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**Impact of an Interdisciplinary Approach and the  
Implementation of Objectives of Arts and Cultural  
Education on Pupils' Performance in Music Education  
and History, and Importance of Selected Values**

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**Impact of an Interdisciplinary Approach and the Implementation of Objectives of Arts and Cultural Education on Pupils' Performance in Music Education and History, and Importance of Selected Values**

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**Abstract**

This paper presents the results of a research study, the objective of which was to investigate whether an interdisciplinary approach to music and history education with implementation of arts and cultural education, could influence pupils' performance in music education and history, and importance of selected values. The research sample included 76 pupils (aged fourteen to fifteen) from the ninth grade of elementary school in Slovenia. An experimental programme of interdisciplinary connections between music education and history has been designed, which comprised, in addition to other learning objectives of arts and cultural education, a collaborative project with a composer. The research results confirmed positive effects of the programme. The pupils of experimental group in comparison with pupils of control group, achieved significantly higher scores on music education and history exams. Furthermore, pupils of experimental group assigned higher level of importance to values such as: culture, arts, creativity and knowledge.

**Keywords:** interdisciplinary approach; music education; history; arts and cultural education; values

## Introduction

The modern society has constantly been posing new challenges to education, changing the concepts of knowledge, due to which monitoring, modernisation and development of the curriculum have become an integral part of the school system. In the search for the answer to the question of what the modern curricula should be like, educational policies have increasingly been focusing on connections between individual subjects and subject areas. The increasing fragmentation of knowledge which can no longer meet the needs of the today's society, is a problem we have become more and more aware of.

Research shows that interdisciplinarity influences the development of generic contents (Hodnik Čadež, 2007) and learning goals of higher taxonomic levels (Pavlič Škerjanc, 2010), improves motivation and interest in the learning process (Drake, 1998; Ross and Hogaboam - Gray, 1998; Bolak, Bialach and Dunphy, 2005; Sicherl - Kafol, 2007; Cheung, 2008; Michelsen and Sriraman, 2009; Serrano Pastor, 2013), and enables better learning results (Upitis and Smithrim, 2003; Bolak, Bialach and Dunphy, 2005; Bresler, 2010; Birsa, 2011).

With the recognition of its positive aspects in the recent year, interdisciplinarity has become a common part of the learning process in Slovenia as well (Sardoč, 2004; Sicherl - Kafol, 2007). However, a study by Štemberger (2007) showed that most teachers implemented interdisciplinarity spontaneously, when a suitable occasion arises. Moreover, Filipčič and Hodnik Čadež (2005) found teachers' understanding of interdisciplinarity debatable, if not modest. Further review of the existing Slovene literature reveals that the majority of interdisciplinarity-related studies were carried out at the level of the first and second triennium of elementary school (Krek, Hodnik Čadež, Vogrinc, Sicherl - Kafol, Devjak, 2007; Štemberger, 2007; Marjanovič Umek, Pečjak, Kranjc, Kordigel Aberšek, Saksida, Žakelj et al., 2011) and that teachers implemented interdisciplinarity mostly in the framework of individual projects or crosscurricular topics (Krek, Hodnik Čadež, Vogrinc et al., 2007; Rutar Ilc and Pavlič Škerjanc, 2010). This suggests that in general, interdisciplinarity is not planned, which also casts doubt on the suitability and quality of its implementation.

In fact, systematic planning and implementation of interdisciplinarity are two important aspects of ensuring its quality, as they enable a shift from focusing merely on content to including also the dimensions related to process and goals, while taking into account the autonomy of individual subject areas. A successful interdisciplinary approach also requires a good balance where all the subjects involved are included throughout the learning process, including examination and evaluation. However, very often certain subjects are only used to consolidate the contents of other subject areas (Snyder, 1996; Mills, 2001) which is the so called "subservient style" of integrating a subject (Bresler, 1995). A very common example of such one-sided integration is the integration of the arts with non-artistic subjects (Winner and Hetland, 2000; Bolak, Bialach and Dunphy, 2005; Bresler, 2010; Serrano Pastor, 2013). Therefore, several authors (Bresler, 1995; Cosenza, 2005; Suraco, 2006; Barry, 2008) point out the importance of interdisciplinary connections where the arts are equal in relation to other disciplines.

