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Professional Culture of the Specialist of the Future

TO THE DEVELOPMENT OF TEXTUAL COMPETENCY OF A FUTURE ENGINEER

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Abstract

The problem of textual competency of a future engineer is considered with regard to the modern trends in the world education, anthropocentrism, culture-centrism and textocentrism being the features of a new educational paradigm. Textual competency is investigated taking into consideration its role in the process of the future engineer's training. It is characterized as a guide to the world of culture being mastered by a student – language culture, speech culture, communication culture, cognitive culture, information culture, culture of social interaction – due to correlation of textual activity with a number of types of activity essential for the student's self-realization. Textual competency, treated in the investigation both as the result of mastering different types of culture and as a prerequisite for continuation of this process, is proved to have an integrated nature which attests to its multidimensionality. The latter, along with the interdisciplinary and meta-subjective character of textual competency, allow the author to look upon it as one of the key competencies to be developed in the process of the future engineer training. A developed textual competency is shown to be indicative of students' ability to be involved in the life-long education. The solution of the problems associated with the student's textual competency formation at technical university is related to the development and use of text-oriented pedagogical technologies in the process of language education of a future engineer.

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Key words: General cultural development, self-actualization text, textual activity, textual competency.

1. Introduction

The processes of humanization and humanitarization of education are considered to be one of the main directions of the modern high school development corresponding to the general tendency of the world education development. A new paradigm of modern education is characterized by anthropocentrism and culture-centrism which have given rise to a new approach to pedagogy as a science of education. It is now can be looked upon as the main communication technology that is able to integrate personal value categories into society (Salosina, 2007). For the same reason natural forms of self-expression of a person, mostly verbal, start presenting particular interest for the researchers. This, in turn, contributes to the importance of language education that realizes the communicative orientation of modern education processes dealing with verbal forms of human self-expression, namely – texts.

2. Problem Statement

Text being a major focus of interest for a number of sciences, the scholars face with "text domination" in humanistic knowledge in general and literary, historical, philosophical knowledge in particular (Moron Arroyo, 2002, p. 207). Text-oriented approach is characteristic of linguistic, cognitive, pragmatic, semiotic, stylistic, psychological studies (Trosborg, 2010; Rothkegel, 2015; Hébert, 2011). As a result, the concept of a text has become established as a unique unit of humanistic knowledge and is now defined as "a starting point of every humanistic discipline" (Bakhtin, 1986, p. 308). Text-oriented theories have put forward the concepts of textuality, textualization and textocentrism, the latter being treated as a sign of modernity (Gatalskaja, 2005).

A modern textualized society can't but affect pedagogy as human science aimed at mastering and transferring humanistic values (Scherba, 1974). It is known that it is language education that has introduced textocentrism into a modern educational paradigm. In the search for the new didactic unit capable of meeting challenges of the modern world the scholars have found out that only text exhibits required features of a "structural and functional unit of a learning object" (Mazunova, 2001, p. 71) since it represents in miniature the language with its features and functions, is reproducible and ready for intercultural interaction, has a sufficient information basis to deploy textual activity.

The concept of textual activity appears to be of particular value for the humanistic studies of the text, textual activity being understood as a system of actions based on knowledge, skills and abilities that allow to create, perceive and interpret texts (Zherebilo, 2010). Training textual activity expectedly includes learning the schemes of text perception and text production typical of the culture being mastered. Thus proficiency in textual activity may turn out to be one of the main indexes of general culture of a student that is targeted by the educational programs of a modern university in the terms of general cultural competency of its graduates. An increase of the overall cultural level of a student could accordingly be possible through the development of his textual competency. The latter is understood as an integral property of a person having the ability to realize textual skills on the base of his knowledge of the text in the process of textual activity (Bolotnova, 2009).

The relevance of the textual competency development to the achievement of the cultural level of a learner holds true for the technical university students. The importance of textual competency for a future engineer is easily derived from the federal state educational standards requirements for general cultural

competency and communication culture which have to be displayed by a technical university graduate along with his professional competency. In this connection the problems of self-realization (self-actualization (Maslow, 1987) of a future engineer in the process of communication, i.e. within the bounds of textual activity and owing to the developed textual competency, is acquiring particular relevance.

3.   Research Questions

The very awareness of the negative consequences of the drawbacks in the communication skills development of a future engineer, which can prevent his professional and personal growth, poses a number of research questions. They concern the content of general cultural education at technical university, the place allocated to communication culture in the university's educational and cultural space, the nature of general cultural competency being formed in the educational process, possibilities of every discipline in its development.

