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**REFLEXIVITY OF MULTIMODALITY IN THE SUBJECT'S  
COGNITIVE PRACTICES**

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**Abstract**

From the position of axiological and epistemological approaches, the article attempts to reflect the subject's cognitive practices through the prism of the phenomenon of multimodality, whose evolution, formation and development were carried out in the process of historical, social and cultural formation of society and the subject. A consideration of the multidimensionality of the phenomenon of multimodality contributes to the identification of its conceptual framework, the definition of semantic and connotation load, reflecting the cultural traditions of society, the universality of status, lines of demarcation, effects. This allows us to conclude that multimodality is a substance filled with modalities subject to verbal interventions that have an ontological basis and different types. The authors conduct a typological analysis of the concepts introduced into the framework of scientific research, which states the anthropological dimension of education, describes the increasing level of cognitive complexity of educational practices, scales the information trace of the subject of modern education, its passionarity. Attention to the subject of modern education – homo complexus – is explained by the need to harmonise the personality structure of a young person of the XXI century. One strives to successfully overcome social turbulence, to choose the optimal trajectory in a wide educational palette, allowing to open new horizons of cognition, comprehend thought forms, learn new languages and approaches to master multimodality in cognitive practices.

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## 1. Introduction

The reflection of the requirements for the 21st century man has highlighted the increasing role of the subject's cognitive practices. Philosophical approaches contribute to the preservation of the phylogenetic code of the nation. New pedagogical concepts determine the current projections of educational development; ethical regulators of the subject's activity aimed at developing quick decision-making, increasing the level of responsibility of the subject for the preservation of moral and ethical patterns developed by previous generations (Straub et al., 2021).

The focus of this article is the phenomenon of multimodality in the cognitive practices of the subject, which, in our opinion, are most prominently manifested in modern education, since it is education that has a wide range of:

- i. philosophical approaches to understanding the procedures of cognition (anthropological, phenomenological, humanistic, semiotic, hermeneutic, potential-centred, etc.);
- ii. theories (functionalism, symbolic interactionism, etc.);
- iii. practices (deconstructivism, postmodernism, etc.).

Multimodality is an important direction in the theory of social semiotics, which considers cognitive practices as a set of textual and visual modalities in order to create a message (Kibrik, 2010). Network communication has determined the emergence of texts that use a variety of means of constructing meanings, so the phenomenon of multimodality marked the emergence of a scientific direction in the study of communication, cognitive practices in their semiotic complexity.

## 2. Problem Statement

The magisterial significance for revealing the phenomenon of multimodality in the subject's cognitive practices is of epistemological discourse, since the subject of the subject's study is:

- i. cognition (Medova, 2020);
- ii. axiological, hermeneutic and phenomenological analysis (Brentano, 2018).

Cognition, according to philosophers, has a dual nature:

- i. meaningfulness and systematicity (Kant, 2012);
- ii. peripatetic and epathetic, so we are essentially faced with two types of cognitive practices represented in cognition:
  - i. epistemological and logical-methodological practices;
  - ii. artistic and humanitarian thinking (Rorty, 2017).

In our article, along with axiological and epistemological approaches to understanding language and text, we use a communicative-pragmatic approach to making sense of reality through verbal and non-verbal aspects, and a socio-semiotic approach to modelling the semantic potential of words and images as a set of interrelated systems and structures.

### 3. Research Questions

In order to reflect on the phenomenon, let us turn to the definition of the concepts introduced into the framework of our research.

Due to the fact that the concept "multimodality" is holographic in nature, let us consider its semantic and connotation load. Let us note that the semantic aspect of cognitive practices is significant for us, relating to the meaning of a word, its content, since sema as the smallest part of the lexical meaning of a word shows various characteristics of named things and facts.

Connotation, in its turn, reflects the cultural traditions of society and is intended to express emotional (evaluative) shades of the subject's statement, as it is a kind of pragmatic information reflecting a certain attitude to objects.

