



## Transgressive Core of Multi-Modal Education

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**Abstract:** The development of Man as a social being is often underscored by his interaction with his boundary/boundaries, and the opportunities for reaching, overcoming, or shifting them. The challenges facing modern education, as well as the ever-increasing requirements for the training of pedagogical specialists, define the need for the construction of transgressive models for growth design and development of various competences of pre-service teachers. In this context, the concept of transgression receives additional connotations that orient it in the direction of the design of a multimodal environment as early as the stage of preschool education in order to achieve the idea of the "transgressive person", constantly pushing the boundaries of their knowledge to facilitate personal development. The present article outlines the methodological parameters of the environment for multimodal preschool education as well as its potential and transgressive nature.

*Keywords:* transgressive education, multimodal educational environment, preschool age.

### Introduction

The idea of transgressive education reaches out to an increasing number of people, insofar as it puts to the test the possibility for each participant in the educational process to reach a point where he must either choose the routine or the risk to venture into the unknown in their thinking and behavior.

The term transgressive is used in different contexts of understanding and functions in the structures of different scientific fields. It is included in a scientific mode in geology, biology, climatology and other scientific fields, and for the humanities it was adapted by the Polish psychologist J. Koziellecki, creator of the new tendency in psychology: psychotransregionalism (Koziellecki, 1987).

For J. Koziellecki, man is an expansive individual who deliberately transcends their boundaries in order to become what they can and, often, must be. According to him, the main generator and catalyst of human development (social, cultural, civilizational) is crossing material, social and symbolic boundaries (Koziellecki, 2002). A. Maslow's understanding of overcoming one's own limitations as a form of satisfying the need for self-realization is associated with the idea of the transgressive personality (Maslow, 1986).

Analyzing the "transgressive concept of man" (Koziellecki, 1987; Koziellecki, 2001; Koziellecki, 2002), developed by J. Koziellecki (Koziellecki, 1987, Koziellecki, 2001, Koziellecki, 2002), as an object of consideration, T. Szczerska (2014) brings to the fore the understanding of the person as a free and creative being who is able to take actions that allow him to transcend material and immaterial boundaries. According to the author, "creators of transgressive activities show personality predispositions in the following areas: originality, sensitivity, independence and flexibility of thinking. This type of human activity, also known as action from "without", is activated by the "can", "want" motivation and is in opposition to defensive (conservative) actions" (Szczerska, 2014).

According to T. Szczerska (2014), focusing on "virtual transgression" (suggested to accompany human existence at its earliest stages), as possibly located on the border of four worlds, the following types of transgression are deduced: "towards oneself", "towards others", "towards things", "towards symbols" (Koziellecki, 2001). The process of overstepping boundaries or expanding the edges of human environment does not necessarily imply that one belongs to any of these worlds. According to the author, "the human need to create a virtual world has deep roots in the psyche", and "Man - Homo transgressivus" creates a real and a virtual world, changing the environment of his material and immaterial existence,

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and this revolutionary and dynamic development of “virtual transgression” in time is a consequence and continuation of historically realized activities.

T. Szczerska (2014) presents a comprehensive view of the evolution of transgressive behavior from prehistoric human existence to the creation of artificial intelligence and virtual spaces. At the heart of her ideas lies perspective that “virtual transgression occurs as a result of the creation of artificial worlds, which is possible thanks to knowledge of the real world, in the course of which the creator consciously initiates the process of interaction between the two worlds, balancing between the real and the artificially created reality by relating these processes to the specific human motivation to take action ‘beyond’ (the human need to create a virtual world has deep roots in the psyche) its realistic possibilities, which is actually a manifestation of man’s tendency to confirm his importance”. For the author, “like risky activities, transgressive activities are also the most complex operations of the human mind and are largely related to the subjectively expected benefit - a strategy also known as the strategy of expectation” (Szczerska, 2014), giving rise to motivational stimuli that actually trace the path of transgressive behavior.

