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An Educational Technology for Developing Professionally-Oriented EFL Communicative Competence: Its Acmeological Potential

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Abstract

This paper addresses the problem of creating effective educational technologies aimed at developing university students' professionally-oriented EFL communicative competence in research-oriented higher educational settings. Two techniques (*mini-research* and *individual educational trajectory*), being actional components of the educational technology developed, were analyzed from the acmeological potential perspective based on the study undertaken. The study participants were undergraduates and master's students majoring in non-language-related fields.

1. Introduction

The challenge of enhancing students' communicative competence development in English as a foreign language (EFL) seems to be essentially important in research-oriented universities. The mission of such universities is to provide high quality research and education (Hyland, 2013; Petrova et al., 2014), and this necessitates being involved in global educational and research agendas. Being the lingua franca of higher education, science and technology, English has been playing a key role in promoting international cooperation in these spheres (Muresan & Pérez-Llantada, 2014) and stimulating its learning and teaching in higher educational settings in non-English-speaking countries (Hyland, 2009). Therefore, addressing the problem of creating and implementing effective educational technologies aimed at

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developing university students' professionally-oriented EFL communicative competence is beneficial to the demands that research-based universities in non-English-speaking countries are facing.

Viewing professionally-oriented EFL communicative competence in the context of non-language-majoring students' personal and professional development in higher educational settings (Atamanova, 2009; Atamanova & Bogomaz, 2011; Atamanova & Bogomaz, 2014) enables educators to become more student-centered in their educational practices. As Wood (2009) concludes, it matters not "what we teach our students", but "how we teach them" (p. 108). Furthermore, from the psychological-acmeological perspective (for details, see Derkach et al., 2000; Kozlova, 2008), one's personal and professional development can be regarded as his or her "lifelong journey to acme, the highest stage of development" (Kozlova & Atamanova, 2012, p. 50). This determines, in our opinion, an approach to the design and implementation of adequate educational technologies, namely its focus on the acmeological potential of such technologies.

Thus, this paper presents an educational technology for developing non-language-majoring students' professionally-oriented EFL communicative competence, namely its design and possible ways of implementing. In addition, it discusses from the acmeological viewpoint how effective the actional component of this technology was when implemented in two variations (mini-research for undergraduates and individual educational trajectory for master's students).

2. Developing students' professionally-oriented EFL communicative competence in research-based universities: An educational technology

Addressing the idea of university students' professionally-oriented EFL communicative competence development as part of their personal and professional one in higher educational settings seems to be beneficial to integrating academic curriculum, educational practice and research activity. Such integration is quite necessary in research-based universities since it helps them to become more effective in training students, especially those majoring in natural sciences and engineering (Wood, 2009; Kozlova & Atamanova, 2012). Moreover, one of the key objectives in higher education is to provide students with an educational environment that will enable them to realize their personal potentials in their professional field (Atamanova & Bogomaz, 2014). Therefore, research-based universities are highly interested in educational technologies that integrate education and research, on the one hand, and that are student-centered ones, on the other.

2.1. Methodological issues

It should be mentioned that the term of *educational technology* varies greatly in its definitions and interpretations, as highlighted by Januszewski (2001). Nevertheless, it is possible to divide all this flow into two streamlines. The first approach deals with *educational technology* as a construct that involves various issues of using technology in education and integrating technological tools with teaching and learning (see, for example, Walker & Barwell, 2009; Nazarenko, 2014; Simpson & Obdalova, 2014). The second one focuses on *educational technology* in its broader sense, namely viewing it as "a complex, integrated process involving people, procedures, ideas, devices, and organization, for analyzing problems and devising, implementing, evaluating and managing solutions to those problems, involved in all aspects of human learning" (AECT, 1977, p. 1). Both in designing and implementing the educational technology being described in this paper we follow the latter understanding.

