The multimodality of lecture discourse refers to the concurrent engagement of several semiotic systems that convey information while considering societal communicative traditions. Methods and tools for analyzing multimodal discourses constitute a pertinent issue, as demonstrated by the plethora of papers on the subject; nevertheless, currently, there exists no standardized terminological framework. The objective is to examine the diverse verbal, non-verbal, and mixed (verbal-non-verbal) physical elements of gesture communication within the context of multimodal lecture discourse, and to develop models of these behaviors, together with their algorithmic representation and computer implementation. Cultural and social customs, regulated behaviors, and departures from non-verbal and mixed communication must also be taken into account.

Khutyz (2016) indicates that successful lecture discourse development requires its alignment with multimodality. The primary objective of lecture discourse is to furnish the audience with information about a certain topic and clarity, typically accomplished via the use of interactive teaching aids. Communication extends beyond linguistic methods of transmitting information. An efficient oral presentation should use elements from many semiotic systems (modalities) — visual aids, intonation, and interaction. Lecturers employ several characterization tactics in their speeches to elicit a specific impact on the audience. Intonation, gestures, facial expressions, pauses, and laughing provide a system of indicators that either augment or replace verbal communication methods. The lecturer's appearance and the distance to the speaker significantly influence the quality of information perception. Non-verbal features indicate the speaker's emotional condition, while the tempo and type of presentation reflect the speaker's competency. Utilizing a single audio channel in a lecture presentation renders the session unproductive and repetitive, limiting students' access to diverse digital and printed resources and relegating them to merely transcribing the lecturer's dictation.

The most extensively researched visually perceived non-verbal methods of conveying the speaker's personality are kinaesthetic (external displays of emotions and moods through gestures and facial expressions) and proxemic (the spatial arrangement of individuals within their habitual environment). Kinesics encompasses the non-verbal elements and their manifestations, including head movements, facial expressions, proxemics, and manual motions (Vereijken & van der Rijst, 2023). The theory of multimodality poses numerous inquiries concerning the methodologies for analyzing non-textual elements and the tiers of research involved. The subsequent layers of complex multimodality are identified: Micro-level refers to the segmentation into distinct codes and sub-codes, along with the identification of various semiotic communicative potentials and resources inherent in each sign system within a multifaceted communicative process; meso-level pertains to the particular processes of intra- and inter-code transcription, the specific interactions among micro-level elements, and the consideration of supplementary semantic potentials that alter the overarching meaning of communication (Roy & Roy, 2021). Meso- and micro-levels may be employed for analyzing communicative processes, such as in the context of a lecture. The macro level encompasses an additional domain, such as a specific discursive genre or discourse. The levels are interconnected and each greater level encompasses lower levels. The macro level encompasses the individual potentials of each code as well as their abstract mutual activation. In the German-language literature, three categories of methods for analyzing various codes (language, picture, or sound) of multimodal information are identified: quantitative, qualitative, and combinatorial methods.

Along with the introduction of technology into student life, another problem in foreign language acquisition arises. Many students do not find it necessary to learn the rules of spelling and punctuation because they rely on the spell checker built into smartphones and computer programmes (Yaroshenko et al., 2020). The trends in recent decades are as follows: the traditional, linearly unfolding, lengthy book text written in classical language two centuries ago is difficult for today's students to read and comprehend. According to research, students today can focus on each task, in this case an educational task, for only six minutes in a row without paying attention to the device (Bassi et al., 2013; Lewkowich, 2019; Pifarré, 2019). On the one hand, in conformity with a number of researchers, with the digitization of the educational process, young people develop multitasking – the ability to perform several tasks at the same time, which is undoubtedly a rather positive personality trait when performing tasks conscientiously. On the other hand, this approach should not be so optimistic.

Modern digital devices can have a negative impact on student engagement, creating attention imbalance and chaos (Accurso & Gebhard, 2020). As a result, students do not have an understanding of foreign languages as a holistic system. There is a need to adapt some courses in a short period of time, as there is no possibility to test updated methods on small groups of students over several years, and they are immediately familiarized with a whole stream of students. Therefore, students have to acquire new knowledge and skills in an accelerated mode, and educators have to adapt curricula and teaching methods quickly to improve the efficiency of the educational process. For this purpose, teachers should have in their arsenal extensive illustrative material and, in addition to printed journalistic texts, various messages in audio and video format to help identify errors in texts.

