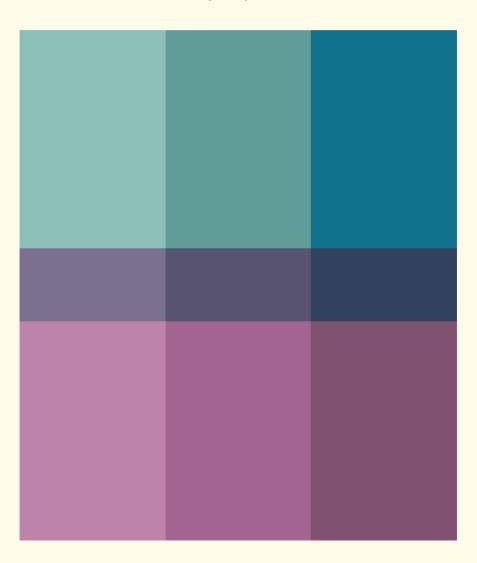
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C-E-P-S Journal

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The CEPS Journal is an open-access, peerreviewed journal devoted to publishing research papers in different fields of education, including scientific.

Aims & Scope

The CEPS Journal is an international peer-reviewed journal with an international board. It publishes original empirical and theoretical studies from a wide variety of academic disciplines related to the field of Teacher Education and Educational Sciences; in particular, it will support comparative studies in the field. Regional context is stressed but the journal remains open to researchers and contributors across all European countries and worldwide. There are four issues per year. Issues are focused on specific areas but there is also space for non-focused articles and book reviews.

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The University of Ljubljana is one of the largest universities in the region (see www.uni-lj.si) and its Faculty of Education (see www.pef.uni-lj.si), established in 1947, has the leading role in teacher education and education sciences in Slovenia. It is well positioned in regional and European cooperation programmes in teaching and research. A publishing unit oversees the dissemination of research results and informs the interested public about new trends in the broad area of teacher education and education sciences; to date, numerous monographs and publications have been published, not just in Slovenian but also in English.

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national educational system during the period of social transition in the 1990s, to upgrade expertise and to strengthen international cooperation. CEPS has established a number of fruitful contacts, both in the region – particularly with similar institutions in the countries of the Western Balkans – and with interested partners in EU member states and worldwide.

~ ,

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V reviji so objavljeni znanstveni prispevki, in sicer teoretični prispevki in prispevki, v katerih so predstavljeni rezultati kvantitavnih in kvalitativnih empiričnih raziskav. Še posebej poudarjen je pomen komparativnih raziskav.

Revija izide štirikrat letno. Številke so tematsko opredeljene, v njih pa je prostor tudi za netematske prispevke in predstavitve ter recenzije novih publikacij.

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Editorial

Art, for Children's Sake! At the Crossroads of Making, Understanding and Teaching Visual Art

The title of the present issue of CEPS journal is taken from a commentary article by Jean Hendrickson (2014), paraphrasing the autotelic bohemian slogan "art, for art's sake". With this paraphrase, Hendrickson takes up the discussion about the role of the arts in schools. We are used to ascribing two complementary roles to art in the educational environment. On the one hand, art is an isolated and self-sufficient subject – "art for art's sake" – in which children relax from "real work" in other subjects and make beautiful things. On the other hand, artistic skills are instrumentalised – "arts integration" – to serve other "more important", meaning mathematical, language, natural, social, and similar subjects. Which of the two extremes should we pursue – "art for art's sake" or "arts integration" – Hendrickson asks? Most would agree that the answer is both. However, Hendrickson reminds us that such a compromise is pyrrhic and that we should completely switch our perspective to the third option – "art, for children's sake".

According to the "art for children's sake" standpoint, art in schools should neither be treated as self-imposed "relaxation", nor as pragmatic subordination to serve other "real" subjects, but should be recognised for the complex and fundamental role that it has in the emotional, cognitive, and social development of a child. Schools should acknowledge that the experiences that young people acquire through visual art enable them to develop fully as human beings and better understand the world in which they live. From a very early age, within their families and through contact with society, children accumulate and learn to use an increasingly greater body of visual language. Thus, the role of the school is to broaden, deepen, and structure this language progressively in many ways.

In the present issue, we conceptualise the »art for children's sake« stand-point at the intersection of making art, understanding art, and teaching art. At this crossroads, the next three topics surface as especially important to us: (1) teaching visual art, (2) teaching of visual art, and (3) teaching with visual art.

The first topic, teaching visual art, addresses the processes of learning and teaching the practice of art itself. About that, several questions arise: What is the relevance of art practice in teaching art? How does art practice influence the development of different cognitive skills in children? Should an art teacher be a practising artist himself? How can the methods of visual art practice be extended

to art education? How should art teachers themselves be educated at universities?

The second topic, the teaching of visual art, addresses the problems regarding the role of discourse (theory) in the process of visual art education, such as: What is the role of discourse in understanding art? What types of discourses (theories) are relevant in the process of art education? What is the relationship between art practice and discourse on art (e.g., art theory, art history) in art education?

The third topic, teaching with visual art, addresses the interdisciplinary role of visual art, how teaching and learning other subjects and disciplines can be art-based, and how other fields of study can prosper from art. The relevant questions are: How can other subjects and disciplines and their competencies benefit from visual art? What are the risks and downsides (of improper use) of interdisciplinarity for the visual art itself? How can different strategies or methods of visual art (e.g., visualisations, representations, etc.) assist other areas of knowledge?

The papers presented in the focus issue address these topics in various ways and in different national and cultural contexts. They are arranged as follows

The issue starts with a review article that makes an overview of relevant topics related to the understanding of the role of art in art education. The article, by Zlata Tomljenović and Sanja Tatalović Vorkapić, is entitled *Constructivism in Visual Arts Classes* and presents constructivist teaching theories and makes a conceptualisation of the possibility of their application to learning and teaching of visual arts. The main principles of constructivist-based teaching of visual arts are interpreted related to other contemporary teaching strategies and approaches, such as active learning, learning through problem-solving, and interactive approaches. By linking art education to the constructivist perspective, the paper provides a certain common thread to the issue and, in a way, underscores the articles that follow.

The issue continues with papers that focus on the theoretical conceptualisation of problems related to the relationship between art education and its parent discipline (art), to the reflection of interdisciplinarity in art education and to some dilemmas regarding artistic development.

The second article, by Petra Šobáňová and Jana Jiroutová, with the title Connecting Art Education Learning Tasks with the Artistic Field: The Factor of Quality in Art Lessons, deals with the issue of how learning tasks in art education should be related with the parent discipline – the artistic field – which quality factors should be taken into account and how the quality of art lessons could be derived based on that. The authors draw on the current theoretical and

empirical research on quality which identifies individual quality factors.

The third article is by Bea Tomšič Amon, entitled *Interdisciplinary Connections through Transmedia Narratives in Art Education*. This article addresses the importance of the interdisciplinary role of art education and the education of art teachers. It presents research in which the participants, future art teachers, had to compare artistic compositions and visual compositions from nature. Understanding how art follows nature is an important goal within the education of future art teachers. Difficulty in connecting data, the transfer of knowledge, and the ability to give meaning to images, as well as understanding visual and verbal discourse, seems to be a persistent problem in many aspects within their education.

In the fourth article, with the provocative title »Do not touch it!« Today's Children's Visual Competencies in Comparison with the Pre-Digital Era in Light of their Art Educational Environment, Gabriella Pataky discusses the problem of the deterioration of visual competencies in today's children by presenting an ongoing project that sought to address two problems: first, how do plastic, spatial (3D) creative capacities develop, and how do they compare with the kindergarten's accustomed advancement of picture-creating, planar (2D) capabilities? Second, how do kindergartners' skills measured in the 1970s compare with those of the kindergartners of today?

The rest of the issue is dedicated to papers that focus on the empirical study of different artistic capabilities within specific groups of pupils and in different national contexts, and to papers that are practice-based and oriented to the usage of specific artistic strategies in art education.

The fifth article, entitled *The State of Art Appreciation among Nine- and Ten-Year-Old Students in Slovenian Primary Schools* by Jerneja Herzog and Matjaž Duh, researches how in the contemporary process of teaching fine arts, pupils' creative expression and art appreciation are used to encourage learners towards both perception and reception. The evaluation and internalisation of works of art should play an equally important role as art practice. In art education practice, they manage to provide adequate incentives for artistic expression but pay less attention to developing art appreciation.

The sixth article, written by Silvie Novotná, is entitled *Artists/Ceramists* in the Role of University Teachers. This study deals with the topic of tertiary education in the field of ceramics at Palacký University Olomouc, Czech Republic. The incorporation of ceramics into the education of future art teachers in Olomouc was not always a matter of course, as it is today. It underwent many changes during the second half of the 20th century. Several personalities played significant roles in the process of the gradual consolidation of its position in

art pedagogical education. This historical study connects its theme with socio-political events, as well as with the development of fine arts in the second half of the 20th century. Thus, it contributes to the formation of a comprehensive picture of the topic »artists as art teachers« in the Europe-wide context.

The seventh article, by Dunja Pivac and Maja Zemunik, with the title *The Self-Portrait as a Means of Self-Investigation, Self-Projection and Identification among the Primary School Population in Croatia*, presents self-portrait as a reflection of personality in a visual, physical sense but also in the psychological sense when self-portrait becomes a mediator of communication with oneself, a medium of self-investigation. Expressive and projective dimensions of children's drawings, which can indicate the possibility of diagnostic and potentially therapeutic activity within the regular elementary education system, were considered as a starting point. The project also tended to examine the impact of the rational-cognitive principles of teaching on children's creativity and expression. In this manner, self-portrait exists as the means of self-reflection, self-awareness and accepting the Self.

