This paper presents the results of research on changes in attitudes towards music education among teacher education students who were exposed to vocal-instrumental lessons over the course of two semesters. The research was conducted among second-year students of teacher education (N=103) at the Faculty of Education in Osijek, Croatia. The results have shown that students’ attitudes towards music education are relatively positive both before and after exposure to music lessons. Students with choir experience had more positive attitudes towards music education. Although positive attitudes after music lessons are somewhat higher, there is no statistically significant difference between the attitudes of students before or after music lessons. Further research on attitudes towards music education is suggested across a larger population of teacher education students, over a longer period of time, and using a wider range of instruments.

**Key words:** music education of teachers, competencies of primary education teachers, attitudes towards music education, vocal-instrumental lessons

**Introduction**

The problem in primary school music education is the inconsistency of its quality amongst countries with different or the same education systems and amongst different cultures. In this context, research has attempted to evaluate the quality of the music education of future teachers that would result in their success as music teachers; results
have shown that educating efficient, high-quality teachers with music teaching competencies is a complex process. Researchers have identified many interconnected factors that influence the music education of teachers, including the quality of music education, which is reflected in the relevance and nature of music courses, the classroom learning environment, students’ preferred learning style, students’ prior music education and music experience, and the attitudes of students towards music and music education (Gifford, 1993, 39). Some education systems feature teacher education programmes that contain only a few music education courses, a small number of music lessons, and modest content and learning outcomes (Figueiredo, 2003; Jeanneret, 1997; Nikolić, 2017a; Šulentić Begić, Begić, 2014; Vannatta-Hall, 2010). On the other hand, some feature more extensive music education if the criteria above are considered. The variety of educational systems and cultures is reflected in the potential for formal and informal music education and the possibilities of students to actively perform music within the education system or community. This leads to inequalities in music experience among teacher education students in different countries at the outset of their studies. Although there are differences in music education among countries, many studies report that teachers generally do not feel confident enough to teach music (Biasutti, 2010, 49). It is understandable that teachers with no basic music knowledge, no active listening skills, no instrumental or vocal experience, and with no skills or experience in music teaching will not be confident about their competencies in music teaching. However, it seems that the specific nature of music education means it is accompanied by certain phenomena that influence teachers so heavily that, despite their music skills or teaching skills and experiences, they still avoid leading music activities in the classroom or simply follow music curricula without any intent to raise its quality or make it interesting, inspiring, and motivating for their pupils.

The search for a solution to the issue of teacher competencies in music teaching has included discussions of psychological and social aspects accompanying the music education of future teachers and their teaching practice (Battersby, Cave, 2014; Biasutti, 2010; Biasutti, Hennessy, Vugt-Jansen, 2015; Ercegovac-Jagnjić, Nikolić, 2010; Jeanneret, 1997; Mills, 1989; Nikolić, 2017b, 2018; Nikolić, Šenk, 2018; Russell-Bowie, 2013; Seddon, Biasutti, 2008; Vannatta-Hall, 2010). Beyond having music teaching competencies, teachers should also be sufficiently confident in their competencies, be able to appreciate music and
music education, understand the importance of music education to the musical, cultural and aesthetic, and general development of children, feel comfortable when performing and teaching music, and be motivated to teach music with the same quality as they teach other subjects. In other words, in addition to professional music teaching competencies, the desired characteristics encompass cognitive, emotional, and conative components of attitudes towards music and music education. A correlation has been found between primary teachers’ attitudes towards music and music education and their competencies and tendencies in teaching music (Barışeri, 2000; Della Pietra, Bidner, Devaney, 2010; Holden, Button, 2006; Nikolić, Ercegovac-Jagnjić, Bogunović, 2013), which confirms that attitudes are an important factor in the music education of teachers. Siebenaler (2006, 14) claims that the attitudes of primary school teachers towards teaching music to young learners can serve as a measure by which to evaluate the effectiveness of music education in teacher education. The circularity of attitudes about music education in the context of primary education (pupil-student-teacher-pupil…) cultivates the low quality of music education in schools due to the influence of attitudes on learning and behaviour and the stability of attitudes and their resistance to change (Nikolić, 2017b, 42). Nikolić (2017b, 50) claims that research into possible influences on the formation of appropriate attitudes towards music education and the transformation of inappropriate ones might lead to ideas as to how to bring positive changes into the music education of future teachers and, consequently, that of their future pupils as well.