In the case of language education, which contribution to this process we consider having been proved (Klementsova, 2015), currently central problems seem to be concerned with identification of the groups of competencies forming communication culture of a technical university student and with estimation of the main directions of his self-actualization in the educational process. Acknowledged textocentism of language education raises a question of establishing relationship between textual competency formed on the base of text and communication competency as a target one for language education. Finding out the conditions for the text to realize its pedagogical status to the full is acquiring certain significance as well.

4.   Purpose of the Study

The aim of the present study is to investigate the nature of textual competency of a future engineer with due regard for its role in the process of the future engineer's training and to clarify the mechanism as well as the conditions of the textual competency formation. This allows to make a conclusion not only about problems but also prospects of the textual competency formation in the process of the future engineer's training. The solution of the identified problems and implementation of the pedagogical possibilities on this way are in many respects predetermined by the availability of the pedagogical model and the technology of the textual competency formation which development constitutes the strategic aim of the investigation.

5.   Research Methods

Methodical basis of the investigation is represented by a number of scientific pedagogical methods: theoretical and methodological analysis – in establishing the degree of advancement of studies of the future engineer's textual competency formation; discourse reflection – in providing some grounding in theory on the basis of logical reasoning and with regard to the researcher's pedagogical experience; a pedagogical experiment – in collecting information on the results of the developed technology application.

6.   Findings

The key to understanding the nature of textual competency and its role in the general cultural development of a student lies with the developing potential of textual activity. It was proved by comparison of textual skills to those belonging to the domains of general cultural competency to be developed by a

future engineer. As a result, our study has revealed the fact that textual activity being an independent activity presents a multi-aspect and multi-purpose structure that is relevant to a number of other types of activity essential for a person's self-actualization. This, in turn, allows us to make a conclusion on multi-aspect character of culture being mastered in the process of textual activity.

Thus, mediation of textual activity by the language system manifesting itself in an adequate use of language material in the process of textual activity is indicative of the significant presence of language activity in the textual one. Language activity provides the basis for mastering language culture, the latter being understood as potentialities of language as a system (richness of vocabulary and syntax, perfection of semantics, etc.) which are to be realized in the process of language functioning (Klementsova, 2015).

At the same time text belongs to speech, and textual activity is essentially a speech phenomenon. Speech culture being formed in the process of textual activity covers the processes of speech perception (reading and listening) and speech production (speaking and writing). Speech culture connected with ability to express one's thoughts and feelings favors correct usage of language and maintains the desire for speech expressiveness. As for speech culture connected with speech perception, it presupposes an adequate comprehension and active interpretation of the text, since "the text is the stimulus, loaded with structures to be perceived and interpreted" (Donald, 2009, p. 44).

Textual activity is also known to provide intercourse in different fields of communication which characterizes it as communication activity. It serves as a basis for developing communication culture manifested in a person's ability to listen to an interlocutor and observe speech etiquette and represented by a complex of knowledge and skills necessary for proper behavior in different socio-cultural situations. It is important to distinguish in this connection cultures of everyday, business and professional communication.

Furthermore, textual activity is an obvious result of cognitive activity of the author of the text, of his "thought – speech functioning" as a human (Lyra & Valsiner, 1998, p. 122), presenting at the same time the object of cognitive activity of another person who perceives this text. As a result, text appears to be the base for the development of cognitive culture, the concept of "cognitive" relating to the processes of thinking, understanding and reasoning.

At the same time, taking account of the processes of transmitting, receiving, converting and keeping information that are incorporated into textual activity makes it possible to look upon the latter as information activity. Moreover, social and cultural context of textual activity as well as social and cultural experience of its participants bearing a direct relationship to its efficiency suggest that textual activity also belongs to the field of social and cultural activity. These considerations allow an understanding of the text's role in the development of the corresponding types of culture.

There is also a good reason to believe that textual activity is related to professional activity of a future engineer taking into account the importance of proficiency in professional language and ability to communicate effectively in the workplace, i.e. in the professional environment. The case in point is taking advantage of the texts for professional use (ESP texts in a foreign language class) for the development of skills needed to process professional information, transfer professional knowledge, solve professional problems. Since these skills are acquired in a class and then transferred to future employment settings, they are considered to be transferable (Liptak, 2008) and very useful for a technical university graduate.

Besides, the list of professionally relevant skills encouraging the professional culture formation can be supplemented by self-management and self-development skills that are formed quite effectively in the process of textual activity (Klementsova, 2018). These skills presuppose a certain level of reflexivity, self-discipline and self-consciousness that will motivate students' engagement in life-long learning after their graduation. Hence textual activity appears to be involved in the process of training of self-improvement professionals, their personal development being a part of their professional culture.