The eighth paper, entitled *Cross-Curricular Analysis* of Picture Books in the Fifth Grade of Primary School: A Case Study, is by Janja Batič and Petra Lebar Kac. The objective of the case study was to explore how a cross-curricular approach to planning and executing Slovenian language lessons and visual art lessons can help pupils learn about the characteristics of the picture book as a multi-modal text. The authors conducted a set of didactic activities entitled *Getting to know the picture book*, introducing selected picture books to pupils as part of their Slovenian language classes, which resulted in the pupils developing their receptive skills while observing and defining the structure of the texts. In visual art classes, the pupils learned about the visual features of the picture book.

The focus issue is completed with the article *Teachers' Views on the Use of Photography in Teaching Arts in Croatian Primary Schools* by Nina Licul. Although photography is part of a daily visual communication and gallery exhibitions, there is no structured approach to photography as a medium for learning the arts in Croatian primary schools. The objectives of the quantitative study were to determine art teachers' views on their knowledge about photography, their abilities in using photography in art teaching, obstacles in using photography in art teaching and the importance of photography in students' visual culture.

The focus issue is complemented with two articles from the Varia section and two book reviews.

The first VARIA article is written by Ceyhun Alemdağ and is entitled Changes in Learning Style Preferences of Physical Education Students. This study

reports a three-year process to explain the change in the learning styles of physical education students. It also involves an assessment of the overall academic achievement of physical education students based on their learning style preferences throughout this process.

The second VARIA article is written by Andreja Bubić and is entitled *The Relevance of Learning Approaches and Temporal Perspective for Test-Taking*. The study addressed the way college students reflect on the process of preparing for tests. Specifically, it investigated the relevance of students' achievement goals, perceived academic control, and consideration of future consequences for several aspects of the test-taking process. The results obtained revealed mastery goals, perceived academic control, and the ability to disengage from the present moment as significant predictors of students' satisfaction with knowledge. Furthermore, higher success optimism was associated with having higher perceived academic control, more pronounced mastery goals, less pronounced social solidarity goals, and a higher tendency to focus on the future, whereas perceived academic control was revealed to be a significant predictor of the perceived ease of preparing for tests.

The books reviewed are related to art theory and art education. Jurij Selan reviews a book published by Boštjan Jurečič entitled *A Study of the Parallels between Visual Art and Music: The Big Misconception*, and Matija Purkat reviews a book published by Robert Potočnik and Iztok Devetak entitled *Heritage Preservation and Interdisciplinary Approach through Fine Art and Science Education*.

The focus issue is well rounded, giving different perspectives on the role of art in art education. We believe that the nine articles in the focus issue give an important insight into some of the research topics related to the »art for children's sake« standpoint.

Jurij Selan and Robert Potočnik

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Constructivism in Visual Arts Classes

ZLATA TOMLJENOVIĆ*1 AND SANJA TATALOVIĆ VORKAPIĆ²

One of the basic features of the modern educational system is manifested in the reversal of the transmissive (traditional) approach to learning and teaching to the transformational (modern) approach. The transmissive approach to learning and teaching is that one in which students adopt readymade constructs of organised knowledge through passive acceptance of the facts mediated by the teacher. In contrast, in the transformational approach, the teacher encourages the student's active participation through exploratory, problem-based learning, during which students gain much more of their potential than in traditionally conceived classes. Changing the obsolete pedagogical paradigm began with the development of contemporary (cognitivist and constructivist) pedagogical theories. According to the constructivist theories of learning, individuals develop their knowledge of the world based on their own experiences and reflection of these experiences. Learning is the result of cognitive constructs based on individual experience and (pre)knowledge gained during the social interaction determined by the culture in which individuals live. Interpretative activity in the constructing of understanding is particularly emphasised in visual arts education. In this paper, the main determinants of constructivism and constructivist theories in the context of the educational process are elaborated. The main principles of constructivist-based teaching of visual arts are interpreted related to other contemporary teaching strategies and approaches such as active learning, learning through problem-solving, and interactive approach to learning and teaching of visual arts. The teacher's role is also discussed, whose approach, awareness of the student's pre-knowledge, and capacity for meaningful communication with students, greatly influence the success of the students' adoption, understanding and interpretation of visual arts contents. The present paper aims to highlight certain elements of the constructivist teaching theories because their understanding and application in the teaching process can help achieve better learning outcomes, specifically students' better ability to use visual arts knowledge in everyday life.

Keywords: constructivism, constructivist learning theories, learning strategies, learning and teaching, visual arts education

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Konstruktivizem pri pouku likovne vzgoje

ZLATA TOMLIENOVIĆ IN SANIA TATALOVIĆ VORKAPIĆ

Ena izmed osnovnih značilnosti sodobnega izobraževalnega sistema se kaže v preobrazbi od transmisivnega (tradicionalnega) pristopa k učenju in poučevanju do transformacijskega (modernega). Transmisivni pristop k učenju in poučevanju je tisti, pri katerem učenci sprejemajo že pripravljene konstrukte organiziranega znanja s pasivnim sprejemanjem dejstev, ki jih posreduje učitelj. Nasprotno pa učitelj pri transformacijskem pristopu spodbuja aktivno udeležbo učenca z raziskovalnim, problemskim učenjem, med katerim učenci pridobijo veliko več svojega potenciala kot v tradicionalno zasnovanih razredih. Spreminjanje zastarele pedagoške paradigme se je začelo z razvojem sodobnih (kognitivističnih in konstruktivističnih) pedagoških teorij. Skladno s konstruktivističnimi teorijami učenja posamezniki razvijajo svoje znanje o svetu na podlagi lastnih izkušenj in refleksije teh izkušenj. Učenje je rezultat kognitivnih konstruktov, ki temeljijo na individualnih izkušnjah in (pred)znanju, pridobljenem med socialno interakcijo, ki jo določa kultura, v kateri posamezniki živijo. Interpretacijska dejavnost pri konstruiranju razumevanja je še posebej poudarjena v izobraževanju o likovni umetnosti. V prispevku so predstavljene glavne determinante konstruktivizma in konstruktivistične teorije v okviru izobraževalnega procesa. Glavna načela konstruktivističnega poučevanja likovne vzgoje se razlagajo v povezavi z drugimi sodobnimi učnimi strategijami in pristopi, kot so: aktivno učenje, učenje z reševanjem problemov ter interaktivni pristop k učenju in poučevanju. Obravnavana je tudi učiteljeva vloga, katere pristop, zavedanje predznanja učenca in sposobnost smiselne komunikacije z učenci močno vplivajo na uspeh učencev pri sprejemanju, razumevanju in pri interpretaciji likovnih vsebin. Namen tega prispevka je poudariti nekatere elemente konstruktivističnih teorij poučevanja, saj lahko njihovo razumevanje in uporaba v učnem procesu pomagata doseči boljše učne izide, zlasti boljšo sposobnost učencev za uporabo likovnega znanja v vsakdanjem življenju.

Ključne besede: konstruktivizem, konstruktivistične teorije učenja, učne strategije, učenje in poučevanje, likovna vzgoja

Introduction

With the development of a contemporary transformational approach to learning and teaching, many changes have happened in an outdated pedagogical paradigm of understanding learning as a passive acceptance of facts mediated by teachers. The changes are related to defining learning as a personal creative process, which involves the active modification and transformation of facts of an individual, his/her interpretation, and organisation of knowledge and its use in everyday life. This process is conditioned by the emergence and development of contemporary-cognitive and constructivist-pedagogical theories. Constructivism in the educational context can be defined as a theory of learning according to which individuals construct and reconstruct cognition of the world based on their own experiences and reflections of those experiences. During this process, new insights are compared with previous experiences and ideas, whereby old beliefs may be altered, or new information may be dismissed as irrelevant. It follows from the abovementioned that each individual actively participates in the creation of his/her own knowledge, whereby he/she asks himself/herself questions, explores and questions what he/she knows (Elliot et al., 2000). The reality of this knowledge is determined by the student's experience and knowledge acquired during social interaction, determined by the circumstances or culture in which he/she lives. It means that the constructivism-based pedagogy is directed at the student rather than the teacher and the active construction of knowledge rather than the passive reception of information. Through the learning process, students are encouraged not only to gain new insights but also to create new thinking constructs that should result in the (re)construction of knowledge. In doing so, the teacher has the role of a coordinator of teaching activities, during which he/she indirectly directs and encourages students to research, discover, and make conclusions. Therefore, designing curricula and strategies based on the constructivist learning theory in the educational process and the visual arts classes is recommended. The fact that makes the constructivist theory more complex than the assumptions underlying the usual teaching process is the awareness of each student's individual cognitive structures/mental models. Consequently, the teacher's role in constructivismbased teaching becomes more complex and responsible since it is necessary to take into account the diverse cognitive and visual types of students, their different perspectives and perceptions, depending on their background and personal characteristics. Therefore, teachers are expected to have a high level of expertise, tolerance, and openness to different views of each student's reality.

Constructivism is regarded as one of the most influential contemporary philosophies in education (Krahenbuhl, 2016) even though its principles

are often misunderstood and interpreted differently. However, constructivism's basic ideas are consistent and ingrained in the modern pedagogical paradigm (even though they sometimes appear under other terms when discussing contemporary learning strategies). The present paper presents the basic ideas of constructivist learning theory, outlines the basic features and principles of constructivism-based visual arts education, and discusses the role of teachers as a key factor in the success of learning and teaching. Specifically, students' success in acquiring, understanding, and interpreting the visual arts content depends largely on teachers' approach to them, their familiarity with students' prior knowledge and the quality of that knowledge, as well as meaningful communication with the students. The paper aims to draw attention to certain elements of the constructivist approach to learning and teaching, whose understanding and adoption by teachers can aid in achieving better student learning outcomes.