Attitudes of students of teacher education

As a psychological construct, attitudes have been a research interest of social psychologists since the early 20th century (Banaji, Heiphetz 2010). One of the most comprehensive definitions of attitudes is provided in Petz (2005, 465), who defines attitudes as acquired, relatively permanent, and stable organisations of positive and negative emotions, evaluations of and reactions to a person, group, situation, idea and other; attitudes have a layered psychological structure consisting of a cognitive, emotional, and conative component. Attitudes can be evaluated in various ways and are considered important because of their presumed influence on the perception of the social and physical world, as well as people’s choices and behaviour (Albarracín, Wang, Li, Noguchi, 2008,
Attitudes are acquired through imitation and personal experience during the socialisation process (Andrilović, Čudina, 1990, 196). Once formed, attitudes have an effect on information processing; while information is being processed, the motivation for new information is combined with attitude correspondence, leading to the evaluation and selection of new information (Bohner, Dickel, 2011, 411). The strength of attitudes depends on their availability from memory; attitudes that are stable in various situations over time that can be consistently recalled are considered strong attitudes, whereas weak attitudes are those that are less available and more easily influenced by context (Bohner, Dickel, 2011, 394). The strength of attitudes has implications for the permanency, persistence, and consistency of attitude-dependent behaviour (Crano, Prislin, 2006, 347).

The resistance of attitudes refers to the degree to which changes in attitude resist contradictory information (Petty, Brinol, 2010, 240). Concepts of attitudes vary from stable entities stored in memory to temporary judgements that are constructed online based on available information (Bohner, Dickel, 2011, 392). Bohner and Dickel (2011, 397) claim that, bearing in mind the processes that unfold during attitude formation, it is unadvisable to differentiate between attitude formation and attitude change due to the possibility that old attitudes remain stored in memory while new ones are formed, which leads to multiple representations of attitudes for the same object. However, whether we believe in the existence of multiple attitudes about the same object or in the replacement of old attitudes with new ones, existing attitudes in both cases play a role in the formation of new attitudes. After old attitudes are opposed with new information, future attitude retrieval from memory may be different; therefore, this paper uses the concept of changing attitudes. When attitudes change as a result of extensive thinking about the relevance of a problem, they have the tendency to persist (Petty, Brinol, 2010, 240). Andrilović and Čudina (1990, 197) state that changes in attitudes require patient and repeated argumentation that affects both the intellectual and emotional aspect of the attitude. Ajzen (2012, 383) reports on research that has shown that explicit and implicit attitudes can be changed under procedures that include controlled or spontaneous processes. Controlled processes are usually a result of exposure to convincing communication that contains strong arguments, while spontaneous changes in attitude encompass exposure to unknown objects of attitudes, the pairing of the object of attitudes with positive or negative
stimuli, and the exposure of the participant to examples of attitudes opposite to their own current attitudes (Ajzen, 2012, 383).

“To produce lasting changes in attitudes that can influence later behaviour, a persuasive message must contain strong arguments and the receivers must be motivated and capable of processing and elaborating on these arguments.” (Ajzen, 2012, 387)

Attitude theories state that, although a change in attitude may be the first step towards desirable behaviour, it might not be enough to produce behavioural responses, even if the new appropriate attitudes have been formed by the central route (Petty, Brinol, 2010, 241). Despite the time and effort invested into changing unwanted attitudes, it very often remains uncertain, therefore it is important to prevent the appearance of unwanted attitudes in education (Andrilović, Čudina, 1990, 197).

Educational systems facilitate the acquisition of competences as a part of the framework curriculum, as well as the hidden curriculum, which refers to the values learners acquire in schools due to planning and school organisation and through material resources (Pavičić Vukičević, 2013, 119). The influence of teachers on students is not simply based on their capability to transfer knowledge about the content of learning, but rather includes an array of affective elements that influence interactions between the teacher and learner, thus affecting teaching and learning (Troxclair, 2013, 58).

The education of future teachers is distinctive compared to education for other professions in terms of students’ experience with educational practices as former pupils. Students thus have a notion of music teaching and education that goes back to the curriculum, learning setting, and the teacher who either explicitly or implicitly transferred their attitudes on music to students. Students can gain attitudes through music experiences outside of school through specialised music education and private lessons, as well as though involvement in community music activities. Students thus begin their studies with pre-formed attitudes about music and music education in general, about music teaching, the competences of teachers as experienced in school, and learning outcomes and how to achieve them. Students’ ideas on music teaching and music teacher competences may be quite different from the outcomes of music education through teacher education programmes, which is a possible cause of a divide between the attitudes of students at the begin-
ning of their studies and attitudes that are desirable in teacher education and later in teaching.

Considering the aforementioned capacity of attitudes to influence the processing of information and differences in students’ attitudes towards music education, every student will learn a different version of whatever they are taught during their studies (Schmidt, 1998, 19). If a student begins their studies with positive attitudes, abilities, and motivation to learn; if the music education programme is of high quality, one can expect the optimal acquisition and development of music competences required for music teaching.