It is obvious that the list of types of culture which development is relevant to textual activity of students, as well as the list of types of activity determining these types of culture, are quite relative. There is a possibility to undertake a more differentiated approach while specifying the activity underlying the culture being formed in the process of textual activity. Thus, having in mind the efficiency of speech activity, it is possible to distinguish a culture of reading, a culture of writing, a culture of listening, a culture of speaking formed in the process of language education. In a similar manner, communication activity infers mastering culture of making oneself understood and understanding others in different communication contexts, i.e.: a culture of persuasion, a culture of discussion, a culture of negotiation, etc.

At the same time, information acquisition, social, cultural and professional interaction, and satisfaction of need for self-development within the framework of textual activity have communicative character, being a prerequisite for real interpersonal interaction. This allows us to consider two main planes of the students' self-actualization in the process of language education at technical university: formed by language and thinking (cognition), and communication and speech relationship. The main directions of students' self-actualization in this educational process are accordingly defined as language culture, speech culture, communication culture and cognitive culture.

Since textual activity turns out to be a multi-purpose structure relating to a number of other types of activities relevant to a future engineer and his acquisition of culture, textual competency formed in the process of textual activity should also be considered having an integrated nature. Assuming that the concept of competency is complimentary to the concept of culture (Klementsova, 2015), we have every reason to believe that textual competency is the result of mastering different types of culture (their interiorization) in the process of textual activity. At the same time, there is a reverse side of the textual competency integrated nature, the latter being manifested not only by combination of textual skills providing textual activity, but also by the ability to be used, in its turn, as an instrument of modeling different types of activity and developing corresponding types of culture. Thus, textual competency can be envisioned both as the result of mastering different types of culture and as a prerequisite for continuation of this process.

An integrated nature of textual competency attests to its multidimensionality, while transferability of textual skills indicates that textual competency has an interdisciplinary and meta-subjective character. The set of such features is known to characterize the group of key competencies (Zeer, Pavlov, & Symanjuk, 2005), and this permits us to classify textual competency with this priority group of competencies. This fact, along with recognition of a developing character of textual activity, can be treated as an extra argument in favor of considering the textual competency formation as a must for the future engineer's training.

Our observation on the relationship between textual activity and a number of types of activity relevant to the future engineer's training fostering the acquisition of different types of culture are confirmed by numerous investigations of text by the humanities. They regard this main participant of textual activity as

a unit of language, speech, communication, cognition, information and culture. It is not by chance that it is text that appears to be a unique didactic unit of the new educational paradigm that is able to meet the challenges of modern world. Being an integral part of educational discourse text is involved in the process of the students' general cultural development promoting the most efficient solution of the problems faced by modern education.

The way text realizes its potential as a unique didactic unit is largely determined by the presence of a cultural factor in its status: the interdependence between culture and text is obvious due to their common categorical character, fulfillment of common functions and existence of common parameters of investigation. If culture is "the way of self-organization of a thinking universe, way of life, rules of people's activity" (Zherebilo, 2010), then its relationship with text as a unit of speech and communication carrying a cognitive, informative and social load of communication is obvious.

A consideration of functional and categorial unity of concepts actualizes not only the interdependence of culture and text, the latter being treated as a cultural phenomenon and a means of culture interpretation. The interdependence of culture and education also becomes obvious, and this gives rise to the concept of cultural and educational space as a developing integrity used for mastering humanistic values and predetermining self-actualization of a person within a context of a certain culture. This makes self-actualization, as a full unfolding of a student's personal potential in culture, the subject of educational activity. Meanwhile textual competency formed in the process of textual activity appears to be a peculiar guide into the world of culture mastered by a student: language culture, speech culture, cognitive culture, information culture, culture of social interaction

The role of the developed textual competency in increasing students' motivation to learn is also considered to be essential since it is extremely important not only for creating conditions for successful learning but also for developing the conscious attitude towards it which, in turn, affects a person's ability to act independently and achieve his potential (Turrel, 2015) in a professional context. A motive is known to be something that "determines, stimulates, induces a person to perform some act included by this motive in a certain activity" (Zymnaja, 2009, p. 220). Taking account of this definition and keeping in mind the fact that text in the structure of textual activity serves as a motive not only for speech perception but also for speech production seem to be sufficient to estimate the role of textual competency in developing a student as a person.

