

## PEDAGOGICAL CASES IN FINAL ASSESSMENT OF FUTURE SPEECH-LANGUAGE THERAPISTS

<sup>a</sup>MARINA A. LAVRENTYEVA, <sup>b</sup>OLGA S. GRISHINA,  
<sup>c</sup>EUGENIA V. ZOLOTKOVA, <sup>d</sup>INNA V. ABRAMOVA

*Mordovian State Pedagogical Institute named after  
M. E. Evseviev, Studencheskaya str., 11 A, Saransk, Russia,  
430007*

*email: <sup>a</sup>lavrentyeva1866@yandex.ru, <sup>b</sup>grishina0609@yandex.ru,  
<sup>c</sup>zzolotkova@yandex.ru, <sup>d</sup>iva-76@yandex.ru*

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**Abstract:** This paper presents the experience with extrapolation of a case-based method to the sphere of special (defectologic) education. The specificity of pedagogical cases used as a monitoring and measuring tool for assessing student's readiness to perform job duties is revealed; the peculiarities are shown incidental to the cases' design and technological use as a diagnostic tool when establishing correspondence of the results of final assessment measuring the learning outcomes of students under the basic education program to the requirements prescribed by the Federal State Standards of Higher Education in the field of training Special (Defectologic) Education; the evidence is provided in support of the efficiency of the proposed diagnostic cases.

**Keywords:** speech-language therapists, case, professional competences, readiness, diagnostics, final assessment.

### 1 Introduction

Dynamic changes occurring in all spheres of human life attribute special relevance to the task of modernizing the Russian pedagogical education: from the perspective of the Professional Standard for Teachers and the Federal State Standards of Higher Education (3+ / 3++), the competence-focused and practice-oriented approaches the use of innovative resources becomes of current interest to develop professional competences and assess the learning outcomes of future teachers capable of self-development, self-determination and self-education. The case-based method is recognized as of the significant interactive educational resources which has broad functionality and high effectiveness. To date, the theoretical postulates have been substantiated, the main objectives along with the content components and procedures of case-based method application in the educational process have been defined. There is a sufficient amount of studies and tutorials explaining its use as a teaching technology, including its specific application for developing professional competences. Researchers emphasize its high potential for different stages of educational process both for cultivating integrative qualities of a highly demanded specialist and for monitoring purposes to measure their level. However, it should be pointed out that though general coverage of the problem is rather comprehensive, the scientific evidence behind application of the case-based method in special (defectologic) education, in particular, in the context of professional training of speech-language therapists is fragmented: this topic is dealt with in a limited number of research works.

Today there is no single understanding with regard to the specifics of design process and application of teaching cases in the education of speech-language therapists. The researchers look for answers to such questions as what is the design process algorithm, what are the design process tools, what is the "case" as a result of design activity and as an educational product. The issues of its application in the indicated field of professional education, inter alia, as a diagnostic tool for the ongoing, intermediate and final monitoring of students' learning outcomes also remain unresolved. Therefore, development of theoretical and methodical underpinnings for extrapolation of the case-based method to the field of special (defectologic) education, and in particular, to the context of professional training of speech-language therapists may be recognized as a research

direction in the high school pedagogical of high theoretical and practical value.

### 2 Literature Review

At the current stage of the Russian society development, preparation of a practitioner-teacher ready to effectively solve professional problems and engage in creative thinking to transform reality is of paramount importance. The traditional paradigm featuring learning outcomes as "knowledge - abilities - skills" has been transformed into a competence paradigm of students' achievements, which, in turn, entailed a change in the tools and technologies used in higher education. Introduction of pedagogical innovations in the competence-focused learning become possible due to the modular design principle, which consists in a clearly structured basic vocational education program, in application of practice-oriented and interactive formats of interaction between actors in the educational relations, in the functioning of a multi-position system of subjective relationships in the context of networking cooperation between educational institutions (Shukshina et al., 2018).

A new paradigm of higher pedagogical education has necessitated inevitable changes in the structure and process of final assessment of graduates: the measure of readiness for profession should be their competence, and the assessment tool should be an exam assignment of interdisciplinary practice-oriented nature to be implemented in the conditions of quasi-professional activity of the graduate (Chandra, 2016).