Constructivism in the light of the contemporary pedagogical paradigm

As a pedagogical learning theory, constructivism is developed on the foundations of cognitive psychology, which addresses how learning and cognition take place (Li, 2017; Marentič Požarnik, 2008). Cognitive and constructivist theories and directions emerged from one another, so we cannot make a strict distinction between these two groups of theories. In addition, some authors, such as Piaget, Vygotsky, Bruner, and Glaser, have influenced the emergence and formation of major conceptual determinants in both groups of theories, and are considered to be the originators of both. With regards to the determination of knowledge as an individual or social process, we distinguish between cognitive and social constructivism-based learning theories (Kalina & Powell, 2009; Plut Pregelj, 2004). Cognitive constructivism, that is, psychological, cognitive learning theories, is based on Piaget's (1951) theory, which, in the context of learning, emphasises the individual's active interaction. Piaget believed that the development of cognitive processes is neither an innate category nor a direct result of experience, but a result of the process of a learner's active cognitive construction. Cognitive psychologists emphasise the role of psychological factors in the learning of concepts, which is realised through the creation of conditions that cause cognitive dissonance.

In contrast to the so-called *individual constructivism* based on Piaget's ideas, *social constructivism*, based on the work of education theorists Dewey and Vygotsky, highlights the crucial role of social and historical contexts in shaping an individual's knowledge. Representatives of social constructivism

argue that an individual cannot be understood without a social environment and interaction (Wertsch, 1995) nor can an individual create his/her knowledge without being influenced by the socio-historical context. Krapše (1999) cites the third variant of constructivist theory, which is a combination of the first and second ones. It advocates the importance of both factors (social and individual) in the creation of knowledge and emphasises the need of knowing the historical, cultural and political context, which is necessary to understand that knowledge. In line with constructivism, didactically appropriate teaching involves helping students to develop the results based on their own experiences and to form their concepts based on social interaction with other peers and the teacher. The common denominator of all constructivist theories is searching for ways to gain knowledge with understanding and to acknowledge the diversity of approaches in achieving educational goals.

In the constructivist approach to learning and teaching, the importance of students' foreknowledge, worldviews and experiences is particularly emphasised, since the course of the teaching process largely depends on them. Learning is not understood as a linear, but as a complex and non-linear process (Twomey Fosnot & Perry, 2005). It seeks to make students choose and process information as much as possible and make decisions based on their mental models (cognitive structures, schemas) to interpret the data and organise their personal experience. In that manner, the production of reproductive, factual knowledge is reduced in favour of creating meaningful knowledge with understanding. From a constructivist perspective, meaningful learning is inherently creative (Newton, 2000), meaning that teachers can help students to some extent in making mental connections between information; however, students arrive at an understanding of their own, including cognitive but also affective-conative, intuitive, and other aspects of personality.

In constructivist theories, particular importance is placed on the interactive teacher-student and student-student relationship as a key component of learning. The communication between students and teachers involves asking open-ended questions to students, encouraging students to ask questions, and creating a stimulating environment within which students can formulate and express their ideas, attitudes, and views on a particular issue.

A constructivist perspective in visual arts education

The constructivist learning theories are close to the contemporary understanding of the visual arts education since the emphasis on the learning process, the student's self-initiative, and, thus, the acquisition of students' own experiences are present in both of them (Herzog, 2008; Simspon, 1996; Thompson, 2015; Wiggins, 2015). Even before learning the content of visual arts, students have certain ideas about the visual world around them. Properly designed visual arts problems should provide a cognitive challenge to reach the higher level of students' understanding needed to solve those tasks.

An interpretative activity in constructing understanding is especially pronounced in visual arts education since the appreciation of artworks and the artistic expression of students is a subjective and individual interpretation of the learned and experienced content. When teaching, the teacher must have no preconceived notions about an appropriate way of solving visual art problems, but rather develops a sensibility for the students' various artistic solutions, remains open to new and different ideas, discusses them with the students, and makes an effort to understand their ways of perception. In doing so, the teacher will gain insight into the students' mode and style of cognition, their cognitive abilities, attitudes and beliefs, and the areas that the students need to develop. This knowledge is the basis for further selection and preparation of the teaching process and visual arts tasks.

Constructivism appears in education as a learning (and teaching) theory; however, there are no systematic didactic elements such as »constructivist« strategies or teaching methods that can give precise guidance on how to implement constructivist ideas in the teaching process. Instead of a set of didactic norms, constructivism, as a learning theory, integrates the diverse principles of the contemporary pedagogical paradigm. In pedagogical theory and practice, some distorted interpretations of constructivist principles may be encountered, such as the view that students must be constantly active, or the rejection of the need for a teacher's direct instruction. Radical ways of interpreting constructivist ideas, manifested in the claim that teaching at school should be replaced by learning, are not desirable since the two activities are inextricably linked in the teaching process; therefore, one or the other cannot be said to be of greater importance: quality teaching will result in successful student learning. The student's self-constructing of knowledge needs to be supplemented by mediating new knowledge. Therefore, the role of teaching cannot be ignored, but it can be discussed as changing the role of the teacher and the way of teaching. In constructivism-based visual arts teaching, direct teaching is used in situations in which, for example, new visual terms need to be introduced or clarified to the students, and should be combined with other teaching methods, in order to check the students' understanding of the new teaching content. Finding the right teaching strategies and methods is a matter of professional and methodological training and the teachers' professional experience. Therefore, it is up to each teacher to find an individual approach to how optimally apply constructivist principles in their own educational practice to modernise and make their work more effective. Below, we outline the principles that can be important to teachers in finding strategies for implementing changes that will result in a more modern and better quality visual arts teaching. Šteh (2004) cites Simons's (1997) classification of characteristic activities that are dynamically altered, intertwined, and complemented in constructivism-based learning and teaching; similar classifications are also mentioned by other relevant authors who have considered the possibility of implementing constructivist theories in school practice (Eastwell, 2002; Fosnot, 1996; Selley, 2013; Yager, 1991). These activities can also be considered integral principles of constructivism-based visual arts classes and are presented below in this context.

Active learning

Every form of learning is active to a certain extent, but the result achieved by a particular activity is critical. The internal activity of the student (referring to the cognitive and no-less-important emotional dimension of personality) is much more important than the external, physical activity. Authentic student activity is created in learning situations that elicit cognitive engagement in students through the processing of information in a non-automatic and active way, and at a deeper level and with more productive cognition than in conventional learning. They can be activated by planned teaching strategies, methods, and forms of work that, through unobtrusive but continuous teacher guidance, ensure quality learning, student initiative, and their cognitive activity. According to constructivist principles, teacher's verbal presentation of knowledge is not sufficient unless students are able to gain some relevant experience on a particular topic, or actively engage thinking and other abilities that will lead to new ideas and (re)constructing of their concepts (Bonwell, 2000; Reich, 2006). Visual arts teaching is well conceived if the teaching process emphasises the presentation of students' ideas, attitudes, thoughts, and experiences: in other words, the stimulation of higher-order cognitive abilities (analysis, synthesis, idea generation, conclusion, evaluation). The development of these abilities is encouraged most often through the appreciation and analysis of artworks or student work, but also through the linking of learned visual phenomena with other teaching areas and everyday life. An artistic creation provides the most direct form of active involvement in the teaching process. In visual arts classes, an active attitude towards the environment forms the basis for the development of thinking and imagination. In practical action, students must activate as many senses as possible; based on them, they experience the sensations that are the basis for the further formation of ideas, opinions, attitudes, and conclusions. With an active attitude towards learning, students go beyond the mechanistic and reproductive level, which can be manifested in visual arts education by acquiring other students' artistic solutions or stereotypes.

Constructive knowledge building

As mentioned above, in constructivism, learning is defined as a constructive process, during which new information is linked to the old, which leads to the understanding and creation of new knowledge. The constructivist concept of visual arts is based on the student's previously acquired experience, which is complemented by new visual knowledge and skills. The acquisition of new experience and knowledge in visual arts education influences the (re) construction of the student's previous experiences and results in new cognitive constructs. In this process, in addition to the environment, the student's ability to experience (i.e., emotional engagement) also plays an important role. When learning, thoughts, emotions, and willing abilities are combined, the results are a new experience and knowledge, as well as an individual artistic work.

The cumulative nature of learning

Each new learning takes place on the basis of the prior knowledge we possess and which influences the formation of new constructs of knowledge. In the Croatian educational system, the visual arts education is based on the so-called spiral model, which is a way of learning in which new knowledge of the visual language and other content builds on what is already existing and adopted in the previous classes, and thus expands with new knowledge and skills. Visual arts tasks that students solve are designed to create a situation in which the students' existing conceptual and technical repertoires are insufficient to deal with what they are confronted with and are, therefore, encouraged to think about how to deal with the problem in new ways. If visual arts tasks are carefully planned and selected with respect to the students' background and developmental levels, they stimulate and motivate learning. Overly demanding tasks will discourage students, as they will be demotivating. Visual arts tasks should be graded from simpler to more complex variants.

