Pedagogical Olympiad as a Tool to Assess Students’ Professional Training Quality

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Abstract: This article examines the problem of assessing the quality of the professional training of students who complete higher education courses. The authors analyze the essential characteristics of quality control and assessment of educational processes at a university, as well as criteria, tools, and methods used for assessing the quality of education. The authors believe that the Pedagogical Olympiad is one of the most efficient tools to evaluate the quality of professional training. The article describes practices to evaluate the quality of education among students during the “All-Russian” stage of the Russian Student Olympiad (ARSO) in speech therapy (Saransk, 2015), as well as aspects of content and the procedure to apply this evaluation tool; the results of this evaluation allow the authors to conclude that the quality of professional competence development and personal education of students are assessed qualitatively and quantitatively.

Keywords: Olympiad, professional training, students, university.

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La Olimpiada Pedagógica como herramienta para evaluar la calidad de la formación profesional de los estudiantes

Resumen: Este artículo aborda el problema de la evaluación de la calidad de la formación profesional de los estudiantes que terminan los cursos de educación superior. Las autoras analizan las características esenciales del control y la evaluación de calidad del proceso educativo en una universidad, así como los criterios, las herramientas y los métodos de la evaluación de la calidad de la educación. Las autoras creen que la Olimpiada Pedagógica es una de las herramientas más eficientes para evaluar la calidad de la formación profesional. El artículo describe las prácticas en la evaluación de la calidad de la educación entre los estudiantes durante las Olimpiadas Estudiantiles en la etapa “All-Russian” de la Olimpiada Estudiantil Rusa (ARSO) en terapia del habla (Saransk, 2015), así como los aspectos de contenido y procedimiento para aplicar esta herramienta de evaluación; los resultados obtenidos a partir de esta evaluación nos permiten concluir que la calidad del desarrollo de la competencia profesional y la educación personal de los estudiantes se analizan cualitativa y cuantitativamente.

Palabras clave: Olimpiada, entrenamiento profesional, estudiantes, universidad.

A Olimpíada Pedagógica como ferramenta para avaliar a qualidade da formação profissional dos estudantes

Resumo: Este artigo aborda o problema da avaliação da qualidade da formação profissional dos estudantes que concluem os cursos de educação superior. As autoras analisam as características essenciais do controle e a avaliação de qualidade do processo educativo em uma universidade, bem como os critérios, as ferramentas e os métodos da avaliação da qualidade da educação. As autoras acreditam que a Olimpíada Pedagógica é uma das ferramentas mais eficientes para avaliar a qualidade da formação profissional. O artigo descreve as práticas na avaliação da qualidade da educação entre os estudantes durante as Olimpíadas Estudantis na etapa “All-Russian” da Olimpíada Estudantil Russa (ARSO) em terapia da fala (Saransk, 2015), assim como os aspectos de conteúdo e procedimento para aplicar esta ferramenta de avaliação; os resultados obtidos a partir desta avaliação nos permitem concluir que a qualidade do desenvolvimento da competência profissional e a educação pessoal dos estudantes se analisam qualitativa e quantitativamente.

Palavras chave: Olimpíada, treinamento profissional, estudantes, universidade.
Methodology

According to Russian Federation’s law “On Education in the Russian Federation,” education quality is a multi-faceted characteristic of the educational activity and training of a student. This shows the degree of conformity with the federal state education standards, federal state requirements, and/or the needs of a person or a legal entity with its interests being applied to the activity of education, including the degree of achievement of the planned results in an educational course (“On Education in the Russian Federation,” 2012).

The outstanding studies focused on the education quality, on the whole, and on the specialists’ training quality, in particular, are the works of various authors, such as Aleksandrova, Akhtamova, Bordovskiy, Vroeynston, Zimin, Lopukhova, Matros, Potashnik, Subetto, Shadrikov, Shishov, and Yamburg, among others.

Specific problems of control and particular aspects of quality assessment of students’ training were solved at different stages of the permanent development of the professional education system in the works of Baidenko, Bespalko, Vasilev, Galyamina, Kalney, Krasilnikov, Minin, Pereverzev, Plaksiy, Selezeva, Tyagunova, and Churlyaeva, among others. In terms of pedagogical technologies, specialists such as Bespalko, Guzeev, Kubrushko, Selevo, Choshanov, and Yudin pay particular attention to the issues of quality control and assessment. The papers by authors like Ant, Ballantine, Strudwick and Hofman, among others, describe particular issues in quality assessment of the development of key competencies.