European researchers, adhering to the provisions of the Bologna Declaration, distinguish three key outcomes of education: academic quality, which implies not only excellence in the field of research, teaching and spread of knowledge, but also a contribution to personal development; ability of graduates to benefit from employment opportunities in the international labor market throughout their lives; mobility in all its expressions and contexts. All universities pursue these learning outcomes and find that the true issue of quality is not a conflict between educational goals and skills, but rather the development and implementation of adequate learning competences and didactics and, subsequently, their adequate assessment (The European Higher Education Area in 2018, 2018).

The assessment patterns for learning outcomes remain equally controversial within the American continent: researchers examine the history of assessment in terms of its objectives and implications, and suggest strategies to make assessment more beneficial (Schinske & Tanner, 2014). Latest reforms are aimed at developing the assessment framework as a useful organizational tool that facilitates mobility, communication and coordination (Schneider & Hutt, 2013).

The Russian academic community searches for innovative assessment resources that would ensure objective measurement within the state final assessment of the level of professional competences acquired by university graduates. The case-based method is recognized by some scholars as such assessment resource which during a state exam may help to create conditions simulating a problematic situation as may be encountered by a graduate in the future professional activity and that needs to be resolved (Chandra, 2016).

Without entering into "terminological" debates, below we provide an overview of the generally accepted understanding of the case-based method and its application in professional education. The method is meant to create the necessary conditions to plunge students into the pluralistic problem from certain academic disciplines which involves the use of various cognitive strategies and has multiple possible solutions. Its intended purpose is not to pass down "the ready knowledge and practical skill" but to develop those in the creative process and collaboration on the terms of equality between all actors in the

educational process. It is also believed that it fosters development of a system of personal values and professional worldview and gives impetus to the world transformation.

In English speaking countries, the case studies (the case-based method) became rather popular among university teachers by virtue of the broad functionality (Murray-Nseula, 2011; Yalcinkaya et al., 2012). Teaching of academic disciplines based on certain cases is believed to be an effective means to improve students' performance and ignite their interest in the subject area (Bonney, 2015). Case studies (case-based method) are regarded as the preferred method for teaching different concepts in academic courses (Bonney, 2015). The case-based method (teaching based on a certain case) is characterized as an easily adjustable teaching style that includes problem-based learning and promotes the development of students' analytical skills (Herreid et al., 2011). Presenting content as a narration accompanied by questions and tasks that facilitate group discussion and resolution of complex problems, cases optimize the development of cognitive processes and ensure transition from sheer memorization and reproduction of the memorized material to problem solving which requires revision of the available knowledge, creation of its new combinations with pre-examined ideas and modes of action, including creation of the innovative ones (Herreid, 1994). The case-based method helps to discover interdisciplinary connections and provides the foundations for establishing relevance of specific academic topics to real social problems (Herreid, 1994; Bonney, 2015). The case-based method boosts the motivation of students for learning and, consequently, improves the effectiveness of assessment (Yadav et al., 2007; Murray-Nseula, 2011).

Over the recent years, the growing interest in the case-based method has been witnessed attributable, on the one hand, to the evidence of its effectiveness as a didactic and diagnostic tool for changing the procedural knowledge of students in practice, including its potential for the development of competences and scientific thinking; and on the other hand, to the opportunities it holds given the active implementation of e-learning formats (Fisher et al., 2019; Turk et al., 2019; Wadowski et al., 2019).

This trend is also observed in the training of speech-language therapists. Students in speech-language therapy often find it difficult to apply their theoretical "book knowledge", or, in other words, to demonstrate competence within a clinical context. The real world of their future profession may be depicted during theory lessons through examination of authentic cases from practice. Cases are very useful for illustrating communication disorders. The indicated process is also spurred by the introduced requirement of the evidence-based practice in the field of speech-language pathology under which all speech-language therapists must be certified as clinically competent (Nail-Chiwetalu & Bernstein Ratner, 2007; Hill et al., 2012; Powell, 2018; Oosthuizen, 2019).

