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Technology of Integrated Media Education

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Abstract

Education is a social institution ensuring the continuity of social and cultural experience, and simultaneously, of society's stability in time. However, rapid digitalization and technological focus of social and cultural practices transform education into one of the most important "engines of development". Responding to this trend, teachers are looking for the ways to enhance cognitive processes and increase their productivity. The efficiency of social and professional functions of a modern person is mediated not only by his/her knowledge, skills, and value orientations, but also by one's ability to capture, identify, and actualize significant cause-and-effect connections and relationships in the continuum of the *past – present – future* in each specific situation, highlighting every unique feature of the typical. The authors conceptualize the educational potentials of the integrated media education technology through the lenses of the theory of cognitive schemata interpreted by the cognitive psychology as a result of cognitive activity on the one hand, and on the other hand, as means of identifying and evaluating information that determines the choice of behavioral strategies. From this perspective, the technology of integrated media education is interpreted as a tool to stimulate reflective-analytical experience, and meanwhile – the development of social and professional competences of students. Since the vast majority of media texts do not initially pursue pedagogical goals, the authors suggest their own definition, determining under what conditions a media text can acquire the status of an educational text. Summarizing the pedagogical experience, the authors describe the methods of didactic adaptation and support of media texts aimed at the educational process. Methodological recommendations help to avoid mistakes in the organization and content of teaching and learning.

Keywords: integrated media education, cognitive pedagogy, educational text, media text, dialogue.

1. Introduction

For many centuries, philosophers and educators, in intense search for the optimal model of educational content, have proceeded from the idea of reductionism, which in ancient times gave birth to the classically verified concept of "The seven liberal arts". But over time, the constantly escalating tendency to fragmentation of the content of education led to the emergence of separate, poorly linked subjects, turning the curricula of educational institutions into a kind of a restaurant menu. And only at the turn of the XX-XXI centuries, calls for the return of pedagogical consciousness to the idea of holism were heard more and more persistently. This is clearly reflected in the semantic constructs of the so-called competence-based approach to education, the

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foundation of which being the understanding that the whole is irreducible to the sum of elements, and the abstract "body of knowledge" stored in one's memory does not in itself guarantee one's social, professional, cognitive and behavioral effectiveness.

Representatives of the cognitive school of psychology believe that the basis of the effectiveness of cognitive actions and behavior is the ability of an individual to shape and capture the cognitive schemata (models, scripts) in personality structures – i.e. the universal meta-tools of knowledge, which, when compared with the observed, allow an individual to experience and reflect upon and evaluate not only reality, but also oneself and one's actions (Sweller, Chandler, 1991; Lurie, 2005; Abakumova, 2006; Solso, 2011; Naisser, 2013; Makarova, 2013). Any new incoming information is perceived, comprehended, interpreted and evaluated through the prism of the foundation of cognitive schemes formed in the course of the lifetime and professional practices in order to decide on the choice of actual behavioral reactions.

Cognitive pedagogy, according to this understanding, includes in the range of urgent tasks of any educational process:

- a) purposeful creation of the students' fund of cognitive schemata;
- b) the development of the ability to minimize information and products of analytical activity into cognitive schemata;
- c) development of the ability to retrieve knowledge out of the cognitive schema when needed in order to identify and evaluate it;
- d) development of the ability to extrapolate (i.e. to transfer to new cognitive situations) and transform (restructure, combine, rethink) cognitive schemata (Bershadsky, 2005; Mayer, 2009; Sergeev, 2012).

From this point of view, referring to the field of professional education, it can be argued that professional competence is not only and not so much the awareness in a particular area of professional activity, but rather the experience of "translating" experience into cognitive schemata, as well as identifying professional situations through existing cognitive schemata, and also the ability to transform, extrapolate and rethink professionally significant cognitive schemata.

The use of integrated media education technology in the practice of professional education can stimulate the development of social and professional competence of future specialists if managers of the educational process provide it with a "bank" of media texts adapted to the professional practices.

2. Materials and methods

Representatives of cognitive psychology believe that in terms of content, cognitive schemata can be in the formats of knowledge, ideas, models, images, experiences, scripts (scenarios), perceptions and actions, cliché reactions, proven behavioral patterns and operations (Kulyutkin, 2002; Lurie, 2005; Kurganova, 2011). Obviously, cognitive schemata that are actualized during the assessment and analysis of a specific situation do not always provide for the adequacy of behavioral responses and assessments. Distorted and false connections and relationships can also occur.