The specialists’ training in the sphere of education has been studied from different aspects. Apletaev, Kuzmina, Slastenin, Sukhobskaya and others address this problem in their papers, focusing on the teacher’s role in society, as well as on the methodology and theory of developing the teacher’s personality. Bondarevskaya, Kolesnikova, Nikandrov, and Tryapitsyna also address it in their papers on the teachers’ professional training, and so do Vorontsova, Markova, Serikov in their works on the trends in the development of the teachers’ training system, determining the transition
from the knowledge-to personality-oriented paradigm. Terms such as *assessment*, *control*, *monitoring*, *quality assurance*, etc., are often used in the discussions devoted to the issue of education quality management. Volodin (2011) gives a comparative analysis of the meaning of these Russian terms and their English equivalents. The term *kontrol kachestva* (“quality control”) is typically used to talk about the external procedures of quality assessment, while *monitoring kachestva* (“quality monitoring”) is related to the assessment of material investment efficiency (Volodin, 2011). The English-language publications on quality issues in higher education widely use the term *quality assessment*, which defines the system of quality assessment in a wide sense—both external and internal assessment—including a number of stages (the stages of planning, assessment itself or monitoring, analysis, etc.). Terms such as *quality evaluation*, *quality audit*, *quality judgment*, etc., are used to denote more specific assessment procedures. The term *quality assurance*, which is about providing (or guaranteeing) the quality or the assurance in quality, is often used in Europe (Evans, 1999; Harvey, 1997; Wahlen, 1998).

A number of scientific studies attempt to define the criteria for quality (level) assessment of students’ training and methods, which quickly measure the students’ quality training in an objective, technological manner and with mathematical accuracy. The assessment criteria are rather ambiguous and seen as the conformity degree to some subjective norm (as a set of assessment tools, indicators and inventory designed by each teacher on their own). Bespalko and Selezneva (1989) suggest using the following criteria to assess the achievement level for a particular educational target at a university:

- Completeness (consistency) in mastering this or that content component (with regard to the interconnections and importance of particular content elements inside each component) by students, the formation of a person’s way of thinking.
- Quality (depth) in mastering the content component by students at four different levels of understanding: reproductive, productive, heuristic, and creative.
- Science level (or abstraction level) of the content component mastered by students.
• Degree of skill automation in the content component mastered by students or development level of the necessary dynamics in understanding the situation and making the adequate decision in problematic situations (Bespalko & Selezneva, 1989).

Nowadays, universities apply a wide range of tools and methods to assess education quality in the educational space. Typically, these are unstandardized (subjective) means of direct quality assessment of education, which the students see in the tests, exams or attestation tasks and four-score assessment scale (excellent, good, satisfactory, poor), including the computer-based means and technology (Ryabova & Naumova, 2014).

Summarizing the data of the Russian scientists, we can point out the main types of the assessment tools for the students:

• Tests (to assess basic knowledge)
• Questions (to assess the elements of the knowledge structure of the general requirements)
• Task-model (to assess basic knowledge)
• Situational task-model simulating a particular activity with the basic knowledge (qualification educational examining task)
• Case study
• Laboratory experiment task (work) as a type of examining tasks for the students
• Practical qualification task (which requires students to show specific practical qualification skills)
• Comprehensive theoretical and analytical project and implementable qualification task (e.g., course paper, graduation qualification paper, professional task, project, etc.).

Agafonova (2011) focuses on the issue of education quality management and defines a set of criteria for its assessment:

• Meaningfulness of the learning process: personal level of academic motivation development, personal attitude of a student to the knowledge and methods to acquire them and to one’s experience and life.
• Purposefulness: a derivative from the term purpose, which means the image of the final result of one’s activities in a person’s mind.
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- **Activity**: la capacidad de una persona de actuar de acuerdo con la situación actual, ser flexible en la articulación de los fines y conseguirlos con cambios significativos en el entorno y en sí mismo.

- **Creativity**: la necesidad de una persona de tomar decisiones creativas atípicas para las tareas establecidas para tal efecto, basadas en la investigación que generan valores espirituales y/o materiales nuevos.

- **Independence**: un atributo resumido de la personalidad manifestado en la actividad, una necesidad y un sentido de la autoeducación, un juicio adecuado y un sentido de responsabilidad personal por su comportamiento y actividad.

