

PEDAGOGICAL TECHNOLOGY FOR ASSESSING THE MUSICAL TRAINING OF FUTURE PRIMARY TEACHERS

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Abstract. Some aspects of the musical and pedagogical training of future teachers aimed at developing a set of skills necessary for the realization of the music education process at primary school are studied in the here presented research. The aim of the study is to present the findings of pedagogical research related to the assessment of musical-pedagogical preparation of Primary School Pedagogy students. Students' results are presented at three levels of development of the musical and pedagogical training. The methods used in this research are student portfolio, observation of students' theoretical and practical musical training and content analysis. An interpretation of the results of this research is presented in the conclusion.

Keywords: musical and pedagogical training; portfolio assessment; educational technology

1. Introduction

Teachers nowadays face many challenges such as the continuously evolving technologies and the ever-increasing demands of children, parents, institutions and society. The main goal of teacher training today is the development of skills to work with constantly changing information and the acquisition of competences to support teachers' professional realization.

The motivation for choosing the topic of pedagogical training of future teachers is related to two findings that are also the focus of the proposed publication:

1. University education faces the challenge of looking for opportunities for specialists' training that can actually be implemented in the field of their education. One of the main issues that every lecturer seeks to find solutions to is the assessment of students' achievement. There is a need to create and approve pedagogical technologies that, on the one hand, take into account the students' individual abilities and learning style and, on the other hand, create opportunities for involvement in the planning and management of their own education, which is adequate to the expectations for future realisation.

2. The practice of assigning music classes to primary teachers is observed in more and more schools. Unfortunately, it is a fact that colleagues use this occasion to simply complete their working hours. This is a problem mentioned in my other publications, and is the result of my observations both as a primary teacher and as a university lecturer. It is true that there are colleagues - primary school teachers, who approach this task, not new to them, with the necessary responsibility; however, there are other teachers who use these classes to fill in gaps in students' knowledge of the so-called "serious subjects"¹⁾.

The following questions thus arise:

- What are the challenges that primary teachers face in the conditions of a real musical education process and are they able to fulfill its purpose?
- What are the opportunities for university education to work in the direction of improving future music teachers' training?

2. Exposition

This publication presents the content and results of pedagogical technology of evaluation of academic achievements of Primary School Pedagogy students related to musical education in I – IV grades in the Republic of Bulgaria. Training of future primary teachers is carried out in both theoretical and practical terms.

Students' training in musical theory disciplines, which are the focus of this study, takes place in the third, fourth and fifth semesters of education. The status of the subjects in the curriculum and the number of lectures and seminars are presented in the following table.

Table 1. Distribution and classes of musical theory disciplines by semesters

	Distribution of music theoretical disciplines by semesters	Lectures	Seminars
Mandatory course disciplines	1. Methodology of music education in primary school (third semester)	30	45
Elective course disciplines	1. Music Theory and Solfeggio (third semester)	30	15
	2. Art Pedagogy – theoretical and practical aspects (fourth semester)	15	30
Required course disciplines	1. Music instrument (third semester)	0	45
	2. Children music folklore (fifth semester)	15	15

The practical training of future primary teachers is carried out in three stages, presented in the following table:

Table 2. Stages of practical training of Primary School Pedagogy students

Type of practical training	Number of classes	Semester
Lesson observation	30 classes	fourth

Continuous study/pedagogical practice	60 classes	fifth
Pedagogical internship/prior to graduation practice	90 classes	sixth
Total number of practical classes	180 classes	

It is necessary to clarify that for every kind of practical training the numbers stated above includes all the subjects in primary school, not just music classes. Future primary teachers have the following number of music classes within each of the types of practice:

- observation – 6 classes;
- current pedagogical practice – 6 classes;
- between 4 and 6 music classes are thought by students during their internship.

A key concept in the current publication is *pedagogical technology*. It is used in two aspects:

“– procedure-descriptive aspect, as an algorithmic process, system of objectives, content, methods and means to achieve the expected learning outcomes;

– procedure-active aspect, as a process of implementation/teaching” (Selevko, 2005).

In English literature exists the concept of *educational technology*, the content of which is interpreted as an “instrument” for improving the teaching and learning processes in all areas²⁾.