The characteristics of transgressive education are recognizable and we can point to some of them as dominant:

- The ethics of transgressive education is based on a “philosophy of care” that balances the desire for expansion with empathy;
- Transgressive education is a form of manifestation of transformative education;
- Transgressive education deals with forms of resilience characterized by a specific fuzziness;
- Transgressive education as a methodology is normative and related to an “ecology of knowledge”;
- Transgressive methods in education are reflexive and performative in nature (Macintyre and Chaves, 2017).

In a broad educational context, there are several possibilities for the application of the transgressive approach where at least two opposite or even similar phenomena, processes or factors are available, but which nevertheless imply the presence of a choice. In this case, we can talk about educational transgression in the presence of: (1) transgression of goal-setting and goal-setting in formal, non-formal and informal education; (2) transgression of cognitive, social, and cultural knowledge; (3) transgression of global and local knowledge; (4) transgression of instructional content; (5) transgression of theoretical and applied knowledge; (6) vertical and horizontal transgression of communication in learning communities; (7) transgression of the educational environment.

The understanding that “the limits of our language do not define the limits of our knowledge” (Eisner, 2003:1) is in accord with the futuristic goals of any educational institution, as well as with the philosophy of a transgressive educational space, guaranteeing a continuous shift of cognitive boundaries.

It is the insight, the awareness of these relations that conceptualizes the idea of a multimodal educational environment in the kindergarten. Its organization obeys the urgent need for pedagogical interaction not to remain in the inertia (routine, stereotype) of their traditional functionality, since it is unthinkable to achieve a perspective for children without realizing transformative education.

### **Preschool education for multimodal literacy**

Pre-school age is a period marked by the child’s continuous strife for individualization and, at the same time, is accompanied by continuous comparison with others in the process of joint activity and relationships with them. The child organizes their relations through the act of social transaction (agreement and mutual concessions), which determines the need for the educational environment in the kindergarten to assist in strengthening one’s own resources and developing the child’s inherent potential, including the cognitive capacity.

In this regard, the child’s development is not the result of the action of individual factors, but is a consequence of their interaction, that is, the determination of changes in ontogenesis, the driving force of which is the interaction between the subject and the living environment, is determined by the dialectical relationship of the intrapsychic (organic) and external (set by the social and educational environment) factors.

Evolved concepts and approaches to modern education and the technology-enriched environment determine the need to search for opportunities for continuous activation of subjects. In preschool education, this search is aimed at overcoming fragmentation, lack of imagination through environment design, guaranteeing multidimensionality, dynamics, multilevel and effective transformation in the course of multimodal education fulfilled in experience.

In the context of preschool education, the manipulation of signs, their multiplication, is the basis of children’s endless presentations and representations.

Their transformation into game, verbal, pictorial, musical, constructive activities is traditionally

analyzed as personal indicators of the level of functional development of the child at preschool age.

Concerning these activities, however, it is important to emphasize that they actually have the character of semiotic resources, since they mediate the clarification of meanings and the achievement of understanding in the process of interactions with peers and adults. At the same time, we cannot ignore the fact that these semiotic resources, as well as their transfer in various contexts of meaning (family, social, educational), reflect the sociocultural dimensions of individual development. Precisely because of their cultural belonging, as well as because of their inherent individuality, the potential of these semiotic resources should be considered a process of continuous construction and reconstruction of personal identity at preschool age in which the transfer of knowledge and skills takes place.

The application of a multimodal approach in pedagogical interaction in kindergarten takes into account the diversity of sociocultural models and the corresponding ways of communication by identifying “the components that are prioritized in the idea of the new educational paradigm with their dichotomous conditioning: reproducibility – proactivity, personalization – dialogue, individualization – differentiation” (Dyankova, 2018: 3).

Recognizing the special importance of the sociocultural context in which the child grows and develops (the child’s personal microclimate), the teacher supports the “welded experience” of expression and develops, enriches, builds on it by using multiple semiotic resources to clarify meanings and their continuous representation, transformation and presentation.