Research on the attitudes of future teachers towards music education

Empirical research in Croatia and the region has not dealt with attitudes as a factor in high-quality music education in teacher education; this kind of research is also lacking on the international level. Research to date has shown that several factors are crucial to the music education of future teachers. Music education and the experience of music performance stand out as important elements in the formation of student attitudes towards music education. Students with performing experience and those who are musically educated have more positive attitudes towards the inclusion of music in the curriculum, the academic and social influence of music, and the need for increased music education and performance (Della Pietra et al., 2010, 10), as well as towards their own ability to lead music activities in the classroom (Barry, 1992, 20). When students begin attending teacher education, their attitudes towards music education are already formed; their engagement in music education during studies and in teaching depends on these attitudes. They are not prone to change, therefore weak music education and a lack of prior performance experience are disadvantageous factors for music education during teacher education studies. Another unfavourable factor are student attitudes about the innateness and the unchangeability of music abilities, which may lead to low student expectations regarding the development of their music skills (Biasutti, 2010, 64). Students who assess themselves as not musically talented tend to be less musically developed and develop negative attitudes towards their competences in teaching music in the classroom (Nikolić, 2017b, 45).
The attitudes of teacher education students about music education are a result of a

“… layered set of circumstances: social and cultural environment, actual music potential and abilities, the knowledge and skills of students/teachers, their music education, and active musical performance experience prior to and during their studies, as well as the psychological constructs of self-evaluation, confidence, self-efficacy, and expectations.” (Nikolić, 2017b, 45–46)

The results of research on trainee teachers’ attitudes towards music education are difficult to compare due to a number of problems. It is very difficult to draw conclusions on how attitudes towards the music education of trainee teachers are formed due to the aforementioned differences among cultures, educational systems, and teacher training studies music programmes, specifically the teaching content, learning outcomes, methods, and types of music education. To be precise, the question is whether these music courses are fundamental courses (music theory, musical instrument playing, vocal skills, composition) or method courses dealing in teaching methodology. Research on students’ attitudes is problematic in light of the overall duration of music education as a part of teacher education programmes and individual one-semester courses, which is a very short period in which to acquire music competencies and form or transform student attitudes towards music education. Comparing research results is difficult due to insufficient details in reports on research methodology. Attitudes are context-specific, and so claims that are used to evaluate attitudes must be specified in the research description, as must the characteristics of lessons that are seen as a factor that influences attitudes. For these reasons, research descriptions of any issue in the music education of future teachers should contain as many details as possible about research conditions and methodology so that results can be discussed and used in relation to other research and applied in teaching practice in order to improve the music education of future teachers and music teaching in primary education.

A few international studies of trainee teachers’ attitudes towards music education have shown that there are positive changes in their attitudes after music lessons that included methodological content to a greater or lesser degree (see Nikolić, 2017b, 46–48). However, research on the influence of fundamental courses on the attitudes of students towards music education has shown different results. Jeanneret (1995) records the positive influence of lessons on the attitudes; Austin (1995)
notes no change; Gifford (1993) shows that students had less appreciation for music after lessons than before lessons. The question is why the results of the influence of fundamental courses are different, and why they display a tendency towards negative attitudes despite the belief that extensive music education leads to more positive attitudes towards music and music education. The answer might lie in the nature of music skill acquisition (playing, singing), which is the most important musical content of fundamental courses. These lessons are, besides the acquisition of music competencies, accompanied by some phenomena that can affect student attitudes, such as; limited time in which to acquire music skills (Gifford, 1993; Nikolić, 2017a); lack of interest and inadequate individual vocal and instrumental practice (Nikolić, 2017a); stage fright (Šenk, Ercegovac-Jagnjić, 2004); the perception of one’s professor as a music critic (Gifford, 1993). Therefore, extensive research on music education is necessary to understand the specific interrelations of the acquisition of music competences and attitudes towards music education. The complexity of the concept of attitudes, inappropriate research methodologies, and a lack of research on the attitudes of trainee teachers towards music education have left many open questions about their attitudes after students enroll in teacher education – what do their attitudes depend on, how do they reflect on their success in music courses, and is it possible to influence attitudes during their studies (Nikolić, 2017b, 49)?

The purpose of this paper is to look for ways in which vocal-instrumental courses (fundamental courses) influence students’ attitudes towards music education in specific circumstances, and to answer the following questions:

– Do students of teacher education have positive or negative attitudes towards music education, and are these attitudes related to their music education prior to their teacher education studies?
– Is it possible to change the attitudes of trainee teachers towards music education during only two semesters of vocal-instrumental teacher education courses?

**Method**

The aim of this research is to establish whether and how the attitudes of teacher education students can change during a fundamental
music course containing vocal-instrumental training. The special aims of this research are:

1) to describe the system of music education for future teachers in Croatia
2) to describe the music experience of students prior to teacher education studies
3) to describe vocal-instrumental teacher education courses
4) to describe the attitudes of students towards music education prior to and after vocal-instrumental lessons
5) to determine the significance of differences in student attitudes towards music education in relation to their music experience
6) to determine the significance of differences in student attitudes towards music education prior to and after two semesters of vocal-instrumental lessons.

In line with these aims, exploratory research has been undertaken to inquire into this issue, which has not been subjected to empirical research in this region so far.