3. Materials and Methods

The aim is to present the results of pedagogical research related to the assessment of musical-pedagogical preparation of Primary School Pedagogy students of the Pleven College of Education, structural unit of St. Cyril and St. Methodius University of Veliko Turnovo.

Research objectives related to the aim are:

1. To carry out a theoretical study and to determine the nature of the selected pedagogical technology for assessing the academic achievements of Primary School Pedagogy students;
2. To present the results of the technology used in order to improve the theoretical and practical training of the university students;
3. To seek and use opportunities for reforming and expanding the pedagogical music training of Primary School Pedagogy students with regard to the methodology of teaching music at primary school age.

Organization of the study presented in the publication

The study of the success of musical-pedagogical training of the students – primary pedagogues, which is the aim of the present research, was conducted through measuring procedures, for which the technology of the portfolio was used. 66 students from the

Department of Primary School Pedagogy from the Pleven College of Education were studied in the period of two academic years: 2015/2016 and 2016/2017.

The methods used in the research presented in this publication are:

1. Observation of the theoretical and practical music training of the students included in the sample.
2. Student portfolio – technology for evaluation of achievements in the music-pedagogical disciplines from the theoretical and practical training cycle.
3. Quantitative and qualitative analysis of the results obtained.

Justification for the research

In the contemporary methodological literature there is no single model of methodical competence of teaching music at an early age in general primary education school. This is also reflected in the difficulty of developing criteria for evaluating the portfolio related to the musical-pedagogical training of students – primary teachers.

Their selection for the present study is based on the essential elements of the musical-pedagogical training of the students – primary teachers. It includes:

Criterion I: Level of knowledge of the studied material

Its essence consists of the following aspects:

1. The student has basic specialist training, including basic musical and musical-metaphysical knowledge and skills for teaching in primary school.
2. The student has the skills to solve musical-pedagogical problems related to the specifics of music education in grades I – IV.
3. The student has motivation to search and enrich the knowledge gained so far and the skills developed in the process of education with additional ones in the field of musical-pedagogical practice.

The criterion of *the level of knowledge of the studied material* is covered by the quantity and quality of the content elements presented in the portfolio, which includes four sections corresponding to the main stages of training of students – primary pedagogues:

- Student portfolio, related to the theoretical training in Music Theory and Methodology of Music Education at Primary School.
- Student diagnostic portfolio, containing results of the assessment of learning achievements during the first stage of the practical training of students – observation of music classes.
- Student practice portfolio, displaying the content and achievements of the second stage of practical training - current pedagogical practice in music.
- Student internship portfolio, presenting the students' abilities and results in the last stage of their musical and practical training³⁾.

Each section of the student portfolio contains a number of elements, as shown in the table, on the basis of which the assessment of *the level of knowledge of the studied material* is conducted.

Table 3. Portfolio elements for assessment of musical-pedagogical training of Primary School Pedagogy students

Portfolio elements	
Students	<i>Lectures and seminars</i>
	<i>Lesson plan</i>
	Presentation, publication, electronic presentation
	Didactic models of music crosswords, entertaining activities, educational games, etc.
Diagnostic	<i>Protocols (notes) from observed lessons</i>
	<i>Self-tailored lesson plan</i>
	SWOT-analyses of observed lessons taught by qualified teachers
Practice	<i>Music lesson plan taught by a student future primary teacher</i>
	<i>Extra music lesson plan ((alternative)</i>
	SWOT-analyses of lessons taught by the students as well as by fellow students
	Didactic models of music crosswords, entertaining activities, educational games, etc.
	Additional didactic materials – music pieces additional to those included in the compulsory curriculum, tables, paintings, reproductions, photos, etc.
Internship	<i>Music lesson plan taught by the university student</i>
	<i>Extra music lesson plan ((alternative)</i>
	SWOT-analyses of lessons taught by the students as well as by fellow students
	Didactic models of music crosswords, entertaining activities, educational games, etc.
	Additional didactic materials – music pieces additional to those included in the compulsory curriculum, tables, paintings, reproductions, photos, etc.

One of the elements of the portfolio is also a SWOT analysis (Strengths, Weaknesses, Opportunities and Threats) (Appendix 1). It is one of the less commonly used interactive teaching techniques in the pedagogical practice.