### **Multimodality and multimodal environment – contexts of understanding**

Theoretical studies of multimodality as analytical discourse are a relatively new direction in scientific research. In terms of content, multimodality refers to the influence of the aggregate application of different modes in the expression of meaning in the process of communication. The functioning of different semiotic resources or modes in oral, written, visual or auditory communicative events, as well as the immensity of variations in their combination, reveals the essence of multimodality as a phenomenon of communication. In fact, multimodality is that specific entity of communication which significantly facilitates and aids understanding. As a structure-determining component, multimodality has been manifested since the very beginning of communication, but its role for sociocultural interactions is becoming increasingly visible and more and more tangible with the unprecedented increase in information exchange in the conditions of the postmodern world.

Thus, regardless the “multimodality” goes back to the beginning of the evolutionary development of civilization, it is the explosion of discoveries (in the 60s-70s of the previous century) in the field of information and communication techniques and technologies that unlocks the increased interest in it. It is the changing immensity of the communicative composition in the real and virtual media environment that is the center where more and more disciplinary areas intersect, investigating the manifestations of multimodality in the constructions of social realities.

Clarifying questions about the multimodal composition of the message, too often in their studies, researchers use the terms “carrier” of information and “mode” of information rather indiscriminately. Along with the accepted and widely established synonymous use of these terms, given their similar content, contemporary research on multimodality is also characterized by a tendency towards a decentralized understanding of the concepts of “carrier” and “mode” of information. Tracing the cultural history of human civilization underscores the dynamics accompanying human progress both in terms of the content of information and in terms of the improvement of its carriers. Introduced in the second half of the last century, high information technologies have a decisive impact on culture, evidence of which is the fact that the society during this cultural-historical period openly began to call itself an “information society” or legitimized itself as a “society - carrier of information culture”. In principle, information removes or reduces the unknown, the indeterminacy. Of and in itself, the information content is a function of the state of the recipient, that is, it is a variable, because it is quite possible for the same message to different recipients to contain much, less or no information.

The cited finding reveals the importance of modes as an organizing principle of communication. Günther Kress defines the term mode in two directions: (1) first, as “a socially and culturally shaped resource of meaning: image, writing, layout, speech, moving images are examples of different modes” (Kress, 2010: 79); (2) second, “semiotic modes are similarly shaped both by the inherent characteristics and potentials of the environment and by the demands, histories and values of societies and their cultures” (Kress and Leeuwen, 1996: 35).

In the context of social semiotics, it becomes clear that each mode possesses multiple modal resources. Decomposing, for example, writing as monomodal allows one to distinguish individual modal resources (syntactic, lexical, graphic), each of which is charged with different potentials and limitations

for signifying meaning in communicative practice, whose meaning components are also “instrumental in associating the inner world of the mind and ideas with the outer world of the body and its interactions and reactions to outside stimuli” (Levunlieva 2012: 175).

Noting that “the mode points to the material resources shaped in the often long histories of social endeavours”, Gunther Kress emphasizes its importance and highlights its predication on history and culture (Kress, 2010: 114). At the same time, the author points out the mutual dependence between the modes that shape the systems and the influence of the systems themselves on the formation of the modes. This interdependence is manifested with particular force with the advancement of information and communication techniques and technologies, where it becomes possible to combine resources in multimodal entities.

Focusing on the now-established concept of “visual rhetoric” refers to the various scholarly practices exploring the generation and comprehension of meaning in multimodal entities. Their theoretical basis is Halliday’s formulation, according to which the meaning presented in a combination of written speech and images functions at three meta-levels: ideal, interpersonal and textual (Halliday, 1978).

The semiotic analysis created by Halliday is applied to the study of visual art (O’Toole, 1994), but later Kress and van Leeuwen highlight the resources of visual texts in the direction of: (1) presenting the discourse (creating an image of objects, phenomena, events, relationships); (2) setting the communicative positions (presentation of author/producer and addressee/audience); (3) creating sharedness (internalizing meanings according to their informational structure and degree of credibility/authenticity) (Kress and van Leeuwen, 1996).