One possible basis for planning and implementation of quality interdisciplinary teaching is culture and arts education which is in itself an interdisciplinary subject.

The role and importance of including culture and arts education in the learning process are emphasised by various documents and state institutions (Road Map for Arts Education, 2006; National Guidelines for Culture and Arts Education, 2009; Draft Model of Culture and Arts Education, 2009; National Programme for Culture 2012-2015, 2011; Seoul Agenda: Goals for the Development on Arts Education, 2010). However, with a few exceptions (Bucik, Požar Matijašič, Pirc, Barle Lakota and Markun Puhan, 2011), these documents only bring the theoretical basis without providing any practical guidelines and examples of best practice which would encourage teachers to implement a quality culture and arts education throughout the entire educational process.

Several studies (Upitis in Smithrim, 2003; Bamford, 2006; Road Map for Arts Education, 2006; Cheung, 2008; Draft Model of Culture and Arts Education, 2009; Seoul Agenda: Goals for the Development of Arts Education, 2010; Sicherl-Kafol and Denac, 2011) report about positive effects of culture and arts education in terms of professional cooperation between artists and schools or individual teachers. Cooperation with artists and their involvement in the creative process influences pupils' learning performance and communication skills as well as the development of their creative, imaginative, critical and reflective thinking (Cheung, 2008).

Therefore, the present paper studies the impacts interdisciplinary teaching and integration of the goals of culture and arts education had on pupils' performance in music and history examinations, but focuses also on the development of values. We wish to bring culture and arts education closer to pupils as an opportunity for creating, acquiring aesthetic experience and developing critical reflection and thinking.

### *Values*

As generally accepted guidance for life, values are important in every society and culture and are as such subject to intense research by various scientific disciplines.

In the past, many authors (Schwartz and Bilsky, 1987; Rokeach, 1973; Herman, 2005) dealt with the issue of defining values, attributing them normative as well as motivational functions. Musek (2000, p. 9) defined values in the framework of motivational objectives and guidance, saying that they are “/.../ generalised and relatively permanent ideas about objectives and phenomena which are highly valued, refer to broad categories of subordinate objects and relations and serve as life guidance, directing our interests and behaviour.”

In the life of an individual, there are various values, organised in a value system within which individual elements, i.e. values are present in specific relations towards other values (Musek, 2000). People perceive some values as more important than others.

To establish the similarities and differences between individuals and the society in perception of values, value systems and orientations, researchers in the 1960's shifted away from mere theoretical studies of values, taking up measuring and empirical researching on a larger scale as well (Ingarden, 1975; Kluckhohn, 1951; Rokeach, 1973; Hofstede, 1980; Schwartz and Bilsky, 1990).

The following psychological classification of values by Musek (2010) is also based on empirical taxonomy of values:

- Dionysiac values  
*Hedonic type*: values related to sensuality, health and safety (joy, entertainment, sociability, excitement, life, comfort, sexuality, good food, free movement, health, safety, rest);  
*Potency type*: status-related, patriotic, legalistic values (power, reputation, fame, money, political success, exceeding others, long life, love of one's country, national pride, order, laws);
- Apollonian values  
*Moral type*: traditional, family and societal values (honesty, kindness, diligence, family happiness, good relationship with one's partner, love for children, love, hope, equality, national equality, peace, concord, justice);  
*Fulfilling type*: cultural, aesthetic, actualisation, cognitive, religious values (culture, arts, creativity, beauty, nature, self-fulfilment, knowledge, progress, truth, wisdom, faith).