The extensive use of cases in various educational spheres determined the emergence of their many classifications, but none of the existing classifications reveals full information about the type-specific features of cases (Khadzhikurbanova, 2013; NCCST, 2016). The models for comparing the effectiveness of different methods of case studies are also proposed (Herreid et al., 2011).

Russian researchers point out that due to their wide functional range, cases may be used at different stages of the learning process: presentation of new material, its consolidation and control. Application of the case-based method as a diagnostic resource is considered at the stage of ongoing, intermediate and final control of the learning outcomes achieved by students. Scientists believe that case diagnostics provides an opportunity: for students to fully demonstrate their practical skills on the basis of obtained knowledge; for teachers to objectively assess the level of students' professional competences and subsequently adjust the learning process under the educational program to each student (Lezhnina, 2008; Konova & Pollak, 2013; Tyagunova, 2013).

Scientific evidence behind application of the case-based method in special (defectologic) education, in particular, in the context of professional training of speech-language therapists, has begun to appear in the works of authors from CIS states in the recent decade. This method helps to address a whole range of problems: preparation of speech-language therapists for the analysis of real situations from practice and development of the algorithms for their solution along with identification of primary and secondary factors with appeal to own experience; development of the teamwork skills; development of pedagogical thinking with orientation towards awareness of multiple possible solutions to the majority of "speech-language" problems. As a type of practical learning activity, the case-based method offers the future speech-language therapists an opportunity to: refine, generalize and systematize interdisciplinary knowledge; acquire universal and specific professional competences (analytical, designing, constructive, organizational, communicative, social); develop pedagogical reflection and, on its basis, foster self-knowledge and self-improvement (Bal, 2012; Chukhacheva, 2017; Lapina, 2019).

Thus, it may be stated that in the Russian system of higher professional education, the case-based method has taken its rightful place among interactive educational resources: its vast potential can be tapped at different stages of educational process at high school. Unfortunately, scientific evidence in support of the use of the case-based method in professional training of speech-language therapists is presented in a limited range of research works. The issues related to the use of the case-based method as a diagnostic tool for monitoring the learning outcomes of students continue to be urgent. In the available sources, no research works have been found that would present the integral process – a model for its use in professional training of speech-language therapists.

### 3 Research Methodological Framework

The research purpose was to extrapolate the case-based method to the sphere of special (defectologic) education, in particular, into the context of final assessment of learning outcomes of future speech-language therapists. For achieving the indicated purpose, the following objectives were defined and sequentially addressed: theoretical substantiation of the use of the case-based method as a diagnostic tool for final assessment, modification of tools for assessment of the level of professional competences of future speech-language therapists and their testing, consolidation of the obtained results and their discussion. The research was carried out with reliance on such methods as: theoretical - analysis of scientific literature and pedagogical phenomena reflecting different aspects of the use of the case-based method in higher education; empirical - generalization, systematization and interpretation of pedagogical experience in this sphere (both authors' own experience and experience of the whole pedagogical community); pedagogical designing; praxiometry (analysis of solutions to diagnostic cases); comparative analysis and synthesis of empirical data reflecting the results of the final assessment of students seeking Bachelor's degree in the field of training Special (Defectologic) Education, with specialization in Speech-Language Therapy, and participation of Mordovian State Pedagogical Institute named after M.E. Evseev in cooperation network of educational institutions as part of implementation of the federal targeted programs, projects and grants (with the Institute of Corrective Pedagogy of the Russian Academy of Education, Herzen Russian State Pedagogical University, Moscow State Pedagogical University, Kazan (Volga Region) Federal University, etc.).