Its utilisation in the portfolio of musical and practical training of future primary teachers involves proving their skills to identify strengths and weaknesses of specific pedagogical phenomena or, in this case, of lessons taught by the responsible teacher, a fellow student and the student himself. Particularly important are the abilities and constraints included in the matrix, which imply exploration of own beliefs about teaching certain learning contents, as well as the identifications of possible issues related to its realization in the next practical stage of learning.

The criterion of *level of knowledge of the studied material* is assessed based on portfolio completeness at the following levels:

- high – students submit more than 2/3 (67% – 100%) of the required elements of the portfolio;
- medium – requires the submission of between 1/3 and 2/3 of the elements presented in the table (34% – 66%);
- low – less than 1/3 of the portfolio elements are submitted (0% – 33%).

Criterion II: Level of musical-pedagogical development of students

This criterion is assessed based on projects and SWOT analyses of lessons, on the development of games, game and didactic tasks and visuals for a given task. The indicators for assessing this criterion are two:

Indicator 1. Application of general knowledge of particular musical-pedagogical phenomenon

It assesses students' readiness to apply their knowledge in new situations, and assesses the level of knowledge transfer skills. Key roles have their ability to evaluate pedagogical phenomena as well as their self-assessment skills, most clearly displayed during their practical training. Expectations from students are as follows:

1. To have didactic analysis skills of basic musical-pedagogical activities, teaching forms, methods and specific cases related to musical education in primary school.
2. To have the knowledge and skills to plan and organize the music education process in I – IV grade.
3. To have the ability, adequate to their educational and personal development, to assess and self-assess music education practice.

The assessment of the application of the musical-pedagogical knowledge and skills of students – primary teachers is graded at the following levels:

- a) *high* – skillfully applying the content learned in a new situation, using it correctly and accurately, having adequate skills for assessment and self-assessment of practical training;
- b) *medium* – they manage to adequately transfer the acquired knowledge and skills to a new situation in most of the cases; they have assessment and self-assessment skills that they are not always able to demonstrate;
- c) *low* – limited abilities of transferring knowledge and skills in a new situation as well as of assessment and self-assessment.

Indicator 2. Creative elements in the portfolio

This indicator evaluates the level of application of knowledge and skills in unfamiliar conditions, supported by the presence of personal ideas. The creative evolution of students in the different stages of their musical-pedagogical training is a focus of interest. The creative tasks included as required elements of the student portfolio are SWOT analyses that provide the opportunity for assessment and self-assessment. Creative charge is present in the creation of didactic models of games, visual aids present in lesson plans, additional materials showing motivation for development such as coursework, student forum publications, etc.

Expectations accounted for by this indicator are as follow:

1. The student has practical and applicable skills for modelling and presenting musical-pedagogical phenomena, for designing his own products, distinguished by his personal touch;

2. The student has motivation to apply and enrich the knowledge acquired so far and the skills developed in the process of education with additional ones in the field of musical-pedagogical practice;

3. The student shows appreciation of certain criteria for aesthetics and literacy in the editing of didactic materials, electronic lesson projects, etc.

The assessment levels are as follows:

a) *high* – the student successfully uses his/her knowledge in unfamiliar conditions, responds adequately to creative tasks, displays motivation in the process of musical-pedagogical development, has distinctly developed criteria for aesthetics and literacy in creating pedagogical products;

b) *medium* – the student partly uses his / her knowledge in unfamiliar conditions, sometimes manages to cope with creative tasks, shows a relatively stable motivation for practical development related to musical-pedagogical practice, there is a system of aesthetic criteria, manifesting itself when performing the tasks;

c) *low* – the student has limited opportunities for creative pursuits, he/she is not sufficiently motivated in the process of musical practice.

