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THE INFLUENCE OF EDUCATIONAL TECHNOLOGY ON THE DEVELOPMENT OF MUSIC STUDENTS' COMPETENCES

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ABSTRACT

The art of good lesson planning and carrying out lessons using appropriate procedures, methods, techniques, in a word - technology, denotes a modern school. The success of a teaching process greatly depends on the professional competence of teachers and their knowledge of modern educational technology. Therefore, the final outcome of teacher education should be to achieve a high level of psychological-pedagogical knowledge and didactic competencies required for work in school and outside school. The course curricula and teaching content described in this paper are defined according to this guideline. The goal is to prepare students for a competitive labor market in our country and in the world, to integrate all levels of music education - from kindergarten to university, and to popularize music art. In order to determine the relationship between traditional teaching methods and lectures with the use of multimedia, research was conducted that showed that music students positively evaluated the use of multimedia in lessons. They perceive such lessons as effective, useful, understandable, interesting, dynamic, instructive and of high-quality, because they help save time and they correspond to contemporary teacher discourse.

Keywords: *contemporary methods, didactics of music, multimedia, music literature.*

INTRODUCTION

Basic characteristics of educational technology

Educational technology marked every historical era, as an integral part of school of that time. It changed in accordance with the social and educational conditions of a certain era and scientific-technical achievements that marked the era. In this context, Bezić (2000) described seven stages of technology. The first stage was characterized by the word of mouth and oral tradition; the teacher was the organizer of speech transmission. The second technological stage involved books and the written word. Books became a new source of knowledge. The third technological stage was characterized by observation of immediate reality, while the fourth stage was distinguished as a period of manipulative and operational techniques and activities of pupils. The fifth technological stage was recognized as a period of audiovisual techniques and mass media, the sixth stage was notable because of emergence of computerization in education, and the seventh technological stage stands out as a period of multimedia techniques.

The same author notes that different terms are used for the notion of educational technology: technology of teaching, teaching technology, teaching techniques, modern educational technology, teaching materials, teaching aids, technical teaching materials, media in education and teaching. Descriptions and explanations of the notion of teaching/educational technology rely on the following key terms: materials, aids, techniques, procedures, approaches, methods, forms, curricula and contents.

The results of the research conducted by Bezić (2000) show that the notion of *educational technology* is variously interpreted and defined. Definitions include contents and terms from didactics, methodology and/or the very application of technology in the educational process. For this reason, technology has to be considered as a unique phenomenon in the educational process, i.e. as pointed out by Lavrnja (2000, p. 28), in „the full context of all elements of complex teaching and learning processes: from target-content-related (intentional-thematic), psychological-cognitive and didactic-methodological to institutional and socio-cultural preconditions and anthropological-psychological, developmental-psychological and pedagogical characteristics of participants in educational processes“.

Many educationists agree that the main purpose of educational technology is to increase the effectiveness of the teaching process and to achieve concrete outcomes in a reliable, but also quick and easy way. Mijatović

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(2000, p. 196) argues that educational technology implies "the totality of resources (techniques and hardware) and procedures based on the means resulting from the development of modern educational technology and applied in teaching process in order to increase its successfulness, i. e. to achieve easier, faster, more rational, cost-effective, productive, objective, realistic, convincing, and easy-to-survey teaching and learning. The same author says that educational technology in a broader sense includes teachers and pupils. Bezić (2000, p. 20) also adheres to this opinion and indicates that work technology is not only the totality of sources of knowledge and materials for educational work in its didactic function, but that it also includes "work experience (methods and procedures of transmission) of teachers and 'work' experience of knowledge acquisition by pupils". Radonjić (1997) supports the opinion that educational technology does not denote just teaching technique, but also a modern approach to different didactic solutions and forms of work. Matijević (1999) also studied educational technology, and defined it as a synthesis of programs, procedures and means aimed at rationalization, optimization and objectivization of the teaching process. Educational technology also includes a medium that not only transmits information, but also certain values (Mušanović, 2000), which, in this case, extends the meaning and interpretation of technology. However, most authors consider educational technology a part of didactic strategy, since it studies the methods of its appropriate and practical application in the educational process. Skok also shares this opinion (2000, p. 269), stating that educational technology suggests "how to use teaching materials and teaching (technical) aids in the most effective and rational way in accordance with the defined pedagogical goal and basic tasks of teaching, with full engagement of all subjective factors".

The terms *didactics of media* or *media didactics* are found in the European literature, and correspond to the American meaning of the term educational technology. In this regard, some considerations of foreign authors about the same concept should be indicated. Authors pay special attention to the fact that technology has a direct impact on the educational goal and the effectiveness of teaching. It connects theoretical and practical aspects and impacts on the interest and motivation of pupils. Educational technology denotes "an effective organization of learning and introduction of new methods and materials that have a direct influence on educational goals" (National Focus Group on Educational Technology, 2006, p. 5). Januszewska and Molenda (2008) view educational technology as a possibility of a simpler and more effective learning with appropriate means and aids. Hlynka (2003) and Jacobsen (2007) argue that educational technology enables achieving concrete practical outcomes in a simple manner, as well as application of knowledge for practical purposes. Wodi (2009, p. 9) stresses the fact that educational

technology will "enhance pupils' interest, facilitate learning and broaden the overall knowledge of pupils". Luckin (2010) also agrees that the proper use of technology aids learning and emphasizes that there is an interaction between the teacher who creates certain content and the technology by means of which the mentioned content can be optimally displayed. Jacobsen (2007) called this interaction *a need for an open educational community*, whose members learn together and acknowledge contemporary trends. Gastaldelli and Marconato (2008) point out that modern educational technology is close to young people's needs and their style of learning, and that the teaching process takes on an interesting connotation by using it. In this sense, it is imperative for teachers to be qualified to teach such lessons. Reich and Daccord (2008) indicate that the skill of using modern technology, in this case modern multimedia techniques, will make teachers become close to pupils, who mostly have a good command of technical devices, especially computers. It should also be noted that the issue of educational technology is the question of culture, development and progress, because it is precisely educational technology that comprises "the entire collection of practices and systems that make up the culture" (Arthur, 2009), *the culture of education.*

The fact is that there are certain problems in the teaching practice, like inefficient use of the time available, inadequate and unprofessional way of work, lack of didactic-methodological knowledge of teachers, lack of knowledge about modern work strategies, non-use or inappropriate use of technology. Educational technology is sometimes inappropriately applied, with unclear goals and purposes; it is not applied within didactic-methodological needs of the teaching process. The challenge of our time is to know the advantages and disadvantages of educational technology. Therefore, all possibilities of its appropriate use should be considered, and innovations should be introduced in the teaching process only when it is really necessary. This primarily refers to the use of multimedia teaching techniques. It is necessary to train primarily teachers in order to be able to use *the benefits of the modern era*, i.e. in order to be able to recognize the possibilities of educational technology implementation in a specific teaching process. Although a certain percentage of teachers support new technology (i.e. modern technique), there is a number of those who *boycott* its use: some of them because they believe that it does not increase the quality of educational work, others because they are not adequately prepared for its use, and the rest of them because it requires their additional effort for preparation and implementation.

From all the above mentioned it can be concluded that educational technology helps in implementation of the teaching process, but also that technology, materials and program tools should be permanently revised, as well as the use of technology itself and its impact on pupils. Mušanović (2000,

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p. 16) argues that ˝systematic criticism of educational technologies should be applied instead of their evaluation and glorification, and their favorable and unfavorable characteristics should be revealed, as a necessary step in innovation and adaptation of technology to pupils“.

The development of educational technology has an impact on the quality of pupils' knowledge and skills, on the development of science, technology and education in general. These are valid reasons for teachers to consider when and how to use new technology in the teaching process and to prepare themselves for its use, professionally and technically. Continuous learning is a part of teachers' life and vocation, and it should be (or become) their everyday routine to keep pace with the changing trends, to adapt and to improve themselves, even in the areas that are not directly related to teaching (while in fact they are).

Music students' competences for living and acting in the modern society

European qualifications framework suggests division of all competences into: *knowledge, skills* and *competences in the narrow sense*. European educational policy places a special emphasis on the development of competences, which is evident in the following documents: *Common European Principles for Teacher Competences and Qualifications*[1], *Improving the Quality of Teacher Education*[2], *Tuning Educational Structures in Europe: Summary of Outcomes – Education*[3] and *Teacher Education in Europe: An ETUCE Policy Paper*[4] (according to Lončarić, D., Pejić Papak, P., 2009). The special importance is also attached to competences in the proposal of the *National Framework Curriculum for Pre-School Education and Compulsory General Education in Primary and Secondary Schools*[5], *Key Competences for Lifelong Learning — A European Reference Framework*[6] and in the document *Improving Competences for the 21st Century: An Agenda for European Cooperation on Schools*[7] (according to Lončarić, D., Pejić Papak, P., 2009).