Multimodality is an integrative phenomenon. To achieve the effect of multimodality, the modern subject is not only language (verbal component); it requires a set of factors that allow communication, in which cognitive practices reach their peak. Multimodality is, in our opinion, the quintessence of several modalities in one givenness. In our study, following L.Y. Nikolaeva, we interpret modality as a way of an event; an expression of the speaker's attitude to the content of his/her utterance (Nikolaeva, 2014). Modality can be represented by three types of features: auditory (hearing), visual (vision) and kinesthetic (sensation).

Radical signs of multimodality are types of external stimulus, human senses (vision, hearing), connection of several sign structures at different levels in a mixed text. Multimodality is expressed through verbal and non-verbal means, interpretation of constantly modifying components of communication. The typology of the concept "multimodality" is presented in Table 01.

**Table 1.** Typology of the concept "multimodality"

No.	Personalities	Radical sign	Relationship to branches of knowledge	Means expressions	Copcepto-sphere
1	V.S. Bezrukova, W. Humboldt	Type of external stimulus	Psychology	Verbal means	Social
2	R. Straub, S. Kulin, T. Ehmke	Human senses (sight, hearing)	Neurophysiology	Non-verbal means	Individual
3	D. Gibson, T. Broadley, J., Downie, P. Wallet	Linking several sign structures at different levels in a mixed text	Linguis-tica	Interpreting the ever-modifying components of communication	Social and individual-moral connection

As it follows from the table, multimodality is a certain external stimulus perceived by one of the human senses; it is a mutual connection of several sign modalities at different levels in a mixed text (Kibrik, 2010). Multimodality manifests itself in the integrity and simultaneity of the operation of different modalities. If initially multimodality was understood as a combination of gesture, facial expressions, words, non-verbal sounds, in the age of computer technology development the concept became based on the analysis of elements of messages transmitted through Internet channels.

A text encoded by semiotically heterogeneous means can be multimodal, and the multimodal understanding of information occurs due to the interpretation of constantly modifying and transforming

components of communication. The use of discrete or continuous language, in our opinion, is also multimodal.

The second concept introduced in the article is the subject's cognitive practices. In Table 02, let us consider the triad: cognition – cognitive – cognitive practices.

**Table 2.** Definition of concepts

Concept	Personalities	Concept definition	Explication
Cognition	V.V. Davydov	Knowledge, cognition	The process of the information processing by the mind
cognitive	M.A. Sushchin	Relation to the study of consciousness and thinking	1. thinking ability; 2. ability to learn, retain and share knowledge with others
Cognitive practices	N.A. Lyz, M.-L. Lange, J. Tewes, K. Bering, A. Dreyer	A set of cognitive means, forms and methods aimed at renewing the methodology of cognition, changing its types and addressing the human being	1. analysing the information received by the subject, using perception, memory, and speech to cognise the world; 2. preparing a new kind of thinking: understanding uncertainty, complexity, contextuality; 3. formation of new thinking, free from the traditions of reductionism, universalism. 4. accounting for the effects of coherence, synchronism, synergy, co-evolution.

The most common cognitive practices in modern education, actively developed by Russian scientists and foreign researchers, are the following (Kononova et al., 2020):

- i. distance education (Abraham, 2021);
- ii. programmed learning (Boguslavsky, 2008; Gleason & Gillern, 2018);
- iii. informatisation of education (Davydov, 2022; Gibson et al., 2018; Weinlich, 2020).

The attention of the scientific community to the development of cognitive practices is explained by their importance in improving the infrastructure of society, in optimising the life activity and sustainability of the ecosystem, in manifesting new standards of modern educational design.

At the beginning of the 21st century, an epistemological shift in cognitive practices was marked in relief, characterised by a linguistic turn, in the course of which the emphasis in the cognition of the laws of reality shifted to the problem of meaning formation in artistic discourse. The level of the understanding and mastering of artistic discourse is the higher the more components are involved in communication: segmental, verbal, non-segmental, and prosodic. In addition to sound information channels, the visual channel, including gestures, gaze direction, facial expressions, postures, proxemics, cultural symbolism, is involved in the mastering of artistic discourse. These codes of cognition are effectively studied in our country (Bezrukova, 2007) and abroad (Alzaid, 2017).