Hence, values can be understood as one of the key factors influencing our personality. Therefore, it is important to understand how an individual acquires, develops or internalises individual values. Herman (2005) merged seemingly completely contrasting theoretical suppositions by authors, such as Sigmund Freud, Erik Erikson, Lawrence Kohlberg and Carol Gilligan into a two-stage model. The "social transmission approach" covers the period from birth to the conclusion of childhood. During this period, the school, parents, teachers, mass media etc. have the most powerful opportunity to transmit values to children who are susceptible to influences from their environment (ibid, p. 399). The second stage, which Herman (2005, p. 401) calls the "cognitive developmental approach", begins with adolescence. During this period the development of values begins to crystallise, because an individual can explore, think about and reflect upon the values they acquired in their childhood thanks to the development of their cognitive abilities. Internalisation of values begins, which is necessary for the formation of personality.

Which values pupils will preserve and internalise as adults and which they will change or reject therefore depends also on which values are encouraged during their education process. In Slovenia, the Elementary School Act (ZOs<sub>n</sub>-F, 2007) defines the following generally accepted values which must be taken into account in preparation of educational plans: ".../ general cultural and civilization values stemming from the European tradition; mutual respect, working together to accept differences and achieve tolerance; respect for human rights and basic freedoms«. In selecting their core values, public elementary schools can also rely on the Recommendations for Establishing and Implementing Elementary School Educational Plan (2008) which provides a guideline in the sense of general civilisation values, e.g. justice, solidarity, respect for human rights and the rights of children, tolerance, etc.

Research shows that in Slovene schools, moral values are the most commonly selected, followed by potency, hedonic and fulfilling values (Medveša, 2011;

Šinkovec, 2013). Our study focused on the most seldom chosen type of values - the fulfilling type. The aim was to verify whether it is possible to influence the importance pupils attribute to values such as culture, arts, creativity and knowledge by introducing interdisciplinary approach and arts and culture education objectives.

## **Methodology**

### *Research Objectives*

To draft an experimental programme for interdisciplinary teaching in music and history in the ninth grade of elementary school in terms of teaching processes, objectives, methods, activities and subject-matter, all the while implementing the learning objectives of arts and cultural education.

Evaluate the effectiveness of existing and experimental teaching programmes with regard to:

- pupils' performance at music and history examination;
- importance attributed to the selected values (culture, arts, creativity, knowledge).

In the present paper, partial results of a broader study are presented.

### *Research Hypotheses*

H 1.1: It is assumed that the pupils of the EG will perform better than the pupils of the CG in a music exam held after the experiment.

H 1.2: It is assumed that the pupils of the EG will perform better than the pupils of the CG in a history exam held after the experiment.

H 1.3: It is assumed that after the experiment the pupils of the EG will be more successful in describing certain interdisciplinary concepts than the pupils of the CG.

H 2.1: It is assumed that after the experiment the pupils of the EG will rate culture as a value higher than the pupils of the CG.

H 2.2: It is assumed that after the experiment the pupils of the EG will rate arts as a value higher than the pupils of the CG.

H 2.3: It is assumed that after the experiment the pupils of the EG will rate creativity as a value higher than the pupils of the CG.

H 2.4: It is assumed that after the experiment the pupils of the EG will rate knowledge as value higher than the pupils of the CG.

### *Experimental Programme*

The experimental programme has been developed on the basis of interdisciplinary didactic approach. A team of music and history teachers collaboratively planned each didactic unit. The team derived from developmental and

goal-oriented models, taking into consideration general and operative goals and the subject-matter covered by the curriculums. Based on didactic elements of both music education and history, the team identified the cohesive elements at the level of learning processes and objectives as well as teaching methods, subject-matter, and activities, which were implemented within each subject. The concept of arts and cultural education proved to be an important cohesive element. Based on the theoretical background of arts and cultural education (*National Guidelines for Culture and Arts Education 2009; Road Map for Arts Education, 2006;*) we recapitulated the process goals of arts and cultural education, which are as follows: to develop pupils' critical thinking, a critical attitude towards culture and arts, aesthetic sensitivity, creativity, tolerance to other cultures, cultural awareness, attitude towards preservation of art and cultural heritage, to enable them to experience and re-experience cultural creations, understand the importance of intercultural dialogue, build their cultural identity, and learn about one's own culture and the cultures of other nations. These process goals of arts and cultural education were then incorporated into the didactic units of music education and history.