According to the authors who have studied the concept of *competences* (Green, 1999, Kurtz and Bartram, 2002, Warr and Conner, 1992, Woodruffe,

[1] European Commission: Education and Culture (2005)
[2] Commission of the European Communities (2007)
[3] Tuning Educational Structures in Europe Workgroup: Education (2005)
[4] European Trade Union Committee for Education (2008)
[5] Croatian Ministry of Science, Education and Sports (2008)
[6] The European Parliament and the Council of the European Union (2006)
[7] Commission of the European Communities (2008)

1991), it can be seen that definitions of competences are moving in two directions: toward qualifications or standards of performing tasks/duties and toward high success in performing tasks/duties. "Competence is a fundamental characteristic of a person, which results in an effective and/or superior work performance...it may be a feature, motive, skill, an aspect of a self-image or social role, or a body of knowledge that he or she uses" (Boyatzis, 1982; according to Kurtz and Bartram, 2002, p. 229). Competences defined as characteristics, qualifications, properties, features, traits, abilities, knowledge, skills, performance and qualities (Mijatović, 2000, Staničić, 2001), are focused on achieving specific educational outcomes. Thus, the concept of competences involves a combination of knowledge, skills, beliefs, motivation and personal characteristics required for individuals to act actively, professionally and efficiently in a particular situation. To be competent means to have knowledge, skills and abilities, and to be able to apply them practically. Strugar (1993) divided teacher competences into personal and pedagogical, with the main difference that personal (human) competences cannot be 'learned', while pedagogical competences are learned, acquired and improved.

According to the list of competences of the European Commission Expert Group, Razdevšek-Pučko (2005) classified teacher competences into the following categories: trained for new ways of work in the classroom, trained for new tasks outside the classroom - in school and with social partners, trained for development of new competences and new knowledge of pupils, development of the teachers' own professionalism, and use of information communication technology. Domović (2006) argues that teachers should possess subject-related knowledge, knowledge of educational sciences, skills and competences for guiding and supporting pupils and the understanding of social and cultural dimensions of education.

Taking the above mentioned into account, we will focus on music pedagogy students at the Department of Music in Pula, and the development of their competences during the four- and/or five-year course of study. By establishing their psychological-pedagogical knowledge and didactic-methodological competences required for work in and outside school, by promoting modern methods of communication and social integration, and by recognizing and pointing to individual abilities of every male and female student, we aim at shaping a new community of professional and creative teachers.

The aim is to prepare students for a competitive labor market in our country and in the world, to integrate all levels of music education - from kindergarten to university, and to popularize art and traditional music. The course curricula and content are defined along these guidelines, as well as everyday professional-practical work, correlation between subjects,

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demonstration lectures, professional-pedagogical practice and various forms of professional lifelong education, like music and music-pedagogical discussions, seminars, lectures, workshops, international symposiums and concerts.

The undergraduate study of music pedagogy offers training for music educationists, who are trained to work and act in professional and amateur cultural institutions and cultural clubs and encouraged to conduct further individual music-pedagogical research.

With regard to competences, a bachelor of music pedagogy should acquire basic music-pedagogical knowledge and skills, and his qualifications and competences will primarily relate to pedagogical work with children and adolescents. A bachelor of music pedagogy can demonstrate his or her knowledge and skills as a music assistant in a kindergarten, he or she can be a music kindergarten manager, choirmaster, the master of a variety of musical ensembles, organizer of musical events, and professional assistant in cultural and art institutions. The further graduate study can qualify him or her also as a primary or secondary school teacher, both in general education and music schools.

After finishing the undergraduate study, students should have well-developed professional musical competences, as well as communication skills, teamwork skills, information and communication technology skills, reflexive thinking and self-evaluation skills, interpersonal skills, criticism and self-criticism, and ability of analysis and synthesis with a possibility of individual improvement of learning skills.

Students' competences within the course *Didactics of Music Teaching* and *Didactic Practicum*

Didactics of Music Teaching 1, 2 and 3 is taught in the 5th, 6th and 7th semesters, and *Didactic Practicum* in the 8th semester. In the course of studying students gain knowledge of theoretical and scientific fundamentals of music, attend demonstration lessons by experts (kindergarten, class teaching, subject teaching, solfeggio, music art) and educationists, and they themselves implement teaching units and contents.

Through the course *Didactics of Music Teaching* students are trained to conduct and implement musical activities in music institutions. The fundamental goal of the course *Didactics of Music Teaching 1* is to analyze and demonstrate the skills needed for school work, as well as to direct students' interest to innovations in the field of music teaching. As far as students' competences are concerned, the following should be pointed out: students are trained for a critical analysis of technical texts, for defining the place of music teaching in the educational system, for analysis and comparison of the

curriculum components and for designing lesson plans and syllabi, and for the analysis and demonstration of musical activities at the pre-school and school level.

The teaching process is implemented through lectures, seminars and workshops, individual assignments, multimedia and the Internet, field work and consultations. Students attend demonstration lessons in kindergartens and schools (class teaching), they perform children's songs and analyze musical works. By attending demonstration lessons in schools students have the opportunity to observe the principles of using modern technology in the classroom (from listening to musical works on a sound recording medium to the use of PowerPoint presentations for teaching purposes), as well as to prepare a specific teaching task by means of individual assignments, multimedia and the Internet.

The fundamental goal of the course *Didactics of Music Teaching 2* is to present musical activities. The concept of the subject of music culture in primary schools is analyzed. Students' competences are associated with the training for interpretation of tasks and outcomes of music lessons in primary school, for defining the place of music teaching in the educational system, for the curriculum components analysis in the field of music culture, for designing implementation programs, for using various teaching strategies, forms, work methods and teaching aids, and for the analysis, description, presentation and implementation of music contents at the primary school level. Lesson implementation remains similar to the existing model, differing in the fact that there is a teacher mentor present in a specific school. Besides attending demonstration lessons, a special emphasis in students' obligations is placed on the exploration of musical works through keeping a music listening diary, which enables students to (further) explore and analyze musical works, and to look for appropriate recordings, video clips and other technical resources that help them in designing a music listening diary and presentation of pieces of music.

The fundamental goal of the courses *Didactics of Music Teaching 3* and *Didactic Practicum* is to analyze music-pedagogical issues in solfeggio lessons in primary music school and the concept of the subject of music art in secondary school. Students acquire competences associated with critical analysis of technical texts, (re)valorization of goals, tasks and purposes of solfeggio lessons and music art lessons, with analysis and interpretation of the curriculum components for solfeggio and music art, and with analysis and implementation of contents in solfeggio and music art lessons. Special importance is attached to field instruction and students' demonstration lessons, which reflect not only their musical knowledge, but also their skill of planning and implementation of a teaching unit. Through the course *Didactic Practicum* students develop skills

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of planning, organization and implementation of the teaching process. Students also take an active part in the work of music associations outside school.

At this level students are offered an inter-subject correlation between the courses *Didactics* and *Introduction to Music Literature*. In order to improve learning, it is necessary to establish a correlation between educational contents. The goal of linking[8] different subjects and contents is for students to get an overall picture of an event, occurrence and area.

The graduate study of music pedagogy offers training for music educationists, who will be trained for music-pedagogical work in primary and secondary comprehensive schools, and for teaching solfeggio in primary music schools and study programs of general teaching and music teaching courses of study. Students will be able to engage in scientific work and enrol in a doctoral study program. A master of music pedagogy can demonstrate his or her knowledge and skills as a teacher in primary and secondary both general education and professional-music schools.

After finishing the graduate study, students should have well-developed professional musical competences, as well as *skills of conducting scientific research, ability of using research results in professional work, professional communication skills, and cognitive skills important for the development and creation of new knowledge*. For these reasons, the purpose of the course *Didactic Practicum* is to train students for conducting lessons, planning and organization of the course of lessons and participation in curricular and extracurricular activities. Students acquire theoretical and scientific fundamentals in the field of music, they attend demonstration lectures by experts and educationists within their professional-pedagogical practice (subject teaching, solfeggio, music art), and they themselves participate in, plan and implement teaching units and contents. They also encourage research work and analysis of specific issues of music pedagogy, didactics of music and pedagogical practice. The research work itself requires good information technology skills.

By getting a degree students will be trained for application of the acquired knowledge and skills, for creative application of ideas, for conducting research, problem solving in new and unfamiliar environment, and for clear presentation of conclusions. They will also possess the skills that will enable their independence, self-direction and continuing studies.

[8] In case of such linking, there are four terms used in pedagogical practice: *integration* (linking of individual parts into a whole, i. e. linking of contents within the same subject), *correlation* (mutual linking of contents and subjects), *concentration* (way of effectuating correlation) and *comparative approach* (aiming for comparison of contents of certain subjects). The terms *correlation, concentration* and *integration* are often treated as synonyms.

Students' competences within the course Introduction to Music Literature 1, 2 and 3

The aim of the course *Introduction to Music Literature* is to introduce students to the music literature that is used in primary and secondary schools lessons. During their study students of music pedagogy acquire knowledge of music history. The course *Introduction to Music Literature* that is taught in the 7th, 8th and 9th semesters is a continuation of the course *History of Music* that is designed for students of the first and second year of the undergraduate study (1st-4th semester) and *Croatian Music History* attended by students in the 3rd year of the undergraduate study (5th and 6th semester).

The fundamental goal of the course *Introduction to Music Literature 1* and *2* is to acquire knowledge and understanding of music, music eras and styles by listening to pieces of music. After completing this course, students are qualified to properly define a wide range of musical occurrences, as well as for identification and critical analysis of specific musical occurrences, and development of the skill of recognition and analysis of musical types. The course explains musical phenomena from the earliest beginnings, ancient Greece, Eastern civilizations, medieval monophony, Renaissance polyphony, musical types in the Baroque, Classicism and Romanticism periods, and significant styles in the music of the 20th century. With regard to competences, students are trained to critically analyze technical texts and music literature in general. Lessons are implemented through lectures, seminars and workshops, individual assignments, field work and consultations. Students are required to attend lessons and actively participate in the teaching process, to draw up two seminar papers (Croatian music, world music literature), to fulfill tasks associated with field work (concerts) and to pass the final exams in Croatian music and world music literature (written exam of recognizing compositions played during the course and writing an essay about the musical period from which these compositions originate).