Goal orientation

Learning visual arts contents has meaning if students understand the purpose of that learning. Therefore, teaching content should always be linked to the students' daily life, the environment in which they live, other areas of activity and life, as well as their individual interests, desires, and needs. In this

way, knowledge ceases to be abstract and becomes meaningful or applicable in life. The teacher must be well skilled in the purposes and goals of visual arts education, both in the general sense and in the planning of individual teaching units. In this case, through meaningfully asked questions and interactive conversation with students, the teacher can encourage their independent thinking, imagination, idea generation and inference, and linking the lessons learned to new experiences, which results in the creation of functional knowledge.

Diagnosticity of learning

Diagnosing our learning helps us make sense of whether we are pursuing our learning goals and whether we have achieved the desired results. For example, in this process, it is helpful for a teacher to have a conversation with the students about the success of the completed visual arts task at the end of the class. It is also good to relate previously acquired knowledge to other learning content and diverse life situations through conversation and raise awareness of the purpose and need to possess that knowledge in everyday life or create a »broader picture. In doing so, the students can hear the thoughts and experiences of their classmates, become aware of the existence of different perspectives, compare others' cognitions with their own, and possibly (re)construct their own cognitions generated during the completed artistic activities. By diagnosing their learning, students become aware of their thought processes and ways of learning (metacognitive knowledge).

Reflexivity

Through reflexivity, the students reflect on their learning experience. Reflection on the past teaching process and learning outcomes helps students to become aware of these learning outcomes, to place them in a wider context, and to connect them with other areas of learning. In this way, students also become aware of the responsibility for their learning. Reflexivity is also related to the role of the teacher. A reflexive way of teaching visual arts involves the teacher's openness to recognising and understanding his/her own strengths and eventual weaknesses in his teaching style. Teacher self-evaluation or reflexive practice involves reflexively synthesising all activities performed and evaluating their performance using appropriate self-evaluation mechanisms and strategies in the visual arts area. It also implies the teacher's knowledge of the purpose and goals of visual arts education and the constant awareness and upgrading of his/her own attitudes and beliefs to prevent the creation of misconceptions and beliefs that may impair the teaching process (Tomljenović, 2014). Le Cornu and Peters (2005) cite four strategies based on a constructivist epistemology that

can encourage involving students in a reflective learning process: developing reflective attitudes in students, explicitly teaching metacognitive skills and processes, creating space for reflection in classrooms, and using and encouraging a responsive interaction style.

Contextual learning

Due to its highly interdisciplinary character, visual arts education offers many opportunities for linking content with other subjects and areas, avoiding the creation of decontextualised learning and formal knowledge. Acquired knowledge of the visual language and visual arts, in general, should be linked to examples and phenomena from the environment and everyday life. The contextualisation of visual arts contents can relate to local and global examples of cultural heritage and their placement in social, historical, geographical, cultural, and political contexts. It is also desirable to teach outside the classroom, in the daily environment of the students, from the schoolyard to walking around the city and visiting museums and galleries. In this way, by interacting with visual content in the real context of everyday life, learning about art contents becomes more interesting, and the experience becomes authentic. Students discover the importance and benefits of culture and arts in the daily life of the individual and the community. In such situations, they can also be encouraged to perceive the interconnectedness and interdependence of various activities, objects, and phenomena in the environment, to observe the direct and indirect connections between the content of visual arts and other learning contents and everyday life. In this way, students become more aware of the role, presence, and importance of visual arts in life and its inseparability from other areas of life.

Orientation towards the experiential approach

The experiential approach to learning and teaching is one of the fundamental principles of the contemporary pedagogical paradigm. Specifically, the best way to foster cognitive and metacognitive development is not one in which content is the focus of interest, but one through which the application of skills and knowledge is emphasised (Kolb et al., 2001). To achieve this goal, a complex, challenging teaching environment should be created, which is similar to situations in everyday life. Therefore, the teacher must be familiar with contemporary, creative teaching methods, the application of which will encourage the students' motivation to experiment and try new ways of work, as well as their openness and willingness to incorporate new ideas and approaches to solving visual arts problems. Through quality conversation or interaction with the teacher and their own cognitive and practical activity, students discover the

principles, relationships, and connections between visual concepts and content, identify aesthetic and visual values in artworks, and discover the specifics of art materials and techniques through learning their characteristics and experimenting with them. The teacher needs to know how to balance giving guidance for thinking and doing and letting students come to their own conclusions. The experiential approach is closely linked to problem-based learning in visual arts since experimentation and discovery are accomplished through open and problem-oriented visual tasks.

Problem-based learning

In problem-based visual arts education, learning is encouraged through methods and activities that are based on the problem situation and which cause more complex thought processes in students. In this way, by creating their cognitive structures and at their own pace, students come to the solution of visual arts problems and new knowledge. At the heart of the problematic situation is a problem-based visual arts task, which the students need to solve creatively; in other words, they need to find a solution using their creative thinking and expression. In doing so, the success of solving a visual arts problem depends largely on the teacher's ability to design various creative tasks and, at the same time, has control over problem-solving strategies. The process itself involves creating a situation I which students are introduced to a problem, defining a problem, gathering information, and asking questions to analyse and generate ideas for solving a problem, solving a problem and evaluating it, and transferring experience to new situations (Tacol et al., 2007). Through problem-based learning, students acquire new insights, attitudes, and experiences that relate to the context and become functional (i.e., applicable in everyday life situations).

Example-based learning

Example-based learning implies linking theory and practice through recognising what has been learned and observing connections (linking different content) in order to concrete examples from everyday life. By learning through examples, abstract knowledge is transformed into concrete, arising from the consequences of its application. By demonstrating examples, complex connections are identified, and the contents of different areas (different areas of visual arts; visual with non-visual) are linked. The more cognitively challenging activities teachers offer the students during their teaching activity, the more likely the students are to understand and adopt the material. The students should be encouraged to analyse, synthesise, make comparisons, associations, metaphors, look at content from general to individual aspects and vice versa as

often as possible during the teaching process. Using media and multimedia is a very effective way of introducing students to examples in the visual arts area, nature, and environment in which they live, which are related to the learning content. In each lesson, it is also advisable to directly demonstrate examples related to learning content, from original artwork to reproductions and objects from nature and everyday use. With skilfully asked questions, the teacher encourages students to independently perceive, compare, and discover visual-aesthetic features and phenomena, to experience what is seen affectively, and to develop artistic sensibility. Constructivism-based visual arts classes should also take into account the different cognitive types of students; therefore, through a demonstration of numerous examples based on experiences with all available senses, the teacher helps the students to connect new information and experiences to the old more quickly and easily, as well as to gain complete knowledge.

Social conditionality of learning

As mentioned before, constructivists, especially social constructivists, define learning as a social and cultural process that occurs in the context of human relationships and activity and not solely in the mind of individual learners (Dudley-Marling, 2012). According to the same author, the sociocultural context is not merely the location of learning; it also affects how people learn and what is learned, and is in itself part of what is learned. The contemporary approach to learning and teaching of visual arts is based on both the teacher-student and student-student social interaction; through interaction, students develop interpersonal, cognitive, social, emotional skills, and confidence, which ultimately leads to better learning outcomes (Tomljenović, 2015).

In order to make the interaction as successful as possible, the emphasis is placed on group and individual work, which increase the students' motivation and activity. Collaborative learning or group work is one of the most effective ways of conducting active learning in visual arts classes. Through collaborative learning, the teacher satisfies students' desire to communicate with each other and designs the procedure for students' independent interaction and exchange. In addition to practical art activities, collaborative learning should be realised through conversations about the realised student works (or other artworks) by analysing, imagining, offering opinions and suggestions, with the goal of creating constructive feedback, made together by the teacher and students. While constructing new understanding is a highly individual activity, communicating with others can enhance learning because it allows students to test their ideas and to consider the ideas of others (Li, 2017).

Intrinsic motivation in learning

Intrinsic motivation is one of the basic prerequisites for successful learning. In the visual arts classes, students are activated with appropriate forms and methods of work that stimulate curiosity, interest in the visual arts tasks and activities in the work process. In order to stimulate the students' internal motivational incentives, the teacher should attempt to activate students' independent action and their thinking about what they do as effectively as possible using a combination of different teaching strategies and methods. An important form of stimulating students' intrinsic motivation is to create a comfortable atmosphere in the classroom since the students, especially those of younger age, are most easily motivated by creating an emotionally positive attitude towards the learning content. A very good way of stimulating intrinsic motivation is through play: an activity that raises concentration, stimulates long-term and focused attention and activity of students, and can be applied at all ages; students create a positive emotional attitude to the teaching content presented through play, and it is easier for them to memorise the teaching content (Bognar, 1986). Games also encourage the activation of the imagination and practical intelligence (Isenberg & Jalongo, 1997; Zagorac, 2006) as desirable abilities in realising the tasks and aims of visual arts education.

Introducing play into visual arts classes can make organising the teaching process more demanding since the preparation of the creative play often requires certain additional resources and aids, as well as various materials and accessories, especially since there are few relevant didactic games available on the market. Therefore, planning this type of activity requires not only extra time but also resourcefulness and creativity in their design and realisation. However, better student activity and interest during creative play will reduce the time needed to acquire knowledge and achieve quality learning. Students will also take a positive attitude towards such teaching since it is most suited to their natural way of learning in which they feel most comfortable and secure. Short creative games that involve solving visual art problems in an interesting and entertaining way can create a link between understanding the visual language and its expression through artistic activities, and, at the same time, verify if the students understand the artistic content. Although commonly used as part of motivation or introduction to a visual problem, play can be used in all stages of the teaching process. The aim of creative play in visual arts classes is to encourage solving visual arts problems through motivation, which at the same time becomes, consciously or unconsciously, motivation to learn.