In the context of the culture and arts principle highlighting the importance of partnership, our experimental programme included an interdisciplinary project which the pupils named *Music through History*. The project in collaboration with a famous Slovenian female composer was in fact an upgrade of the interdisciplinary approach to music education and history.

The purpose of this project was to create a learning environment which would enable most pupils, through direct contact and interaction with a composer, unique experience exploring, perceiving, evaluating, and learning about the sphere of sound. The main underlying objective of the project was based on creative process, with pupils looking for inspiration in historical events. They created their own composition which they named "1'33" and an overview of the 20th century, combining music and history. The project ended with pupils' performances and team evaluation involving teachers, pupils, and the composer.

The experiment comprised:

- 12 music lessons (37.5% of all music lessons in the ninth grade) covering the following topics: Impressionism, Science and art in the 20th century, Music in the 1st half of the 20th century, Music in the 2nd half of the 20th century, Slovenian music in the 1st half of the 20th century, Slovenian music in the 2nd half of the 20th century, Jazz;
- 25 history lessons (39.0% of all history lessons in the ninth grade) covering the following topics: World War I, World between the World Wars, Slovenians between the World Wars, World War II, Slovenians during World War II, World after World War II;
- 14 lessons (6 music lessons, 2 history lessons, 6 lessons before and after class) – implementation of the interdisciplinary project *Music through History* in collaboration with a composer.

The survey was designed as a single factor experiment with classes serving as comparison units, one being the experimental group and the other the control



group. We investigated the effect of an interdisciplinary didactic approach and the implementation of learning objectives of arts and cultural education.

The experimental factor had two modalities:

- Teaching music education and history according to standard curriculum and traditional teaching methods;
- Teaching music education and history according to standard curriculum with an interdisciplinary didactic approach, implementing the objectives of arts and cultural education in the intended and delivered school curriculum and including an interdisciplinary project in collaboration with a composer.

### *Method*

To study the effectiveness of interdisciplinary teaching in music education and history, while implementing objectives of arts and cultural education, we used an experimental method of empirical/analytical pedagogic research paradigm.

### *Study Population*

We surveyed four classes of ninth graders from two elementary schools (aged fourteen to fifteen). The pupils were divided into two groups, namely, the control group (n = 33) and the experimental group (n = 43). In terms of statistical hypothesis testing, the two selected groups of pupils, represent a simple random sample from a hypothetical population.

### *Data Collection*

Prior to conducting the experiment, we selected the participating classes from the chosen elementary schools, which provided us with some general information. Then, we obtained the required permits from headmistresses, teachers, pupils, and pupils' parents. Further, we gathered information on the initial and final states of the control group and the experimental group by means of examination and questionnaire. Both research instruments had been designed specifically for this survey.

### Content and Formal Characteristics of the Exam

The initial music and history exam was designed to evaluate prior knowledge of pupils in both, experimental and control groups. The part of examination related to music comprised seven questions (total 13 points), four of which were short answer questions, one was a connecting exercise, while two were long answer exercises. Most exercises (42.9%) were at the level of knowledge measuring, while the rest of them involved understanding and application (28.6%) and interpretation of concepts (28.6%). The initial history exam was composed of seven questions (total 10 points), among which there were four multiple choice exercises at the level of knowledge measuring (57.2%), one short answer exercise and one connecting exercise, both

involving the levels of understanding and application (28.6%), and one exercise requiring a longer answer and interpretation of concepts (14.3%).

