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## THE USE OF NEW MEDIA TECHNOLOGIES AND DIALOGUE EDUCATION IN DOCTORAL PROGRAMS

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### *Abstract*

The paper focuses attention on the study and application of the dialogical model of education within the system of higher education, which has been discussed by specialists for a certain length of time. This concerned, above all, the bachelors' and masters' levels of education. Doctoral education, which until recently was listed as a postgraduate stage of education, was not included. However, in practice, with an increase in the level of education, feedback from students and dialogue delivery of educational material becomes more effective and valuable. Young researchers require a different approach than younger students. A mutual evaluation of the educational materials, conducting classes in the form of talks and discussions appeal to them. Therefore, today there is an urgent need to consider new models of education in higher education at the postgraduate level. In the framework of this paper, the possibility of introducing and implementing a dialogue model of education in postgraduate programs for the training of research personnel is being considered. The article outlines the possible ways of its implementation, described in the works of Western researchers. In addition, the very concept of dialogue learning is revealed, and its features are explored. Comparative analysis of approaches to dialogue education in Western and Russian educational institutions for the training of research personnel is given, primarily in the scientific and pedagogical field. Successful implementation of this new approach is facilitated by new media technologies that have been introduced to universities together with the computerization of the educational process.



**Keywords:** Higher education, dialogue education, postgraduate study, media technologies, educational process.

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## 1. Introduction

The problem of reshaping the format of postgraduate education has been considered by many researchers from various perspectives. Over the past few years, a number of papers have emerged which analysed the effectiveness and development of postgraduate programs in a number of countries. These analyses were carried out from the point of view of internationalisation, financial and pedagogical aspects of training. All authors acknowledge significant changes in the training of academic researchers – from the impact of globalisation and immigration to the development of teaching programs. Most of them note the need to change the existing model of postgraduate education (Anderson, 2013; Baptista, 2016; Bourne, 2013; Gonzalez-Ocampo et al., 2015; Li, Yu, 2015; Nabi, Ghous, Sheikh, 2016).

## 2. Research questions

The principles and practice of dialogue education represent a concrete way of integrating adult learning theory into the development and implementation of training activities. The basic principles of dialogue learning include:

- Actual dialogue. This is the primary principle of dialogue education and means positioning dialogue as a means to achieve the end result of training, and not as a goal. The principle assumes that any adult has enough life experience to converse with any teacher on any subject and that learners learn best when content relates to their experience. Thus, two-way, open dialogue needs to be a part of all learning activities.
- Students as subjects or decision-makers. The students must be seen as actors influencing the content of the training, not as objects acted upon that are receiving information passively.
- Achievement-based objectives that describe what students will do with the knowledge in an observable way. Objectives are described using action verbs.
- Learning tasks, which are structured as open questions (i.e. questions that do not have a "right" answer), inviting students to interact with the content. That encourages an open dialogue between the learners and the teacher, as well as among learners. These tasks determine the way in which students will achieve the goal (what for?), to help them to gain (Vella, 2008; Vella, 2012) the necessary knowledge (what?) to arrive at the intended purpose (why?).

## 3. Purpose of the Study

To gain a full understanding of the possible solutions to the issue of introducing doctoral dialogue education using new technologies, one needs to consider the experience and the existing postgraduate educational systems in both the leading Western countries and in Russia. First of all, it should be noted that the requirements for graduate\doctoral students have drastic differences even within the seemingly uniform Bologna system.

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## 4. Research Methods

The researchers use comparative analysis of approaches to dialogue education in Western and Russian educational institutions for the training of research personnel primarily in the scientific and pedagogical field.

## 5. Findings

Two substantially different models of education have been developed in western countries by the end of the 1950s – on the one hand, the UK, Australia and Commonwealth model and, on the other hand, the one used in the universities of the USA and Canada. In the American system, one's research efforts are assessed by a team of researchers led by the principal supervisor. In the British system, only one scientific director is managing the entire process of research moderation.