Furthermore, from the psychological-acmeological perspective (for details, see Derkach et al., 2000; Kozlova, 2008), professionally-oriented EFL communicative competence can be referred to as a dynamic integral personal characteristic providing effective interaction in English in a professional context (Atamanova, 2009; Atamanova & Bogomaz, 2011; Atamanova, 2014; Atamanova & Bogomaz, 2014). The core of such an interpretation is the complexity and multifacetedness of EFL communicative competence, i.e. it is viewed as "being inseparable in its cognitive, behavioral, emotional, motivational and axiological components" (Atamanova & Bogomaz, 2014, p. 346). In other words, EFL communicative competence can be interpreted as a measure of the target-language culture transformation into one's personal world regarding all the aspects of human being, including his or her professional dimensions.

With respect to this broader understanding of EFL communicative competence, the psychological-acmeological perspective seems to be beneficial because university students' personal and professional development can be

considered as their "lifelong journey to *acme*, the highest stage of development" (Kozlova & Atamanova, 2012, p. 50), their professionally-oriented EFL communicative competence being an essential part of the process mentioned. It should be noted that the word *acme* has its origin from the Greek noun *ακμη* and means 'the highest point of something, peak, mature age or full bloom of life', so *acme* can be understood as the highest stage of one's personal and professional development. In connection to this the question arises of what educational practices allow us to provide university students with adequate educational settings to enhance their professionally-oriented EFL communicative competence development in their lifelong journey towards *acme*.

2.2. An educational technology for developing students' professionally-oriented EFL communicative competence

This paper focuses on developing non-language-majoring students' professionally-oriented EFL communicative competence based on the psychological-acmeological approach to the process of their personal and professional development in higher educational settings. The basic principles of such an approach, according to Kozlova (2008), are the following: 1) a vector of one's personal and professional development is manifested via his or her personal world changes; 2) a driving mechanism of a person's further development is a conflict between one's personal world and his or her actual life quality; 3) values, being anchored in a culture, are transformed into one's personal world.

As mentioned above, EFL communicative competence is viewed as a measure of the target-language culture transformation into one's personal world. In a professional context this means that professionally-oriented EFL communicative competence reflects a degree of such a transformation regarding professional dimensions. It was supposed by Atamanova (2009) that university students' professionally-oriented EFL communicative competence is developing via modeling various situations of communication (in its broader meaning as interaction) in a professional context. This is an *actional* component of the educational technology under discussion (see Fig. 1). In the case of university students majoring in non-language-related fields it can be implemented in two ways, namely in *mini-research* for undergraduates and in *individual educational trajectory* for master's students. In addition, this educational technology includes four more constituents, as shown in Fig. 1. These are *diagnostic*, *motivational*, *organizational* and *reflective* components.
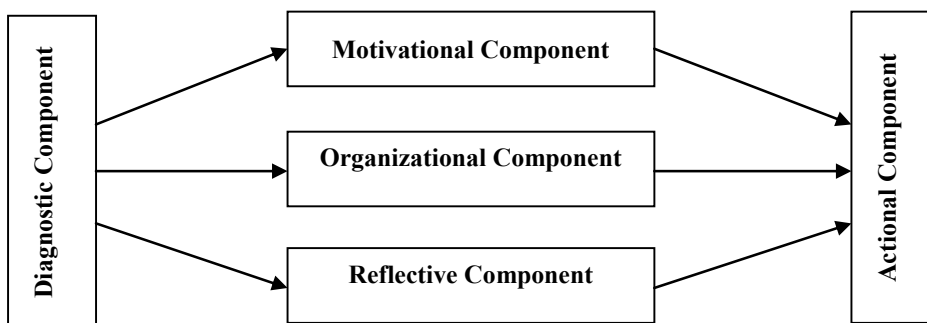

Fig. 1. Components of the educational technology discussed in this paper.

The *diagnostic* component serves for identifying students' actual level of EFL communicative competence as well as their purposes for learning English, difficulties they have in language learning, their past experience in learning English and their attitudes towards the language. All these aspects have a significant effect on the process of learning, as shown by Atamanova (2014). Moreover, it is important to evaluate learners' personal and communicative potentials for revealing 'growing points' to enhance their professionally-oriented EFL communicative competence development.

The *motivational* component is intended for developing students' readiness for being competent in EFL in a professional context and focuses on learners being aware of their own purposes of learning English and their adequateness to the educational standards and future profession requirements. In addition, students' attitudes toward the language and the learning process are supposed to be transformed via motivation.