- **Culture of interrelations**: una parte del moral cultural de una persona, caracterizando los modos de comportarse y actuar en la sociedad.

- **Ability for reflection**: la disposición psicológica individual de una persona para el autoconocimiento a través del análisis autocrítico de sus estados psicológicos personales, así como la habilidad para evaluar adecuadamente los servicios de educación proporcionados.

- **Quality of knowledge, skills and abilities**: el nivel alcanzado evaluado por un enfoque integral que ajusta los conocimientos, habilidades y competencias de los estudiantes y las exigencias del contenido de la unidad didáctica del instituto de educación superior federal (FSBEI HE).

In accordance with these criteria, the tools to assess the education quality at a university should include both the quality assessment of students’ knowledge, skills, abilities and competencies in the FSBEI HE and the personal education of the students, and they should also be an efficient tool to stimulate students for active cognition and learning motivation at a university.

We believe the Student Olympiads to be one of the efficient tools that solve the above-mentioned tasks.

The works of Russian scientists considered the questions about the creation and development of the Olympiads, as well as the problems of their organization and conduct in the following aspects: the formation of knowledge, skills and personal qualities by conducting subject Olympiads (Ogure, 2004; Popov, 2005); technology of organization and holding of the Olympiads in the university (Vyshnepolsky, 2000; Korsunova, 2003; Popov, Puchkov, 2010; Shcherbakova, 2010); Olympiad movement in universities (Popov, Puchkov, 2009; Repin, 2000, etc.); distance form of participation...
in Olympiads (Makarova, 2009); and pedagogical Olympiad as a means of training future specialists for professional work (Vislogozova, 1991; Grevtseva, 2015), etc.

Let us characterize the term Olympiad. Pedagogical literature does not hold any precise interpretation of this type of intellectual competitions, but Makarova (2009) and Korsunova (2003) define it as follows:

- A professionally oriented Olympiad is an organizational form of short-term competition among the students, which requires participants to show high level of intellectual efforts, demonstrate knowledge, skills, abilities in the subject areas, personal qualities appropriate to their specialization, as well as make quick creative decisions for the professional pedagogical tasks. This form demands time-consuming preparation and post-Olympiad reflection (Makarova, 2009).
- Intellectual creative Olympiad among pupils is an integral way of testing and stimulating their creative development in the education process (Korsunova, 2003).

Grevtseva (2015) notes that Student Olympiads are the only tool to activate the creative capacity of the students, to develop the scientific research, organizational pedagogic activity, to promote the pedagogic and psychological knowledge, and to evaluate the education quality of the students.

Based on this, we will now articulate our understanding of the pedagogical Olympiads: a tool used to train future specialists in their professional activity, which promotes the development and assessment of the professional competencies and personal education of the students.

**Results**

Let us look at how the qualities of the developed competencies and personal education of the students during the Students Olympiad of the All-Russian stage in the All-Russian Student Olympiad (ARSO) in speech therapy (Saransk, 2015) were assessed.

A set of theoretical and practical (creative) competition tasks helped the participants to show their development level of general cultural and
professional competencies in different spheres of speech therapist activities (Arkhipova & Minaeva, 2014).

The first competition tasks involved finding the readiness level of the participants to demonstrate their level of mastering a profession and to present their professional ideas and achievements. The tasks were in the form of public presentation of the teams by the contestants. Participants were supposed to present a name, a slogan, attributes of the team, information about the faculty, university, and to describe their own pedagogic idea in the context of the Olympiad.

The second competition task was a theoretical one, organized to find how good the Olympiad’s participants know the material in their profile course, Speech Therapy, and was prepared in the form of online testing in Info-vuz, the e-educational environment of the FSBEI HE Evseiev Mordovia State Pedagogical Institute. Testing and assessment materials given in the environment of Test Designer (60 tests in 3 versions) aimed at solving some standard tasks of the speech therapist’s professional activity. They include multiple-choice tasks, matching tasks with the elements of two sets, tasks to put the elements in the right order and/or to define the logical connections in a row of given elements.

The third competition task—a case study—aimed to identify the Olympiad participants’ level of mastering of the material in a profile course, Speech Therapy, and their readiness level to apply it in practical activities. The contestants were encouraged to analyze the video materials and to assess the individual and typological specificities of health-disadvantaged children, to examine the methodological and tool resources for logopedic support provided to the health-disadvantaged people, and to present the results of the analysis during online testing in Info-vuz.