Constructivist approaches in designing visual arts classes

In visual arts classes, students should solve visual arts tasks that trigger cognitive conflict and offer an activity that can be used to resolve the conflict. Every part of the teaching process can be used as an opportunity for authentic learning. Short creative exercises, which are intended to be a playing activity, represent a very convenient way for learning, encouraging the students' intrinsic motivation, thinking and curiosity. They usually take part before making students' artworks.

A visual arts problem can, for example, be related to the acquisition of basic knowledge of primary, secondary and tertiary colours (Ostwald's colour circle), and its understanding can be stimulated by the playing, using transparent coloured film sheets. They can have primary and secondary colours as well as their tones; students in groups experiment by overlapping the two selected sheets and make conclusions based on the overlapping of different combinations. The tasks may, for example, relate to finding secondary colours (students need to discover that green is obtained by overlapping blue and yellow sheets, etc.), finding colour tones according to the suggested example (students have a reproduction pattern and, by overlapping the sheets, they seek to guess combinations that are most similar to the tones/colours in the picture), and similar. Another example is supplementing a selected reproduction of an image with missing cut pieces to their corresponding pieces or by painting/drawing the missing pieces, depending on the visual arts problem.

If the new knowledge is not appropriate for the students' developmental level, the students may solve the art problem in an undesirable direction, or, in the case of the task being too simple or too difficult, lose their motivation to work. Therefore, the teacher needs to know the student's prior knowledge to adapt the tasks and teaching methods to the developmental stage of the group, as well as individual students, in order to ensure the conditions in which the cognitive conflict, so that the attachment of new content to old constructs can occur. In exploring the students' developmental levels and abilities, the conversation between the teacher and the student is greatly assisted, through which the students discover their thoughts, ideas, and associations about a particular visual content and problem. The most effective conversation is based on pictorial examples, using open-ended questions (What do you think...?; What happens when...?; What do you notice...?; How do you imagine...?; What will happen if you change/add/highlight...?). Therefore, the teacher must seek and encourage the reflection and expression of the student's personal perception.

Teaching activities should challenge the students' assumptions by questioning and reaffirming them or replacing them with new knowledge (Brooks & Brooks, 1999). It is also important to encourage the consideration of visual arts problems in multiple perspectives. In this way, questions initially presented as irrefutable facts (e.g., What is a colour?) can become open and liable to numerous interpretative possibilities (Prater, 2001).

We can offer another example related to project-based learning, which is very suitable for constructivist-oriented visual classes. The project topic can be anything from visual arts area that is proposed by a national curriculum. The chosen theme must be connected with other areas of life, selected through students« and teacher's interaction. If the topic is, for example, »Music and visual arts«, the teacher might begin a lesson by listening to music or showing a video clip on YouTube about Kandinsky, who made the first abstract painting, motivated by listening to the music. The teacher might ask the students what kinds of paintings they would make to express their feelings and associations created by the music, what kind of shapes and colours are created in their imagination by listening of particular music tones. He/she might also ask if they could be connected to some other senses, for example, do they have a certain smell or taste or texture? In that way, different approaches to the issue can be presented and discussed. The emergence of abstract art can be placed in a broader social context, by talking about the Industrial Revolution and scientific achievements in the early 20th century, about the emergence of the microscope, which allowed insight into the world hitherto invisible to the human eye (the microscopic world as a new possible artistic stimulus), and similar. In that way, students can see phenomena from multiple perspectives, make connections between hitherto unrelated data, and understand that there is no one answer for complex issues. The breadth and depth of processing the topic depend on its complexity, time provided, and students' age or interests. Students can work in groups in the classroom to begin individual projects, and explore some parts of a potential topic, first theoretically, and after that through practical, creative work. They can read and make concepts in groups, demonstrating them later through various kinds of interaction. Students might also be asked to give their own opinions about artists or artwork seen, to find connections between the life at the time and the artistic styles, to talk about the artworks they prefer by elaborating why, in order to develop their ideas and to create associative and creative thinking. By verbalising their thoughts and feelings, they became aware of their opinions and the variability of their opinions. By transforming their thoughts and feelings into visual communication, they become capable of demonstrating the understanding and elaboration of the visual problem and of expressing their unique artistic experience.

Visual arts classes should also be performed outside the classroom, in order to respect contextual learning about phenomena from the environment and everyday life. Architecture in the local community can be a good incentive for exploring shapes, volumes, space, colours, light and shadow, and materials. Students can compare traditional and modern architecture, their function, aesthetics, materials, sizes, and integration into the environment by engaging in real-world contexts. They can debate the ways of everyday life in different spaces, and learn how the environment could define the shape, size and visual definition of the house, by exploring places for human living in different countries/continents, connecting the content with ecological issues and sustainability. They can also discuss the ideal house for living or learning, and make their own version of it in various materials.

This type of work, however, requires skilful and creative teachers. The role of the contemporary teacher in today's educational context is becoming increasingly demanding and complex, dictated, on the one hand, by modern pedagogical concepts and the complexity of the school conditions in which teachers work, on the other. In addition to possessing knowledge and skills in the visual arts area and methodology, teachers are also required to have a mentoring approach to the students, to develop creativity among students, to be able to involve students in independent and active work, to include new technologies in the teaching process, to be open and ready to new ideas and approaches, to have a desire to experiment and attempt new ways of teaching, and to possess the ability to use contemporary interactive and art-specific teaching methods and procedures. A constructivist-oriented teacher in visual arts classes also plans and encourages student participation in such a way that they help one another in solving visual arts tasks and develop a sense of teamwork. To be able to express new ideas in their own way, students also need to be given sufficient time and appropriate working conditions, which is another major challenge in current Croatian school practice, in which only one hour a week is intended for teaching visual arts in elementary school.

Conclusion

Constructivism-based visual classes offer students many forms and ways of acquiring knowledge: from a specified and structured learning situation to a completely unstructured environment; from a rigorous system of navigation through teaching content to a mode of free exploration, in which students independently change topics by increasing active participation in learning through the process of constructing knowledge (Spiro et al., 1987). As

the constructivism-based visual education encourages the development of all of the students' potentials in learning and teaching, it can also be called a holistic approach to learning and teaching, which not only refers to the cognitive activity in the narrow sense but necessarily involves emotional, motivational, social and psychomotor aspects of personality. Specifically, it is important to engage students emotionally in learning and teaching since, in this way, the transformation of earlier cognitive constructs will be more effective and easier. Difficulties in applying the constructivist perspective of learning and teaching may be linked to a more complex process of teachers' preparation for teaching since it is simpler and easier to maintain teaching in an outdated, transferable manner, without an individual approach to the students. Therefore, today, teaching is still often reduced to solving simple problems instead of more complex ones through student collaboration. Student-initiated questions and student-to-student interactions are neglected, conventional knowledge and ways of thinking are preferred, or the curriculum is interpreted in a rigid and inflexible manner.

In contrast, it is necessary to raise awareness of the necessity of changing the educational process in order to keep up with the needs of modern society, so we could follow contemporary scientific trends related to education and, accordingly, change obsolete attitudes and beliefs about learning and teaching, which can only lead to meaningful changes inside schools as a condition for effective learning outcomes. Difficulties in accepting contemporary and, therefore, also constructivist, approaches to learning and teaching are also the result of the entrenched teachers' beliefs, their upbringing, prior education, and personal perspectives. Therefore, teachers should constantly question their thinking patterns and reconstruct the acquired knowledge into new concepts and meanings through continuous professional and personal development.

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Connecting Art Education Learning Tasks with the Artistic Field: The Factor of Quality in Art Lessons

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This theoretical study deals with interconnecting learning tasks of art education with the parent discipline of art education (that is, with the artistic field as defined by Pierre Bourdieu, 1996), while reflecting on the quality of art lessons in the Czech Republic. The authors draw on current theoretical and empirical research of quality that identifies individual quality factors. The most salient factors are the connection with the artistic field and the resulting ability of conceptual integration, together with curricular normativity, the intentional work of the teacher with educational content, characteristics of teaching such as the support of divergence, creative approaches, associativity, imagination, reflection, searching for intersections between pupils' experience and the content of the subject, etc. The text also emphasises the fact that judgement on the quality of learning tasks should be based only on ontological-didactic and psychological-didactic aspects. The former relate to the cultural and artistic context of learning tasks, that is, the current values in the field of visual culture and the artistic field, while the latter consider the personal characteristics of each and every pupil.

Keywords: quality of art lessons, art and art education, didactics of art education, quality factors of teaching art, quality of art tasks, quality of learning tasks in art education

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Povezovanje likovnih nalog z likovnim področjem: dejavnik kakovosti pri pouku likovne vzgoje

Petra Šobáňová in Jana Jiroutová

Teoretična študija obravnava problematiko medsebojnega povezovanja učnih nalog likovne vzgoje s celostnim pristopom (tj. z umetniškim področjem, kot ga je opredelil Pierre Bourdieu, 1996), hkrati pa podaja razmišljanja o kakovosti pouka likovne vzgoje na Češkem. Avtorji se opirajo na zdajšnje teoretične in empirične raziskave, ki opredeljujejo posamezne dejavnike kakovosti. Najopaznejši dejavniki so: povezava z likovnim področjem in posledična sposobnost konceptualne integracije skupaj s kurikularno normativnostjo, z namernim delom učitelja z izobraževalnimi vsebinami, značilnostmi poučevanja, kot so podpora divergenci, kreativni pristopi, asociativnost, domišljija, razmislek, iskanje presečišč med izkušnjami učencev in vsebino predmeta itn. V besedilu je poudarjeno tudi dejstvo, da mora presoja o kakovosti učnih nalog temeljiti le na ontološko-didaktičnih in psihodidaktičnih vidikih. Prvi se nanašajo na kulturni in likovni kontekst učnih nalog, torej trenutne vrednote na področju vizualne kulture in likovnega področja, drugi pa upoštevajo osebne značilnosti vsakega učenca.