The applied value of the semiotic analysis of visual art (visual rhetoric) is also reflected in the testing and documentation of its effectiveness on multimodal resources: (1) of speech, sound and music (van Leeuwen, 1999); (2) of gesture and movement (Martinec, 2000); (3) of color (Kress and van Leeuwen, 2002); (4) of the moving image – kineikonic (Burn, 2013; Burn and Parker, 2003); (5) of web content (Herring, 2009) and layout (Kress, 2010).

For the user of the semiotic approach, it is clear that they must make sense of the essential belonging of ideas and their “expressors” (the variety of communicative modes), accept or reject the order (the meaning they refer to) and the discourse they impose. New information technologies construct a new level in the organization of communication.

The diverse communicative modes and their potential resources together make up the “fragments” of reality, but design manages to select the adequate conceptual means to shape a complete message.

In itself, the design “says and shows”, but the meaning potential of what is shown has another explicit form and points to another dimension, different from what is said.

Design materializes discourse as a supralinguistic structure – the multimodal unfolding of meaning realizes the constitutive functionality of meaning.

Each research discourse requires a specific research approach and inventory. In summary, the content and form of multimodal texts/contents reflects their transformative role in the context of social interactions in the direction of: (1) multi-layered insertion (introduction) and transmission of meaning; (2) objectification of the potentials of the modes of communication in the implicitly contained contexts; (3) personification of ideas as a result of the dynamics in the cultural conditions, but also from the readings and interpretations of the semiotic discourse.

The distinction between functional, structural, and systemic communication analysis approaches is becoming more and more relative (Genova, 2019: 154). The starting points in their representative nature are based on the internal functional organization of the message.

The distribution of individual resources in the multimodal text and the mutual tensions between them turn visual communication into a unified mechanism: at certain points in the use of design (whether perceived or created) it is possible for one or the other communicative mode to temporarily dominate, but it is not possible to ignore the contextual information of the other mode(s).

While multimodal interaction analysis examines the convergence (density, integrity) of organically connected interactants through their self-determined contextual information and their aesthetically structured charge (O’Halloran, 2011; Norris 2004), in semiotic terms, critical multimodal discourse analysis is concerned not so much with the structure of one or another resource but with its social (pragmatic) functioning in the general system of codes and meanings.

Methodologically, research in the field of multimodality (O’Halloran and Smith, 2011; O’Halloran, 2011; Jewitt 2013) claims that: (1) all communication is multimodal; (2) multi-modal studies should not be focused solely on language; (3) each mode with its inherent modal resources has a specific added value that is subordinate to and satisfies specific communicative requirements; (4) the combination of modes is a purposeful phenomenon, organizing their reinforcing function in the act of communication and playing a

key role in the exchange of information.

Thus, the generalized methodological reflections on multimodality represent communication as a process of integration and hierarchical correlation of multiple modes, all of which are socially developed as resources of meaning and therefore, understanding. Research on the multimodal nature of language has mainly focused on the accompanying role of additional modes in the process of verbal and non-verbal communication, whose repertoire – consciously or unconsciously – creates a specific linguistic world.

While the initial studies of multimodality are concentrated solely on the use of language in its oral and written form, in the last two decades this limited focus has expanded and, by conquering new areas, has created new contexts in its unprecedented manifestation.

Studies that analyze multimodality in the relation social-communicative-cognitive enhance the delicacy of analysis, to include the perspective of digital technologies. As a result, a large-scale potential and a horizon for further development of multimodality in social, cultural and educational contexts emerge before the research quests.

Digital technologies boost the multimodal approach to scientific knowledge, which not only enhances the transfer among scientific traditions, but also converges theoretical and methodological platforms to interpret the processes of internalization of meanings, values and meanings in modern society. The age of digital technologies presents multimodality as “the normal state of human communication” (Kress, 2010: 18). This finding is also supported by John A. Bateman’s thesis that today “the text is only one strand in a complex presentational form that seamlessly incorporates a visual aspect ‘around’ and sometimes even instead of the text itself” (Bateman, 2008: 41). This is due to the common purpose served by the two aspects in the message - the verbal and the visual, as their functional role is aimed at the potential “to create and maintain social relations and ... both language and image are socially constructed means of conveying meaning” (Genova, 2019: 154).