The fourth competition task—a creative task—assessed the competence in the area of project activities, namely, readiness for design in the correctional, diagnostic, consultative, cultural and educational spheres of the professional activity of the speech therapist. The participants were asked to develop their individual projects in the relevant logopedic issue and to speak about them in the form of multimedia presentation. The task was to defend the projects chosen by the jury.

The analysis of the tasks prepared by the Olympiad’s participants revealed the development level of the competencies and personal education for the students, as is clearly seen in the following results.
In the first competition task, most participants (7 teams out of 9, that is, 77.8%) showed an average readiness level to present their professional ideas and achievements, to demonstrate their level of mastering a profession (average success level from 5 to 7 scores with the maximum possible score of 10). On the other hand, 22.2% of the participants (2 teams out of 9 participating in the Olympiad) showed the best results in doing the Olympiad task (average success indicator is more than 7 scores); low results were not recorded. Thus, the participants showed their ability to understand the social importance of their future profession, the motivation to perform the professional activities, their ability for empathy, for the adequate and appropriate perception of people with speech defects, their ability to analyze the socially important problems and processes occurring in their professional activities. The participants of the Olympiad also demonstrated personal qualities, such as culture of interrelations, being active, creative and purposeful.

The second competition task was theoretical and was prepared in the form of an online test in Info-vuz. On the whole, the analysis of the second competition results reveals a rather high level of mastering the material in the profile course, Speech Therapy, by the participants.

With the highest score of 15 out of 20, 12.2% of the contestants showed a high level of theoretical background in the profile course. In addition, 81.7% of the participants demonstrated an average level of mastering the knowledge in the material in the profile course, scoring from 8 to 14, which is quite a high result with regard to the maximum complexity level of the theoretical tasks in the All-Russian stage of the All-Russian Olympiad in Speech Therapy. Finally, 6.1% of the participants showed a low level of theoretical background, scoring 8 or less.

Participants of the university Olympiads could identify an overall level of participant theoretical background by compilation of the summed testing results by the teams: No high level was recorded; all teams showed an average level of theoretical background by scoring more than 8.

In terms of content of the tests performed, the analysis revealed that the majority of the contestants were successful in mastering the categories and concepts in speech therapy and the material of its main sections: Theoretical Basis of Speech Therapy, Dyslalia, Rhinolalia, Dysarthria, Voice Disorders, Disorders in Tempo Rhythmical Organization of Speech, Alalia, Disorders in Writing Speech, Phonetics Phonemic Speech Underdevelopment, and...
General Speech Underdevelopment. The contestants showed a pretty full understanding of the typology and structure of speech dysontogenesis and the ways to overcome the speech language pathology. They also knew the psychophysical and personal peculiarities of the children belonging in this category, how to identify the particular speech disorders and analyze their aetiopathogenesis, and the system of the special methods and techniques to provide the logopedic support to the children of pre-school and school ages. They appeared to have less mastery of the Aphasia section, which is likely related to the fact that this section is studied at the final stage of the education process.

The results of the analysis became the basis to identify the difficulty level of the test tasks used for the students. The multiple-choice tasks were the simplest ones, while matching tasks with the elements of two sets were more difficult to answer, and the tasks to put the elements in the right order and/or to define the logical connections in a row of given elements appeared to be the most difficult to solve.

The analysis of the third competition’s results (case studies) showed that the Olympiad’s participants evaluated the individual typological specificity of a child with speech pathology and resource provision for the logopedic support with the analysis of particular pedagogic situations (video materials). Thus, the participants showed the following results about their readiness to apply their theoretical knowledge in practical activities: High level of completed competition task was not recorded; 63.3% of the participants showed an average level of the completed task and score the highest (from 8 to 14 scores out of 20 possible scores); and 36.7% of the contestants scored the lowest (less than 8 scores).

The analysis of the completed case content allowed us to conclude that a number of professional competencies are sufficiently developed: readiness to organize the correction development medium, its methodological support and to provide the correction compensatory work in education, health and social protection spheres for successful socialization of people with speech disorders; ability to organize and to carry out the psychological and pedagogical examination of people with speech disorders to specify the disorder structure in order to choose the individual educational trajectory. The least formed among the contestants was the ability to rationally select and implement correctional and educational programs based on the
person-oriented and individually differentiated approaches to people with speech disorders.

