

## THE USE OF TEACHING AIDS AND THEIR IMPORTANCE FOR STUDENTS' MUSIC EDUCATION

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Received: November, 17.2015.

Revised: November, 26.2015.

Accepted: December, 01.2015.

Original Research

UDK 371.64/.69:[371.3::78(497.11)]"2014/2015"

**Abstract.** In an effort to ensure a high level of implementation and increase the efficiency of the use of teaching aids in music education, a research was conducted in the academic 2014/2015 with an aim to test whether the educational level of teachers, the number of years of their experience at work, and the particular school in which the teachers are employed influence their selection of teaching aids used in the course in music education. The aim of the study was to determine whether the selection and use of teaching aids influences the quality of teaching the course in music education. The attitudes of participants were studied by means of a questionnaire specifically designed for the present research. The total sample comprised 113 primary school class teachers. The study so conducted has determined the current situation in the teaching practice, any significant differences emerging from the connection between the use of teaching aids in the course in music education and a number of general variables, including any prior elementary musical education of the teachers themselves.

**Keywords:** *teaching, music education, musical instruments, teaching aids, class teachers.*

### 1. INTRODUCTION

The final decades of the 20<sup>th</sup> century clearly represented a period of detailed investigation into new tools, models and forms of work, whose aim was to ensure a more creative, high-quality educational process. Dedication to improved conditions for the work and education of the young has been the chosen path in the efforts to provide every individual with conditions for unhampered development. In effect, this process has aimed to contribute to the development of society as a whole. If one starts from the fact that the contemporary school should not only educate, but also support and guide a person's development, one

should investigate the concrete tools that both multi-subject class teachers and single-subject teachers, but also all other individuals directly dealing with the education of the young, could use in this process.

To make their activity more successful, both class teachers and single subject teachers can use numerous teaching aids, which will simultaneously serve as sources of knowledge and instruments of learning. In contemporary didactics, teaching aids are defined as didactically shaped objects, products of human work, which are used in the teaching process as sources of cognition / learning. For this reason, they are synonymous with specific sources of knowledge used in the teaching process (*Pedagogical Encyclopedia, 1989*). In order for music education to be implemented in an unhampered way, appropriate teaching aids need to be used in the teaching process. The most common groups of these aids are: visual teaching aids (textbooks, illustrations, drawings, books, magazines), auditory teaching aids (various sound recordings – CDs available with the textbooks or CDs coming from the teacher's own collection), audio-visual teaching aids (a combination of audio and video materials, DVDs directly recorded with an intention to work as didactic and methodological materials, or DVDs coming from the teacher's own collection), and textual teaching aids (texts as sources of knowledge). Additional teaching aids which are especially important in music education are multimedia teaching aids (*Duraković and Vidulin-Orbanić, 2011*) and also cybernetic technologies (computers, the Internet), which provide for the simultaneous use of various means of communication: audio and video recordings, text, and graphics. In addition to all aids mentioned above, musical instruments are considered invaluable in teaching music (the piano, accordion, guitar, child instruments from the Orff Schulwerk,...). Class teachers / single-subject teachers can use these instruments in various phases

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of music education provided to their students. However, if the implementation of the teaching process is to be successful, where the primary goal of teaching is, among other things, to develop musical memory and the aesthetic education of students, one should point out that the introduction of even the most up-to-date teaching aids, including the possibility for a number of them to be simultaneously used in a single class of music education, can only enrich the students' experience: no teaching aid can substitute the key importance and role of the teacher in the teaching process.

### 1.1. Music Education in Primary Class Teaching

After the introduction of educational standards in primary schools and the adoption of the Educational Curriculum in Serbia, the goal of teaching music in primary schools has been defined primarily as the development of interests, musical sensitivity and creativity, training the students' understanding of the variants of musical expression, and development of their sensitivity to musical values through familiarization with the artistic tradition of their own nation and other nations (*Educational Curriculum, 2010*). This would mean that the essential goal of music education in the primary school is to establish value-based criteria for both aesthetic and critical evaluation of music. For this reason it is important that class teachers and single-subject teachers reflect on the importance of this goal so that they could meticulously plan their teaching of music in such a way as to influence the formation of their students' musical taste, which is threatened by various potentially harmful influences present in society from the student's earliest age onwards.