Multimodal text modifies the meaning of words by using them in a new context—audio, visual, digital, or a combination of these. Bezemer and Kress (Bezemer and Kress, 2008) point out as an advantage the concrete character of information perception when the message is composed in multiple communicative modes, that is, the cases in which the sign format is supplemented by sound or image as a secondary mode of communication. Their perception is realized through dialectical interpenetration and complex interrelationships.

Presenting the features of human communication in a semiotic context, Halliday, M. (1978) was the first to consider the role of communication modes other than oral and written speech. Kress and van Leeuwen (2001) extend the research scope to an analysis of all resources to represent aspects of multimodality.

By discussing the meaning potentials of modal resources in transmitted messages, the authors clarify the relationship between the potential of communication modes and the social aspects of design in making sense of the text (Bateman and Schmidt 2011). What the sign can potentially convey in different representations or materials builds accessibility into the potential of communicative modes. Both the ways of expressing knowledge and the limited possibilities of the communicative mode relate to its potential – that is, to its accessibility. The shift of meaning from one communicative environment to another (recontextualization) helps specify, conceptualize and redefine the semiotic repertoire of the perceiver and creates new needs and value systems inspired by the multimodal text, which not only engages multiple channels of information perception, but activates different spheres of the individual’s inner world which are required for its processing and its adequate comprehension.

The combination of modes, their parallel “weaving” in the generation of meaning-enriched expressiveness is an indicator of the dynamic structure of multimodality. This gives grounds to define it as determinant of the socio-cultural levels in which societies, communities and individuals articulate relations, values and ideologies in a certain order. The assertion of multimodality as a “determinant of sociocultural levels” has its logic and acceleration, due to the growing contexts of understanding, and the analysis of its functionality highlights the capacity that multimodality has as a phenomenon of communication in the information society. In practice, in every cultural and historical era, the socially accepted methods of transferring, processing and storing information reflect the constitution and evolution of multi-modality in the course of human civilization.

Continuing the view that in the new civilization bits (a unit of information) replace atoms (a unit of matter) as the primary attribute of human interactions, it can be said that in the digital age multimodality is in control, but also leaves the door open for its violation, given the fuzzy boundaries within which people, groups, and communities function.

The preeminently interactive character in the comprehension of the multimodal content radically changes the differentiation of roles and positions in their classical setting “source of information - perceiver

of information". In fact, the optimal relevance between subjects in the information exchange, as well as the precise selection of the modes and their modal potentials, are the factors determining the limits of this role designation. The symmetrical synchronization in this interaction is also emphasized by D. Anderson who announces the emerging communicative role "prosumer" ("prosumers = producers & consumers") in the creation of multimodal texts, which denotes a simultaneous identification of producers/creators/authors ("producers") and users/consumers in the process of coding, transfer and recoding of multimodal designs (Anderson, 2003).

That is, in order to be adequate to the conditions in the multimodal environment, a heuristically oriented consciousness is expected and required from the modern person, which creates and processes information meaningfully, generates, induces meanings or rejects them.

The analytical interpretation of the phenomenon under investigation confirms the understanding that due to the gradual mastering of the known, but also due to the rapid encounters with the unknown - (with the continuous sophistication of information technologies), in the new age, multimodality is situated as an object of study in the field of multiple scientific studies, which adds relevance to its interdisciplinary significance.

### **Transgressive core of the multimodal educational environment in kindergarten**

The conceptualization of the idea of a multimodal educational environment presupposes the necessary conditions for dialogue and personalization of the pedagogical interaction in the kindergarten. In operational terms, the multimodal educational environment is "oriented towards the technological integration of the following mental functions of 3-7-year-old children: identification, testing, expression" (Dermendzhieva, Tasevska and Dyankova, 2022: 56). In fact, it is a predictor of the full development of children's potential in the context of the transgressive perspective towards the active inclusion of competent application of multiple literacies in the knowledge society.