Due to the fact that the function of art is the reflection of society and culture, let us consider the third concept necessary to assess the significance of multimodality in cognitive practices, i.e. "art pedagogy".

Art pedagogy is a branch of pedagogical science about upbringing, development and education of the younger generation by means of art. Art pedagogy has as its presumption the full priority of visual and verbal channels, which provides a degree of the understanding of artistic discourse. The deep nuances of the main conceptualisations of artistic and aesthetic modus operandi presented in scientific books are in Table 03.

**Table 3.** Typology of the concept "art pedagogy"

No.	Concept definition	Explanations	Common features of pedagogical and stage activities	Mission of art
1.	Branch of educational science	Professional passion, developed pedagogical thinking, creativity, intuition	1. substantive 2. trait. 3. conceptual recognitions. 4. requirements for the personality of the creator	Art is phenomenon cultures; art is the central medium of culture; it's a common code that everyone understands quite well
2.	The totality of psychological and pedagogical knowledge, skills, abilities, skills, combined with professional passion, developed pedagogical thinking, creativity and intuition; skill, pedagogue's skill	Creative "adapting" to the pedagogical situation	1. Structural attribute. 2. Instrumental attribute. 3. Target attribute	Art is the impact on the inner world of the individual, on the moral and aesthetic spheres
3.	The science of upbringing, development and education of the younger generation by means of art, of preparing them for independent artistic creation	Cognition and transformation, human improvement	Procedural Characteristics. Structural attribute	Art is spiritual anthropology, a means of human spiritual evolution, the harmony of nature and the "dialectic of the soul"

The mission of cognitive practices is cognition and transformation, human improvement through the development of communicative skills and their reflection with the help of multimodal discourse. The modern concept of multimodality includes in its interpretation a wide range of analytical procedures. It is a variety of types of thinking, the use of diverse languages, diagnostic tools, modelling (for example, the systemic-functional model is applied to the semiotic analysis of fine art, paintings, sculpture and architecture), graphic parameters (colour, background, perspective, format, etc.).

Since art pedagogy is closely related to types and genres of art, and art itself is a phenomenon of culture, a means of human spiritual evolution; a common code that everyone understands quite well, it is quite logical to consider the following concept of "culture", which plays an important role in the mastering of cognitive practices by the modern subject of education.

Initially, culture meant opposition to nature, as it was wrested from nature through work and labour, so it has "human rules" for control and development: if we improve nature, it means that we cultivate it. In a figurative sense, culture is the ennobling of human bodily-soul-spiritual inclinations and abilities (Schlegel, 2015).

In our article we understand culture as a certain order of social systems, norms and values, beliefs of a numerous social group of society. Culture can be considered in a dichotomy: professional (artist) and dilettante (public), as some people produce culture, others consume it. Speaking about culture, let us designate its iconic and symptomatic signs:

1. Culture is a complex of meanings (symbolic series) by means of which a subject creates its reality in the form of a certain order of knowledge.

2. Culture is the merging topos of the subject (preferences).

3. A subject's cultural preferences are his or her distinctive characteristics: cultural preferences, styles, interests, own identity.

4. Culture is a set of actions and signs, a consequence of a subject's choices: for example, one person listens to classical music, another listens to a schlager, and the result is that both get an aesthetic impression and enjoyment.

5. Culture is a system of relevant knowledge that actors can successfully utilise.

Sociologists studying culture at the empirical level work with the sectoral concept of "culture". An example is the so-called "high culture" to which the privileged segments of society (approximately 10% of the world's population) have access. "High culture" is reserved for educated people (Popper, 2012). This is due to the fact that contemporary art is conceptual and the subject needs certain art historical knowledge to reflect on it. Cultural institutions expand their range of opportunities for educational activities among children, youth, a wide range of stakeholders.