In the first cycle of elementary education (the first four grades of the primary school of general education), music education is one of the most important subjects, whose contents may help in the all-out development of the student's personality. There are numerous factors that need to be taken into account in order for the music education to be successful. Good preparation is, therefore, important, where the teacher should foresee numerous situations and create conditions for the simultaneous development of both music perception and music reception. If music education classrooms are well equipped with various teaching aids, this can largely contribute to the achievement of the set goal – the development of the stu-

dent's ability to experience music and to create his or her own musical expression.

## 2. MATERIALS AND METHODS

Our interest in the present study has arisen from the goal to investigate the attitudes of teachers to the use of teaching aids in the course in music education in the first cycle of primary education. The aim was to learn whether in music education classes there were differences in the use of teaching aids between teachers who had significant professional experience and "beginner" teachers, and also whether the level of teachers' own education influenced their decision to use particular teaching aids.

From the goal defined above, particular research tasks emerged, through which we wished to find out details about:

- 1) the teaching aids used by the participants in teaching music education in the first four primary school grades;
- 2) the musical instruments used by the participants in teaching music education;
- 3) are there any differences in the use of teaching aids based on the length of the participants' professional career as teachers.

The starting hypothesis is: in teaching the course in music education, teachers insufficiently use available teaching aids harmonized with the course syllabi in order to improve the quality of the teaching process. The present work has used a descriptive and analytical method to present both quantitative and qualitative data. The instrument took the form of a Questionnaire, while the data obtained have allowed us to gain an insight into the current conditions on the given sample and in the given location.

The data were processed by standard statistical methods / descriptive statistics. The statistical processing of the data was based on the use of the software package SPSS Statistics 20, including the statistical description and inferences.

The independent variables were:

- 1) the teacher's sex;
- 2) the primary school in which the teacher was employed;
- 3) the teacher's level of education;
- 4) the number of years of the teacher's professional experience.

The sample was random, and the data/responses from 113 primary school teachers were collected from the territory of the city of Niš in the academic 2014/2015 (6 primary

schools were located in the city area and 1 primary school was rural).

## 2.1. Participants

In terms of sex, the sample gathered 92 women (81.4%) and 21 men (18.6%), which means in the total of 113 participants (100% valid sample) the female population predominated.

**Table 1.** The Structure of Participants by School

	Frequency (f)	Percent (%)	Valid percent (%)	Cumulative percent (%)
Car Konstantin	20	17.7	17.7	17.7
Radoje Domanović	19	16.8	16.8	34.5
Branislav Nušić	10	8.8	8.8	43.4
Stefan Nemanja	20	17.7	17.7	61.1
Vožd Karadorde	10	8.8	8.8	69.9
Dositej Obradović	9	8.0	8.0	77.9
Dušan Radović	25	22.1	22.1	100.0
Total	113	100.0	100.0	

From Table 1 we learn that the majority of participants were employed in primary schools from the city area, 103 - 91.2%, while the number of participants from a rural school was 10 - 8.8%.

**Table 2.** The Structure of Participants by Level of Education

	Frequency (f)	Percent (%)	Valid percent (%)	Cumulative percent (%)
College degree	13	11.5	11.5	11.5
Bachelor	92	81.4	81.4	92.9
Master	7	6.2	6.2	99.1
Magister	1	.9	.9	100.0
Total	113	100.0	100.0	

The teachers who participated in the study had various educational levels. From Table 2 we conclude that there are most teachers who have completed higher education (a bachelor's degree, level VII/1 in the Serbian classification) - 92 teachers in all (81.4%). In the schools covered by the present research, there were 13 teachers (11.5%) with college degrees. There were the fewest teachers in the sample who continued their education and earned a master's degree - 7 teachers (6.2%). Only 1 teacher (0.9%) has earned the degree of a magister (Table 2).