The tested variables were:

– Music experience variable – music education and active music performance prior to teacher training studies
– Predictor variable – the attitudes of students towards music education prior to music lessons
– Intervening variable – vocal-instrumental lessons during teacher education
– Criterion variable – the attitudes of students towards music education after music lessons.

Participants

Participants in this research were second-year students (N=103) of the teacher education programme who attended compulsory vocal-instrumental courses at the University of Osijek’s Faculty of Education in Osijek, Croatia. All participants were female; their average age was 19.62 (SD=0.73; Min.=19; Max.=22). This was the first year of studying singing and playing at the studies to all students.
**Instruments**

For the purposes of this research, a *Teacher Education Student Questionnaire* was designed and a *Course Completion Sheet* was used.

To collect data for this research, a *Teacher Education Student Questionnaire* was designed, containing 18 items. Participants used an individual anonymised code instead of their names at all stages of the research to ensure true and honest answers to the questions and to enable the comparison of results in longitudinal research. The first two questions collected data about the participants’ gender and age. The third and fourth question were multiple choice questions dealing with the formal and informal music education of students prior to teacher education studies, and their experience in actively performing music during the same period. This was followed by 14 Likert-scale statements (1–14), each with five response categories (from 1 *Strongly disagree* to 5 *Strongly agree*). The statements referred to the cognitive, conative, and emotional component of attitudes towards the music education of students and teachers; participants were asked to express how strongly they agreed with each statement. In statements 1 and 7, the scoring was reversed in order to avoid socially desirable answers. In the initial survey, using a 14-item scale, predictor variable data was collected – student attitudes towards music education prior to their studies. The same scale was used in the final survey to collect data for the criterion variable – student attitudes towards music education following music lessons.

The *Course Completion Sheet*, filled in by the professor, provided data about the lessons held during two semesters; it also contained descriptions of lessons (lesson content, methods used, organisation of lesson, assessment of students’ success).

**Research procedure**

The initial survey was conducted at the beginning of the first semester (October), while the final survey was conducted during the last vocal-instrumental class at the end of the academic year (June). Before the survey, students were informed about the purpose of the survey, were informed that the survey is anonymous, and were asked to provide honest answers. Students gave oral consent to take part in the research. Students were provided with a written survey form; the researcher was
present during the survey process. At the end of the academic year, the professor who held the vocal-instrumental lessons provided the Course Completion Sheet.

**Results**

*The system of music education for future teachers in Croatia*

Teachers of young children in Croatia teach music in the first three or four classes of primary school (which lasts eight years), which means music education is obligatory for all teacher education students. The music education of future teachers occurs within an integrated undergraduate and graduate five-year study programme, and the system of music education differs slightly among faculties (Nikolić, 2017a, 163). All faculties have courses whose outcomes are related to future school practice. Beyond gaining knowledge about music, students gain competences in analytical listening, singing, instrumental performance (synthesiser, piano, accordion, or guitar), and they acquire knowledge, experience and skills related to music teaching. The number of music lessons in teacher education programmes varies from 195 to 300 lessons within 6 or 8 semesters; this number is different at each faculty. Apart from compulsory courses, each faculty offers various elective courses according to their possibilities (see Nikolić, 2017a, 163–165).

At the Faculty of Education in Osijek, where this research was conducted, there is no entrance exam to test music abilities prior to enrollment in the study programme. The music education of future teachers begins in the first year of studies with a 30-lesson Music Theory course and a 30-lesson Music course, which is based on the acquisition of knowledge and the development of skills in analytical listening and singing (*Integrated undergraduate and graduate five-year university class teacher studie*, 2005). During the second year of the programme, students attend a 30-week course entitled Instrumental Practice I, which encompasses instrumental (piano and synthesiser) and vocal lessons. It is held once a week for 45 minutes in groups of 12 students. During the third year of the programme, one lesson per week of vocal-instrumental lessons are taught during one semester (*Instrumental Practice II*; 15 lessons). During the fourth year, students take courses entitled Music Teaching I and Music Teaching II, the goal of which is to train future teachers to teach music in the first four classes of primary school. There
are 30 weeks of lessons taught both at the faculty and in schools at a rate of four lessons per week. Students can attend the elective courses *Music Listening I* (30 lessons) and *Music Listening II* (15 lessons) during the fourth and the fifth year of the programme, the aim of which is to learn music through analytical listening.

**Students’ music experience prior to enrolment**

Only 2.91% (N=3) of the participants in this research had formal music education in a music school. A total of 1.94% (N=2) of respondents underwent informal music education in the form of private music lessons. This means that 95.15% (N=98) of respondents did not have out-of-school music education. As the number of students with formal music education was low, the variable of music education prior to enrolment in the teacher education programme was not used in further analysis.