Ključne besede: kakovost pouka likovne vzgoje, umetnost in likovna vzgoja, didaktika likovne vzgoje, dejavniki kakovosti poučevanja likovne vzgoje, kakovost likovnih nalog, kakovost učnih nalog pri likovni vzgoji

Introduction

The key objective of this theoretical analysis is to contribute to the theoretical discourse on the role of works of art in art lessons. We will therefore discuss works of art in terms of the subject of an art task within art education. In our paper, we aim to point out that the interconnection of an art task with the artistic field contributes to the quality of the art task, and thereby also to the quality of art lessons. This thesis is based in the theory explained and clarified in the paper, and supported by two model tasks analysed in a separate section of the paper, in which we reflect on the qualitative transformation of the content of an art task that is interconnected with content from the parent discipline, that is, from the artistic field. Although the authors view the subject matter from a global perspective, reflecting on some of the key texts from abroad, the paper draws primarily on texts produced and research conducted in the Czech Republic.

The relationship between art (that is art practice and art discourse, e.g., art theory) and art education is one of the key issues of art pedagogy. At the general level, it is a problem of the relationship between the parent discipline and the subject, which all educational fields and their didactics deal with to a different extent. By parent discipline we mean a specialised field of study corresponding to the school subject (Janík & Slavík, 2007) that fulfils the role of a reference framework from which the theory of the field of study as well as the form of its curriculum and the form of practice are derived. When addressing the issue of the parent discipline, authors Janík and Slavík (2007) use the term field of study to refer to the parent discipline in their study on the methodological problem of the relationship between the field of study and the subject. Knecht (2007) uses the term parent discipline in his review study dealing with current theoretical approaches to didactic mediation of subject matter. In our text, we also use the term reference framework, in which it is suggested that art education is closely related to the *parent discipline* and the content of education is compared with the content and specifics of the given parent field of study.

Art and culture are traditionally considered to be the parent discipline of art education, which is currently extended to the entire field of visual culture. A very useful term describing the parent discipline of art education is the concept of *artistic field*. This is the term used by French art sociologist Pierre Bourdieu (2010), who applies the term to answer the key question »What is art?«, or »What makes art?«. According to Bourdieu, the artistic field develops from the gradual historical evolution of society (it is not necessary to search for the ontology of art, but for the historical circumstances of its establishment) and the value of art is permanently produced and reproduced within that field. It is only

the functioning of this field that creates an aesthetic disposition, without which the field – and of course art as a separate category – would not work. It is therefore the social conditions that allow the *creation* of an artist and their products. However, it is not just the artist who influences the course of this field; other factors, such as art historians, critics, curators and art enthusiasts, are much more involved. The artistic field is a space in which the belief in the value of art is shared and constantly renewed (ibid.) This definition seems to be suitable in the context of art pedagogy, as well, since the parent discipline of art education cannot be perceived in a limited way; for example, only as art history and a tradition codified by art production. In addition to the social context, there is a rich, sophisticated and historically changing theoretical discourse, as well as the area of art production or border areas such as design or scientific illustration and modern forms of digital visualisation. The contemporary culture of image and exposed visual communication cannot be excluded either. The concept of artistic field can include all of these areas, and they should all be considered when thinking about the curriculum or the specific content of art education.

The relationship between art education and the parent discipline has changed considerably throughout history. We could name a number of contemporary theoretical studies from the beginning of the twentieth century, which, while seeking sources of artistic expression, discovered the power of children's works and advocated their value in relation to art. The art and artistic activity of pupils were put almost on an equal footing; the intoxication of the discovery of »lost nature« prevailed and art education was attributed the ability to change the world and society. Unlike theory, however, the practice looked somewhat different. As Sokolová (2010) recalls, in relation to the educational field, art was perceived as a utility until the middle of the twentieth century: as a framework shaping tastes and a level of craft skills applicable in employment. It was the paradigmatic changes produced by interwar avant-gardes and the development of modern art that then significantly changed not only the relationship between the parent discipline and art education, but also the meaning of art education. They gradually shifted the discipline towards the so-called spontaneous-creative concept, in which the subject of the pupil is taken into account and the role of art is emphasised as a means for developing personal dispositions, cultivating creativity and expressing the pupil's subjectivity.

The concept of art – which until then was unrivalled, theorised and incomprehensible to pupils, and from which the practical aesthetic forms for teaching purposes were derived – shifted to a concept in which art becomes a testimony and self-interpretation of a person, an expression of their originality, sensitivity and uniqueness, and thus a concept to be transformed into

educational practice. The forms of methodologies at that time contained nothing but instructions for creating ornamental compositions, and there was no attempt whatsoever to address what is today called education through art. Of course, mentioning this absence in methodologies does not mean that education through art was not being formed, as is demonstrated, for example, by Lichtwark's pioneering work *Übungen in der Betrachtung von Kunstwerken. Nach Versuchen mit einer Schulklasse* (Exercises in Contemplation of Works of Art. After Experiments with a School Class), published in Dresden as early as 1900. Children perceived as »unwritten boards with innocent eyes making art« were supposed to gain experience mainly through personal visual and emotional experiences from works and through their own artistic expression stemming from their spontaneous interest (will) to depict something (Sokolová, 2010).

This positive shift, however, had a somewhat paradoxical outcome. In the end, impulses taken from modern art often led to a considerable loosening of the links between art and teaching. The spontaneous-creative concept of art education, in which only the child's personality and their view of the world without binding norms was to be manifested through art activities, broke away from a direct and thoughtful connection with the artistic field and made do only with the creative potential of children. In some cases, art has completely disappeared from art education or has been projected only selectively (especially its generally accepted, popular, even kitschy artistic expressions). This obviously proves to be a problem, because the content of art education unrelated to the parent discipline tends to grow wild, ceasing to absorb and mediate the ongoing shifts in the parent discipline, and thus the cognitive and cultural initiation potential of the subject is lost. As Slavík summarises (2015), too much emphasis on the pupil's spontaneity weakens the view of the unique character of expressive creation and ultimately suppresses the learning functions and cognitive goals of education.

Where the curriculum framework is looser, the content is not strictly prescribed and the teacher has a considerable degree of autonomy (e.g., in the Czech Republic), this becomes an even more pressing problem. The quality of the didactic transformation of the parent discipline is fully in the hands of the educator, and often the pupils get to know only narrowly chosen concepts of art and not a relevant, representative selection. Teaching is based mainly on practical creative tasks, often without ever knowingly linking the tasks to the parent discipline or reflecting on it, as is also confirmed by research studies into practice (Šobáňová, 2016). Since postmodernism, we have not been accustomed to thinking this way: the idea of a representative selection disagrees with the diversity and richness of the artistic field, and we are not at all willing to accept

that one selection is more relevant than another. However, it is necessary to realise that the curriculum is such a selection and reduction by its very nature.

As Dytrtová and Slavík (2019) recall, for expressive educational disciplines, including art education, it is not easy to associate theories (which play a very significant role in the case of art) with educational practice. This is not due to a lack of information resources; on the contrary, there is an overwhelming mass of knowledge in aesthetics, art theory, art history and other disciplines. However, in order for teachers to make good use of this knowledge in practice, they should selectively apply it to practical situations and creative learning tasks in the classroom. This is where the stumbling block lies, as the systematic arrangement of theoretical interpretation is usually different from the dynamic form of practical experience. In other words, the logic of the theoretician approach to educational practice cannot be derived directly from the order of theory, but first from the structure of actual experience itself (Dytrtová & Slavík, 2019; Slavík, 2003). For this reason, our study also aims to analyse the link between art education and the parent discipline, and to point out the importance of this link as a key factor in the quality of art education.

The Relationship between Art and Art Education in Contemporary Didactic Discourse

It is clear from the initial outline that the relationship between art and art education can be viewed from many perspectives and that it is a topical and relevant problem. It is not surprising, therefore, that many experts address this topic, whether in theoretical analysis of the relationship between art and the curriculum or in discussing whether the current definition of the reference framework is still up to date and, for example, the extent to which it applies to the whole visual culture.

Certainly, the concept of this reference framework – and the different accents on one of the functions or dimensions – naturally also becomes the basis for various original concepts in art education. At random, we can mention the concept of VCAE (Visual Culture Art Education), which is characterised by an emphasis on the integration of broader visual culture into art education (supported by visual studies), as well as approaches developed in gallery education, which in turn focus on interpretation activities in the broad field of education in culture, with an emphasis on the development of pupils' cultural competence (supported by museum and gallery pedagogy and by the theory and history of art), or specific concepts such as *artefiletics*, a reflective conception of art education emphasising the educational dimension of art education

and pupils' artistic creation as a first cognitive step, to be followed by the second step of reflection and dialogue between pupils as a source of new knowledge (Slavík, 1997, 2015). In this conception, art is a source of content, and education tends to both undertake cultural initiation and to understand itself through its own expression and its reflection in dialogue with others.