**Table 3.** The Structure of Participants by the Length of Professional Experience in Years

	Frequency (f)	Percent (%)	Valid percent (%)	Cumulative percent (%)
0-5	8	7.1	7.1	7.1
5-10	12	10.6	10.6	17.7
10-15	29	25.7	25.7	43.4
15-20	31	27.4	27.4	70.8
more than 20	33	29.2	29.2	100.0
Total	113	100.0	100.0	

Table 3 presents the structure of participants based on the number of years of their professional experience as teachers. The fewest participants, trainees, had the shortest work experience (0-5 years): there were 8 such persons (7.1%). At the moment of the study 12 teachers (10.6%) had 5-10 years of professional experience, while 29 participants (25.7%) had the experience of 10 to 15 years. There were 31 persons (27.4%) with an experience ranging from 15 to 20 years. Finally, in the studied population there were the most teachers who had spent more than 20 years of their lives educating the youngest school population (33 persons, or 29.2%).

**Table 4.** The Structure of Participants by the Grade They Taught in 2014/2015

	Frequency (f)	Percent (%)	Valid percent (%)	Cumulative percent (%)
One	36	31.9	31.9	31.9
Two	24	21.2	21.2	53.1
Three	23	20.4	20.4	73.5
Four	20	17.7	17.7	91.2
Combined classes	10	8.8	8.8	100.0
Total	113	100.0	100.0	

In the academic 2014/2015, in which the present study was conducted, all participants - teachers were teaching in one of the first four grades (Table 4). From the structure of participants by this grade given above, one can conclude that 36 teachers (31.9%) were "in charge of" grade one, 24 teachers (21.2%) had grade two in their classroom, 23 teachers (20.4%) worked with grade three, and 20 teachers (17.7%) were responsible for grade four. In combined classes (which can still be found typically in rural areas due to reduced numbers of students, and where classes are formed by putting together students from two different grades), the number of teachers was 10 (8.8%).

### 3. RESULTS

In addition to the textbook, which according to *Stošić (2012)* represents the main support in the teacher's work, but also the principal instrument of teaching methodology, the full teacher's pack for the course in music education also contains the reference book for teachers, and the accompanying audio materials - CDs (which are a constituent part of the textbook). According to *Cvetković and Đurđanović (2014)*, one expects that contemporary music pedagogy should select appropriate musical examples (the audio materials on the CD) and harmonize them with the children's developmental capacities and the characteristics of the particular age group so as to establish an activities-based system, whose aim is to develop musical capacities, skills, and knowledge. In music education classes in some grades (mostly in the first education cycle - grades one to four) one can also find the additional musico-didactic materials in the form of various musical instruments for children from Orff's Schulwerk, which many teachers incorporate in their classes in order to motivate their students to become actively involved in the implementation of the teaching process.

**Table 5.** Teachers' Attitudes to Teaching Aids in Music Education

		Yes	No	Total
Do you use the CDs recommended by the publisher of the textbook?	f	110	3	113
	%	97.3	2.7	100
Do you use CDs by other publishers in your teaching process?	f	108	5	113
	%	95.6	4.4	100
Do you use audio-visual presentations in your teaching process?	f	66	47	113
	%	58.4	41.6	100
Do your music classes also involve playing the instruments from Orff's Schulwerk?	f	91	22	113
	%	80.5	19.5	100

In Table 5 we can find interesting data. Out of the total of 113 interviewed teachers, 110 (97.3%) use CDs which come with the textbook toolkit recommended by the textbook publisher. Further, 108 teachers (95.6%) use CDs of other publishers in addition to the audio materials (CDs) enclosed with the textbook.

We have also found that more than a half of the total number of participants use audio-visual presentations (contemporary teaching technologies) in their music education classes as well – 66 or 58.4%, which is in line with the opinion of *Vidulin-Orbanić and Duraković (2011)*, who point out, among other things, that teaching technology is sometimes ap-

plied inappropriately, with an unclear goal and purpose, which is why it is important to train teachers in such a way that they should first gain an insight into the possibilities offered by this technology, and then also that they should actually start using it. The same authors *Vidulin-Orbanić and Duraković (2011:115)* are aware of the importance of such teaching technologies, though, and they state that the development of such technology influences the quality of student knowledge and skills, of science and engineering, and finally of education as a whole.