Besides organised extracurricular music activities in schools, there is a tradition of cultural and arts associations in Croatia, which organise folklore and chorale activities. Various vocal and instrumental groups and choirs are also organised within religious communities. If students were in an ensemble for at least two years, this was noted as active music performance experience. The results show that, prior to enrolment in the teacher education programme, 24.27% (N=25) of respondents sang in a choir, while 11.65% (N=12) were members of folklore groups. The other 64.08% (N=66) of respondents did not have any experience performing music.

**The vocal-instrumental course in the teacher education programme**

The music lessons that were taken as a variable in this research are part of the *Instrumental Practice I* course. Its aim is to help students gain basic keyboard skills to the amateur level; this skill will be used in teaching children of early primary school age (*Integrated undergraduate and graduate five-year university class teacher studies*, 2005, 116). Practice encompasses performing children’s songs appropriate for teaching of the *Music* course in the first three classes of primary school, in which teacher trainees must learn how to sing and play songs with harmonic accompaniment. The outcomes of the course *Instrumental Practice I* (*Izvedbeni plan nastave ak. 2017./18. god.,* 155) are:
a) to gain skills at playing the instrument with two hands
b) to play the melody and the harmonic accompaniment of songs
c) to apply music reading skills to the analysis and interpretation of songs
d) to play and sing songs for children of early primary school age.

The professor submitted the Course Completion Sheet for the entire academic year. During the first three weeks, the professor tested each student’s musical abilities using the Test of Musical Abilities (Nikolić, 2017c) and recommended each student individual practice exercises according to their musical abilities. Apart from beginner lessons in performance, the professor held a lecture on the nature of musical ability and fear of public performance.

Initial testing on music literacy was carried out. After the introductory three weeks, classes were held in groups; the lessons focused on singing basics and learning a number of children’s songs using the method of learning by ear (described in Rojko, 2004, 151–165). In each lesson, the professor would demonstrate music tasks by singing and playing, students would then learn how to sing the example songs, read sheet music, and practice playing the demonstrated tasks. Students were instructed to practice the same way at home as they had during the lesson; at the next lesson, their playing and singing was individually assessed. Learning to sing, play, and read music was performed using: 20 exercises for each individual hand and for both hands; 30 songs; 5 singing games suitable for working with children of an early age. The singing games were taught following the usual classroom procedure to help students understand the practical use of their playing and singing skills in the classroom. During the year, the work and progress of each student was continuously monitored; all respondents achieved a satisfactory level of expected learning outcomes.

Student attitudes towards music education

To collect data about student attitudes towards music education, a scale with good internal consistency was created. The total Cronbach alpha coefficient (α) was 0.826 for the initial survey and 0.822 for the final survey (Table 1). Attitudes are context-specific, therefore it is important to list the statements used to test them (Table 1).
Table 1. Student attitudes towards music education

<table>
<thead>
<tr>
<th>Statements</th>
<th>N</th>
<th>M</th>
<th>SD</th>
<th>M</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Music education is only for those who have talent in music.*</td>
<td>103</td>
<td>4.00</td>
<td>0.94</td>
<td>4.25</td>
<td>0.88</td>
</tr>
<tr>
<td>2. It is good that everybody has an opportunity to learn how to sing.</td>
<td>103</td>
<td>4.37</td>
<td>0.74</td>
<td>4.51</td>
<td>0.73</td>
</tr>
<tr>
<td>3. I think everybody can achieve a certain level of music education.</td>
<td>103</td>
<td>4.33</td>
<td>0.82</td>
<td>4.45</td>
<td>0.76</td>
</tr>
<tr>
<td>4. It is good that everybody has an opportunity to learn how to play.</td>
<td>103</td>
<td>4.11</td>
<td>0.82</td>
<td>4.39</td>
<td>0.65</td>
</tr>
<tr>
<td>5. Singing is a natural human behaviour.</td>
<td>103</td>
<td>3.91</td>
<td>0.96</td>
<td>4.00</td>
<td>0.96</td>
</tr>
<tr>
<td>6. Every child can perform music in a certain way.</td>
<td>103</td>
<td>4.40</td>
<td>0.65</td>
<td>4.57</td>
<td>0.64</td>
</tr>
<tr>
<td>7. Musical abilities are innate and cannot be developed.*</td>
<td>103</td>
<td>4.08</td>
<td>0.94</td>
<td>4.21</td>
<td>0.88</td>
</tr>
<tr>
<td>8. Music has a positive impact on human life.</td>
<td>103</td>
<td>4.87</td>
<td>0.36</td>
<td>4.89</td>
<td>0.34</td>
</tr>
<tr>
<td>9. I believe that teachers must be able to play a musical instrument.</td>
<td>103</td>
<td>4.04</td>
<td>0.93</td>
<td>4.26</td>
<td>0.93</td>
</tr>
<tr>
<td>10. Teachers should be able to sing.</td>
<td>103</td>
<td>3.84</td>
<td>1.12</td>
<td>4.22</td>
<td>0.82</td>
</tr>
<tr>
<td>11. Teachers need to have professional knowledge about music and music teaching methodology.</td>
<td>103</td>
<td>4.14</td>
<td>0.85</td>
<td>4.30</td>
<td>0.74</td>
</tr>
<tr>
<td>12. I believe that early years teacher can successfully teach music in the lower classes of primary school.</td>
<td>103</td>
<td>4.25</td>
<td>0.84</td>
<td>4.44</td>
<td>0.74</td>
</tr>
<tr>
<td>13. I am looking forward to learning how to play.</td>
<td>103</td>
<td>4.20</td>
<td>0.94</td>
<td>4.71</td>
<td>0.54</td>
</tr>
<tr>
<td>14. I am pleased that I will practice singing.</td>
<td>103</td>
<td>3.95</td>
<td>1.08</td>
<td>4.39</td>
<td>0.68</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>103</td>
<td>4.18</td>
<td>0.86</td>
<td>4.40</td>
<td>0.73</td>
</tr>
</tbody>
</table>