The teachers have at their disposal several methods of enhancing intrinsic motivation to learn with the help of textual activity: specifying the aim purposeful for the students when they work with texts or perform text assignments; using text assignments involving students' interpersonal contacts; addressing to professional texts and text assignments creating professional situations; developing text assignments asking for creative response of students; applying problem solving techniques on the base of the text; introducing self-assessment techniques into students' textual activity, etc.

All these methods have one feature in common: their use increases students' motivation to learn owing to cognitive interest and/or emotional response arisen in the process of textual activity. As a result, educational process becomes an event for the students, arising a need to be involved in an imaginary dialogue with the author of the text as well as in speech interaction during the discussion of the text, i.e. in the process of self-expression.

Thus, textual competency of a student attests not only to his successful mastering of humanistic knowledge but also to his ability of knowledge mining (Kaufman & Michalski, 2005) which is extremely important for the process of free self-education (Hessen, 1995) of any specialist. This fact allows to consider a developed textual competency as an index of readiness of a future engineer for professional activity, as a manifestation of his humanistic education in the present and as his instrument for mastering cultural and educational space in the future.

The role assigned to textual competency in the future engineer training is quite pronounced when researchers define textual activity as the main type of educational activity in language education, emphasize "harmonizing influence" of universal skills of textual activity, look upon text as a center around which the whole system of education in non-language university is built. It seems that the reason to consider practical relevance of textual competency to the future engineer training is provided by the very nature of this competency, namely, by its multi-component composition, complexity of construction, integrity of constituting components.

Meanwhile, the same circumstances define a number of problems associated with the textual competency development of the students. The case in point is first and foremost the students' non-sufficient mastering of rational techniques helping to perceive and process information of the texts when they are being read or audited. The quality of the students' speech production activity and its results, i.e. the texts of their reports, compositions, courseworks, diploma essays, also leave much to be desired. The students have a vague notion about culture of discussion, have problems while presenting their point of view.

The absence of competent extraction of actual information from different written and oral texts, undeveloped reproductive and productive skills that are necessary for presenting and creative processing of the extracted information while formulating one's own point of view on what has been read – all these facts testify to the lack of proper organization of textual activity in the educational process.

Having every reason to believe that textual competency is directly related to professional communicative competency of a future engineer, we are advocating the use of the developing potential of textual activity as a pedagogical necessity in the process of the future engineer training. It is obviously possible only in the case of developing a special pedagogical technology to acquire textual competency which is a feasible task for language education.

A distinctive feature of this technology will be the students' involvement into the consistent, step-by-step process of textual activity unfolding in an authentic context, i.e. on the base of authentic texts and using authentic assignments. Authenticity is known to lie not in the text but in the way speakers and readers make use of it, namely in their response (Widdowson, 1990), suggesting the importance of using text in performing real-life tasks or stimulated tasks that provide students with opportunities to connect directly with the real world of their future profession. These tasks provide a gradual transition from an adequate understanding of a given text to the students' own text creation, from speech reproduction to speech production. The efficiency of this transition is maintained by the quality of text assignments: their adequacy from professional point of view, the authenticity of interactive situations created by them, their ability not only to attract students' attention but also to motivate them to perform the assigned task.

7. Conclusion

Thus, the undertaken research into the nature of textual competency of a future engineer has revealed its dependence on the developing character of textual activity unfolding in the foreign language classroom. The established correlation between textual activity and other activities accompanying it (language activity, speech activity, communication activity, cognitive activity, socio-cultural activity, etc.) makes it possible to consider textual competency as an instrument of developing corresponding types of culture. Taking into account the importance of mastering of these types of culture in the process of the future engineer training it is possible to assert that textual competency participates in the students' professional readiness formation.

Textual competency is proved to be relevant to the students' self-actualization in the process of foreign language education at technical university, the main directions of self-actualization being the development of the students' language culture, speech culture, communication culture and cognitive culture. Textual competency, treated both as the result of mastering different types of culture and as a prerequisite for continuation of this process, has an integrated nature which attests to its multidimensionality. The latter, along with the interdisciplinary and meta-subjective character of textual competency, allow to look upon it as one of the key competencies to be developed in the process of the future engineer training.

Moreover, a developed textual competency is involved in increasing the students' motivation to learn, maintains their ability of knowledge mining, favors their self-education in the present and self-improvement in the future. Being indicative of students' humanistic education, a developed textual competency presupposes an efficient mastering of the cultural and educational space by a future engineer. Conversely, it is conceivable that an undeveloped textual competency may block personal and professional advancement for a future engineer. It means that the development of pedagogical technologies aimed at acquiring textual competency is on the agenda of specialists involved in the training process of a future engineer possessing not only professional but also humanistic knowledge and enjoying a high level of personal culture development.

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