When we asked the question whether child instruments from Orff's Schulwerk were used in music classes in their school, we found out that there were by far more teachers who used these instruments in the implementation of the teaching process – 91 or 80.5%. In grades one and two, when musical literacy is not yet developed, students play music solely by providing rhythmic accompaniment for counting rhymes, songs, dances, by using rhythmic instruments (shakers without a slit, shakers with a slit, castanets, the wooden cylinder, the wooden snare, wooden sticks - claves, the triangle, the small drum, cymbals, maracas). Yet in the musical literacy phase - grades three and four, pitched instruments from Orff's Schulwerk begin to be used for playing simple melodic examples and children's songs (the metallophone ranging from c1 to c2 and metallophone with the a-d2 pitch range) (*Đurđanović, 2015: 371*). In this period, the instruments from the Orff Schulwerk become an indispensable teaching aid in the process of creating and performing music.

**Table 6.** Differences in the Use of the Orff Schulwerk by the Level of Education

		N	M	Sd	F	df	p
Do your music classes also involve playing the instruments from Orff's Schulwerk?	College degree	13	1.4615	.51887	2.802	3	0.04
	Bachelor	92	1.1739	.38111			
	Master	7	1.0000	.00000			
	Magister	1	1.0000	.			
	Total	113	1.1947	.39773			

In Table 6 we find a statistically significant difference among the participants in terms of their use of the Orff Schulwerk based on their level of education. Judging by the highest means, we note that the Orff Schulwerk instruments are mostly used by teachers with college (M=1.46) and bachelor's degrees (M=1.17). The difference is statistically significant on the level  $p < 0.05$ , i.e.  $p = 0.04$ .

**Table 7.** Differences in the Use of the Orff Schulwerk by the Years of Professional Experience

	N	M	Sd	F	df	p	
Orff Schulwerk instruments	0-5	8	1.5000	.53452	10.659	4	0.000
	5-10	12	1.9167	.28868			
	10-15	29	1.2069	.41225			
	15-20	31	1.0968	.30054			
	over 20	33	1.2424	.43519			
Total	113	1.2832	.45255				

In terms of the length of professional experience, it is significant to point out that trainee teachers, i.e. teachers with the shortest experience in the teaching profession (5-10 years) are aware of the advantages provided to the teaching process by the instruments from the Orff Schulwerk. Therefore, they use such instruments most commonly (M=1.91) (Table 7). The differences with regard to the tested phenomenon are statistically significant on the level  $p < 0.05$ .

**Table 8.** Differences in the Use of the Orff Schulwerk by School

	N	M	sd	F	Df	P
Car Konstantin	20	1.2000	.52315	7.026	6	0.00
Radoje Domanović	19	1.9474	.84811			
Branislav Nušić	10	2.3000	.82327			
Stefan Nemanja	20	1.0000	.00000			
Vožd Karađorđe	10	1.4000	.84327			
Dositej Obradović	9	1.6667	1.00000			
Dušan Radović	25	1.2400	.59722			
Total	113	1.4513	.76755			

Based on the comparison of means (Table 8) we can conclude in which schools playing the Orff Schulwerk instruments is the most prevalent (Primary School Branislav Nušić, M=2.30, Primary School Radoje Domanović, 1.95). For us, the information that they are most commonly used in the only rural school covered in the present study, in which the teaching process is organized in combined classes, is particularly important. This implies that teachers in this school have used their knowledge and experience and thus become particularly encouraged to use child musical instruments. In this process, they have made a good connection between the teaching materials and the musical performance conducted by students from different age groups.