*In these statements the scale is reversed.

The initial examination of student attitudes towards music lessons whose effect was monitored shows that the students unanimously agreed with the statement (8) that music has a positive impact on human life. Students partially agreed with other statements on the musical behavior of people (statements 5–8), the need for the musical education of all people...
(statements 1 to 4), the need for teachers to be musically educated (statements 9–12), and the emotional component of attitudes towards their music education during their university studies (statements 13 and 14). The weakest results were those for statements about singing (statements 5, 10 and 14), which suggested less positive attitudes towards learning how to sing than towards other forms of music education. The average value of all statements (M=4.18; SD=0.86; N=103) shows that student attitudes towards musical education were relatively positive prior to the vocal-instrumental lesson, but they were not at the highest level of agreement.

An examination of student attitudes towards musical education after music lessons shows that students unanimously agree with statements claiming that music has a positive impact on human life (statement 8), that it is good that everyone has the opportunity to learn how to sing (statement 2), that every child can perform music in a certain way (statement 6), and that the students are looking forward to learning how to play (statement 13). Students partially agree with all the other statements. The weakest results were for the statement about the innateness of musical abilities (statement 7) and in statements related to the teaching of singing (statement 5 and 10). The average value of all claims (M=4.40; SD=0.73; N=103) shows that student attitudes towards music education were positive after two semesters of vocal-instrumental lessons, but not at the highest degree of agreement.

The aim of this research was to determine the significance of differences in student attitudes towards music education before and after two semesters of vocal-instrumental lessons, and the significance of differences in student attitudes towards music education prior to lessons relative to their musical experience. Based on the standardized skewness and kurtosis test, it can be concluded that the distribution of the variables Student attitudes towards music education before music lessons and Student attitudes towards music education after music lessons significantly deviate from the normal distribution (Table 2).

<table>
<thead>
<tr>
<th>Table 2. Descriptive data on numeric variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>Student attitudes prior to music lessons</td>
</tr>
<tr>
<td>Student attitudes after music lessons</td>
</tr>
</tbody>
</table>
For this reason, the distributions of these variables were normalised using Blom’s formula. These normalised variables were used in further analysis in this paper, and the Kolmogorov-Smirnov test showed that the variables *Student attitudes towards music education prior to music lessons* (p=0.200) and *Student attitudes towards music education after music lessons* (p=0.200) meet the parametric criteria.

The research sought to determine whether student attitudes towards music education changed significantly during two semesters of vocal-instrumental lessons. For this purpose, a *t-test* of paired samples was used; it showed no statistically significant difference (t(102)=0.008; Sig.=0.814) between the total initial score (M=4.18) and the final test (M=4.40). Graph 1 shows the results for each item, pointing to a positive trend in attitudes towards music education after two semesters of vocal-instrumental lessons.

![Graph 1. Student attitudes towards music education by item in initial and final testing](image)

Thus, although the overall result on the scale did not show a statistically significant difference, the higher measurement values in the final test indicate a positive trend in attitudes. The change is most obvious in those items that reflect the emotional component of attitudes towards students’ acquisition of musical skills (Statement 13 *I am looking forward to learning how to play* and statement 14 *I am pleased that I will practice singing*), as well as in the statement that had the lowest value in the initial interview (Statement 10 *Teachers should be able to sing*).

This research sought to identify any significant differences between student attitudes towards music education prior to music lessons at the
faculty compared to the experience of active musical performance. One-factor variance analysis (ANOVA) was used to test significant differences in attitudes towards music education before the musical training of students who had actively participated in a choir (N=25; M=4.45; SD=0.39) or folklore group (N=12; M=4.22; SD=0.32) as compared to those who did not have such experiences (N=66; M=4.07; SD=0.51). A statistically significant difference was found (F (2, 100)=6.447; Sig.=0.002).