The course *Introduction to Music Literature 3* is attended by students of the graduate study (5th year) of music pedagogy. The fundamental goal of the course is to acquire knowledge and understanding of music, music eras and styles by listening to pieces of music (19 pieces of *serious* music and one piece of another genre - jazz, pop, rock, musical, ethno), which are analyzed in music culture/art lessons in primary and secondary schools. The aim of the course is training for transferring the acquired knowledge in practical work with future pupils.

Introduction to Music Literature 3 is a direct continuation of the courses *History of Music* (1st-4th semester), *History of Croatian Music* (5th and 6th

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semester), and *Introduction to Music Literature 1*, and this course directly correlates with the subjects *Didactics of Music Teaching* and *Didactic Practicum*.

The course includes listening to the most outstanding works of individual composers of a certain era, which is interpreted by listening to selected compositions from the entire history of music (Croatian and world literature) contained in primary and secondary school textbooks. With the help of the available educational technology (PowerPoint presentations, sound recording media, audio and video clips, etc.) students introduce audiences to the characteristics of the period in which the composer of the work lived, to composer-technical characteristics of his work, they place the composer in his or her stylistic context, refer to the importance of the composition in the composer's overall work, and, during presentation in front of students or individual work with the course teacher, analyze the composer's genre, form and characteristics (melody, harmony, rhythm, specifics of the composing technique, underlying software). In addition, students analyze technical texts, they inquire about frequency of performance of obligatory compositions and their ratings, as well as about their possible application in the world of television, film, theater, literature, art, etc. and in music of other genres.

Consequently, the teaching process consists of a continuous practical demonstration, i.e. of oral presentation using audio-visual means (multimedia) and listening to selected musical types that accompany the presentation. Students are obliged to regularly attend group or individual lessons and actively participate in the teaching process.

Since lectures of the above mentioned courses are based on the modern teaching strategies with the use of multimedia, the aim was to investigate whether music students recognize the benefits of such type of teaching.

METHODOLOGY

Research aim and tasks

The aim of this research was to determine the relationship between traditional methods of teaching and modern lectures with the use of multimedia.

The following tasks result from the defined aim, with the purpose to establish:

1. the difference between the so-called traditional teaching and multimedia teaching;
2. students' perceptions in connection with multimedia teaching;

3. students' perceptions in connection with quality and usefulness of multimedia teaching.

Instrument

For the purpose of this study a questionnaire entitled *Using multimedia in Teaching* was designed by one of the authors, Ms Vidulin-Orbanić. The questionnaire designed for music students consisted of four parts and 53 items. The second part consisting of fifteen items with a five-point Likert scale (1 – strongly disagree, 5 – strongly agree) was used for further analysis and comparison of the results. The questionnaire was anonymous.

Statistical procedures

Descriptive statistics was used to describe the sample: arithmetic mean, standard deviation, and contingency table. Inferential statistics included *T* test, *F* test and One Way ANOVA.

Subjects

Table 1. Structure of the sample

Town	Year of study	Gender		Total
		Female students	Male students	
Pula	1	9	7	16
	2	5	4	9
	3	3	6	9
	4	5	2	7
	Total	22	19	41
Osijek	1	4	6	10
	2	6	4	10
	3	0	7	7
	4	10	2	12
	Total	20	19	39
Split	1	3	0	3
	2	9	2	11
	3	14	3	17
	4	8	3	11
	Total	34	8	42

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The study included 122 undergraduate music students, from the first to the fourth year of study, from Pula, Split and Osijek. In *Table 1* it can be seen that the sample consisted of 76 female students and 46 male students. There were 41 interviewed respondents in Pula, 39 in Osijek, and 42 respondents in Split. The study included students from the Section of Music Pedagogy, Classical Accordion, Piano, Solo Singing, Theory and Composition, Wind and String Instruments and the Guitar.

Procedure

The questionnaire was distributed to students during lessons. The purpose of the research was explained, as well as the method of solving the questionnaire. The testing lasted 20 minutes.

RESULTS AND DISCUSSION

Difference between traditional lessons and lessons with the use of multimedia

Table 2 indicates that, for all the questions at the significance level of 5%, the hypothesis that the answers on Likert's scale 3 (neither agree nor disagree) are significantly different from the value of 3 can be rejected, which means that respondents had a clearly stated attitude towards all statements. For a positive difference (positive T value) respondents had a positive attitude towards the posed statement (*agree* (4) and *strongly agree* (5)), whereas for a negative T value respondents *strongly disagree* (1) or *disagree* (2) with the statements from the questionnaire. Consequently, students positively perceive lessons with the use of multimedia (as opposed to traditional lessons), because they allow them to save time (arithmetic mean 3.82; p=0.000), because they are more interesting (arithmetic mean 4.09; p=0.000), of better quality (arithmetic mean 3.33; p=0.000), more understandable (arithmetic mean 3.19; p=0.028) and easy-going (arithmetic mean 3.61; p=0.000), compared to frontal, traditional lessons. Students' response to the statement *Lessons with the use of multimedia are more demanding compared to traditional lessons* was that they did not consider them more demanding than traditional lessons (arithmetic mean 2.79; T=-2.48, p=0.015). The negative value was established for the statements that suggested that traditional lessons were more dynamic (T=-2.30, p=0.023) and effective (T=-2.05, p=0.041) than multimedia lessons. This means that students again prefer multimedia lessons, obviously perceiving

them as more dynamic and effective than traditional methods of implementing the teaching process.

Table 2. Statistically significant differences: traditional and multimedia lessons

Variables	N	Arithmetic mean	Standard deviation	SE mean	95% CI	T	p
Time-saving	122	3.8279	0.9680	0.0876	3.6544; 4.0014	**9.45**	**0.000**
Interesting	122	4.0909	0.9747	0.0886	3.9155; 4.2663	**12.31**	**0.000**
High-quality	122	3.3390	0.9976	0.0918	3.1571; 3.5209	**3.69**	**0.000**
Understandable	122	3.1901	0.9426	0.0857	3.0204; 3.3598	**2.22**	**0.028**
Demanding	122	2.7966	0.8921	0.0821	2.6340; 2.9593	**-2.48**	**0.015**
Easy-going	122	3.6148	0.9040	0.0818	3.4527; 3.7768	**7.51**	**0.000**
Dynamic	122	2.767	1.113	0.102	2.565; 2.968	**-2.30**	**0.023**
Effective	122	2.790	1.111	0.102	2.588; 2.992	**-2.06**	**0.041**

Legend: H_0: mean=3; H_1: mean≠3, Test of mean = 3 vs. not = 3

According to the results from *Table 3*, there was no statistically significant difference at the significance level of 5% by town. By means of F test it was also established that there was no statistically significant difference at the significance level of 5% by gender and the year of study.

Table 3. Differences in answers by town

Variable	Town (arithmetic mean)			*F* test (*p* value)
	Pula	Osijek	Split	
Time-saving	3.76	3.79	3.93	0.359 (0.699)
Interesting	4.17	4.13	3.98	0.457 (0.634)
High-quality	3.48	3.44	3.12	1.610 (0.204)
Understandable	3.38	3.18	3.02	1.436 (0.242)
Demanding	3.02	2.74	2.62	2.281 (0.107)
Easy-going	3.63	3.85	3.38	2.770 (0.067)
Dynamic	2.68	2.87	2.76	0.291 (0.748)
Effective	2.80	2.90	2.68	0.394 (0.675)

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It can be concluded that students from Pula, Osijek and Split prefer the use of multimedia in the teaching process, i.e. they consider multimedia lectures to be interesting, high-quality, understandable, dynamic and effective.

Students' perception regarding multimedia lessons

Table 4. Perception of multimedia lessons

Variables	Arithmetic mean	Standard deviation	SE mean	95% CI	T	P
Tiring	2.390	1.159	0.181	2.024; 2.756	**-3.37**	**0.002**
Pleasant	4.049	0.705	0.110	3.826; 4.271	**9.52**	**0.000**
Boring	2.128	1.128	0.181	1.763; 2.494	**-4.83**	**0.000**
Useless	1.976	1.084	0.169	1.634; 2.318	**-6.05**	**0.000**

Legend: One-Sample T test
Test of mean= 3 vs. not = 3

The results from Table 4 indicate that based on the negative value of T test, students did not perceive multimedia lessons as tiring, boring or useless. There was a statistically significant difference at the level of 5% for these variables.