### 4 Results and Discussion

#### 4.1 Theoretical Substantiation of the Case-Based Method Use as a Diagnostic Tool for Final Assessment

Theoretical substantiation implies definition of the pedagogical case used as a diagnostic tool in professional training of speech-language therapists. According to I. V. Ulyanova (2016), a case offered for resolution at the comprehensive integrated final state

examination enables situational assessment of professional competences of a graduate who completed the Bachelor's degree program, as when elaborating solution to the case, the graduate demonstrates the mastery of theoretical knowledge and relevant experience, creative thinking, skills of analysis and synthesis, comparison, formulation of key alternatives, generalization, choice of solution, designing, and as a result the problem solution project is presented. L. V. Lezhnina (2008) describes the case as one of the useful means to assess graduate's readiness for professional activity against the requirements to qualification and substantiates her position by the fact that "successful solution to a problematic situation requires independent intellectual activity of a student based on integration of psychological and pedagogical knowledge acquired during the years of study, accumulated professional skills and experience". In the authors' opinion, diagnostic case represents a monitoring and measuring tool to assess readiness of a student who will become a future speech-language therapist, to solve professional problems, and therefore, to perform job duties within a certain range of activities. Its structure includes such components as: description of professional situation; a set of tasks of certain type which predetermine the solution algorithm and help to establish the level of representation competences; overall score reflecting the level of competence and the quality of learning achievements after completion of a professional training program.

#### 4.2 Modification of Tools for Assessment of the Level of Professional Competences of Future Speech-Language Therapists and Their Testing

The modification process began with optimization of final assessment tools reflecting the learning outcomes after completion of the entire program of professional training. This logic is determined by the design algorithm recognized by the pedagogical community for constructing the basic educational programs of higher education based on the desired integral outcome. The diagnostic cases were developed based, on the one hand, on a multi-year experience of state final assessment of mural and extramural students of the Department of Psychology and Defectology who seek Speech-Language Therapy specialty (most organizational and content components of assessment procedure have been tested over a span of 10-15 years), on the other hand, on the experience gained through participation in testing of innovative projects within modernization of pedagogical education (Lavrentyeva & Zolotkova, 2015).

State final assessment is an inseparable part of the basic educational program of higher education, its goal is to establish correspondence of the learning outcomes of students under the Bachelor's program to the requirements prescribed by Federal State Standards of Higher Education (3+ / 3++) in the field of training Special (Defectologic) Education; and its objectives are: first, to analyze and assess the readiness of students to professional activities of a speech-language therapist in institutional conditions incidental to the education, health care and social protection systems; second, to decide on the conferring of/ impossibility to confer the qualification as specified in the list of specialties and fields of training in the system of higher education; to find ways and to determine prerequisites for improving educational process in the indicated field of training for the indicated specialty.

The conceptual key to designing the organizational and content component of state final assessment was the incorporation of requirements to the quality of education from three groups of consumers of the basic educational program of higher education – students, employers and social institutions, primarily represented by the state and the professional community.

The content of assessment means and the procedures to determine their validity are centered around accomplishing the goal of student's "correspondence" to the "competence model of a graduate" and find implementation under the pattern: job duties – job activities (skills+knowledge) – competences – learning outcomes. The professional competence, despite differences in research approaches and definitions, in general

terms may be characterized as readiness of a student to effectively resolve issues in the professional realm using the acquired knowledge, the developed abilities and skills, value attitudes, creative approach and personal responsibility.

Some researchers assert that the competences include such components as "readiness", "ability" and "conditions". Each of those may be subject to certain determinants impacting the development of professional competency of a student: the readiness to solve problems is assessed from the perspective of motivation, promptness and initiative; the ability demonstrated in solution of problems helps to reveal theoretical and practical levels of professional training; conditions of solution help to assess the novelty of the addressed problem, the degree of autonomy and potential in resource support of activities. The key criterion for determining the competence accentuation is seen as the dominant form of its manifestation in activity (Chuchalin et al., 2013). Therefore, it is reasonable to assess certain competences of students by how they solve problem situations, which we proceeded from when designing the content component of the state final assessment.

The accentuation of professional competences, among other things, is essential for students to find employment by demonstrating the level of their competence to employers. At the same time, the items under control and assessment are all the competences declared in the basic educational program. There is no need to prove the assertion that general cultural (universal) and general pedagogical competencies can be demonstrated only in a situation of professional activity (real or simulated) which requires the search for solutions to problems and the application of knowledge, combinations of ways towards the solution, and pedagogical creativity, in general. For this reason, the principal content of the final assessment relates to a specialty-focused module of the program, learning outcomes under which are of crucial importance for professional activity, which implies the implementation of technologies of individual and systematic speech-language support for people with disabilities in the field of special and inclusive education, as well as in the spheres of health care and social protection.