However, even the presence of adequate cognitive patterns in the structures of consciousness does not guarantee the choice of the right evaluative and behavioral responses. For instance, a student who is quite prepared for the exam, but unable to cope with a stressful situation, can choose the wrong algorithm for solving a familiar problem. In other cases, on the contrary, unclaimed and seemingly long-lost cognitive schemata in response to the situation suddenly "break through" from the depths of consciousness and ensure the appropriate behavioral response. For example, in the course of communication with native speakers, a tourist may unexpectedly recall and use some foreign language words and phrases, which he had learnt at school and as it seemed to him, had long forgotten.

The fund of cognitive schemata that an individual uses in the process of analyzing and evaluating reality is a dynamic hierarchy: some of the schemata are extremely generalized, universal, others are situational and specific. The general structure of this hierarchy is determined by the subject's attitudes (which, in essence, are also cognitive schemata of a higher, ideological level) at a particular stage of one's personal development. However, each stage of personal development is associated with a certain "restructuring" of the cognitive system. For example, an adult, re-watching the film, which used to be one of the bright impressions of adolescence, feels surprised to unveil new meanings and plot lines, which were left unnoticed pay in teenage years.

M.A. Padun and A.V. Kotelnikova compare the fund of the cognitive schemata of an

individual with a matrix, the “cells” of which are filled with situationally significant content, but at the same time they can be extrapolated, “transferred” to a new situation. In this case, the same cognitive scheme plays an important role in assessing and understanding a wide range of phenomena and situations (Padun, Kotelnikova, 2012). In contrast, some subjects may tend to rely on a narrow set of stenciled, standard cognitive schemata, hypervalent cognitive “cliches” that dramatically limit the possibility of understanding the situation and developing adequate behavioral responses (Kurganova, 2011).

In this work, the focus of our attention is on cognitive schemata that are formed in the process of perception and understanding of media texts, understood as pedagogical means of enhancing cognitive processes and the development of students' social and professional experience.

Theoretical attitudes and experience of cognitive psychology lead to a number of conclusions regarding the content and organization of the pedagogical process in the system of professional education. The methodological platform of cognitive psychology allows to understand the learning process as the development, accumulation, understanding, rethinking, adjustment and reformatting of various multi-level cognitive schemata. The implication is that the development of the ability to create a schema is an important and autonomous goal of education. The “packaging” of the cognitive situation into the cognitive scheme, and later - the use of this scheme in other situations ensures the optimization of cognitive acts, as students learn new educational material finding the elements that are already familiar to them, and rely on them (Abakumova, 2006; Makarova, 2013). Scheme development can also find a way out in the process of reformatting, when elements of cognitive schemata that have been previously entrenched in the structures of consciousness become building blocks for new ones. On this basis, generalized strategies of cognitive activity are developed and then implemented.

It should be noted that a specific individual's cognitive schemata fund is formed not only from coherent, consolidated elements, but also from competing, and sometimes conflicting structural elements – “cognitive centaurs”, which ambivalently combine the seemingly incompatible.

3. Discussion

In procedural terms, the development of cognitive schemata is the modeling of the most essential aspects, determinants, connections and relations of reality, and then their recording in memory structures and incorporation into the already formed cognitive hierarchy. The hierarchy of cognitive schemata is as follows:

A. Matrix schemata, they record the most significant relationships and connections for the individual. They are characterized by a high degree of versatility and are experienced as a value in various cognitive situations. Discrepancies between matrix cognitive patterns of different individuals lead to different – sometimes diametrically opposed – understandings and assessments of the same situation.

B. Motivational schemata “set the semantic coordinates” to the processes of self-organization, stimulate a volitional impulse; mobilize a person to overcome external and internal resistances.

B. Instrumental schemata capture a positive experience of actions in the past, thereby ensuring the accuracy and speed of reactions. The accumulated fund of instrumental schemata, the ability to transfer (extrapolate) from one situation to another, transformation, and reformatting provides a high degree of flexibility of cognitive and analytical processes, as well as a high speed of behavioral response. Conversely, the limitations of the fund of instrumental schemata can provoke some serious “failures”, low efficiency of analytical activity and behavior, since in this case the person does not have “material” for comparison and contrasting; and thus finds himself/herself “squeezed” in a narrow range of standard cognitive “cliché”.

G. Procedural cognitive schemata serve the processes of control and self-control. In situations when “something goes wrong”, they discover, identify the error, evaluate the available alternatives, find ways and resources for correction, determine the essence and the course of action aimed at overcoming the problem.