3. Results

The results of *the first criterion related to the knowledge of the studied material are registered on the basis of the completeness* of the portfolios presented. It evaluates not only the level of theoretical and practical knowledge and skills of students, but also their motivation for future realization as primary teachers, including in the teaching of music. The results obtained through it are presented in the following diagram:

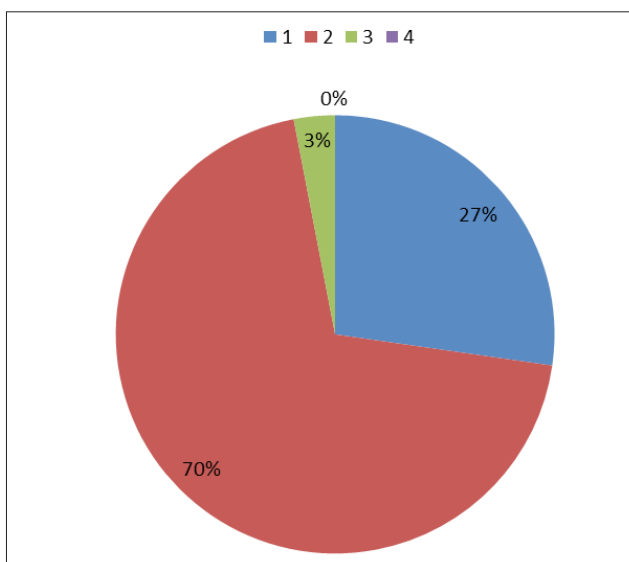


Figure 1. Result of portfolio completeness indicator

18 students (27%), having presented more than 2/3 of the required elements of the portfolio, fall into the *high* level of this criterion. They have not only basic specialist training, which includes basic musical and musical-methodical knowledge and skills for teaching in primary schools but also skills for solving problems related to the specifics of musical education in grades I – IV. Being assessed at this level is evidence of their motivation for development in that direction.

The performance of the majority of the students – 46 (70%) is at a *medium* level. They have included between 1/3 and 2/3 (33% – 66%) of content items in their portfolios. The results of their assessment show that this group of colleagues have basic training as well as skills for solving problems related to the specifics of primary musical education. Their motivation is relatively good but not consistent.

The *low* level of the portfolio completeness indicator includes 2 students (3%). They have submitted less than 1/3 of the content elements, which is probably related to low motivation and poor command of knowledge and skills related to their musical-pedagogical training.

The results related to *the application of students' theoretical and practical training* as well as their assessment and self-assessment skills are presented schematically in the following diagram.

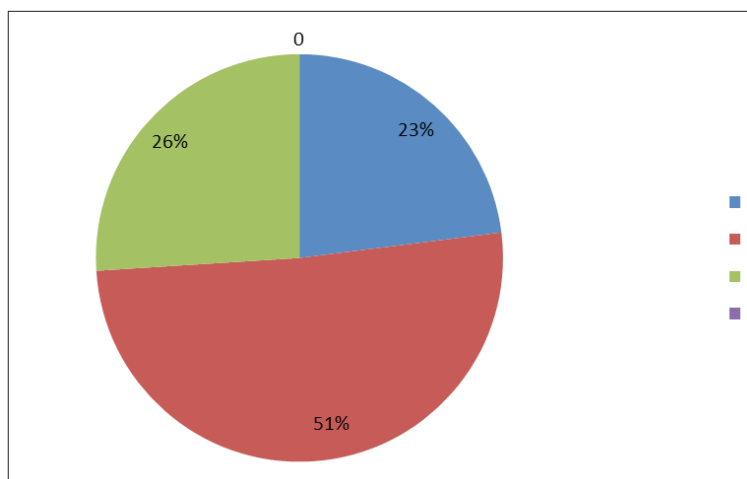


Figure 2. Results of the application of knowledge and skills criterion

The numerical values presented in the diagram suggest the following summarized results:

23% (15) of the students apply their knowledge to a new situation skillfully, correctly and accurately. They have adequate assessment and self-assessment skills in practical training and are included in *the high level of the indicator*.

The medium level of application of the acquired knowledge and skills during musical theoretical and practical training of students-future primary teachers includes more than half of the students – 51% (34). They manage to adequately transfer acquired knowledge and skills in a new situation in most cases. They have assessment and self-assessment skills that they cannot always demonstrate sufficiently fully and objectively.

By summarizing the results of the high and medium level, it can be concluded that the majority of the students – 74% (49 students) manage to apply the knowledge and skills of their musical-pedagogical training in a real educational process. The adequate assessment and self-assessment skills acquired so far will be a working corrective in their future professional development.