Should a need arise to monitor and assess a considerable amount of competences, "aggregated" competences become the item under control. The aggregation of competences within the graduate's competence model (no more than three) is implemented with due regard for the type of professional problems to be solved on the basis of this aggregation. In assessing the aggregated competencies, it is assumed that the levels of all competences in integration will correspond to the level of the aggregated competence (Danilov et al., 2014).

In the logic of aggregation, diagnostic cases for final assessment are compiled in two modules: "Speech-Language Diagnostics and Design of Individual Support Programs for People with Disabilities (Technology of Individual Speech Therapy Support)" and "Design and Implementation of Speech-Language Therapy Activities in the Context of Systematic Support for People with Disabilities (Technology of Systematic Speech-Language Support)", taking into account the compatibility of students' competences assessed at the exam. A rather short case comparable to the psychological and pedagogical problem is used as an assessment material.

Below we explore in detail the specifics of a case from speech-language therapy. The case represents a situation from speech therapy practice, which simulates a professional problem, and is intended to check how well a student plans the sequence of professional actions and how fully implements these actions. And, naturally, effectiveness of the case is directly correlated with its design for addressing educational tasks.

It is reasonable to distinguish the following stages in designing a speech-language therapy case as a diagnostic tool:

- Formulation of the case purpose in the context of an "aggregated" competence measured at the final assessment - definition of the professional problem;

- Choice of the type / types of professional activity, its subjects and objects;
- Presentation of a model of professional problem - a schematic overview of the problem showing internal and external connections between its subjects and objects;
- Collection of relevant information in the institutional system for filling the model with specific factual materials - thus bringing it in line with reality;
- First draft of a case text;
- With reference to the professional standard, definition of job duties - job activities: skills + knowledge, the use of which will help to solve the proposed professional problem;
- Development of logically interconnected control tasks (possibly of varying complexity), imitating professional activity within a scope of the proposed problem;
- Development of criteria and indicators for assessing the case solution (including in relation to the components of the aggregate competence - indication of competences required by the Federal State Educational Standard, which are essential to perform a certain control task, and identification of their "realm of control" with regard to knowledge, skills and abilities of students);
- Testing in order to establish the diagnostic effectiveness of the case, adjustment of the content and presentation technology;
- Finalization of the case and methodological guidelines for its application.

#### 4.3 Consolidation and Discussion of the Obtained Results

Peculiar features of the speech-language therapy case within the module "Speech-Language Diagnostics and Design of Individual Support Programs for People with Disabilities" relate to historical "attraction" of domestic logopedics to medical sciences, and to the roots of speech-language pathology with description of specific clinical cases. Professional tasks in this case are represented by the most neutral information – a form does not contain ready answers to the questions and does not limit the creative thinking of students thus making it possible to go beyond a standard algorithm of action of a speech-language therapist. A student may: assess the symptoms shown by a person with disabilities, identify individual-typological signs of a speech pathology, formulate a diagnostic hypothesis in the pedagogical conclusion and speech therapy diagnosis; then analyze the obtained results - determine effective and appropriate speech therapy technologies and on this basis offer an individual program of speech therapy support; carry out modeling and demonstrate professional actions necessary to solve a particular problem. The professional task conveyed in such a manner embraces two types of problem situations: theoretical and practical. Actions of a student to attend the needs of a virtual patient are equivalent to the actions of a speech-language therapist in real practice (Lavrentyeva & Ryabova, 2016).

Format specifics of a speech-language therapy case within the module "Design and Implementation of Speech-Language Therapy Activities in the Context of Systematic Support for People with Disabilities" is predetermined by the focus of this module on assessing students' capacity to organize and implement various speech therapy activities to render help not to a single individual but to a particular "problematic" category in specific institutional conditions. Informative part of cases designed to this format is represented by as brief as possible description of typical work situations - just enough for introduction of students to the sphere of activity and identification of the category of people in need of speech-language therapy. When demonstrating solutions to such cases, a future speech therapist recommends the model of interaction between a specialist and the subjects within his/her professional scope with account of their individual features and social status; identifies standards and regulations governing the process and documentation; describes technological aspects of a solution to the professional problem; gives a pedagogical forecast (Lavrentyeva & Ryabova, 2016).