D. Finally, the cognitive patterns of generating feelings, emotions and experiences associated with cognitive, reflective-analytical practices, social and professional functioning.

As a rule, cognitive acts actualize a complex of multi-level cognitive schemata. As a result of the overall assessment of the phenomenon through the matrix cognitive scheme, then its understanding in the context of life and the current situation with the help of a motivational

cognitive scheme, the instrumental cognitive scheme is updated, ensuring the integration of a particular form of activity. Evaluation of the activity's result is reflected not only in rational judgments and conclusions, but also in emotional experiences, which, in turn, reinforce or erode the procedural cognitive scheme, in necessary situations contributing to the search for corrective actions.

At this stage of our reasoning, it should be emphasized that T. Dridze justly considers any kind of sociocultural communication (certainly including the education process) as a type of textual activity. Thus, the subjects of interaction not only perceive and store the author's (primary) text in memory structures, but also understand in a certain way, interpret, rethink, analyze, systematize, reproduce, compile and comment the information. In fact, the subjects of communication, based on the original author's texts, generate their own, "add-in" (secondary) texts, structure and content of which is mediated by standard ways of perception, comprehension, evaluation of texts and behavioral reactions about them (Dridze, 1984). Judging by the qualitative results of the "receiver's" textual activity, as well as by the dynamics of the growing ability to create secondary texts, one can quite confidently define the levels of the subject's psychological, social and professional competencies. This understanding of the question can be expressed through a verbal formula: while creating texts, a person is simultaneously creating him/herself.

An important clarification should be pointed out: in modern science, the term "text" is defined as an assemblage of signs, a coded message addressed to someone (possibly to oneself) who is able to translate these symbols into some meaningful content. In sociocultural practice, the term "text" is often accompanied by an adjective that emphasizes the specific method of information's symbolic coding: "literary text", "choreographic text", "musical text", "media text", etc.

In a certain sense, a media text itself is a specific cognitive schema, a reality's model refined from "noises", reflecting the author's life-sense reference points. Of course, not a single schema (and therefore not a single media text) contains reality in its entity. It is not a situation's copy, since it only records a "semantic core", that is, a limited number of semantic facets, connections and relationships, while others either make up the peripheral part of this circuit, or are completely ignored. A schema or a model simplifies and coarsens reality, but at the same time it is capable of replacing it in the process of reflexive-analytical activity (Uemov, 1971).

A. Fedorov highlights the transversal nature of the term "media text": any messages of all kinds and genres that function in modern media systems are defined as such (Fedorov, 2006; Fedorov, 2010). But, in the context of our research objectives, further on, the term "media text" will refer to audiovisual feature or documentary works (films, TV shows, videos, posted on video hosting sites, etc.) and / or their clips. An audiovisual media text operates with multi-code sign systems, in which verbal and nonverbal components form an integral connotation. Media texts of this type can not only represent and model reality, but also concurrently perform anthropomorphic and sociomorphic functions. It is not fortuitous that some authors call Hollywood a "soft power", by means of which existential "American values" were first poeticized for the U.S. population, and only then the charm of these values with a certain effusiveness was spread to the rest of the world.

L. Zaznobina referred to "integrated media education" as the pedagogical process, in which the subjects' reflexive and analytical practice about media texts is understood as a teaching tool aimed at enhancing learning efficiency (Zaznobina, 1996). Perceiving a media text, subjects identify themselves with its characters and situations. Rationally and emotionally responding to events and even mentally relating to them, they constitute their own reality in consciousness, form cognitive schemata that allow not only to realize the situation and predict its development, make certain decisions, work out a sequence of actions, but also make existential choices (Grishaeva, 2010: 121-124). Herewith, the nature and results of the reflexive-analytical subject's immersion into a media text are always mediated by the features of his/her previous cognitive, social, cultural and professional experience.

It is clear that ignoring such a powerful lever of pedagogical influence, the systems of general and vocational education inevitably face negative effect on their functions and results. If education does not take advantage of the benefits of integrating media into the educational process, then the media themselves (guided by, as a rule, purely commercial goals) will sooner or later diminish the efforts of teachers, putting them in value opposition to students.

However, the integration of media texts into the educational process is greatly complicated by the fact that in their overwhelming majority they pursue other, by no means educational, goals,

that is, the authors' creative intent has not provided for their use as educational texts. Thus the following question is of considerable interest: when and under what conditions does a media text created with extracurricular goals become educational? To answer this question, we need some semantic reminiscence.