The *organizational* component determines the educational settings for developing university students' EFL communicative competence in a professional context from the psychological-acmeological perspective. As stated above,

this process is viewed as the target-language culture transformation into one's personal world regarding professional dimensions and results from modeling various situations of professional communication (in its broader meaning as interaction). The triad of *language*, *communication* and *context* is referred to as an inseparable unity being the core of university students' professionally-oriented EFL communicative competence development.

The *reflective* component helps university students to become more aware of language learning as a process, to cope with difficulties they are facing and to find their own effective ways of developing their professionally-oriented EFL communicative competence. By its very nature, this constituent serves as a psychological support for language learners.

As far as the *actional* component is concerned, it is implemented in two ways as given above, namely in *mini-research* for undergraduates and in *individual educational trajectory* for master's students. *Mini-research* is a technique that involves university students in a step-by-step process of researching into their special field (for educational purposes), beginning with problem-formulating and concluding in with presenting results (for details, see Atamanova & Bogomaz, 2011). *Individual educational trajectory* means that master's students follow their own ways in mastering English according to their research questions and their research programmes. This technique is supposed to transform the role of an English teacher into that of a tutor.

3. Effectiveness of the educational technology developed

It should be noted that the educational technology described was implemented in the educational process at Tomsk State University (for details, see Atamanova & Bogomaz, 2011; Atamanova & Kashirina, 2011) and has been used for developing university students' professionally-oriented EFL communicative competence at the Faculty of Technology and Engineering. This paper addresses some aspects of evaluating its effectiveness from the psychological-acmeological perspective. In other words, the acmeological potential of this technology can be assessed by tracking the dynamics of students' EFL communicative competence development in higher educational settings.

3.1. Study sample

The total study sample included 71 university students aged from 18 to 24 years old. They were 24 second-year engineering undergraduates and 47 master's students majoring in technical physics and applied mechanics. All the students were taking English as part of their academic curriculum at university.

3.2. Data collection and analysis

The undergraduates' EFL communicative competence as an input parameter was assessed by their English teacher who rated its level using a 7-point grading scale from very low (2) to very high (5) with an interval of 0.5. Their professionally-oriented EFL communicative competence was then evaluated twice (using the same scale) based on their research projects according to the *mini-research* technique applied.

The effectiveness of the educational technology discussed in the case of master's students was assessed based on the self-evaluation of their own progress in developing their professionally-oriented EFL communicative competence following their *individual educational trajectory*. The study participants were asked to evaluate changes in their level of professionally-oriented EFL communicative competence using the following scale: *improved greatly*, *improved moderately, improved slightly, unchanged*, and *worsened*. The data collected were then statistically treated.

3.3. Study results and discussion

Fig. 2 shows the dynamics of the second-year engineering undergraduates' professionally-oriented EFL communicative competence development in higher educational settings. As seen, these dynamics are positive, i.e. the educational technology implemented with *mini-research* as its actional component does enable university undergraduates to develop their EFL communicative competence in a professional context. It should be noted that the study participants' professionally-oriented EFL communicative competence was evaluated three times, namely as an input parameter (1) at the beginning of their second year at university and when presenting results of their

mini-research projects: (2) at the end of the first term and (3) at the end of the second term.
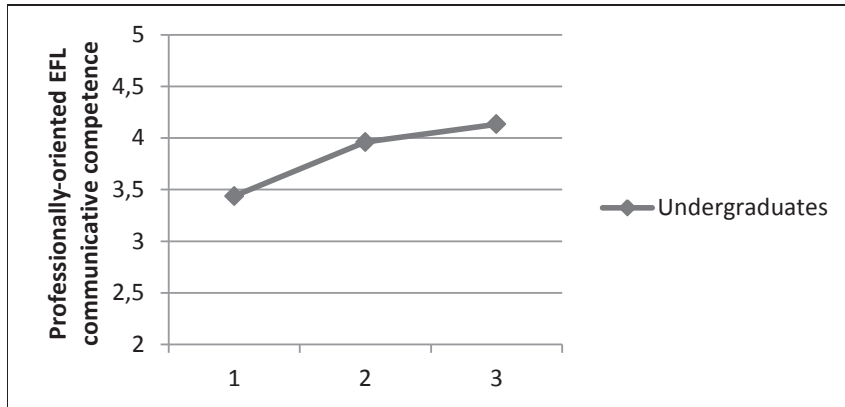

Fig. 2. Dynamics of the study participants' professionally-oriented EFL communicative competence development.
1 – input parameters; 2 – I mini-research project; 3 – II mini-research project.