In the US model, doctoral candidate status is given only after one's successful passing of the comprehensive examination. However, within the European model PhD candidacy is granted upon the successful defence of a research proposal.

There are many checks and balances within the American system that ensure the quality of education. A doctoral student must master the curriculum of approximately 12 to 18 months, in addition to the exams. A comprehensive examination is another important feature of the American system and includes both written and oral components. Students who have failed the examination have an opportunity to retake them again in a year.

As part of the quality assessment in the European system, a doctoral student must successfully pass a proposal defence seminar. This system eliminates the need for coursework and promotes writing and defence of good and promising (in the proposal committee's opinion) research topics. Only after the defence of their research proposal does a PhD student become a PhD candidate (Tewari).

In Russia, with the adoption of the Federal Law №.273-FZ "On the Education of the Russian Federation", postgraduate study ("aspiranturas"), which used to be a level of postgraduate education, have become "integrated" into the general system of higher education as its third stage. Now the new model of higher education consists of three levels: the first – Bachelor's degree, the second – Specialist's or Master's and the third – Graduate school level degree. Graduate school is regarded as the level of higher education intended for the training of highly qualified personnel (especially in the fields of research and education). To this end, in addition to preparing doctoral students for comprehensive exams ("candidate's exams"), extra classes in several other subjects relevant to their field of study have been introduced – including lectures, seminars and teaching practice sessions, where dialogue education could be implemented. There are also mid-coursework exams in these additional subjects. Previously, the purpose was to prepare graduate researchers, and the main result of the program was a PhD junior ("Candidate of Sciences") degree. Now, though, at the end of their studies, doctoral students receive a "post-graduate certificate of completion" and are awarded the qualification of "researcher, teacher-researcher". As a result of completing their training in graduate school, according to the federal standard, graduates should acquire universal competence, which does not depend on their specific areas

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of training; general professional competence, determined by their area of study; professional competence, determined by the doctoral program's direction (profile).

Experts believe that: 1) the implementation of teaching staff programs in graduate schools at the third level of higher education confirms the integration of Russian education into the European educational environment, creates additional opportunities for the development of science and an influx of young professionals; 2) the development of basic educational programs for training teaching staff in graduate school with a focus on the requirements of relevant federal standards should be accompanied by a careful analysis of the modern high-tech labor market, the design of techniques, tools and training technologies which would provide high growth of core competencies and, above all, universal competencies that allow their carriers to be successful in such a market; 3) The ratio of professional, general professional and versatile competencies in the design of specific educational training programs for teaching staff in graduate schools can and should reflect not only the requirements of professional standards and the labor market as a whole, but also one's individual capacities, way of thinking, one's previous professional experience and achievements (Gvil'dis, 2014).

The defence of a qualifying research paper (thesis) becomes the next goal in Russian postgraduate training. The research of doctoral students in Russia takes place under the supervision of the doctoral advisor, who, as a rule, are PhD seniors ("Doctor of Sciences") with at least 10 years experience in research and teaching, and with a position of professor or associate professor. These supervisors provide advice in choosing the topic of the thesis, plan the research with his doctoral student and help defend it, create an individual plan for writing a thesis, organise students' research.

The advisor also assists in the preparation and publication of doctoral students' research results, which set out the basic points of the dissertation, as well as in writing reports to be presented at conferences, research seminars, round tables, etc. They, in general, are responsible for the quality of findings prepared and presented during the defence of a thesis. On department's meetings, doctoral students must annually report on the work done (based on which they undergo an annual research assessment).

However, as the authors of the article "Supervising doctoral students: variation in purpose and pedagogy" write:

"International policy changes that have prioritised increasing growth in the numbers of doctoral students have led to wide-ranging debate about the changing purpose of the doctorate. However, there has been little research aimed at investigating doctoral supervisors' views of the purpose of the doctorate, despite the significant role supervisors play in enacting any doctoral policy changes." (Akerlind, McAlpine, 2015).