The relationship between the artistic field and art education is not only the topic of theoretical analyses and the core of various educational concepts, but also the subject of research. For example, Šobáňová (2016) attempted to verify, by means of a research probe, whether and how the connection with the parent discipline is actually realised in practice; in another study, she tried to identify and summarise significant shifts that have occurred in art theory, pointing out that changes in the artistic field should also be reflected in practice. Given their age and level of cognitive development, pupils should be encouraged to understand the social conditionality of art and the process of symbolisation as a key feature of all works of art; they should learn to understand that art is not necessarily beautiful and that it contains a sensory and content level through which it becomes a specific interpretation of our existence. They should also be encouraged to understand the fact that art represents reality not by mere imitation, and that the quality of a work today is not judged by the level of mimesis, but rather by the power of individual expression, the depth of world grasp, and the ability to initiate public debate (Šobáňová, 2015).

Fulková (2013) thinks along similar lines and emphasises that the particularly communicative character of visual art today, overlapping with social intervention and various novel forms of contemporary creativity, is inspiring. It highlights the role of art as a means of resistance to cultural homogenisation and creeping in societal tendencies (nationalism, patriotism, abbreviated solutions to neglected social problems), where pathology gradually becomes the norm. According to Fulková (2013), art, which is sometimes accused of having an activist character, can counterbalance the absence of critical spirit in schools, where "aestheticizing and imaginative, mind-tending and safe activities are considered a creative approach". Art is a source of emotional, unique experiences that need to be subjected to subsequent critical reflection and a search for context (ibid.).

The issue of basing art education on working with actual art in order to ensure the quality of art lessons and art teaching is, of course, much discussed on an international level. It has been a part of global art education discourse and the topic of many research and study works for the past decades. Primarily, we would like to mention the work of Elliot W. Eisner, who dedicated most of his professional life to advocating the importance of the arts in education in

general, and of art education in particular. In one of Eisner's (2002) key books, *The Arts and the Creation of Mind*, he claims that his thesis is straightforward. He considers the arts to be cognitive activities that are guided by human intelligence and that make unique forms of meaning possible (Eisner, 2005). However, he argues further that "the meanings secured through the arts require what might best be described as forms of artistic literacy, without which artistic meaning is impeded and the ability to use more conventional forms of expression is hampered" (Eisner, 2005, p. 76).

Kerry Freedman, another leading personality in the research of art education, deals extensively with visual literacy and the relationship between knowing and making art. In her book Teaching Visual Culture, Curriculum, Aesthetics, and the Social Life of Art, Freedman (2003) focuses on the importance of contexts of visual culture as well as on the relationships between past, present and future in postmodern visual culture. Furthermore, she places great importance on teaching visual culture in a contemporary democracy. As she goes on to explain, today »people cannot only speak freely; they can visually access, display and duplicate, computer manipulate, and globally televise. Visual culture images and objects are continuously seen and instantaneously interpreted, forming new knowledge and new images of identity and environment« (2003, p. 3). Visual culture, as Freedman maintains, mediates social relationships »between and among makers and viewers and among viewers«; she views the importance of teaching art within art education mainly in its ability to navigate learners through this image-saturated world as they represent forms of mediation »between people in which a range of professional, discursive practice plays an important role« (ibid.).

Another research study that has been carried out recently is entitled Artists and their Artworks as a Model for Improving the Quality of Teaching in Art Education and was completed by Mohammed Al-Amri (2016) and his colleagues at the Sultan Qaboos University in Oman. Making a reference to Lindsley (2006), who believed artists have a key role to play in the educational reform process and as providers of professional development, the authors' research shows that there is a strong relationship between artists and their works, on the one hand, and children's development, on the other (2016). As the authors conclude, including artworks in art lessons plays a key role in multiple areas. It proves to be beneficial not only for increasing children's motivation for learning about art, but also for developing their knowledge about multicultural art, developing their relationship with art and their ability to understand the language of art, as well as developing aesthetic sensitivity for art (ibid.).

The list goes on, but the aim of the present study is not to produce an overview of all of the works on the relationship between art and education, but

rather to offer another perspective. We will approach this relationship from the viewpoint of the quality of art education. This is particularly important in countries where the school curriculum is traditionally looser and where teachers teach without prescribed methodological assignments. The Czech Republic is one such country. After the massive curricular reform that began in 2005, the teacher's autonomy is even greater; the teacher is actually the creator of the curriculum and follows only very loose frameworks. The educator is the one who has a fundamental influence on quality, whether through their pedagogical strategies, the specific concept and content of tasks, their concept of quality, or their preferences and relation to the parent discipline.

The Relationship between Art Education and the Artistic field in the Context of the Quality of Art Lessons

We have argued above that detaching art education from its parent discipline in practice weakens the cognitive and cultural initiation potential of the subject, and that over-emphasising pupils' spontaneity and building teaching only on practical art activities without making a link to and reflecting on the artistic field ultimately weakens the educational potential of art education, as well as its quality and relevance. In the continuation, we will analyse the relationship of art education and its parent discipline and point out the importance of this connection as an important factor in the quality of art education.

In the history of art education, it is possible to trace various time-related answers to the question of what its objective is, and what manner of education, what types of tasks or their results, can be considered as good. Quality itself naturally defies clear definition because, just like the artistic field, the practice of art education, too, is a result of changes in aesthetic values and criteria, and in our ideas about the meaning and objectives of art education.

Nevertheless, some quality factors can be found in the literature. Some reflect on various international measurements and comparisons (a comparative study on the competences of art teachers in Uhl Skřivanová, 2018; on PISA assessment see, for example, Plavčan, 2018, UNESCO: Education for All, 2000–2015, etc.), some are in the form of theoretical analysis (e.g., research by American authors associated with The Wallace Foundation, 2009; a monograph by Janík et al. entitled *Kvalita* (ve) vzdělávání: obsahově zaměřený přístup ke zkoumání a zlepšování výuky [Quality (of) Education: A Content-Focused Approach to the Research and Improvement of Education], 2013; a study by Slavík and Lukavský *Hodnocení kvality expresivních tvořivých úloh ve výuce (na příkladu výtvarné výchovy*) [Evaluation of the Quality of Expressive Creative

Tasks in Education (Given the Example of Art Education)] published in 2012; or a collective monograph resulting from the conference of the Czech section of INSEA and published under the title *Kvalita ve výtvarné výchově* [Quality in Art Education], 2019).

Among the identified quality factors can be found, for instance, curricular normativity (quality in this case means that the teaching fulfils the objectives of the curriculum); emphasising the intentional, careful and justified work of the teacher with educational content; or certain characteristics of art lessons. such as promoting divergence, a creative approach, associativity, imagination, reflection, seeking intersections between the pupil's experience and the content of the subject, etc. The quality of teaching is also directly dependent on whether learning tasks stimulate cognitive activation, the development of the semiotic function of the psyche, conceptual integration, or other higher levels of perception, thinking, feeling, expression and communication (Janík et al., 2013). Reference is made to Piaget's already classical model of mental functions and the stages of cognitive development, in which the sensomotoric, semiotic function enabling the origin and development of symbolic thinking and speech plays a key role. All of these factors do not, however, ensure quality if the group does not have a supportive learning climate created by motivated players, a climate in which experimentation is allowed and pupils can learn from their mistakes without fear of error. Reflectivity and stimulating dialogue are also mentioned as important factors of quality in art education.

The connection of art education with the parent discipline can be identified in a number of these factors. The artistic field as referred to by the authors is also a source of concrete curriculum content. In this context, Janík et al. (2013) characteristically state that the quality of teaching is based on the quality of managing this content. Of course, educational content is one of the key components of the educational process, because the teacher has to teach something, not just nothing or anything (ibid.). Thus, the path to the quality of art education takes us through the attention paid to the content of the tasks presented to the pupils, and thus to their source, to the artistic field.

In general, all educational content is related to established fields of human activity and their knowledge. It is not only knowledge in terms of information, but also in terms of the structure or system of information, the apparatus of concepts, forms and methods of cognition – in art through *a work* and creative process, ways of creating phenomena – concepts and artefacts.

When considering content in the context of quality, the essential fact is that content is a potentiality, a possibility that develops during education, rather than a clearly defined entity. It is something that the pupil acquires, understands and integrates into their structure of consciousness. Content is an option that takes place in various forms through common action and shared communication. Content manifests itself when understanding (something) and when communicating (something); only then do people realise that what they are handling has certain content (Janík et al., 2013). From this point of view, the quality of teaching is based on the realisation of this potentiality; on the other hand, poor quality teaching means wasting this possibility, not developing (in terms of education) and not acquiring (in terms of the pupil) content.

Educational content in art education is very diverse. It covers curriculum-based content, which usually includes practical expressive activities and artistic skills, and traditionally also comprises a knowledge of key artworks of the great styles: from artworks having mythological, religious and other narrative messages, to artworks whose content is fluid, less clear, just like life itself, based on a dream, birth, life, death, doubt, human fate, the problem of good and evil, otherness, disputes, harmony, and generally on the very basal ability of people to create and understand symbols and their natural tendency to transcend. (For example, the Czech curriculum sets out three general content units for art education within general education: the cultivation of sensory sensitivity, the application of subjectivity, and the verification of communication effects.)

These are types of content whose grasping (by language or non-verbal means) and sharing among people is one of the cultural foundations of our civilisation. The different ways of their didactic transformation – of the various content offered – are the results not only of differences between teachers (each of whom prefers a different type and level of content, as well as a different strategy to pass the content on), but are also based on the specificity of the content of the subject. Some methods of didactic elaboration might require science-based educational content, while others require art-related content that is usually offered in an integrated code (typically, for example, in projects and topic sets).