Due to the development of digitalisation, the institutions of contemporary culture are exposed to a certain danger. Traditional cultural institutions and perceptions of culture were developed in times when places where cultural property was stored (books, libraries, museums) were quite rare and expensive. For example, presenting a symphony to the public requires a lot of resources: well-trained musicians, musical instruments, a building with excellent acoustics. Recording a symphony for posterity is quite costly, so expensive mass media storage platforms encouraged, until the end of the 20th century, to choose for storage what had high artistic value and was recognised by the public. At one time, W.A. Mozart's operas were perceived by the composer's contemporary audience as entertainment, a divertissement. Traditional art was defined and controlled by cultural institutions and institutes and was interpreted unambiguously, not providing for initiative improvisation.

The current situation in culture and art is different. Diverse digital platforms for storing various kinds of information have become available, and with the help of a mobile phone the subject finds favourite films, books, music. Modern software allows us to join art and culture to many millions of users, who send, receive and often use the resource youtube.com, facts and information on which everyone can post. This makes art and culture as a whole lose its relevance not only quantitatively, but also qualitatively:

1. Art loses the form of trust on which, for example, art pedagogy has traditionally been based.

2. Today, most artists fulfil the order of an individual subject or society, losing the ideal of autonomy and freedom.

Contemporary art is no longer the contradictory world of the dominant mainstream, as it serves the powerful and their firms, who gain a certain prestige from communicating with art, becoming a privileged tool of cognition, as understanding art, being cultural. It is helped by numerous thought operations on encoding and decoding semiotic content, on reflection of communication channels, on recognising continuous and discrete languages, on developing the subject's cognitive practices.

#### **4. Purpose of the Study**

The purpose of our research is to identify the phenomenon of multimodality in the subject's cognitive practices that have been developed in the 21st century.

Objectives of the study:

1. Analysis of the definitions of the concepts introduced in the research framework.
2. Reflexion of multidimensionality of the phenomenon of multimodality.
3. Identification of the universal status, semantic load, and multimodality effects.

#### **5. Research Methods**

In this paper, we elaborate on multimodal discourse analysis, which aims to interpret communicative practices in terms of identifying meanings when analysing particular aspects of cognitive practices.

For the reflection of scientific and pedagogical knowledge and terminology, the authors use a set of methods: general scientific methods (analysis and synthesis of concepts), multimodal (conversion) analysis, analysis of multimodal interaction, generalisation, which allows us to identify the mission of multimodality in the cognitive practices of the XXI century.

#### **6. Findings**

The communication process is a symbiosis of different types, systems and channels of communication that enhance the ability to outreach to the target audience; the degree of impact on the listener; creating models of verbal, non-verbal, mixed behaviour of the subject of communication.

With the help of a wide range of semiotic means, multimodality contributes to the formation of certain sociocultural conventions, coordinating the goals, strategies, and tactics of dialogue communication in homo sapiens.

We found out that multimodality is the connection of different information codes (verbal/non-verbal, iconographic, technical, etc.), as well as taking into account the rules of interaction in the communicative act. That is why we consider the role of this phenomenon to be legitimate:

in expanding the sources of narratives, the boundaries and quality of the communicative process;

in the deployment of the practice of social design of the modern subject;

in describing communication in terms of the contemporary mutation of a wide range of modalities: textual, audiovisual, spatial, etc.;

in the implementation of the subject's apperception of the perceived information in the process of communication (dialogue, polylogue);

in determining its recursiveness, i.e. constant renewal and modification, which certainly contributes to the amplification of education and the development of synectic principles:

- i. general methodological (humanism, integrativeness, developmental nature of learning);
- ii. special (harmonious development of personality, connection with science, polytechnicism);

in the formation of ethics of values and ethics of business relations of communicators.