Table 5. Difference in answers by the year of study

Variable	Year of study (average)				*F* test (*p* value)
	1	2	3	4	
Tiring	2.79	2.10	2.00	2.03	**3.546 (0.017)**
Pleasant	3.93	4.03	3.88	4.17	0.808 (0.492)
Boring	2.41	2.13	2.16	1.70	2.164 (0.096)
Useless	2.24	1.67	1.73	1.55	**2.842 (0.041)**

Table 5 shows the differences by the year of study in relation to students' perception of multimedia lessons, obtained by *F* test. The results indicate that there were statistically significant differences for the variables

tiring (p=0.017) and useless (p=0.041). It is evident that there were significant differences in the attitude of the fourth-year students compared to the first-year students, i.e. they to a greater extent did not consider multimedia lectures to be tiring or useless. Since the students probably had the opportunity to see and attend multimedia lectures and/or they themselves performed tasks using multimedia tools, it can be concluded that for these reasons they support such teaching and perceive it as positive.

There was no statistically significant difference (p>0.05) by gender. With regard to town, there were statistically significant differences in the arithmetic mean (F=3.93, p=0.022<0.05) only for the statement *Teaching with the use of multimedia is useless*, for which the value for Pula amounted to 1.08, Osijek 1.0 and Split 0.71. In other words, students from Split to a greater extent believed that teaching with the use of multimedia was not useless.

Students' perception regarding the purposefulness of teaching with the use of multimedia

Table 6. Differences in music students' perception toward purposefulness of multimedia teaching

Variables	Arithmetic mean	Standard deviation	SE mean	95% CI	T	p
Instructive	4.000	0.866	0.135	3.727; 4.273	**7.39**	**0.000**
Modern	4.220	0.822	0.128	3.960; 4.479	**9.50**	**0.000**
Multimedia use	2.756	1.090	0.170	2.412; 3.100	-1.43	0.160

Legend: One-Sample T test
Test of mean = 3 vs. not = 3

According to the results from *Table 6,* there were statistically significant differences at the significance level of 5% for the variables *instructive* and *modern*. The students consider lectures with the use of multimedia as very instructive (arithmetic mean 4, p=0.000) and argue that multimedia teaching corresponds to modern teaching needs (arithmetic mean 4.20; p=0.000). They also neither agree nor disagree with the fact that multimedia should be used in every lecture, which can be associated with the fact that for students the use of technique is no precondition of modern and instructive teaching. Therefore, they leave a possibility for some lectures to be traditional and frontal, especially because multimedia is no guarantee of successful teaching; a

professional teacher, appropriate and useful materials and active and inquisitive students are.

The results by town from *Table 7* indicate that there was a statistically significant difference at the level of 5% in connection with the statement that all lectures should include the use of multimedia. Accordingly, not every lecture should involve multimedia, to which students from Split agree to the greatest extent.

Table 7. Differences in answers by town

Variable	Town (arithmetic mean)			*F* test (*p* value)
	Pula	Osijek	Split	
Instructive	4.00	3.79	3.81	0.669 (0.514)
Modern	4.22	4.10	4.00	0.687 (0.505)
Multimedia use	2.76	2.69	2.12	**5.128 (0.007)**

According to *Table 8* there was a statistically significant difference at the level of 5% also in connection with the statement that all lectures should include the use of multimedia, and in relation to the year of study. It is evident that students in the fourth year of undergraduate study to the greatest extent believe that not every lecture should involve multimedia.

Table 8. Difference in answers by the year of study

Variable	Year of study (average)				*F* test (*p* value)
	1	2	3	4	
Instructive	3.72	3.90	4.00	3.83	0.516 (0.672)
Modern	4.17	3.87	4.12	4.27	1.216 (0.307)
Multimedia use	2.93	2.27	2.58	2.30	**2.744 (0.046)**

CONCLUSIONS

Based on the conducted research and in relation to our sample of respondents, it can be concluded that students positively evaluate modern lectures with the use of multimedia, because they are effective, useful,

understandable, interesting, dynamic, instructive, high-quality, they enable students to save time and correspond to modern needs of teaching.

Therefore, they should be implemented to a greater extent, teaching staff should be trained, as well as students, in order to use multimedia properly, paying attention to its effectiveness and the quality of multimedia resources and contributions, which are shown in this way.

Finally, it should also be noted that the knowledge and use of modern educational technology has an impact on the level of students' competence, their knowledge, skills and abilities. Together with new, innovative and creative models and strategies, they develop and improve learning and teaching skills. We believe that technical and meaningful lectures can enable students to recognize the importance of using modern technology and being trained for new ways of work in and outside school, as well as for the use of information communication technology. It is particularly important for them to be able to put their competence at the service of the educational system and to be professional creators of a high-quality school aiming at individual development of competences.

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UTJECAJ NASTAVNE TEHNOLOGIJE NA RAZVOJ KOMPETENCIJA STUDENATA GLAZBE

SAŽETAK

Umijeće kvalitetne pripreme i realizacije nastave uz uporabu prikladnih postupaka, metoda, tehnika, jednom riječju - tehnologije, odlikuje suvremenu školu. Uspješnost nastavnog procesa bitno ovisi o učiteljevim profesionalnim kompetencijama i poznavanju suvremene nastavne tehnologije. Stoga, konačan ishod školovanja učiteljskog kadra treba biti postizanje visoke razine psiho-pedagoških znanja i didaktičko-metodičkih kompetencija potrebnih za rad u školi i izvan nje.

U ovom radu govori se o tehnologiji kao o čimbeniku koji bitno utječe na učiteljevu ulogu u procesu odgojno-obrazovnoga rada. Obrazovanje je danas u stalnom ciklusu mijenjanja, nadopunjavanja i (pre)usmjeravanja. Sve se njegove paradigme stalno propituju i revaloriziraju. Različiti noviteti postavljaju izazove pred sam koncept obrazovanja, modificiraju njegovo trajanje, ukazuju na potrebu cjeloživotnog usavršavanja. Jedna od najpoticajnijih novina jest upravo primjereno korištenje suvremene nastavne tehnologije koja utječe na rad nastavnog osoblja, na kvalitetu znanja učenika, studenata i poboljšanje njihovih kompetencija. Važno je osvijestiti kad i kako koristiti novu tehnologiju te kako se pripremiti za njezinu uporabu. Na tom su tragu postavljeni programi i sadržaji kolegija koje u okviru ovoga rada opisujemo. Cilj je pripremiti studente za konkurentno stručno tržište rada kod nas i u svijetu, povezati sve razine glazbenoga obrazovanja - od vrtića do fakulteta i popularizirati glazbenu umjetnost.

S ciljem definiranja i utvrđivanja odnosa između klasičnih metoda poučavanja i suvremenih predavanja uz uporabu multimedije te utvrđivanja načina percepcije studenata u odnosu na multimedijsku nastavu, njezinu kvalitetu i svrsishodnost, proveli smo istraživanje u kojem je sudjelovalo 122 studenta glazbe dodiplomskog studija triju hrvatskih sveučilišta. Dobiveni rezultati pokazali su da korištenje tehnologije odgovara suvremenim potrebama nastave glazbe. Studenti glazbe pozitivno ocjenjuju predavanja uz uporabu multimedije i percipiraju ih efikasnim, korisnim, razumljivim, zanimljivim, dinamičnim, poučnim i kvalitetnim jer omogućavaju uštedu vremena te odgovaraju suvremenom nastavnom diskursu. Međutim, rezultati su pokazali i to kako studenti imaju pozitivno mišljenje o klasičnim predavanjima,

frontalnim oblicima rada, polazeći od premise da multimedija sama po sebi nije jamstvo uspješne nastave, već je to stručan nastavnik, adekvatno predstavljeno i korisno gradivo te motiviran student. U konačnici, rezultati istraživanja upućuju na zaključak da je nastavna tehnologija djelotvorna pomoć u realizaciji nastavnoga procesa, no također da njezina uporaba, poput svih ostalih, tradicionalnijih materijala i programskih alata koji se pri poučavanju koriste, treba biti permanenetno podvrgnuta kritičkom promišljanju kako bi polučila optimalne ishode.

Ključne riječi: *suvremene metode, metodika glazbe, multimedija, glazbena literatura.*

UVOD

Temeljne odrednice nastavne tehnologije

Nastavna tehnologija obilježila je svaku povijesnu epohu, kao sastavni dio tadašnje škole. Mijenjala se u skladu s društvenim i obrazovnim uvjetima određenog vremena i znanstveno-tehničkim dostignućima koja su obilježila period. U tom kontekstu Bezić (2000) opisuje sedam tehnoloških faza. Za prvu je fazu bila karakteristična živa riječ i usmena predaja; učitelj je bio organizator govorne transmisije. Druga tehnološka faza obuhvaćala je knjigu i pisanu riječ; knjige su postale novi izvor znanja. Treću tehnološku fazu odlikovalo je promatranje neposredne stvarnosti, dok se četvrta izdvojila kao period manipulativnih i operativnih tehnika te aktivnosti učenika. Petu tehnološku fazu prepoznajemo kao period audiovizualnih tehnika i masovnih medija, šesta je upečatljiva zbog pojave kompjutorizacije obrazovanja, a sedma tehnološka faza ističe se kao period multimedijskih tehnika.

Isti autor napominje kako se za izraz nastavna tehnologija koriste različiti nazivi: tehnologija nastave, obrazovna tehnologija, nastavna tehnika i tehnologija, suvremena obrazovna tehnologija, nastavna sredstva, nastavna pomagala, tehnička sredstva nastave, mediji u obrazovanju i nastavi. Razmatrajući sintagmu nastavna/obrazovna tehnologija dolazimo do sljedećih ključnih izraza kojima se ona opisuje i tumači: sredstva, pomagala, tehnika, postupci, pristupi, metode, oblici, program, sadržaji.