The phrase "educational text" is often found in the pedagogical and methodological literature, but its definition is missing even in such serious information sources as the "Pedagogical Encyclopedia". Researchers and educators most often associate this term with information sources – textbooks, teaching aids, reference books, self-learning manuals, etc., ignoring the fact that in the educational process texts are created by all of its subjects – that is, by both educators and students.

L.Zaznobina rightly emphasized that the integration of media texts into the educational process would only bring tangible benefits if they were carefully selected, analytically processed; study guides for these media texts were created and mediated by competent instructional design. On this basis, we suggest the following definition: an educational text is a text which the subjects of the educational process carry out text activities with, in formats of text perception and text production, aimed at performing learning, developmental and educational tasks. The status of an educational text is acquired by any text that is projected, created, transformed, adapted, analyzed, commented, interpreted (rethought) by subjects of educational process (i.e., students and teachers) in order to develop a personality's intellectual and spiritual potentials.

In line with our definition, media texts, initially not being educational texts, acquire didactic value and this status when they are included in the informational-semantic context of pedagogical processes and provided with necessary methodological support (for example, questions, tasks, comments, etc.). In the course of reflexive-analytical practice with media texts, students develop mechanisms for meaning-generating, ability to extract cognitive schemata, observance, allowing to grasp causal relationships, as well as the ability to create secondary texts in which the cognitive schemata are transformed into the "speech copies" of characters, situations and interactions.

Obviously, not every media text can be pedagogically effective. It is recommended to use in the educational process those media texts, whose characters, actions and conflicts allow some options of interpretation. The sequences and clips, where characters are immersed in situations of moral choice, struggle of motives, face external and / or internal resistances, undergo crisis stages in the formation and development of an individual, community or society as a whole, have a particular pedagogical value (Ross, Nisbett, 1999; Naisser, 2013).

Let us emphasize the pedagogical expediency of applying small fragments of larger media texts in the educational process. The fact is that in life and career virtually the majority of interactions are carried out in the form of short-term interpersonal contacts. But, despite the narrow time frame, each such contact should be interpreted by its participants "stereoscopically", that is, through the prism of past, present and future. During interaction based on the subject's fund of cognitive schemata and with varying degrees of accuracy, they reconstruct the personality's background and mental features of each other, assess the current situation, as well as predict its subsequent development.

Analyzing a video clip (for example, a sequence from a film or a TV show) in class or as a home assignment, students perform social and psychological diagnostics, investigate "inner impetus" and causal connections in characters' actions, provide arguments for their understanding of motivational, semantic and compositional components of a media text.

Establishing the main, semantic components of a media text, looking for implicit meanings of lines and behavioral "sprouting" into the past and future of characters, predicting the development of events beyond the time of the sequence being watched, students enhance their observation skills, replenish the fund of cognitive schemata, and in doing so, social and professional competence. That said, we emphasize once again that the chronotope of reflexive and analytical activity is much wider than the chronotope of the film clip itself.

The cognitive schemata stored in memory structures can be both verbal and non-verbal, but they are transmitted to others most often through language and speech. Thanks to them, in the conditions of interaction between competing or dialogically complementary forms of "speculation and logics" (Bakhtin, 1979), the "palette" of students' cognitive schemata is enriched. Controversial juxtapositions and sometimes collisions of meanings, assessments, opinions, and positions contribute to the increment of cognitive schemata. Therefore, the inherent pedagogical value is provided by: a) the experience of public and reasoned defending of their point of view by students, and at the same time, b) the experience of tolerant listening and consideration of the arguments of

other participants of the pedagogical process, c) the experience of intellectual cooperation and collaboration in the decision-making process and finally, d) the experience of interiorization, that is, the “translation” of a dialogue from the external environment to the internal dimension of consciousness (Mertens, 2010; Palmer, 2008; Sergeev, 2012; Karahoca, 2018).

Dialogics as a generalizing principle is intrinsic not only to the culture as a whole, but also to any genuine pedagogical interaction. Moreover, it is true even in case when outwardly pedagogical interaction looks like a monologue speech. In a number of defining dictionaries, the essence of the dialogue is erroneously reduced to the exchange of remarks between two (or more) subjects. However, the etymological construction of this word allows to emphasize the meaning of other meanings. Ancient Greek *dia* is translated as “through”, “indirectly”, “through”, and *logos* – as “science”, “word”, “meaning”. Combining the component parts, we get the definition – “through the word – meaning”.