When analyzing the first pedagogical situation offered in a case, the contestants could quite successfully evaluate the individual typological specificity of a child in terms of pedagogical report characterizing his/her speech underdevelopment as general, first-level underdevelopment and to articulate a number of tasks requiring a solution in the logopedic support for this child and being the basis to plan the further work: development of speech understanding; development of the independent imitation-based speech; and articulation of a two-member simple sentence on the basis of mastering elementary formation of words. Articulation of the perspectives of mastering the first form general educational program by this child appeared to be the most difficult task since the unfavorable prognosis is determined by the age of this child (which was missing in the analysis, as not all students categorize it as a key factor), as well as the speech underdevelopment (contestants primarily paid attention to this factor).

The results of the analysis made by the contestants of the second pedagogic situation revealed that the participants of the Olympiad were ready to evaluate the methodological resources for the logopedic support provided to the health-disadvantaged people. All the contestants were shown a video clip and were able to identify that the video demonstrated a logopedic lesson in formation of the lexical and grammatical means of coherent speech. The assignment to choose the tasks that match the content logics of this lesson (and the author’s idea about these tasks), for instance, such as reading verses aloud, generated some difficulties. The performance of this situation analysis appeared to be the lowest in the third competition.

The performance of the third pedagogic situation analysis was the highest. All students demonstrated that they were ready to fully evaluate the instrumental resources for the logopedic support of the people with speech disorders. The contestants could easily identify that a set of exercises in the given video clip was aimed at preparing the child’s organs to articulate a sound [∫]. The majority could point out all the combinations of characteristics of this sound and complement the given set of the articulation gymnastics with exercises traditionally used to solve a particular task. On the whole, all contestants fully or partially showed their readiness to apply theoretical knowledge in solving the practical tasks of a speech therapist’s professional activity.
The fourth competitive task was aimed at assessing the competence in project activities, namely, being able to design in the correctional, diagnostic, consultative, cultural and educational spheres of the professional activity of the speech therapist. The analysis of the results showed that 22.4% of the participants presented high-quality projects and scored from 20 to 30, while 57.1% presented medium-quality projects, scoring from 10 to 19, and finally, 20.5% of the contestants presented low-quality projects and scored less than 10.

The analysis of the projects demonstrated that the most relevant and promising issues in speech therapy are:

- Innovative technologies in speech therapy (the students' projects were entitled “Innovative technologies in speech therapist’s work,” “Application of the computer logopedic programs in V type schools,” “Application of SPU in the correction work of the speech therapist in the context of educational organization,” etc.).
- Search of non-traditional methods of logopedic impact (the students’ projects were entitled “Play set Pertra in speech therapist’s work,” “Non-traditional methods of impact in logopedic work,” “Probe substitutes,” “Development of the communicative abilities of the stuttering preschool children with the fairytale therapy,” etc.).
- Training of future speech therapists (the students’ projects were entitled “Project of communicative competency development for the future speech therapist,” “Consulting testing center ‘Speech Therapist’,” “Speech aspect of professional image of a teacher,” etc.).

The best projects recommended for public defense were chosen at the stage of the initial evaluation of the project of each Olympiad’s participant. The specified projects differed in their purposefulness, content-richness, deep preliminary preparation and high quality of presentation of the material. The projects presented the modern logopedic problems with the possible solutions and showed the perspectives of the project implementation. These papers fully reflected the results of the project activities, including clearly and appropriately developed objects and subject, purposes and tasks of the projects; the methods and resources for the projects are also appropriately selected, the possible risks and ways to overcome them are specified, and the final result (product) of the project activity is clearly identified.
Public defense helped the contestants to present the results of their project activities in full, to demonstrate the development level of their professional competencies, as well as the personal education (creativity, activity, independence, and ability for reflection).

Conclusions

To summarize, we may say that Olympiads help implement the tasks of comprehensive assessment of education quality in a pedagogical university. This tool provides an opportunity to measure the students’ training quality in an objective, technological, multi-faceted way and very quickly develops positive motivation in pupils, activates the creative capacity of students, and contributes to self-perfection.

- Olympiads can be an efficient tool to assess the quality of the professional competencies and personal education of students mastering the main professional educational course in higher education.
- A wide variety of the Olympiad tasks aimed to cover a wide range of competencies, and the personal education of the students is an important condition for the Olympiad to be efficient.
- The content of the competition tasks should include didactically and methodologically prepared and systematized material reflecting different spheres of professional pedagogic activities.

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