Rezultati istraživanja koje je proveo Bezić (2000) pokazuju da se pojam *nastavna tehnologija* različito tumači i definira. Definicije obuhvaćaju sadržaje i pojmove iz didaktike, metodike i/ili samu primjenu tehnike u procesu obrazovanja. Iz tog razloga tehnologiju je potrebno sagledati kao jedinstven fenomen odgojno-obrazovnog procesa, odnosno, kako ističe Lavrnja (2000, str. 28), u „cjelovitom kontekstu svih sastavnica složenih procesa nastave i učenja:

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od ciljno-sadržajnih (intencionalno-tematskih), psihološko-spoznajnih, didaktičko-metodičkih i metodoloških do institucionalnih i sociokulturnih pretpostavki i antropološko-psiholoških, razvojno-psiholoških i pedagoških osobitosti sudionika obrazovnih procesa“.

Brojni pedagozi suglasni su u tome da je glavna svrha nastavne tehnologije povećanje efikasnosti nastavnog procesa te postizanje konkretnih ishoda na pouzdan, ali brz i jednostavan način. Mijatović (2000, str. 196) smatra da je nastavna tehnologija „ukupnost sredstava (tehnika i hardver) i postupaka koji se temelje na sredstvima do kojih je došao razvoj suvremene nastavne tehnologije, a primjenjuje se u nastavi radi povećanja njezine uspješnosti, odnosno radi lakšeg, bržeg, racionalnijeg, ekonomičnijeg, produktivnijeg, objektivnijeg, zornijeg, uvjerljivijeg, preglednijeg učenja i poučavanja“. Isti autor napominje kako nastavna tehnologija u širem smislu uključuje učitelja i učenika, u čemu se slaže i Bezić (2000, str. 20), koji ističe da tehnologija rada nije samo sveukupnost izvora znanja i sredstava za odgojno-obrazovni rad u didaktičkoj funkciji, već da ona uključuje i „radno iskustvo (metode i postupke prenošenja) nastavnika i 'radno' iskustvo usvajanja od strane učenika“. Radonjić (1997) govori u prilog tome kako obrazovna tehnologija ne označava samo nastavnu tehniku, već suvremen pristup različitim metodičkim rješenjima i oblicima rada. Obrazovnom tehnologijom bavio se i Matijević (1999) koji taj pojam određuje kao sintezu programa, postupaka i sredstava, usmjerenih na racionalizaciju, optimizaciju i objektivizaciju nastavnog procesa. Pod obrazovnom tehnologijom smatra se i medij koji ne prenosi samo informacije, već i stanovite vrijednosti (Mušanović, 2000) što, u ovom slučaju, proširuje značenje i tumačenje tehnologije. Ipak, većina autora sagledava nastavnu tehnologiju kao dio didaktičke strategije jer se bavi proučavanjem načina njezine adekvatne i praktične primjene u odgojno-obrazovnom procesu. U tom smjeru promišlja i Skok (2000, str. 269) koji ističe da nastavna tehnologija ukazuje na to „kako najsvrsishodnije, najracionalnije upotrebljavati nastavna sredstva i nastavna (tehnička) pomagala u skladu s postavljenim pedagoškim ciljem i temeljnim zadaćama nastave uz puni angažman svih subjektivnih čimbenika“.

U europskoj literaturi pojavljuje se sintagma *didaktika medija* ili *medijska didaktika*, koja je bliska američkom značenju pojma obrazovna tehnologija (eng. educational technology). S time u vezi, navesti valja i neka razmišljanja inozemnih autora o istom pojmu. Istaknimo kako autori osobitu pozornost obraćaju na činjenicu da tehnologija neposredno utječe na obrazovni cilj, efikasnost nastave, povezuje teorijski i praktični aspekt, utječe na interes i motivaciju učenika. Nastavna tehnologija označava „efikasnu organizaciju učenja te uvođenja novih metoda i sredstava koji neposredno utječu na obrazovni cilj“ (National Focus Group on Educational Technology, 2006, str. 5). Januszewski i Molenda (2008) nastavnu tehnologiju vide kao mogućnost

jednostavnijeg i efikasnijeg učenja uz adekvatna sredstva i pomagala. Hlynka (2003) i Jacobsen (2007) smatraju da nastavna tehnologija omogućuje dolaženje do konkretnih praktičnih ishoda na jednostavan način te aplikaciju znanja u praktične svrhe. Wodi (2009, str. 9) ističe da se obrazovnom tehnologijom „povećava interes učenika, olakšava učenje i obogaćuje sveukupna spoznaja učenika". Luckin (2010) se također slaže da pravilno korištenje tehnologije pomaže u učenju i naglašava kako se uviđa interakcija između učitelja koji kreira određeni sadržaj, i tehnologije, kojom se taj isti sadržaj može optimalno prikazati. Tu interakciju Jacobsen (2007) naziva *potrebom otvorene obrazovne zajednice* koja zajedno uči i uvažava suvremene tijekove. Gastaldelli i Marconato (2008) ističu da je suvremena nastavna tehnologija bliska potrebama mladih i njihovom stilu učenja te da sam nastavni proces poprima zanimljiviju konotaciju uporabom iste. S time u vezi, prijeko je potrebno da je i učitelj osposobljen za izvođenje takve nastave. Reich i Daccord (2008) napominju kako će vještina korištenja suvremene tehnologije, u ovom slučaju suvremene multimedijalne tehnike, učiniti učitelja bliskim učenicima, koji, većinom, dobro vladaju tehničkim uređajima, osobito kompjutorima. Napomenimo i to da je pitanje nastavne tehnologije pitanje kulture, razvoja, napretka jer upravo nastavna tehnologija obuhvaća „cjelokupnu kolekciju prakse i sustava koji čine kulturu" (Arthur, 2009), *kulturu obrazovanja*.

Činjenica je da u nastavnoj praksi postoje određeni problemi: od neefikasnog korištenja raspoloživog vremena, neadekvatnog i nestručnog načina rada, nedovoljnog didaktičko-metodičkog znanja učitelja, nepoznavanja suvremenih strategija rada do nekorištenja ili neprimjerenog korištenja tehnike. Nastavna tehnologija se ponekad neadekvatno primjenjuje, s nejasnim ciljem i svrhom; ne primjenjuje se u sklopu didaktičko-metodičkih potrebitosti nastavnog procesa. Poznavanje prednosti i nedostataka nastavne tehnologije izazov je vremena u kojem živimo. Stoga, valja sagledati sve mogućnosti adekvatne primjene i uvoditi novine u nastavni proces kada je to zaista potrebno. Tu prvenstveno mislimo na uporabu nastavne multimedijalne tehnike. Potrebno je osposobiti prvenstveno učitelja kako bi mogao koristiti *blagodati suvremenoga doba*, odnosno, kako bi mogao uvidjeti koje su mogućnosti implementacije nastavne tehnologije u konkretan nastavni tijek. Priznati valja da, iako postoji određeni postotak učitelja koji podržavaju novu tehnologiju (podcrtajmo – suvremenu tehniku), postoji i određeni broj njih koji *bojkotiraju* primjenu suvremene tehnologije: jedni iz razloga što smatraju da ona ne povećava kvalitetu odgojno-obrazovnog rada, drugi jer nisu adekvatno pripremljeni za njezinu primjenu, treći iz razloga što to od njih traži dodatni napor potreban za pripremu i primjenu.

Iz svega navedenoga možemo zaključiti da je nastavna tehnologija pomoć u realizaciji nastavnog procesa, no također da tehnologija, materijali i

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programski alati trebaju biti permanenetno podvrgnuti promišljanju i dekonstrukciji, kao i sama uporaba tehnologije i njezino djelovanje na učenike, o čemu govori i Mušanović (2000, str. 16): „Umjesto evaluacije i glorificiranja valja primijeniti sistematsku kritiku obrazovnih tehnologija i otkrivati njihove kako povoljne tako i nepovoljne karakteristike kao nužan korak u inoviranju i prilagođavanju tehnologije učenicima".

Razvoj nastavne tehnologije utječe na kvalitetu znanja i umijeća učenika, na razvitak znanosti i tehnike, na obrazovanje u cjelini. To su valjani razlozi da svaki učitelj porazmisli kad će mu i kako nova tehnologija koristiti u nastavnom procesu te da se pripremi za njezino korištenje, stručno i tehnički. Permanentno učenje dio je učiteljskoga života i poziva, a biti u skladu s promjenama, znati se prilagoditi i usavršavati se, čak i u onim segmentima koji nisu neposredno vezani za učiteljski poziv (a zapravo jesu!), treba biti (ili postati) svakidašnjica.

Kompetencije studenata glazbe za život i djelovanje u suvremenom društvu

Europskim kvalifikacijskim okvirom predložena je podjela svih kompetencija na: *znanje, vještine* i *kompetencije u užem smislu.* Europska obrazovna politika naglašava upravo razvoj kompetencija, što je vidljivo iz dokumenata *Common European Principles for Teacher Competences and Qualifications*[9], *Improving the Quality of Teacher Education*[10], *Tuning Educational Structures in Europe: Summary of Outcomes – Education*[11] i *Teacher Education in Europe: An ETUCE Policy Paper*[12] (prema: Lončarić, D. Pejić Papak, P. 2009). Isticanje kompetencija u prvi plan pronalazimo i u prijedlogu *Nacionalnog okvirnog kurikuluma za predškolski odgoj i opće obvezno obrazovanje u osnovnoj i srednjoj školi*[13], *Key Competences for Lifelong Learning — A European Reference Framework*[14] i u dokumentu *Improving Competences for the 21st Century: An Agenda for European Cooperation on Schools*[15] (prema: Lončarić, D., Pejić Papak, P. 2009).