Considered as a complex of purposeful actions, the design of a multimodal educational environment in kindergarten synthesizes the statements in the sociocultural theory of development (Vygotsky and Cole, 1978; Rogoff, Matusova and White, 1998), in the socio-semiotic theory (Kress, 1997) and in the concept of multiliteracy pedagogy by operationalizing their potential in the context of transgressive education:

- the sociocultural theory asserts the idea that (1) social interactions play a major role in the formation of knowledge and understanding and that (2) learning is an active process of communication with others, that is, children construct their understanding of language in the context of family, community and institutional belonging;

- according to the tenets of social semiotics (1) children use diverse modes of expression and (2) those who employ similar forms of communicative modes interact effectively and strengthen their sense of community, that is, children know how to connect with each other, not only conveying messages through signs and symbols, but also generate (specify) meanings in the form of speech, rhythm, movement, image, music and visual arts;

- the pedagogy of multiliteracy suggests the idea that (1) the educational institution should expand its inclusive function towards the diverse ways of expression, according to their cultural, communicative, linguistic, artistic and technological aspect and that (2) pedagogical interaction should focus on the different modes of meaning creation and the ways in which meaning can be represented in communicative events, that is, the pedagogy of multiliteracy reflects the dynamics in the development of information and communication technologies and their impact on communication in the modern world.

Bearing in mind that each new concept is based on efficient-proven approaches, the operationalization of the transgressive potential of the multimodal educational environment in kindergarten relies on the synergy between:

- a) established approaches in pedagogical theory and practice:

- the activity-and-communication approach, which is built around the understanding that the realization of a given activity is mediated by communication allowing meanings and implications in the pedagogical interaction to be clarified;

- the holistic approach that focuses on the development of the individual as a whole; based on playing games, creativity, imagination and exploiting the potential of the arts (dance, music, visual arts, theater, performance, etc.); primary importance is given to the experience of the child as a whole;

- the multi-cultural approach that takes into account cultural dynamics and aims at developing an understanding of and respect for cultural similarities and differences; the approach is oriented towards the symbolic image – cultural image link based on the experiences in intercultural dialogue and also towards the development of sensitivity to the specifics of a multicultural environment;

- the constructivist approach which is based on the concept that knowledge originates and is

constructed within social interactions in the educational environment (sharing, comparison, debating) and thus creates conditions for the subjects to build knowledge together by clarifying their own meanings and helping others to clarify theirs;

b) specific approaches for multi-modal design of the educational environment:

- the "100 languages" approach to children (known as the Reggio Emilia approach) is based on the assumption that children can express themselves in "100 languages" (speech, facial expressions, gesture, narrative/story, movement, dance, image, music etc.). When encouraged to use all these 'languages', they share with the community in the kindergarten what they have learned and why it is important to them; the approach emphasizes the development of imagination by providing a variety of opportunities for the child's creative self-expression; children's way of thinking is considered a value that requires special attention from the adult (parent/teacher);

- the Funds of knowledge approach prioritizes the importance of the social context in which the child grows and develops; the understanding that the cultural and family practices reflected in the child's everyday experience provide a valuable resource and a rich linguistic and cultural repertoire that the teacher should be aware of, use, develop and build on;

- the VARK-approach differentiates the subjects in the pedagogical interaction with respect to their leading style in learning and cognition (visual, auditory, reading/writing, and kinesthetic);

- the multi-sensory approach and its main advantages are related to engaging students (in both real and digital educational environments) by creating conditions for simultaneous processing, transformation and use of information based on the activation of different sensory systems in the process of cognition.

- The transgressive potential of the presented approaches impresses to a particularly high degree the concept of a multi-modal environment in the kindergarten and is of crucial importance for the development of transgressive behavior.