The final music and history exam was designed to check pupils' progress, comparing the experimental and the control groups. The music exam was composed of nine exercises (31.5 points), 7 of which were short answer exercises, one was a long answer exercise and one a connecting exercise. The exercises measured the levels of knowledge (22.3%), understanding (33.4%) and application (44.5%).

The final history exam was composed of 16 questions (43 points). It comprised six short answer exercises, six long answer exercises, a gap filling exercise, two connecting exercises and one exercise composed of two long answer questions and a short one. The exercises measured pupils' knowledge (27%), understanding (33.4%) and application of knowledge (39.6%).

For the final exam we prepared an additional exercise in which pupils were asked to explain 9 concepts (9 points). We processed the answers to this exercise independently of the rest of the exam, as they relate to understanding and application of knowledge acquired at music education and history.

Analysis of individual exercises of the initial and final exams in music education and history showed that the average value of the difficulty index (p%) ranged between 40 and 80%, with some exercises standing out (31.6%; 34.2; 90.8%). As regards discriminativity (r pb), all exercises were suitable, as all the r pb indices were above 0.30.

### Measuring Characteristics of the Exam

#### 1. Validity

We ensured content validity by verifying the exams against the goals and standards of knowledge set in the curricula. Both exams were subject to appraisal by experts.

#### 2. Reliability

Cronbach's coefficient alpha ( $\alpha$ ) was used to verify the reliability of the music and history exams. The coefficients of the music (0.87) and history (0.88) exams following the experiment show high reliability of both examinations.

#### 3. Objectivity

Objectivity of the execution of the music and history exams were ensured by giving the basic information and instructions to the teachers present at the examinations. Objective processing of the answers was ensured with unified evaluation criteria.

### *Data Processing*

The data was processed at a descriptive and inferential levels, using the following statistical methods:

- frequency distribution of variables (f, f %),

- t-test for independent samples with Levene’s test,
- basic descriptive statistic: arithmetic mean ( $\bar{x}$ ). standard deviation (s),
- $\chi^2$  test (Pearson's  $\chi^2$  test) of the hypothesis of independence,
- Cronbach's alpha ( $\alpha$ ).

## Results

### *Pupils’ Performance in the Music and History Exams*

We carried out the analysis of state factors prior to the experiment based on an exam in which we tested pupils’ knowledge in music and history in the experimental group and in the control group. The result of the t-test showed that between the two groups, there were no statistically significant differences in the overall results of the music exam ( $t = 0.854$ ,  $P = 0.396$ ) and history exam ( $t = 1.332$ ,  $P = 0.106$ ).

This chapter presents the results which refer to pupils’ performance in the music and history exams carried out after the experiment.

**Table 1.** *Results of the t-test of the Differences in the Overall Results of the Music Exam between the Experimental Group (EG) and the Control Groups (CG)*

Group	Number n	Arithmetic Mean $\bar{x}$	Standard Deviation s	Homogeneity of Variance Test		Difference of Arithmetic Means Test	
				F	P	t	P
EG	43	17.38	6.574	21.510	0.000	12.566	0.000
CG	33	3.06	3.114				

As it is evident from Table 1, the assumption about homogeneity of variance was not justified ( $F = 21,510$ ,  $P = 0,000$ ). Therefore, we referred to the approximate t-test which showed a statistically typical difference ( $P = 0.000$ ) of arithmetic means of the experimental and control groups’ music exam results. In the music exam following the experiment, pupils of the experimental group ( $\bar{x} = 17.38$ ) performed better than pupils of the control group ( $\bar{x} = 3.06$ ), which confirmed the research hypothesis *H 1.1*.