Prema autorima koji su se bavili pojmom *kompetencija* (Green, 1999, Kurtz i Bartram, 2002, Warr i Conner, 1992, Woodruffe, 1991) možemo uvidjeti

[9] European Commission: Education and Culture (2005)
[10] Commission of the European Communities (2007)
[11] Tuning Educational Structures in Europe Workgrop: Education (2005)
[12] European Trade Union Committee for Education (2008)
[13] Ministarstvo znanosti, obrazovanja i športa (2008)
[14] The European Parliament and the Council of the European Union (2006)
[15] Commission of the European Communities (2008)

da se definicije kompetencija kreću u dva smjera: na kvalifikacije ili standarde obavljanja zadatka/obveze te visoku uspješnost u obavljanju zadatka/obveze. "Kompetencija je temeljna karakteristika osobe koja rezultira učinkovitom i/ili superiornom obavljanju posla...može biti osobina, motiv, vještina, aspekt slike o sebi ili socijalne uloge, ili korpus znanja koju ona ili on koristi" (Boyatzis, 1982; prema Kurtz i Bartram, 2002, 229). Kompetencije definirane kao karakteristike, kvalifikacije, odlike, svojstva, osobine, sposobnosti, znanja, vještine, performanse, kvalitete (Mijatović, 2000, Staničić, 2001) orijentirane su na postizanje određenih obrazovnih ishoda. Dakle, pojam kompetencija obuhvaća kombinaciju znanja, umijeća, uvjerenja, motivacije i osobnih karakteristika potrebnih da individua aktivno, stručno i efikasno djeluje u određenoj situaciji. Biti kompetentan podrazumijeva imati znanje, vještinu, sposobnost i moći to praktično primijeniti. Strugar (1993) kompetencije učitelja dijeli na osobne i pedagoške, s time da je osnovna razlika u tome da se osobne (ljudske) ne mogu 'učiti', dok se pedagoške uče, stječu i usavršavaju.

Razdevšek-Pučko (2005), prema listi kompetencija ekspertne skupine Europske komisije, kompetencije učitelja razvrstava u sljedeće kategorije: osposobljenost za nove načine rada u razredu, osposobljenost za nove radne zadatke izvan razreda: u školi i sa socijalnim partnerima, osposobljenost za razvijanje novih kompetencija i novog znanja kod učenika, razvijanje vlastite profesionalnosti, uporaba informacijsko-komunikacijske tehnologije. Domović (2006) smatra da učitelji trebaju posjedovati predmetna znanja, znanja iz obrazovnih znanosti, vještine i kompetencije za vođenje i pružanje podrške učenicima te razumijevanje socijalnih i kulturoloških dimenzija obrazovanja.

S obzirom na navedeno, usredotočit ćemo se na studente glazbene pedagogije Odjela za glazbu u Puli i načinu oblikovanja njihovih kompetencija tijekom četverogodišnjeg i/ili petogodišnjeg studija. Uspostavom njihova psiho-pedagoška znanja i didaktičko-metodičkih kompetencija potrebnih za rad u školi i izvan nje, poticanjem suvremenoga načina komunikacije i socijalne integracije te prepoznavanjem i ukazivanjem na individualne mogućnosti svakog studenta i studentice, težimo oblikovanju nove zajednice stručnih i kreativnih učitelja.

Cilj je pripremiti studente za konkurentno stručno tržište rada kod nas i u svijetu, povezati sve razine glazbenoga obrazovanja - od vrtića do fakulteta, popularizirati umjetničku glazbu i tradicijsku glazbu. Na tom su tragu postavljeni i sami programi i sadržaji kolegija, svakodnevni stručno-praktičan rad, međupredmetne korelacije, ogledna predavanja, stručno-pedagoška praksa te različiti oblici stručnog cjeloživotnog obrazovanja u vidu glazbenih i glazbeno-pedagoških tribina, seminara, predavanja, radionica, međunarodnih simpozija i koncerata.

Na preddiplomskom studiju Glazbene pedagogije obrazuju se glazbeni pedagozi koji će biti osposobljeni za rad i djelovanje u profesionalnim i

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amaterskim kulturnim ustanovama, zatim kulturno-umjetničkim društvima, a bit će poticani na daljnje samostalno glazbeno-pedagoško istraživanje.

Glede kompetencija, prvostupnik glazbene pedagogije treba ovladati osnovnim glazbeno-pedagoškim znanjima i umijećima, a njegove će se kvalifikacije i kompetencije prvenstveno odnositi na pedagoški rad s djecom i mladeži. Prvostupnik glazbene pedagogije svoja će znanja i umijeća demonstrirati u ulozi glazbenog suradnika u vrtićima, bit će voditelj glazbenih vrtića, zborovođa, voditelj raznih ansambala, organizator glazbenih priredbi, stručni suradnik u kulturnim i umjetničkim ustanovama, a tijekom nastavka studija, učitelj u osnovnim i srednjim školama, općim i stručno-glazbenim.

Nakon završenog dodiplomskog studija student će imati razvijene, osim stručno-glazbenih, i sljedeće kompetencije: komunikacijske vještine, vještinu timskog rada, vještinu korištenja informacijsko-komunikacijske tehnologije, vještinu refleksivnog promišljanja i samovrednovanja, interpersonalne vještine, kritičnost i samokritičnost, sposobnost analize i sinteze uz mogućnost samostalnog unaprjeđivanja vještine učenja.

Kompetencije studenata u sklopu kolegija Metodika nastave glazbe i Metodički praktikum

Metodika nastave glazbene kulture 1, 2, 3 provodi se tijekom V., VI. i VII. semestra, a *Metodički praktikum* u VIII. semestru. Studenti će tijekom studija steći znanje o teorijsko-znanstvenim osnovama glazbe, zatim pratiti ogledna predavanja stručnjaka (vrtić, razredna nastava, predmetna nastava, solfeggio, glazbena umjetnost) i metodičara te i sami realizirati nastavne jedinice i sadržaje.

Kolegijem *Metodika nastave glazbe* studente osposobljavamo za vođenje i realiziranje glazbenih aktivnosti u glazbenim ustanovama. Temeljni je cilj kolegija *Metodika nastave glazbe 1* analizirati i demonstrirati koje su vještine potrebne za rad u školi te usmjeriti interes studenata na inovacije u području glazbene nastave. Glede kompetencija studenata istaknimo sljedeće: osposobljavaju se za kritičko analiziranje stručnih tekstova, za definiranje mjesta glazbene nastave u sustavu obrazovanja, za analizu i usporedbu sastavnica nastavnog programa i izradbu izvedbenog plana i programa, za analiziranje i demonstriranje glazbenih aktivnosti na predškolskoj i školskoj razini.

Nastava se izvodi putem predavanja, seminara i radionica, samostalnih zadataka, multimedijom i internetom, terenskom nastavom i konzultacijama. Studenti hospitiraju u vrtiću i školi (razredna nastava), izvode dječje pjesme te analiziraju glazbena djela. Prateći predavanja i

hospitirajući u školi studenti imaju priliku vidjeti princip korištenja suvremene tehnologije u nastavi (od slušanja glazbenih djela na nosaču zvuka do realizacije powerpoint prezentacije za potrebe nastave) te također, putem samostalnih zadataka, multimedije i interneta prirediti određeni nastavni zadatak.

Temeljni je cilj kolegija *Metodika nastave glazbe 2* demonstrirati glazbene aktivnosti. Analizira se koncepcija predmeta glazbene kulture u osnovnoj školi. Kompetencije studenata odnose se na to da će biti osposobljeni: za tumačenje i interpretiranje zadaća i ishoda nastave glazbe u osnovnoj školi, za definiranje mjesta glazbene nastave u sustavu obrazovanja, za analizu sastavnica nastavnog programa u području glazbene kulture, za izradbu izvedbenog programa, za korištenje različitim nastavnim strategijama, oblicima, metodama rada i nastavnim sredstvima, za analiziranje, opisivanje, demonstraciju i realizaciju glazbenih sadržaja na osnovnoškolskoj razini. Način izvođenja nastave i dalje je sličan već postojećem modelu, uz razliku što se dodaje i mentorski rad učitelja u odabranoj školi. Osobiti naglasak u obvezama studenata ima, uz hospitacije, upoznavanje glazbenih djela kroz dnevnik slušanja, čime studenti (i dalje) upoznaju i analiziraju glazbena djela, traže adekvatne snimke, video inserte i ostale tehničke mogućnosti koje im pomažu u koncipiranju Dnevnika slušanja glazbe i prezentaciji glazbenih primjera.