The difference in attitudes towards music education before music lessons between students without performance experience and students with choir experience was confirmed by a post hoc Scheffe test (p<0.05), however no difference was confirmed for students with experience in folklore groups (p>0.05) (Graph 2).

![Graph 2. Differences in attitudes towards music education before music lessons depending on prior active musical performance experience](image)

Although the criterion for grouping students according to their choir experience was that they had spent at least two years singing in a choir, the significant difference confirmed that students with choir experience had a more positive attitude towards music education than those without choir experience prior to taking vocal-instrumental lessons.

**Discussion and conclusion**

In some European countries, such as France, England, the Netherlands, Sweden, Germany, Norway, and Scotland (according to Šulentić Begić, Begić, 2014), music teaching in schools is performed by music specialists, not general teachers who either did not attend music courses
during their studies or attended only a few. In countries in which music is taught by general teachers (Slovenia, Hungary, Austria, Italy, Ireland, and Finland, according to Šulentić Begić and Begić, 2014), teacher education programmes differ in length (3 to 5 years), their number of music courses (1 to 3 mandatory courses), and their total amount of mandatory music lessons during the programme (48 to 150 lessons). In these countries, music education at university encompasses music teaching methodology and theoretical music courses, whereas vocal-instrumental courses are included in Finland and Austria and singing courses are included in Hungary (Šulentić Begić and Begić, 2014). Teacher education programmes in Croatia, as mentioned above, are 5 years long and encompass 195 to 300 mandatory music lessons, including theoretical courses, methodology courses, and mandatory vocal-instrumental courses through 2 to 5 semesters, depending on the faculty (Nikolić, 2017a). The music education system in teacher education in Croatia is broader and more purposeful than that of faculties in the other aforementioned European countries. However, in spite of the presence of a parallel educational system of music schools available in most cities (see HDGPP) to all pupils who pass an entrance exam, students enrolling in teacher education do not have out-of-school music education. Music education as a part of general education is modestly limited to one lesson per week throughout eight years of primary education (MZOS, 2006, 12); the only mandatory teaching area is Music Listening, while other areas (Singing, Playing an Instrument, Elements of Musical Creativity) are included into the curriculum at the teacher’s discretion. In grades 4 through 8, Listening and Learning about Music are mandatory, while the other areas are included at the teacher’s discretion (Singing, Playing Music, Musical Notation, Musical Games, Free and Improvised Rhythm, Moving to Music, Dance and Play, Performance, Creativity, and Computers, MZOS, 2006, 66–78). In grammar schools and some other secondary schools, music education is performed as a part of the Music Arts course for two to four years (Škojo, 2013, 302) with one lesson per week; this course is based on listening to music and learning about the history of music (MPK, 1994). However, pupils from other secondary schools who did not attend any music lessons also enrol in teacher education programmes. Considering the fact that there are a negligible number of students with formal music education prior to their university studies, and that only one third have experience in some form of extracurricular music activities, most of the students be-
gin university without knowledge of music theory, without musical performance skills, and with highly divergent musical abilities. The results of this research show that students of teacher education programmes are musically inexperienced, and that music education at the faculty is the first contact with musical performance for most of them. They are unfamiliar with the specificities of learning music, which differ from those in other subjects.

The music education of future teachers in Croatia, besides lessons in music theory and music teaching, includes vocal-instrumental training in the form of group teaching. The model described in this paper illustrates a teaching process that connects learning of the basics of musical literacy and developing the skills of reading, understanding, and analysing notation for children’s songs, acquiring instrumental performance and singing skills, introducing the accompanying psychological and pedagogical phenomena of musical skill acquisition, experientially learning of the method of singing a song by ear, and the method of teaching singing games. In this context, we can say that the course Instrumental Practice I has incorporated these basic musical skills and linked them to the future purpose of these skills. According to the professor’s report, students achieved learning outcomes, but also understood to which extent and in which form these skills would be used in practice. Students continuously fulfilled musical tasks individually and, apart from gaining musical knowledge and skills, they gained experience in performing music in front of others and attended performances of other students, which might contribute to the development of their self-efficacy, self-assessment, and self-confidence if they are successful. Since the teaching outcomes were achieved, potential negative attitudes towards music education should not be a result of students’ low achievement in learning how to play or sing.

The results of this research cannot be compared to the results of previous research due to the diversity of educational systems and cultures, which provide students with different musical experiences as a part of primary and secondary education and extracurricular music activities. For example, Jeanneret (1995, 86) reports that, in the USA and Australia, 40.26% (N=77) of students play a musical instrument, while 53.25% have undergone some form of musical instruction. This research in Croatia has shown that only 4.85% of students have learned to play an instrument, whereas 64.08% did not have any musical per-
formance experience prior to enrolling in the teacher education programme. The teaching content that Jeaneret (1995, 85) mentions differs greatly from the curriculum that was examined in this research, so the impact of such teaching is not comparable. Gifford (1993, 39) reports that 43.4% of students in Australia had learned to play a musical instrument prior to enrolling in university. The same report contains an internal evaluation of teaching, but as no teaching content is mentioned, the results cannot be compared. A research report conducted by Austin (1995) in the United States does not provide information about student music education or university music course curricula. Therefore, learning outcomes and attitudes cannot be compared at present; this may be one of the reasons for the poor exploration of the concept of attitudes in music teaching in teacher education programmes.