17 of the students (26%), i.e. almost a quarter, fall into the *low level*. This is a serious reason for considering strategies to improve the proposed model for the theoretical and practical application of knowledge and skills in a real pedagogical process. Limited opportunities for transferring knowledge and skills into a new situation, as well as relatively less developed assessment and self-assessment skills, are a sufficient reason to direct their training towards self-study and extra-curriculum activities.

The following chart presents the results related to the presence of *creative elements in the portfolio* – an indicator that assesses the level of application of knowledge and skills in new conditions, supported by the presence of personal ideas.

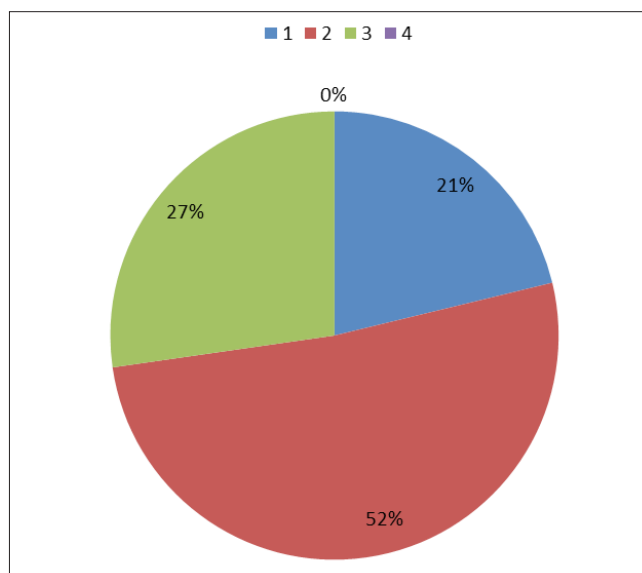


Figure 3. Results of the presence of creative elements in the portfolio criterion

At the high level of the criterion for the presence of creative elements in the portfolio is the performance of 14 students (21%), who successfully use their knowledge in unfamiliar conditions and respond adequately to creative tasks. They have practically applicable skills for modelling musical-pedagogical phenomena to create their own products of this nature. They show consistency and have the motivation to research and enrich the knowledge gained so far and the skills developed in the learning process with additional materials. Their portfolios are evidence of a set of formed aesthetic and literacy criteria for didactic materials, electronic lesson projects, etc.

Half of the students – 52% (34) fall into *the medium level* of the indicator. They partly use their knowledge in new conditions and do not always manage to cope with creative tasks. There is motivation for development, as well as observable criteria for aesthetics and literacy in the preparation of lesson projects, didactic materials, presentations.

The low level includes 27% (18) of the students displaying limited abilities of creative pursuits. They have included a small portion of content items of this kind in their portfolios.

4. Interpretation of results

The search for effective pedagogical technologies for teaching and assessing student achievements is a key task in university professors' professional work. The practical music training of future primary teachers requires a change in their training model in accordance with the dynamics and requirements of the modern labor market. The following table presents the results of the proposed pedagogical technology, according to the survey.

Table 4. Comparison of results of indicators

	Knowledge of the studied material	Application of students' theoretical and practical training	Creative elements in the portfolio
<i>High level</i>	27%	23%	21%
<i>Medium level</i>	70%	51%	52%
<i>Low level</i>	3%	26%	27%

The comparative analysis of the results shows that students' performance is better in respect of the indicator related to knowledge of the studied material. It is clear that this is theoretical information that is the basis of their training, but it does not cover it completely. Theoretical knowledge is effective when it is transformed into real practical skills. It is necessary to look for additional opportunities to develop skills to apply the acquired knowledge in real practice. This conclusion is supported by the analysis of the results obtained by the indicator of application of students'

theoretical and practical training. Interpretation of the data obtained from the last indicator, related to the presence of creative elements in the portfolio, implies the need to increase future primary teachers' motivation for self-development.

5. Conclusion

The research presented in this publication aims to create a pedagogical technology for assessing the academic achievements of future primary school teachers in the context of theoretical and practical musical training. The results obtained in it will be used to seek opportunities to improve the quality of their musical education training. The conclusion that can be made is that the use of the presented pedagogical technology creates the opportunity to construct a learning process that contributes to the formation of personal and professional skills, necessary for students' successful realization in a modern educational process.

NOTES

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