One of the trends in practice-oriented training at the level of higher education is introduction of WorldSkills technologies in the educational process. The demonstration exam under WorldSkills is a set of tasks and activities for participants to demonstrate their skills and abilities according to the specifications outlined in the competence standards. Demonstration tasks, on the one hand, offer material that will help students to show their personal and professional qualities to the fullest possible extent, and, on the other hand, to set a steppingstone for objective understanding of their "zone of actual development" and for adequate self-assessment with regard to the prospects for success in profession. The proposed speech therapy cases meet the above requirements of the WorldSkills standard in the context of a demonstration exam.

Readiness to solve professional problems or to carry out job duties is an effective (active) property of a personality, mobilization of forces for the correct application of acquired knowledge and skills, as well as practical experience, in various types of professional activity. The structure of the above indicated property of a personality may be represented by two basic integral components: the psychological component (personal and cognitive subcomponents) and the activity component (communicative and labour subcomponents). For this reason, an overall score for the case solution by future speech therapists in the process of final assessment is based on such criteria as: the level of general cultural development, first of all, intellectual abilities, skills of orientation and interaction in the socio-cultural space, speech skills and professional communication skills; strength of mindset for achievements and success in profession; readiness for the implementation of the main types of activities for solving professional tasks - level of skills for professional situation analysis, information structuring, rational choice of the way towards solution and necessary resources, reflection and correction. Its proposed format is a competence level assessment revealing the quality of learning achievements upon completion of the professional training program.

The analysis and consolidation of the results of final assessment of students seeking Bachelor's degree in the field of training Special (Defectologic) Education, with specialization in Speech-Language Therapy, the reports of the chairmen of the state examination commission, feedback from employers' representatives over the past three years allow to assert the higher objectivity of final assessment of the learning outcomes of the future speech-language therapists, and, serve as the evidence for the effectiveness of the pedagogical cases suggested as the monitoring and measuring tool to assess students' readiness for job duties within a certain range of professional activities.

And for summing up, we would like to highlight that participation in projects of pedagogical education modernization and, as a result, access to multi-mode resources of networking cooperation between educational organizations, help to expand the professional horizons of the academic teaching staff and gain the innovative experience in designing basic educational programs for higher education and their underlying resources, including designing and using diagnostic cases for assessing the quality of professional training of speech-language therapists. However, the roll out of this interactive resource is a vivid process of discussions, developments and testing. The issues of standardization of pedagogical cases as diagnostic tools remain particularly relevant. Nevertheless, as experience shows, the chosen approach is highly promising and correlates with the social order - with the goals of higher education.

#### 5 Conclusion

The analysis of the information sources on the problem under examination and own experience in teaching prove the usefulness of pedagogical cases for the development and evaluation of the level of professional competency of future speech-language therapists. The materials presented in this paper are of high value as the authors were the first in their attempt to

extrapolate the case-based method to the sphere of special (defectologic) education, in particular, into the context of final assessment of learning outcomes of future speech-language therapists. Our research and development efforts helped to reveal the specificity of pedagogical cases used as a monitoring and measuring tool for assessing student's readiness to perform job duties within a certain range of professional activities; and to have a closer look at the peculiarities incidental to their design and technological use as a diagnostic tool when establishing correspondence of the results of final assessment measuring the learning outcomes of students under the basic education program to the requirements prescribed by Federal State Standards of Higher Education (3+ / 3++) in the field of training Special (Defectologic) Education. The virtue of the suggested diagnostic cases is that they make it possible to simulate a real organizational situation; create a motivating working environment conducive to the utilization by bachelors of their experience and professional potential, the demonstration of non-standard approaches; enable the reflection and independent expert evaluation. Materials developed by the authors may be used in the teaching process in the field of training Special (defectology) Education, with specialization in Speech-Language Theory, and within networking cooperation between educational organizations of different tiers.

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**Primary Paper Section: A**

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