Temeljni je cilj kolegija *Metodika nastave glazbe 3* i *Metodičkog praktikuma* analizirati glazbeno-pedagoška pitanja nastave solfeggia u osnovnoj glazbenoj školi i koncepciju predmeta glazbene umjetnosti u srednjoj školi. Kompetencije koje studenti stječu odnose se na: kritičko analiziranje stručnih tekstova, za (re)valoriziranje ciljeva i zadaća te svrhe nastave solfeggia i nastave glazbene umjetnosti, za analizu i tumačenje sastavnica nastavnog programa solfeggia i glazbene umjetnosti, za korištenje novih metoda i postupaka u nastavi solfeggia i nastavi glazbene umjetnosti, za analiziranje i realizaciju sadržaja u nastavi solfeggia i glazbene umjetnosti. Ističemo osobitu važnost terenske nastave i oglednih predavanja studenata u kojima dolazi do izražaja ne samo njihovo glazbeno znanje, već i umješnost pripreme i realizacije nastavne jedinice. Putem kolegija *Metodički praktikum* kod studenata razvijamo vještinu pripreme, organizacije i vođenja nastavnog procesa. Također, studenti se uključuju u rad glazbene izvanškolske udruge, gdje i samo aktivno sudjeluju.

Na ovoj se razini studentima nudi međupredmetna korelacija kolegija *Metodike* i *Upoznavanja glazbene literature*. Kako bi učenje bilo kvalitetnije, potrebno je uspostaviti korelaciju obrazovnih sadržaja. Cilj

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povezivanja[16] različitih nastavnih predmeta ili sadržaja je da studenti steknu opću sliku o nekom događaju, pojavi, području.

Na diplomskom studiju Glazbene pedagogije obrazuju se glazbeni pedagozi koji će biti osposobljeni za glazbeno-pedagoški rad u osnovnim i srednjim općeobrazovnim školama, za nastavu solfeggia u osnovnim glazbenim školama te na studijskim programima općeg nastavničkog i nastavničkog glazbenog usmjerenja. Studenti će se moći baviti znanstvenim radom i upisati doktorski studij. Magistar glazbene pedagogije svoja će znanja i umijeća demonstrirati kao učitelj i nastavnik u osnovnim i srednjim školama, općim i stručno-glazbenim.

Po završetku diplomskog studija očekuje se da će student imati razvijene sljedeće kompetencije, uz stručno-glazbene: vještinu provođenja znanstvenog istraživanja; sposobnost korištenja rezultata istraživanja u stručnom radu; vještinu stručne komunikacije; razvijene kognitivne vještine važne za razvoj i stvaranje novog znanja. Iz navedenih razloga, kolegijem Metodički praktikum i praksa trebamo osposobiti studente za vođenje nastave, planiranje i organizaciju nastavnog tijeka te sudjelovanje u nastavnim i izvannastavnim aktivnostima. Studenti stječu teorijsko-znanstvene osnove iz područja glazbe, zatim prate ogledna predavanja stručnjaka u sklopu stručno-pedagoške prakse (predmetna nastava, solfeggio, glazbena umjetnost) i metodičara te i sami učestvuju, planiraju i realiziraju nastavne jedinice i sadržaje. Također, potiču se na istraživački rad i analizu specifičnih pitanja glazbene pedagogije, metodike nastave glazbe i pedagoške prakse. Upravo istraživački rad potrebuje poznavanje i rad s informacijskom tehnologijom.

Završetkom studija student će biti osposobljen za primjenjivanje stečenih znanja i umijeća, kreativnu primjenu ideja, istraživanje, rješavanje problema u novim i nepoznatim okruženjima, jasno iznošenje zaključaka. Također, posjedovat će vještine koje će mu omogućiti nezavisnost, samousmjeravanje i nastavak studiranja.

[16] Prilikom takvog povezivanja u pedagoškoj se praksi spominju četiri pojma: *integracija* (spajanje pojedinačnih dijelova u cjelinu, odnosno povezivanje sadržaja unutar istog predmeta), *korelacija* (međusobno povezivanje sadržaja i predmeta), *koncentracija* (način ostvarivanja korelacije) te *komparativni pristup* (teži usporedbi sadržaja određenih predmeta). Pojmovi *korelacija, koncentracija* i *integracija* često se tretiraju kao sinonimi.

Kompetencije studenata u sklopu kolegija Upoznavanje glazbene literature 1, 2 i 3

Kolegijem *Upoznavanje glazbene literature* želimo upoznati studente s glazbenom literaturom koja se koristi u radu u nastavi u osnovnim i srednjim školama. Studenti glazbene pedagogije tijekom studija stječu znanja iz povijesti glazbe, a kolegiji *Upoznavanje glazbene literature,* koji se provodi tijekom VII, VIII i IX semestra, nadovezuju se na kolegije *Povijesti glazbe* koju slušaju studenti prve i druge godine dodiplomskog studija (I- IV sem.) te *Povijesti hrvatske glazbe* koju pohađaju studenti 3. godine dodiplomskog studija (V. i VI. sem.)

Temeljni cilj kolegija *Upoznavanje glazbene literature 1* i *2* jest upoznavanje i razumijevanje glazbe, glazbenih epoha i stilova slušanjem glazbenih primjera. Nakon odslušanog kolegija studenti bivaju osposobljeni za pravilno definiranje širokog spektra glazbenih pojavnosti, prepoznavanje i kritičko analiziranje specifičnih glazbenih pojava, razvijanje vještina prepoznavanja i analiziranja glazbenih vrsta. Kolegij tumači fenomene glazbe od prapočetaka, antičke Grčke, istočnih civilizacija, srednjovjekovnog jednoglasja, renesansnog višeglasja, glazbenih vrsta u baroku, klasicizmu i romantizmu te značajnih pravaca u glazbi 20. stoljeća. Glede kompetencija, studenti se osposobljavaju za kritičko analiziranje stručnih tekstova te glazbene literature općenito. Nastava se izvodi putem predavanja, seminara i radionica, samostalnih zadataka, terenske nastave i konzultacija. Studenti su dužni pohađati nastavu i aktivno sudjelovati u nastavnom procesu, prezentirati dva seminarska rada (hrvatska glazba, svjetska glazbena literatura), ispunjavati zadatke vezane uz terensku nastavu (koncerti) te položiti završne ispite iz hrvatske glazbe i svjetske glazbene literature (pismeni ispit prepoznavanja odslušanih skladbi te pisanje eseja o razdoblju kojemu ista pripadaju).

Kolegij *Upoznavanje glazbene literature 3* pohađaju studenti diplomskog studija (peta godina) glazbene pedagogije. Temeljni cilj kolegija je upoznavanje i razumijevanje glazbe, glazbenih epoha i stilova slušanjem glazbenih primjera (19 *ozbiljnih* glazbenih primjera i jedan primjer iz drugog žanra – jazz, pop, rock glazba, mjuzikl, etno glazba) koji se obrađuju na nastavi glazbene kulture/umjetnosti u osnovnim i srednjim školama. Cilj kolegija jest u osposobljavanju prenošenja stečenih znanja u praktičnom radu s budućim učenicima.

Upoznavanje glazbene literature 3 također se direktno nadovezuje na kolegije *Povijest glazbe* (I.-IV. sem.) i *Povijest hrvatske glazbe* (V. i VI. sem.) te *Upoznavanje literature 1*, a predmet izravno korelira s predmetima *Metodika nastave glazbe* i *Metodički praktikum*.

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Sadržaj kolegija podrazumijeva slušanje najizrazitijih djela pojedinoga skladatelja određene epohe, a tumači je slušanjem odabranih djela iz cjelokupne glazbene povijesti (hrvatska i svjetska literatura) zastupljenih u osnovnoškolskim i srednjoškolskim udžbenicima. Student, uz pomoć raspoložive nastavne tehnike (power point prezentacije, nosači zvuka, audio i video isječci, itd.) upoznaje auditorij s karakteristikama razdoblja u kojem je živio autor djela te sa skladateljsko-tehničkim značajkama njegova opusa, umiješta skladatelja u stilski kontekst, osvrće se na značenje djela u sveukupnom radu autora te, tijekom predstavljanja pred studentima ili u individualnom radu s nositeljicom kolegija, analizira njegov žanr i oblik te karakteristike (melodija, harmonija, ritam, posebnosti tehnike skladanja, programska podloga). Uz to, student analizira stručne tekstove, informira se o izvođenosti zadanih djela, njihovoj recepciji, eventualnoj primjeni u svijetu televizije, filma, kazališta, književnosti, likovnosti i sl. te u glazbi drugih žanrova.

Nastavni se proces, dakle, sastoji od kontinuirane praktične demonstracije: usmenog izlaganja uz primjenu audio-vizualnih sredstava (multimedija) i slušanja odabranih glazbenih vrsta koji prate izlaganje. Studenti su dužni redovito pohađati grupnu ili individualnu nastavu i aktivno sudjelovati u nastavnom procesu.

S obzirom na to da se na navedenim kolegijima predavanja temelje na suvremenim strategijana poučavanja iz primjenu multimedije, željeli smo istražiti uviđaju li studenti glazbe prednosti takve tipologije nastave.

ISTRAŽIVANJE: ODNOS TRADICIONALNIH METODA POUČAVANJA I MULTIMEDIJE

Cilj i zadaci istraživanja

Cilj ovog istraživanja je utvrditi odnos između klasičnih metoda poučavanja i suvremenih predavanja uz uporabu multimedije.

Na temelju definiranog cilja proizlaze sljedeći zadaci kojima smo željeli utvrditi:

1. razliku između tzv. klasične nastave i nastave uz multimediju;
2. način percepcije studenata u vezi s multimedijskom nastavom;
3. percepciju studenata u vezi s kvalitetom i svrsishodnošću poučavanja uz multimediju.