The possibility and the probability of introducing dialogue interaction into the framework of higher education have already been considered by some researchers. For example, Dan Gerber in his article "Dialogue Learning in Higher Education" wrote: "... I would make the argument that ninety percent [of professors] follow the four principles of Adult Learning Theory and Dialogue Educations to the best of their ability. These four principles are (as I learned them in 1987 from Jane):

- Respect - the learner must feel heard, and respect for himself/herself.

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- Immediacy - learners must see how they can use their new knowledge, skills and attitudes immediately, in their context
- Experience - people learn best when what they are learning is related to their own life experience.
- Adults learn:
  - 20% of what they hear,
  - 40% of what they hear and see,
  - 80% of what they discover for themselves.

... Especially important is principle number four: Adults learn - 80% of what they discover for themselves. Do these teachers know this? Most likely not. What they do know is the students are learning better than with the old method of only lecturing. Most might notice a higher level of energy in their classes. Consequently, I see that we won! The old ... approach to education (strictly lecturing with tests every few weeks) is on its way out and Adult Learning Theory and Dialogue Education is on its way in." (Gerber, 2015). Examples of using new media in higher education can also be found in the article "Mobile computing devices in higher education: Student perspectives on learning with cell phones, Smartphone & social media" by Gikas and Grant. As part of their analysis of social networks and mobile devices in the learning process of students at three universities (Coastal College, Lakeshore University, The University of Northbrook), the researchers emphasise the emergence of two major themes in their interviews of student focus groups. The first describes the advantages of using mobile devices for teaching, and the second concerns the discussion of the disadvantages of this type of educational process.

Study participants noted many positive aspects of using mobile devices in education. These advantages include quick access to information, communication and co-production of content, variable ways of teaching, and situated learning. Permanent connection to the Internet, as stated by the students, provides faster access to the course's content. This was what made finding any necessary source within a few seconds possible.

Another advantage derived from the constant availability of communication was the opportunity to interact with coeds and the professor. Lakeshore University students believe that constant communication available through mobile devices was key to team success.

While participants generally considered mobile computing devices useful, there were some obvious difficulties associated with their use. These included: a negative opinion on mobile devices from a number of other instructors, difficulties in interaction with the devices, and devices as sources of distraction (Gikas, & Grant, 2013).

Another example of analysing information technology use within the system of higher education can be found in the article "Perceptions of Effectiveness of Instructional Uses of Technology in Higher Education in an Era of Web 2.0", published by researchers from the University of Concordia in 2014. According to the authors, the students are already using new information technologies for educational purposes as these technologies simplify accessing relevant information, but also because they facilitate communication and collaboration with teachers and classmates. The use of existing means of transmitting information, in addition to creating integrated platforms with frequently updated educational information, is, apparently, particularly beneficial for teaching students. Other teaching strategies such as online

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lectures and additional websites are also beneficial to learning. However, according to the authors, some educational practices via digital means are less advantageous. These include poorly used PowerPoint presentations, websites that are irrelevant or overfilled with content that is too broad, and mandatory discussion forums. Thus, the use of information and communication technologies (ICT) by instructors of higher educational institutions provides an important contribution to the educational process, although the way in which they are used is of utmost importance. A review of 300 studies measuring the effect of mixed (traditional and hi-tech) education students' experience shows that participants, in most cases, positively evaluated the integration of ICT in higher education (Venkatesh, Croteau, Rabah, 2014).

Consideration of dialogue learning through new technologies within the framework of postgraduate programs also requires an analysis of areas where such training would be most appropriate. In order to determine the most important and demanding aspects that require improving in doctoral education one could focus on the report "At Cross Purposes: What the Experiences of Today's Doctoral Students Reveal about Doctoral Education".