**Table 2.** *Results of the t-test of the Differences in the Overall Results of the History Exam between the Experimental Group (EG) and the Control Group (CG)*

Group	Number n	Arithmetic Mean $\bar{x}$	Standard Deviation s	Homogeneity of Variance Test		Difference of Arithmetic Means Test	
				F	P	t	P
EG	43	33.56	6.123	3.202	0.078	9.552	0.000
CG	33	17.97	8.111				

Analysis of the results of history exam showed that the assumption on homogeneity of variance was justified ( $F = 3.202$ ,  $P = 0.078$ ). The difference ( $P = 0.000$ ) of arithmetic means of the experimental and control groups' exam results was statistically typical ( $P = 0,000$ ). In the history exam following the experiment, pupils of the experimental group ( $\bar{x} = 33.56$ ) performed better than pupils of the control group ( $\bar{x} = 17.97$ ). Based on this, we confirmed the *research hypothesis H 1.2*.

**Table 3.** Results of the t-test of the Differences between the Experimental Group (EG) and the Control Groups (CG) in the Overall Results of the Exercise regarding Interdisciplinary Music and History Concepts

Group	Number n	Arithmetic Mean $\bar{x}$	Standard Deviation s	Homogeneity of Variance Test		Difference of Arithmetic Means Test	
				F	P	t	P
EG	43	3.59	1.849	6.002	0.017	8.304	0.000
CG	33	0.79	1.068				

We analysed pupils' performance also from the point of view of understanding interdisciplinary concepts. Here the assumption on homogeneity of variance was not justified ( $F = 6.002$ ,  $P = 0.017$ ). Consequently, we referred to the approximate t-test which showed a statistically typical ( $P = 0.000$ ) difference of arithmetic means of the experimental and control groups' interdisciplinary concepts test results. In the interdisciplinary concepts exam following the experiment, the pupils of the experimental group ( $\bar{x} = 3.59$ ) performed better than the pupils of the control group ( $\bar{x} = 0.79$ ). Based on these results, we confirmed the *research hypothesis H 1.3*.

#### *Rating of the Selected Values*

Before and after the experiment, pupils of the two groups were asked to rate a selection of values (health, freedom, love, religion, fun, money, fame, comfort, culture, arts, creativity, knowledge) in terms of importance (1 - the least important; 5 - very important). In line with the hypotheses, this chapter presents the results for the following values: culture, the arts, creativity, knowledge.

Analysis of the state prior to the experiment showed no statistically typical difference between the experimental and control groups in terms of importance attributed to individual values: culture ( $\chi^2 = 4.032$ ;  $g = 4$ ;  $P = 0.402$ ), the arts ( $\chi^2 = 3.578$ ;  $g = 4$ ;  $P = 0.466$ ), creativity ( $\chi^2 = 4.678$ ;  $g = 4$ ;  $P = 0.322$ ), knowledge ( $\chi^2 = 1.262$ ;  $g = 4$ ;  $P = 0.868$ ).

The following table presents the results regarding the importance of values obtained after the experiment.

**Table 4.** Results of the  $\chi^2$  Test of the Hypothesis on Independence between the Groups of Pupils (EG, CG) and the Importance attributed to the selected Values

Value	Attributed Mark	EG		CG	
		f	f %	f	f %
Culture $\chi^2 = 17.089$ ; g = 4; P = 0.002	1	3	7.0	1	3.0
	2	7	16.3	1	3.0
	3	16	37.2	7	21.2
	4	14	32.6	9	27.3
	5	3	7.0	15	45.5
The Arts $\chi^2 = 22.009$ ; g = 4; P = 0.000	1	4	9.3	2	6.1
	2	8	18.6	2	6.1
	3	19	44.2	7	21.2
	4	11	25.6	7	21.2
	5	1	2.3	15	45.5
Creativity $\chi^2 = 19.135$ ; g = 4; P = 0.001	1	9	20.9	4	12.1
	2	11	25.6	7	21.2
	3	15	34.9	3	9.1
	4	7	16.3	7	21.2
	5	1	2.3	12	36.4
Knowledge $\chi^2 = 10.520$ ; g = 4; P = 0.033	1	22	51.2	10	30.3
	2	14	32.6	9	27.3
	3	7	16.3	8	24.2
	4	0	0.0	4	12.1
	5	0	0.0	2	6.1