Instrumentarij

Za potrebe ovoga istraživanja konstruiran je upitnik pod nazivom *Korištenje multimedije u nastavi,* autorice Vidulin-Orbanić. Anketni upitnik, namijenjen studentima glazbe, sastojao se iz četiri cjeline i 53 čestica. Za daljnju analizu i usporedbu rezultata koristili smo se drugom cjelinom, sastavljenom od petnaest čestica s Likertovom skalom od pet stupnjeva (1-uopće se ne slažem, 5-u potpunosti se slažem). Upitnik je bio anoniman.

Instrumenti

Koristili smo se deskriptivnom statistikom kojom smo opisali uzorak: aritmetičku sredinu, standardnu devijaciju, tablicu kontingencije. Inferencijalna statistika obuhvaćala je: *T* test, *F* test, jednofaktorsku metodu ANOVA.

Ispitanici

Tablica 1. Struktura uzorka

U ispitivanju je sudjelovalo 122 studenta glazbe dodiplomskog studija, od prve do četvrte godine, iz Pule, Splita i Osijeka. Prema *Tablici 1* možemo vidjeti da uzorak čini 76 studentica i 46 studenta. U Puli je anketirano 41, u Osijeku 39, a u Splitu 42 ispitanika. Uključeni su studenti Odsjeka za glazbenu pedagogiju, Klasičnu harmoniku, Klavir, Solo pjevanje, Teoriju i kompoziciju, Puhačke i gudačke instrumente i gitaru.

Postupak

Studentima su podijeljeni upitnici tijekom nastave. Objašnjena je svrha ispitivanja, kao i način rješavanja upitnika. Ispitivanje je trajalo 20 minuta.

REZULTATI I DISKUSIJA

Razlika između klasične nastave i nastave uz multimediju

Iz Tablice 2. vidljivo je da se, za sva pitanja na razini 5% značajnosti, može odbaciti hipoteza da su odgovori na Likertovoj skali 3 (niti se slažem, niti se ne slažem) značajno različiti od trojke, što znači da oko svih tvrdnji ispitanici imaju jasno izražen stav. Za pozitivnu razliku (pozitivnu T vrijednost) ispitanici imaju pozitivan stav o postavljenoj tvrdnji (*uglavnom se slažem* (4) i *u*

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potpunosti se slažem(5), dok za negativnu T vrijednost ispitanici se *uopće ne slažu* (1) ili se *uglavnom ne slažu* (2) s tvrdnjama iz upitnika. Dakle, studenti pozitivno percipiraju predavanja uz uporabu multimedije (nasuprot klasične nastave) jer omogućavaju uštedu vremena (ar. sredina 3.82; p=0.000), zanimljivija su (ar. sredina 4.09; p=0.000), kvalitetnija (ar. sredina 3.33; p=0.000), razumljivija (ar. sredina 3.19; p=0.028) i ležernija (ar. sredina 3.61; p=0.000) u odnosu na frontalna, klasična predavanja. Na tvrdnju *Nastava uz uporabu multimedije je zahtjevnija u odnosu na klasičnu nastavu* studenti odgovaraju da ju ne smatraju zahjevnijom od klasične nastave (ar. sredina 2.79; T=-2.48; p=0.015). Negativan se predznak vidi i na tvrdnjama koje upućuju na to da je klasična nastava dinamičnija (T=-2.30, p=0.023) i efikasnija (T=-2.05; p=0.041) od multimedijske nastave, što znači da studenti, opet, daju prednost multimedijskoj nastavi, koju, očito, percipiraju kao dinamičniju i efikasniju od klasičnog tipa vođenja nastavnog procesa.

Tablica 2. Značajne statističke razlike: klasična nastava i nastava uz multimediju

Prema rezultatima iz Tablice 3 možemo tvrditi kako ne postoji statistički značajna razlika na razini značajnosti od 5% prema mjestu. Također, na temelju *F* testa utvrdili smo da ne postoji statistička značajna razlika na razini značajnosti od 5% u odgovorima u ovisnosti o spolu i godini studija.

Tablica 3. Razlika u odgovorima prema mjestu

Možemo zaključiti da studenti iz Pule, Osijeka i Splita daju prednost korištenju multimedije u nastavnom procesu, odnosno, predavanja uz uporabu multimedije smatraju zanimljivim, kvalitetnim, razumljivim, dinamičnim i efikasnim.

Način percepcije studenata u vezi s multimedijskom nastavom

Tablica 4. Percepcija multimedijske nastave

Prema rezultatima iz Tablice 4 možemo zamijetiti sljedeće: s obzirom na to da je predznak T testa negativan, studenti ne percipiraju multimedijsku nastavu zamornom, ni dosadnom, ni beskorisnom. Za iste varijable vrijedi da postoji značajna statistička razlika na razini od 5%.

Tablica 5. Razlika u odgovorima po godini studija

U Tablici 5 prikazane su razlike prema studijskoj godini u odnosu na percepciju studenata prema multimedijskoj nastavi, dobivene *F* testom. Rezultati pokazuju da postoje statistički značajne razlike prema varijablama zamornost (p=0.017) te beskorisnost (p=0.041). Vidljivo je da na četvrtoj godini postoje bitne razlike u odnosu na prvu godinu, odnosno, u većoj mjeri smatraju da predavanje uz multimediju nije zamorno niti beskorisno. S obzirom na to da su studenti, vjerujemo, imali priliku vidjeti i prisustvovati nastavi uz uporabu multimedije i/ili su sami izvršavali zadatke koristeći multimedijske alate, možemo zaključiti da, iz tih razloga, takvu nastavu podržavaju i percipiraju pozitivno.

Prema spolu nema značajne statističke razlike (p>0.05). Glede mjesta zabilježene su statističke značajne razlike u aritmetičkim sredinama (F=3.93, p=0.022<0.05) jedino za tvrdnju *Nastava uz uporabu multimedije je beskorisna*, za koju Pula ima vrijednosti 1.08, Osijek 1.10 te Split 0.71. Drugim riječima, studenti iz Splita u većoj mjeri smatraju da nastava uz uporabu multimedije nije beskorisna.

Percepcija studenata u vezi sa svrsishodnošću poučavanja uz multimediju

Tablica 6. Razlike u percepciji studenata glede svrsishodnosti poučavanja uz multimediju

Prema Tablici 6 možemo zamijetiti da postoje statističke značajne razlike na razini značajnosti od 5% za varijable *poučnosti* i *suvremenosti*. Dakle, studenti smatraju da su predavanja uz uporabu multimedije vrlo poučna (aritmetička sredina 4; p=0.000) te kako poučavanje uz multimediju odgovara suvremenim potrebama nastave (aritmetička sredina 4.20; p=0.000). Također, niti se slažu niti ne slažu s time da svako predavanje treba biti multimedijsko, što možemo povezati s činjenicom da studentima nije uvjet suvremenog i poučnog predavanja uporaba tehnike. Dakle, ostavljena je mogućnost da neka predavanja budu i frontalnog oblika, klasična, osobito stoga što jamstvo uspješne nastave nije multimedija, već stručan nastavnik, adekvatno i korisno gradivo te aktivan i radoznao student.

Prema Tablici 7, glede mjesta, rezultati pokazuju da postoji značajna statistička razlika na razini 5% u odnosu na to da svako predavanje treba biti multimedijsko, dakle, ne traba svako predavanje biti multimedijsko, s čime se najviše slažu studenti iz Splita.

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Tablica 7. Razlike u odgovorima prema mjestu

Prema Tablici 8 postoji statistički značajna razlika na razini od 5%, također vezano uz konstataciju da svako predavanje treba biti multimedijsko, a u odnosu na godine studija. Naime, očito je da studenti četvrte godine dodiplomskog studija najviše smatraju da ne treba biti svako predavanje multimedijsko.

Tablica 8. Razlika u odgovorima po godini studija

ZAKLJUČAK

Na osnovi provedenoga istraživanja i u odnosu na naš uzorak ispitanika možemo zaključiti da studenti pozitivno ocjenjuju suvremena predavanja uz uporabu multimedije jer su efikasna, korisna, razumljiva, zanimljiva, dinamična, poučna, kvalitetna, omogućavaju uštedu vremena te odgovaraju suvremenim potrebama nastave.

Stoga, valja ih prakticirati u većoj mjeri, educirati nastavnički kadar, ali i studente, kako bi pravilno koristili multimediju, obraćajući pozornost na njezinu djelotvornost, ali i na kvalitetu samih multimedijskih izvora i priloga koji se na taj način prikazuju.

Za kraj napomenimo i to da poznavanje i korištenje suvremene nastavne tehnologije utječe na razinu kompetentnosti studenata, na njihovo znanje, umijeće, sposobnosti. Uz nove, inovativne i kreativne modele i strategije razvijaju i poboljšavaju vještinu učenja i poučavanja. Smatramo da će studenti, uz stručna i sadržajna predavanja, moći uvidjeti važnost korištenja suvremene tehnologije i biti osposobljeni za nove načine rada u školi i izvan nje te za uporabu informacijsko-komunikacijske tehnologije. Osobito je bitno, da će moći svoju kompetentnost staviti u službu obrazovnoga sustava, biti stručnim kreatorom kvalitetne škole koja teži pojedinačnom razvoju kompetencija.