In order to meet the expectations of a digital society, "the modernization of education is imperative in the development of people's talent and potential and so is the acquisition of digital skills" ([European Commission, 2021](#)). In the context of the emphasized dynamics, the grounds for a new outlook on the pedagogical practice can be seen as well as those for reflexivity towards the challenges facing the organization of the educational environment in the kindergarten. The forecast for the future is becoming increasingly unpredictable and the life and career conditions in which today's children will realize their potential becomes increasingly difficult to define. Transformative education requires a multi-modal approach in the development of the ability for in-depth "understanding/interpretation", for conscious application of the "communication/internalization" dialogue in view of the transgressive perspective of the active individual who transforms the environment and himself. The individual is an active agent who the capacity to think and act transgressively, to focus on change and development.

A multi-modal learning environment: (1) is comprehensive in its use of visual, audio and kinesthetic modalities-both verbal and non-verbal, including videos, images, movement, real-life examples, and hands-on activities; (2) promotes two-way communication and puts the active participation of the child at the center of the pedagogical interaction, thus, operationalizing the subject principle; (3) provides quality experiences and balanced opportunities for the child to develop and learn by integrating all areas of development in the course of everyday communication and activities (play, study, work) within the context of a digital age to support the emerging needs of each child and to enhance their personal sense of well-being; (4) ensures the delivery of content from all educational streams through the synergistic inclusion of visual elements, sounds and other components (various modality resources) to enrich the child's perception and support the semiotic funds of knowledge which determine the creation of a universal design for preschool learning and a presentation of the educational content in a cognitively accessible manner for every child; (5) includes in its organization dynamic tasks that result in the child's qualitative experiences to create the basis of metacognitive development; such tasks are crucial for the development of the child's abilities to act strategically in future situations as well as to have the freedom to express his/her understanding about concepts, objects, phenomena from the social context in a unique way based on his/her own experience and creativity.

## Conclusions

The multimodal educational environment in the kindergarten is based on the organization of inter-subject, multimodal processes of meaning, which create conditions for learning through quality experiences and relationships.

The development of multiple literacies relies on children's experiences in play, verbal performance,

visual, musical, constructive activities, whose dynamic, creative nature favors the specific educational context for multimodal interaction built on design and redesign techniques, skills for construction and deconstruction, for recontextualization in the compositional construction of multimodal messages (verbal, non-verbal, audio-visual, motor, etc.).

In the spontaneous expression and impulsive expressiveness inherent to preschool age, children not only assert themselves, but also continue to learn about the world, to make sense of the relationships that structure it, to experiment with their own resources for coping with everyday tasks, to discuss ideas, make choices, make decisions by applying the acquired knowledge in relevant communicative and cognitive modes.

Psychologically, the organization of pedagogical interaction in a multimodal educational environment stimulates not only the conscious, but also the subconscious layers of the child's psyche and presupposes motivation for a communication process managed by the multimodal ensemble used by the teacher.

In the information (network) society, multimodal communication functions as a meta-platform with limitless educational potential, especially now that: „[s]piritual spaces have been replaced by the rhythms of technology and telecommunication. A virtual reality has been created and technologies have revolutionized culture“ (Penev, 2021: 115). The harnessing of its pragmatic and applied ubiquity should be oriented in the following two directions:

First: Effective application in the learning process - organization of a multimodal educational environment as a requirement for the professional qualification and competence of pedagogical specialists.

Second: Adaptation of curricula and resources to transgressive 21-st century skills related to complex problem solving, creativity, critical thinking, collaboration and digital literacy, that is, to the development of multimodal literacy in adolescents.

The goal-orientation to these two areas is in line with the trend towards modifications of education systems, as skill requirements are changing at an accelerating pace – especially in the IT field. These productions provoke a revision (re-revision) of pedagogical interactions in the kindergarten as an environment that is to develop and build on not only the experience of “living with others” in the context of the personal perspective, but also the activity of constantly shifting the cognitive boundaries. Therefore, there is a real, significant and open to research field situated on the boundary between the processes of socialization and transgressive education and their crucial importance for child development and their preparation to live in the information society.

### Conflict of interests

The authors declare no conflict of interest.

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