**Table 9.** Differences in the Use of the Orff Schulwerk by Grade

	N	M	sd	F	df	P
One	36	1.2222	.59094	5.450	4	0.000
Two	24	1.5000	.83406			
Three	23	1.3913	.72232			
Four	20	1.4000	.68056			
Combined classes	10	2.4000	.84327			
Total	113	1.4513	.76755			

Table 9 presents the differences in the use of the Orff Schulwerk based on the students' grade. We can see that the use of these children's instruments - the Orff Schulwerk is the most dominant in combined classes (M=2.40), followed by grade two classes (M=1.50). This is important information for the present study, especially if we have in mind that the combined teaching process implies the presence of students from various grades/age in the same classroom, which is accompanied by the additional involvement of the teacher, who must well conceive of such music classes so that all students should become well involved in the playing process, in accordance with their capacities and knowledge. The difference is statistically significant on the level  $p < 0.05$ ,  $p = 0.00$ .

**Table 10.** Do students in your class:

Use their own Orff Schulwerk instruments?	f	81
	%	71.7
Use the Orff Schulwerk instruments provided by the school?	f	13
	%	11.5
Total	f	94
	%	83.2

For the purposes of the present study, it was important to learn how well the schools are equipped with Orff Schulwerk instruments, and also whether in those primary schools in which the students do not possess their own instruments necessary for the implementation of the teaching process in the first educational cycle the school provides the opportunity for the music classes to still progress in an unhampered way. More than a half of teachers - participants in the present study (81 or 71.7%) responded that the students possessed their own instruments, while 13 persons (11.5%) said that students used the school's instruments in music classes. Since the total of 94 teachers (83.2%) actually answered this question, we assume that with some teachers (9, or 8%) instruments from the Orff Schulwerk are not played at all, which would mean that their schools do not own these indispensable teaching aids (Table 10).

We also asked teachers from Niš-based schools which instruments they used the most in teaching music. We provide the data that we collected in Table 11.

**Table 11.** Which of the Listed Musical Instruments Do You Most Commonly Use in Your Teaching?

		Piano	Orff Schulwerk instruments	Another instrument
Yes	f	17	81	31
	%	15	71.7	27.4
No	f	96	32	82
	%	85	28.3	72.6
Total	f	113	113	113
	%	100	100	100

Out of the total number, 17 teachers (15%) use the piano, while 96 teachers (85%) have confirmed that they do not use this instrument in implementing the teaching process. That the use of the Orff Schulwerk instruments is more prevalent has been testified by 81 teachers (71.7%). In addition, in the present study we also wished to investigate whether and which other musical instruments are used in teaching music. When asked which additional instruments they used, the teachers listed the following instruments: the accordion, the guitar, the synthesizer. Some teachers did not name this other instrument even though they circled the response that they did indeed use another instrument in teaching music.

In order to find out whether in addition to various musical instruments some other teaching aids are also used in teaching music, we found particularly valuable the information on the teachers' potential acceptance of the challenges of the modern age, through the use of various audio-video presentations, which could significantly contribute to the quality of teaching music.

**Table 12.** Differences in the Use of Teaching Aids by the Years of Professional Experience

		N	M	sd	F	df	p
Do you use audio-visual presentations in your teaching process?	0-5	8	1.2500	.46291	2.969	4	0.023
	5-10	12	1.4167	.51493			
	10-15	29	1.2069	.41225			
	15-20	31	1.4516	.50588			
	over 20	33	1.6061	.49620			
Total	113	1.4159	.49508				

In this regard, we have importantly discovered that there are significant differences in the use of such teaching aids in relation to the length of professional experience (Table 12). Namely, in this category, the use of audio-visual presentations is typical of all teachers,

starting from those who have worked as teachers from 0 to 5 years to those who have been employed as teachers for more than 20 years. However, the data still suggest that the use of audio-visual materials is most commonly practiced by teachers with the longest work experience, of more than 20 years ( $M=1.60$ ), followed by the teachers whose professional experience spans the range of 15 to 20 years ( $M=1.45$ ). The difference is statistically significant on the level  $p<0.05$ ,  $p=0.02$ . It was expected that the youngest teachers, with the shortest experience, would mostly use audio-video presentations in their classes. The question is then posed - if these teachers have completed their own studies with an extensive use of modern teaching technologies, and if the importance and principles of the use of such technologies are well known to them, why do these teachers show the lowest initiative in preparing such classes? In an earlier study, Vidulin-Orbanić and Duraković (2011) have stressed how important it is to educate not only teaching staff, but also students for the proper use of audio-visual presentations, where the proper selection of the materials, but also the quality of the sources and information so presented should be particularly accentuated. This would undoubtedly support younger colleagues to use modern technologies, which of course does not mean that every music class should use audio-visual presentations. It is important, however, that in individual domains, when the teaching contents provide the rationale for their use, they are indeed used.