In our paper, we found that communication channels play a significant role in the reflection of multimodality in such cognitive practices of the subject as visual communication. For example, art is a completely different configuration of the mental space, the subject's neural network. The quality of the neural network is higher in those people who are engaged in art, so they perceive these activities as a necessity. It is easier for a person interested in art to understand modern musicians and artists, because the process of communication between artist and viewer is facilitated by a group of factors.

- i. Media communication. With the help of the simplest apparatuses and programmes, the subject can build media communication: texts are depicted visually, pictures are commented on with pre-prepared texts.
- ii. Development of cultural techniques. With the help of media, text is computer reproduced, stored, distributed further, with reading and writing becoming the most sought-after cultural techniques today. The computer has extended their competences to multimodal communication.
- iii. Practical needs (life experience, safety and security of the subject, attention, care, etc.).
- iv. Educational needs of the subject: acquisition of competences necessary for solving life tasks.
- v. Aesthetic preferences (beauty, harmony, creativity, cognition). Aesthetic preferences are explained by the subject's taste. An important role is played here by society and the formed level of culture, age, gender, environment. That is why a person follows certain aesthetic patterns.
- vi. Communication (contacts, interaction, communication between subjects, media). Communication consists of three main components: prosody, verblivity proper and gestures/mimicry. Along with communication, interaction and social perception are important for the modern subject in the subject's cognitive practices.

There are aspects to be considered in the subject's communication:

cultural (3 stages of cultural development);

pedagogical (formation of skills and abilities);

psychological (overcoming mental anorexia and dysthymia).

The modern subject of education is a person of a "new type", as he/she is connected with counterparts (content, interface, external environment), attitudes of other learners, and for self-realisation in cognitive practices he/she uses:

- i. the limbic system;
- ii. new technologies in learning;
- iii. biased knowledge;



- iv. an actual toolkit;
- v. transmedia products;
- vi. pedagogical patterns and models of education;
- vii. the subject's vitagenic experience.

## 7. Conclusion

1. The subject of education of the XXI century is an emotionally communicative, visually and haptically oriented researcher of the world around him/her, communicating with society, mastering new cognitive practices, the impact of which on the subject is strengthened due to the multimodal effect.

2. The epistemological discourse is crucial for revealing the phenomenon of multimodality in the subject's cognitive practices, since the subject of study is cognition, as well as existentialism and samples of modern education.

3. To better understand patterns and trends in technology, text, context and culture, multimodal discourse analysis needs to be used more specifically and comprehensively. The main objective of multimodal discourse analysis is to annotate, analyse, search and extract patterns of multimodal semantics within and between complex multimodal phenomena such as picture, video and film.

4. Multimodal phenomena can materialise, for example, in newspapers and television, pictures and films, in virtual or material objects or events.

5. In the process of mastering artistic practices, the use of multimodal analysis contributes to the identification of patterns of aestheticisation of everyday life both in the field of communication and in the organisation of spatial and temporal constants, cultural models that predetermine the "conservation of meanings", their "packaging" in forms and modus operandi accessible to perception, the simultaneous presence of which provides the phenomenon of multimodality.

6. The goals of modern education development as a synthesis of cognitive practices are inextricably linked with the ideas of development of continuous and adaptive education; personalised education; formation of flexible human resources; individual educational strategies; socialisation and self-realisation of the subject of education.

7. In the process of communication, a person deals with a significant number of media practices aimed at familiarising the subject with the essence, types of media; at visualisation; at getting an idea of the forms of content production, its possibilities; at forming the subject's cultural code.

8. The basic skills of the subject of education of the XXI century are formed in the network, as the Internet for young people is an experimental platform where thinking strategies are developed, cultural norms are formed, and interpersonal relations in society emerge.

9. In the development of the subject's cognitive practices, a significant role is assigned to the teacher, as it is he or she who is able to develop soft-competences in students that expand their potential through the use of a computer, laptop, or TV screen.

10. The material presented in this article can serve as a basis for further research using practical methods, which will open new horizons in the study of multimodality as a special direction in the subject's cognitive practices.

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