The essence of the dialogue lies in the search for meaning mediated by a second-signal system. It is not only a matter of the external contact between several subjects. Personality itself is initially endowed with a dialogic nature and an important indicator of its scale is the dialogical nature of its “intrapersonal space”. The internal (internalized) partners of the person with whom he/she enters into dialogical relations are “Myself”, “He”, “She”, “Others”, “Social community”, “Society as a whole”, and finally, “Culture”. Dialogues with these “internal partners” stimulate the search and discovery of the meaning of life, the choice of one's way, behavioral strategies and tactics. It is only important that the “internal partners” have an independent “voice”, that is, they act as full and full-fledged subjects of the dialogue.

4. Results

Reflection on the subject and pedagogical experience enable us to articulate some methodologically important provisions.

1. Data of cognitive psychology suggest that textual activity forms the basis of cognitive processes, and its result is the foundation of cognitive schemata used by an individual while perceiving, institutionalizing, understanding and evaluating reality.

2. The status of an “educational text” can be acquired by any type of message that is designed, created, transformed, adapted, analyzed, commented, and interpreted by subjects of the educational process in order to increment intellectual abilities, moral strength, behavioral repertoire and analytical experience of an individual.

3. Media texts, created, as a rule, with non-educational goals, can acquire the status of educational texts and find wide application in the pedagogical process of the systems of general and vocational training, provided that they are processed through instructional design and methodological support.

4. The didactic adaptation of a media text is, first of all, the selection and fragmentation of media material, mediated by the topic, purpose and organizational form of classes, as well as the features of the educational environment and the type of learners' group. For the organization of reflective and analytical practice, it is advisable to offer the students segments of feature films, documentaries or thematic television programs, averaging 7-10 minutes, most often representing a relatively complete sequence, withdrawn from a larger media text. This sets students up to the perception of the events, situations and characters stored by the segment in the chronotope of the past-present-future, updating the previously developed and generating new cognitive schemata.

5. Methodological support is to be provided by study guides containing questions, assignments, explanations, comments, references to literary sources and/or other media texts, Internet pages, etc., aiming students at analytical perception, critical thinking, understanding and evaluating the content of a media text through the prism of a hierarchy of explicit or implicit the cause-and-effect relationships mediating the characters' choices.

6. Reflexive analytical practice involving media texts (both in classroom and independent work) provides enrichment of cognitive schemata, the development of students' social and professional competence, especially if a media text's characters find themselves in situations of external or internal conflict, at the crossroads of existential or moral choice.

7. In the process of perception and reflection of a media segment, students should: draw conclusions regarding the reasons that provoked the conflict (crisis) situation, describe the most likely vectors of its development in the future; suggest ways to resolve the situation. Since a conflict does not usually arise suddenly, but background is embedded in every conflict, its escalation is

most often detected through external indicators that students must spot and correctly interpret, thus enhancing their “psychological vigilance” and observation. Thus, indicators of the intense psychological state of the characters can be, for example: a) words, phrases, concepts, remarks, extra- and paralinguistic features of speech, elements of non-verbal communication; b) material objects – weapons, cars, mechanisms, clothing, etc.; c) emotionally colored behavioral reactions of the leading characters (experiences of hope, anxiety, joy, depression, aggression, frustration, as well as facial expressions, tears, hysteria, etc.); d) supporting characters – in particular, psychological and social archetypes acting specifically in the sequence's chronotope and beyond; e) facts that are referenced and that are interpreted and evaluated by the characters of the media text; e) the interaction of characters with each other and the social environment, as well as the social background of the situation, etc.

8. Discussion forms of reflexive and analytical practices about media texts contribute to the interiorization of a dialogue into the intrapersonal space for the expansion of students' social and professional competencies.

5. Conclusion

The experience of using pedagogical technology of integrated media education in the framework of social sciences, humanities, psychological and pedagogical training courses of the vocational education system, as well as monitoring reflexive-analytical activities of students during class work and self-study, enable us to determine that the integration of purposefully adapted, methodologically assisted media text bank in the educational process contributes to the development of psychological, social and professional competencies of future professionals.

The application of integrated media education technology in the educational process provides a link between theoretical and practical components of education. Cognitive schemata formed in the course of reflexive and analytical activities based on media texts can be extrapolated to life and professional practices, and enrich students' behavior repertoire.

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