This research has shown that students of teacher education programmes have relatively positive attitudes towards music education before music lessons at university. More positive attitudes about the music education of those students who had musical performance experience prior to enrolment point to a connection between attitudes about music education and involvement in extracurricular music activities. Further research is needed to determine whether more positive attitudes are a result of involvement in amateur music making, or if those students with more positive attitudes tend to participate in extracurricular music activities. The research did not confirm that a two-semester vocal-instrumental course in a teacher education programme could significantly influence the attitudes of trainee teachers towards music education. The absence of a positive change in attitude may be attributed to the high results of the initial testing, to instruction that was not directed at creating a positive attitude towards music education, and to the complex nature of attitudes as a psychological construct. However, the observed trend towards positive attitudes after two semesters of music teaching suggests that positive changes in attitude might occur over a longer period of time, and that future research should be conducted across several semesters of music teaching.

The results of this research have not confirmed the hypothesis that the development of music competences is followed by more positive attitudes towards music education; they are thus in line with the results of research by Austin (1995) and Gifford (1993). Concerning the lack of musical experience of the participants in Croatia and the lack of musical knowledge and skills of teacher trainees – which inevitably leads to
a lack of knowledge of the processes by which music competences are acquired – the question remains as to which methods should be used to teach playing and singing to people who acquire music skills as adults in the specific setting of music teaching in teacher education programmes. After conducting research showing that future teachers have less positive attitudes towards music education after a semester of vocal-instrumental instruction, Gifford (1993, 45) concludes that any attempt to teach teacher trainees students as musicians may result in better music teaching skills, but may also result in unwanted consequences such as decreased appreciation of music and decreased enjoyment in the process of music acquisition, as well as a greater resistance to involvement in music education. Considering the results of research that recorded a positive change in attitudes when teacher education contained methodological courses (Barry, 1992; Berke, Colwell, 2004; Lewis, 1991, in: Austin, 1995; Nart, 2016; Phillips, Vispoel, 1990; Siebenaler, 2006), it can be assumed that a higher amount of methodological content in vocal-instrumental courses in teacher education programmes might lead to more positive attitudes.

The limitations of this research are reflected in the measuring instrument for the study of attitudes, which showed a high score in the initial survey of lessons and did not sufficiently differentiate the sample. In addition, the relatively small number of items on the scale precludes the interpretation of the interplay between the cognitive, conative, and emotional components of attitudes on music education in the context of the music education of future teachers. Given the complexity of the concept of attitudes and possible different agents in the teaching process (organisation of the study programme, course plan and programme, professors, teaching conditions), future studies should be conducted across a large number of respondents at different faculties in order to clarify the role of music teaching in teacher education programmes in engendering positive student attitudes towards music education.

The attitude of future teachers is very important to their education as they influence the acquisition and interpretation of knowledge, the definition and selection of tasks, the interpretation of teaching content, and the understanding of the monitoring process (Pajares, 1992, 328). Therefore, discussing attitudes towards music education should be among the aims of music courses in teacher education programmes to create prerequisites for the better music education of future teachers, thereby ensuring higher quality music lessons in primary education.
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STAVOVI STUDENATA UČITELJSKOG STUDIJA O GLAZBENOM OBRAZOVANJU – MOGU LI SE MIJENJATI TIJEKOM NASTAVE GLAZBE?

Lidija Nikolić

U radu su predstavljeni rezultati istraživanja mogućnosti promjena stavova studenata učiteljskoga studija o glazbenom obrazovanju nakon dva semestra vokalno-instrumentalne nastave. Istraživanje je provedeno sa studenticama druge godine učiteljskoga studija (N=103) na Fakultetu za odgojne i obrazovne znanosti u Osijeku, Hrvatska. Rezultati su pokazali kako studentice imaju relativno pozitivne stavove o glazbenom obrazovanju prije i poslije nastave glazbe, a pozitivniji stavovi su zabilježeni kod studentica koje imaju iskustvo pjevanja u zboru. Iako se može ćutit trend pozitivnijih stavova nakon nastave glazbe razlika u stavovima studentica o glazbenom obrazovanju prije i poslije nastave glazbe nije statistički značajna. Sugeriša se istraživanje stavova o glazbenom obrazovanju na većem uzorku studenata učiteljskoga studija, kroz duže vremensko razdoblje i to opsežnim mjernim instrumentom.

Ključne riječi: glazbeno obrazovanje učitelja, kompetencije učitelja primarnog obrazovanja, stavovi o glazbenom obrazovanju, vokalno-instrumentalna nastava