In addition, the results obtained were compared with those presented in Atamanova & Bogomaz (2014), who did the evaluation of undergraduates' EFL communicative competence for first-year and second-year non-language-majoring university students being taught English in a conventional manner. In the two subsamples (51 first-year and 56 second-year undergraduates) there was no difference in their means of EFL communicative competence: $M1 = 3.88$; $SD1 = 0.60$ and $M2 = 3.88$; $SD2 = 0.61$, respectively. In contrast, the dynamics of the study participants' professionally-oriented EFL communicative competence development was positive and there was an increase in the mean level of the competence in question from 3.44 ± 0.47 to 4.13 ± 0.34.

Fig. 3 presents the results of the study participants' self-evaluation of their own progress in developing professionally-oriented EFL communicative competence following their *individual educational trajectory* in the case of master's students majoring in technical physics and applied mechanics. They were asked to evaluate changes in their level of professionally-oriented EFL communicative competence in the course of their English for Specific Purposes (ESP) classes.
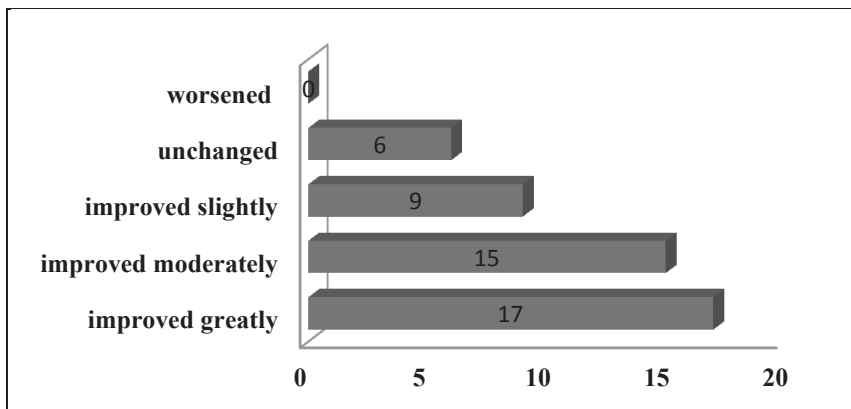

Fig. 3. Master's students' feedback on their progress in professionally-oriented EFL communicative competence development.

Based on the feedback provided, it can be concluded that following one's own *individual educational trajectory* in mastering English in a professional context helped the master's students improve their level of professionally-oriented EFL communicative competence significantly. None of the study participants indicated that their EFL

communicative competence related to their special field became worsened. Only six students reported that their level of professionally-oriented EFL communicative competence was unchanged. 9, 15 and 17 master's students ticked off their slight, moderate and great improvement, respectively, as shown in Fig. 3.

4. Conclusion

The challenge of integrating academic curriculum, educational practice and research activity can be considered as one of the first priorities in research-oriented universities. Based on the psychological-acmeological approach to the process of university students' personal and professional development in higher educational settings, we designed and implemented an educational technology for developing non-language-majoring students' professionally-oriented EFL communicative competence. Its acmeological potential is determined by the sound psychological basis of the technology created, according to which professionally-oriented EFL communicative competence is supposed to be *a degree of the target-language culture transformation into one's personal world regarding professional dimensions*. In turn, the triad of *language*, *communication* and *context* provides the core of university students' professionally-oriented EFL communicative competence development via modeling various situations of professional communication.

The educational technology developed includes five components, namely *diagnostic*, *motivational*, *organizational*, *reflective* and *actional*. The last constituent can be brought about in two variations (*mini-research* and *individual educational trajectory*) depending on the students' level of education (a Bachelor's course or a Master's one, respectively). The study conducted has confirmed the effectiveness of the technology under discussion compared with traditional approaches to teaching ESP in higher educational settings.

Acknowledgements

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