As it is evident from Table 4, there was a statistically typical difference between the two groups compared as regards the importance of individual values. The pupils of the experimental group rated culture ( $\chi^2 = 17.089$ ; g = 4; P = 0.002), the arts ( $\chi^2 = 22.009$ ; g = 4; P = 0.000), creativity ( $\chi^2 = 19.135$ ; g = 1; P = 0.000) and knowledge ( $\chi^2 = 10.520$ ; g = 4; P = 0.033) higher in terms of their importance as the pupils of the control group did. The smallest difference between the two groups is in the grades given to knowledge. Based on the above results we *confirmed the research hypotheses H 2.1, H 2.2, H 2.3, H 2.4.*

## Discussion

The experimental group performed better in the exams concerning music, history and interdisciplinary concepts than the control group, which we attributed to the experimental interdisciplinary teaching programme which proved to be more efficient than the traditional teaching. Active involvement in the interdisciplinary learning process enabled the pupils of the experimental group to explore, analyse, interpret, evaluate and critically judge various contents on their own. Interdisciplinarity at the level of content, goals and processed helped pupils establish meaningful connections between music and history. Various studies confirmed (Ivanitskaya, Clark, Montgomery and Primeau, 2002; Cubero, 2005, as cited in Casal Madinabeitia, 2007)

that the shift from a disconnected network of knowledge to establishing meaningful connections between disciplines facilitates the personal process of knowledge organisation and contributes to long-term knowledge, better activity, intuition and thinking. Furthermore, authors (Upitis, Smithrim, Patteson and Meban, 2001; Upitis and Smithrim, 2003; Bresler, 2010) claim that interdisciplinarity increases pupils' general performance in examinations.

Apart from testing pupils' knowledge, the study also focused on promoting and shaping of certain fulfilling type values. Results showed that after the experiment, the pupils of the experimental group rated culture, the arts, creativity and knowledge higher in terms of their importance than the pupils of the control group.

We believe that the inclusion and implementation of culture and arts education goals, such as critical thinking, cultural identity building, development of creativity, raising awareness about and expressing one's own culture, learning about other cultures, promoting tolerance and respect for differences and learning about the importance of cultural heritage, in the learning process helped raise pupils' awareness about the importance of the values in question, thus contributing to the above mentioned results. The cooperation of pupils with the composer within the interdisciplinary project *Music through History* which gave pupils the opportunity to explore and discover their own creative potentials also played an important role. Hence, this creative process, which pupils were able to experience first hand, proved to be the most important part of the project. The above mentioned results of the study match the findings by Sicherl-Kafol and Denac (2011) and Cheung (2008), confirming that cooperation with an artist influences the development of competences in the field of cultural awareness and ability to express, while the artistic experience redefines one's attitude towards the arts.

However, based on the results of the study, it is not possible to conclude that there were any changes in the value hierarchy or orientation (pupils were not required to rank the values), nor that pupils of the experimental group actually internalised the values concerned. In fact, various authors (Rokeach, 1973; Kilby, 1993; Musek, 2010) observed that value orientation changes over a longer period of time. Still, the results are encouraging, given the fact that the experimental programme helped pupils to recognise culture, the arts, creativity and knowledge as important values in their lives.

## **Conclusions**

Research findings confirmed that interdisciplinary approach to music education and history and participation of artists in the educational process had positive effects on pupils' performance in exams and their appreciation of the selected fulfilling values. Studies on positive effects of interdisciplinary teaching could serve as stimulus to examine more thoroughly the possibilities of a planned and systematic implementation of interdisciplinarity in the learning process. Further research in culture and arts education could also contribute to a greater awareness of teachers and others involved in education about the importance of cooperation between schools and artists or cultural institutions. Beside the basic human values, such as respect,

tolerance, equality, it would be necessary to include values of the fulfilling type (such as culture, the arts, creativity, beauty, nature, self-fulfilment, knowledge, truth) into the educational process as well. In this respect, further research in this field which would monitor this category of values over a longer period of time would be welcome.

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