It is effective to carry out foreign language teaching for students of pedagogical specialities on the basis of the analysis of artistic and journalistic materials, the base of which is constantly updated and modernized. Students should learn to write correctly on the artistic works of the classics of literature: teachers need to inculcate linguistic tastes, pay attention not only to grammar, but also to the arrangement of punctuation marks in great writers. The selected examples are quite complex, but at the same time more effective. Appeal to modern journalistic texts contributes to the consolidation of the linguistic norm. For this purpose, the reverse method is used. Therefore, in addition to samples of fiction texts, students should be offered to study materials on contemporary pedagogy news, in which various types of violations were committed, and make a card index with examples of language errors found by students in journalistic texts. Thanks to such an approach, teachers demonstrate what mistakes should be avoided in speech, in written texts, form linguistic reflections, and eliminate the practice of superficial reading (Jones et al., 2020).

Pedagogical universities need to solve the problem of comprehensive modernization of the teaching process, as media systems are rapidly transforming and information technologies are rapidly developing. Undoubtedly, higher education institutions will not abandon the classical long-standing teaching methods, but some of them have already become archaic and need to be finalized. The reformatting of curricula includes the introduction of digitization of the process: interactive learning (discussions, creative assignments, work in pairs and triples), use of illustrative materials, presentations, online dictionaries. In the conditions of modernization, universities should be equipped with computer laboratories, multimedia studios, projectors, interactive whiteboards, and other special devices so that teachers can use the most modern teaching methods. For example, musical non-verbal language is original and unique, it is very different from verbal language, and yet, there are points of contact between them, which, have great pedagogical potential and can instil the skills of correct speaking and spelling in foreign languages in the complex, diverse and valuable process of student learning (Rolinska, 2021). In foreign language classes of pedagogical specialities can be used musical elements of language teaching as an introduction of non-verbal communicative function of discourse or speech replica, dialogue. That is, the communicative process of exchanging opinions through music or musical pauses.

Thus, it is obvious that learning foreign languages is an important component of the whole system of education in universities. The development of technology and scientific progress bring both positive and negative changes in all spheres of life, including education. Modern technologies make learning more diversified and engaging, and professors can use multimodality in pedagogy to engage current students. But, on the other hand, modern technologies are aimed at the maximum facilitation of human activity in all aspects, including the learning process: T9 typing system, online dictionaries, calculators, text generators. These discourage pupils from solving educational issues themselves. Therefore, one of the goals of the modern teacher is to find a balance between these two aspects, which will result in teaching foreign languages using information technology.

## **Conclusions**

Thus, it is obvious that foreign language learning is an important component of the whole system of education in higher education institutions. A thorough examination of lecture discourse in pedagogy necessitates the exploration of various aspects of multimodality, integrating both linguistic and sociological perspectives while analyzing verbal and non-verbal modes of information conveyance.

The heightened interest in multimodality studies correlates with the broadening of textuality's bounds. A multimodal text is a text encoded using many semiotic methods, encompassing both verbal and non-verbal elements. Multimodal information comprehension is interconnected; all elements of communication are perceived collectively and recursively, resulting in meanings that are continuously processed and altered. Alongside language, the primary code, non-verbal elements significantly contribute to the transmission of information perception. The audiovisual element serves as the catalyst enabling the recipient to completely comprehend the conveyed information.

In foreign language teaching, multimodality serves various purposes: it enhances student engagement, fosters creativity, stimulates imaginative thinking, and promotes associative cognition. It functions as a tool for addressing specific challenges or achieving broader educational objectives. At its core, multimodality facilitates communication and the conveyance of emotions, ideas, and perspectives. By integrating different modes of expression, such as visuals, gestures, or technology, students gain insight into the cultural and linguistic nuances of language. The examples provided underscore the potential of multimodal approaches in foreign language instruction, yet the field remains underexplored, warranting further investigation by scholars and educators alike.

Future research in multimodality within foreign language teaching should explore the effectiveness of different multimodal strategies in achieving language learning outcomes and consider cultural influences on multimodal learning experiences. Additionally, investigating the integration of technology into multimodal instruction, developing teacher training programs, and creating robust assessment methods are vital.

#### Author's short bio

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