## 6. Discussion

According to the data cited in the report, doctoral research training takes up most of the students' time and is one of the most successful areas of their training. 74.2% of students are interested in research, 71.7% are confident in their ability to do research, and another 65.1% said they are preparing their own research programs.

Doctoral students receive financial support (grants and scholarships) in exchange for the results of their research and their publication at conferences. Most doctoral students (93.4%) stated that they have many opportunities to present their findings at professional conferences.

However, the authors also found that the training of doctoral students in research is not exhaustive. Doctoral students are not well informed about all aspects of research. Publishing findings are crucial in the process of research, but only half of students reported that they prepare their findings for publication (42.9%), and only slightly more (52.4%) are confident in their ability to do so. Only about 50% (44.7%) reported that they are able to assume responsible roles in research projects.

In their classroom work doctoral students, as a rule, get good grades, but two-thirds of them believe that the classes do not give them a broad base of knowledge in their field (71.7% agreed or strongly agreed with this) and do not provide a good basis for conducting independent studies (70.4%). In addition, many of them don't find their program flexible enough (67.7%). This suggests that some programs require a critical review of the curriculum to meet the needs of students, as well include current knowledge in the field.

It is widely believed that some exams and requirements (eg, comprehensive examinations, oral examinations) seem arbitrary and useless (43.5% of doctoral students agreed with this statement). This concern is particularly acute for doctoral students in psychology (49.1%) and linguistics (48.7%), and, to a lesser degree in geology (32.7%) and molecular biology (32.5%). Of course, some students expressed disappointment about high exam difficulty, but, in general, universities are encouraged to explore the extent to which their preliminary and qualifying exams really serve their intended purpose.

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Too often, according to the authors, do students feel helpless and unable to speak out? However, they also bear some of the responsibility for introducing and promoting necessary changes (Golde, Dore, 2001).

In their article, the authors also cite "... Some particular recommendations for [American] doctoral students:

Provide accurate information to prospective students, including information about the quality of preparation, the culture and climate of the department, levels of financial support, and the quality of teaching and advising. By reflecting the full range of experiences available in the program, the good and the bad, current students can help prospective students make sound enrolment decisions.

- Actively mentor new students in the program.
- Engage faculty and program administrators in making expectations mutually explicit.
- Press to ensure that accurate information about career placement, graduation rates, funding and the like are routinely provided to incoming students.
- Demand that faculty be good advisors and that students can get mentorship from more than one faculty.
- Learn about various career opportunities. Share information about non-traditional career paths with other students. ...
- Demand a voice in program decision-making.
- Talk about what does and does not work in the program. Initiate a conversation about changes." (Golde, & Dore, 2001).

## 7. Conclusion

After reviewing the materials mentioned in the article some conclusions can be drawn concerning the potential value of introducing dialogue learning methods into modern Russian postgraduate programs, and also those of the American type (The USA and Canada). The European (British) PhD system does not require such changes as it often foregoes classroom training and examinations and focuses exclusively on postgraduate research.

Firstly, dialogue learning systems have a positive impact on the engagement of students and memorisation, and their use in higher education, according to some statements, is already producing positive results (Akerlind, & McAlpine, 2015).

Secondly, the basic principles of dialogue learning described by Jane Vella in her papers can be implemented in training programs of doctoral students not only in traditional educational formats but also via media technologies (e.g., mobile devices and social networks) in higher education. Technologies that enable students' easier communication with each other and with the instructor also simplify dialogue within the framework of the educational process.

Thirdly, the use of such techniques is especially relevant and should be introduced in doctoral students' classroom setting. These classes have received negative feedback from American universities ' doctoral students, which, due to the similarity of the Russian and the American system of research training, can be extrapolated to graduate schools in Russia.

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Finally, according to the principles of dialogue education, it is necessary to introduce tasks, providing a practical example of conducting research and publishing the findings. This aspect of training also caused difficulties, and, given its importance for students' future research activity, the introduction of postgraduate practical tasks in this area would greatly affect both the quality of work and the satisfaction of students.

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