The final task of our study was to locate the percentage of teachers who had previously obtained a musical education in a specialized school of music. In other words, we wished to find out whether prior to enrollment in their own university studies the teachers had played a musical instrument. We found out that 20 teachers (17.7%) had obtained some music education in one of the schools of music, while 93 teachers (82.3%) had enrolled in the teacher training faculty without any special musical education.

**Table 13.** Differences in Music Education Prior to Their Studies by the Years of Work Experience

	N	M	Sd	F	df	p
0-5	8	2.0000	.00000	10.47	4	0.000
5-10	12	1.2500	.45227			
10-15	29	1.8966	.30993			
15-20	31	1.8387	.37388			
over 20	33	1.9091	.29194			
Total	113	1.8230	.38336			

Table 13 provides some interesting data. Teachers with the shortest professional experience, from 0 to 5 years ( $M=2.00$ ), and also teachers with the longest professional experience, of 20 years and more ( $M=1.90$ ) belong to the categories of participants who most commonly reported having played a musical instrument prior to their studies and thus received some music education from schools of music. The difference is statistically significant on the level  $p<0.05$ ,  $p=0.00$ .

At the same time, we looked into their own reflection - how much is prior music education relevant to the profession of a multiple-subject class teacher. These are the data that we have obtained: More than a half of the participants (58, or 51.4%) think that prior music education is partly important or fully important for class teachers. In Table 14 we may see that 14 teachers (12.4%) did not have a position on the matter, while music education was not at all important for the successful implementation of various contents in music teaching for 41 teachers (36.3%).

**Table 14.** How Important Is Music Education for the Profession of a Class Teacher?

How important is music education for the profession of a class teacher?	Not at all	Mostly not	I don't know	It is partly	It is fully	Total
f	41	/	14	41	17	113
%	36.3	/	12.4	36.3	15.1	100

## 4. CONCLUSION

Starting from the fact that the use of various teaching aids is important for the musical education of students, teachers continuously face the need for the most frequent use of these aids. In that respect, the results obtained in the present study have confirmed the hypothesis that, in spite of the good understanding of the importance of teaching aids in music education classes, the positive attitude to the use of musical instruments, and the appreciation of the advantages of modern technologies in preparing creative audio-visual presentations, teachers still insufficiently use teaching aids. Based on the results obtained from the study, we have confirmed that there is a difference with regard to the teachers' level of education and number of years in employment, which suggests that positive actions are needed so that teachers' professional competencies could be enhanced in the coming period. Such

indicators point to the need for a thorough and continuous professional development of teachers. Offering various seminars for their further professional training and their incorporation into various projects for strengthening professional competencies would provide an impetus to creating more innovative and more interesting music classes in schools. Music teaching in which teachers have been supported to use various teaching aids and play various instruments, music teaching aimed at and accommodated to the developmental musical needs of students would help attain numerous goals of music education: it would support students' interest in art music, boost their ambition to actively play music, and stimulate their aesthetic development.

## ACKNOWLEDGEMENT

The paper has emerged as part of the project Musical Legacy, Contemporary Creativity and Formation of Taste conducted by the Faculty of Arts in Niš (FU np. 103/12) and the Research Center of the Serbian Academy of Sciences and Arts and the University of Niš – Department of Social Science (SANU Niš no. 8/00-13-002/13-006).

The author wishes to express gratitude to participants in the research, teachers of six primary schools from the territory of the city of Niš, who took part in the study in the academic 2014/2015. and thus helped shed new light on the elements of the teaching process relevant to the modernization of music teaching. The responses gathered here will certainly help mark new approaches for the advancement of students, both by the realization of their own potentials and by the enhanced quality of the education process.

## Conflict of interests

Author declare no conflict of interest.

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