Janík et al. (2013) point out that the quality of teaching is further enhanced by the teacher's reflection on their own teaching, by their ongoing analysis of own practices in relation to the content, by their evaluation, design and verification of alterations, and by their attention to the quality of the tasks presented to the pupils and to the levels of the educational content transmitted. The key for each teacher is whether the tasks presented to pupils are sufficiently developed, whether their content and level of demand are adequate, and whether the tasks offer a meaningful goal.

Slavík and Lukavský (2012) refer to the multi-layered characteristics of tasks in art education, which are mostly based on artistic expression leading to an artefact as the result. The quality of the task does not, however, depend on this

result; rather, it is determined by the overall educational impact on the pupil. In this axiom resonates the old issue of art education, which is the influence of the prevailing aesthetic norm on art education and the assessment of pupils' achievements. For now, there is a consensus that the evaluation of the quality of teaching is subject to criteria that are different from those that apply to the art activities of professionals. In education, it is necessary to ask not how good a pupil's *work* is, but rather what the pupil takes from the lessons, what levels of their creative, cognitive or affective abilities were encouraged during the lessons, what they managed to discover, to understand, where the task took them. Completely different criteria apply when assessing professional artistic performance.

The misunderstanding of this principle leads to epigonism, where the external signs of artworks are used without understanding their context or the context of the child's thinking and feeling. The most important thing for assessing the real quality and not only the apparent quality is to ontogenetically validate the child's attitude toward the world (Uždil, 1968). Therefore, quality assessment cannot be derived solely from the pupil's final work at art lessons. As Uždil reminds us, value is also determined by the artmaking process. A result that is unambiguous in the case of a professional artwork is not the only result in the case of a child and their artistic expression. Uždil maintains that optically compelling results can be achieved in a way that is not educationally effective at all; for example, by the pupil's carrying out every oral order of the teacher, or alone, but not on their own, moving in a closed system of visual aesthetics that the teacher has set up and the pupil elaborates on. Needless to say, this process does not develop children's creativity (Uždil, 1968).

Judgements on the quality of learning tasks must therefore consider both the ontological-didactic and psychological-didactic aspects. The first concerns the cultural context of expressivity, i.e., contemporary values in the field of aesthetics, artistic expression, expressive depiction of relationships between people, etc. (Slavík & Lukavský, 2012), that is, the parent discipline, while the second is based on the characteristics of each pupil.

In terms of working with the content, Slavík and Lukavský (2012) consider good quality (meaning *developing* according to Janík et al.) learning tasks to be those that lead pupils to *conceptual integration*, i.e., the child's ability to give meaning to their actions, to create metaphors and symbolic expressions, to interlink contexts. This can also be perceived as the basis of artistic activities, and as such they again represent the artistic field: their application in education above all means linking education with the parent discipline. By conceptual integration, Slavík and Lukavský (2012) refer to the principle of metaphorical meaning-making based on the relevant interconnection or combination of

concepts from different domains through an innovative interpretation. According to them, it is precisely the realisation of conceptual integration that establishes the quality of art education.

Examples of Art Tasks Complementing the Thesis: Their Interconnection with the Artistic Field as a Factor of Quality

The role of linking a task with the artistic field and the impact of this link on conceptual integration can be well demonstrated in the following tasks. They also illustrate the aforementioned importance of educational content as a factor of quality, and the potentiality of content offered in a creative activity, which can be developed to varying degrees, whereby this development (or not) creates a measure of quality.

Our model task comes from teaching practice, where it has been frequently recorded in different variations. It is based on creative work with a product of nature, specifically with stone. Its common and debatable variant is that pupils bring stones and then draw or paint on them as they choose. The result is usually a colourful artefact that often not only denies its natural origin, but is also tasteless and actually meaningless, and the task can be characterised as being of poor quality. Its disciplinary or multi-disciplinary educational potential is very low, the task can only develop basal dexterity, and the connection with the parent discipline is absent.

A variant is a classic task based on making a drawing study. Pupils draw the stone and try to capture it as faithfully as possible with respect to its overall shape, details and structure, making an effort to model space with light and shadow. This task is very popular and quite trouble-free, and drawing studies as such are inseparable from art skills training. Nevertheless, the task is weak in terms of development and therefore not of high quality. There is a link with the parent discipline, but only with its skill base: the ability of mimesis, the ability to observe and draw what we see. There is no deeper subject content, only a lower level of imaginary hierarchy of abilities (in its simple form, the task does not lead the pupil to cognitive activation or substantial development of the semiotic function of the psyche). Furthermore, the task does not take into account the psychological-didactic level and is not suitable for younger children.

If the quality of the tasks described is low and we postulate that the quality factor is the interconnection of learning tasks with the artistic field, how could they be improved? Of course, there are many possibilities, but due to limited space we will offer just two simple examples.

Figure 1–2
A low-quality artistic task and an inspiration to improve it





Note. Left: an example of the result of a low-quality task. Right: possible inspiration from the artistic field with the potential to improve the quality of a task. A British artist working with organic material emphasising natural processes (installation of two boulders and wooden sticks covered with clay which was monitored and documented by the artist as time took effect on the clay). From »Two Stones«, by A. Goldsworthy, 1994, photo by Philipp Scholz Rittermann.

In the case of the first task, we can make a reference to the work of British artist Andy Goldsworthy and generally to the context of land art. In light of these works, the superficiality of the original task and its insensitivity to the haptic and visual qualities of natural material, such as stone, are particularly evident. Natural materials, whether stones or flowers, leaves, pinecones or twigs, can, as in Goldsworthy's work, become an opportunity to apply a more subtle approach to nature and to cultivate sensory and ecological sensitivity. When working with natural materials, it is, of course, desirable to use their natural colours and structures. At the same time, Goldsworthy offers additional levels: he sets natural materials into unexpected contexts, regrouping them into surprising compositions without violence and with sensitivity to their nature. Presenting a task inspired by such art will show that an impressive yet sensitive and deep work can be created in a simple way and with one's bare hands. It may also make children think about the relationship between a human being and nature, the laws of nature or the nature of life and its extinction in the natural course of things. This type of work also offers the desired conceptual integration (developing the metaphor of the stone and the possible symbolic meanings of the artefacts). Another dimension offered by this task is the development of sensitivity towards nature, understanding our position in nature and building responsibility for the natural environment.

The point of the second task was a drawing study of a stone, and the task was to train illusive image skills, eye and hand coordination, the sensitive modelling of space, and mindfulness towards visual qualities such as shape, texture, light and shadow. How could this task be enriched and improved? This time, the original task – unlike the previous one – does not have to be eliminated completely; it can be built on. The attention of pupils can be directed to the inner structure of the stone. Specifically, using the example of minerals and the artworks entitled *Květy hornin* [The Flowers of Rocks] created by Czech painter and graphic artist Jiří John, which are currently part of the GASK (Gallery of the Central Bohemian Region, CZ) collections. John explored the silent processes of nature and of life in general, much like Goldsworthy, but through classical art media such as painting.

Figure 3–4 A drawing study of a stone





Note. Left: inspiration from the artistic field with the potential to improve the quality of a task based on the theme of stone. From J. John, *Nerosty – květy hornin [Minerals – the Flowers of Rocks]*, 1968, canvas, oil, GASK (Gallery of the Central Bohemian Region, CZ) collection, Kutná Hora. Right: a work by an 11-year-old boy.

The task, which we have borrowed from educator Karin Militká (to whom we are much obliged for allowing us to use the task for the purposes of this text) and which is inspired by John's work, directs pupils' attention from the surface to the inside. Pupils are encouraged to observe nature (as well as ordinary stone, we show them minerals with cut and coloured »drawings«, such as agate, malachite or amethyst) and to discover the surprising structures

inside seemingly ordinary and not very appealing stones. We work with a moment of surprise and in the first step we encourage pupils to create their own work based on colour layering. The assignment reads as follows: Take a sheet of paper and cut or tear the largest irregular shape inspired by one of the minerals shown. You can create several. Select one of the shapes and use it as the original template. Draw the template with pastel along its edges. Then lay it on another paper and wipe the pastel from the edges of the template outwards onto the underlying paper. Gradually reduce the shape of the template by tearing or cutting. Create additional layers with pastel. Be aware that crystals in nature are formed in such a way. You can use a variety of shapes for even smaller templates. Choose the colours according to the mineral you like most. After this first step, when a drawing is created, comes a component that is just as important: reflection. In this case, it focuses on identifying the meanings of the activity and discovering the originally unexpected content. We can develop further concepts, such as the dichotomy inside x outside, inner x outer beauty, hidden, mystery, hidden treasure, etc. Working with paper and dry pastel becomes not only a means of capturing and experiencing the beauty of minerals and rocks, but also of conceptual integration; namely, the search for and reflection of layers hidden within each of us. Thus, the task develops into existential questions and its educational content is deepened considerably. Both examples show the importance of reflection, because it is only the quality of reflection on expressive activities and the interconnection of a creative process and an outcome with other contexts that determines whether an ordinary art project can gain valuable content and whether it becomes a formative impetus for the pupil. It is worth noting that a slight change to the task and the course of its implementation can make it a good-quality task, or render it entirely useless. A slight change can offer a new perspective, it can connect pupils' creativity with reflection on their subjective experience and put the artistic activity into a more general cultural context.

The description of these model tasks shows that a task based on one and the same subject matter may have different content, different levels of the same content, and quite a different quality as a whole. Many such examples would prove – as here – that educational content emanating from artistic activities and the artistic field is an open potential. Its recognition by the teacher, the appropriate way of developing it during the lesson, as well as the pupil's response to the content all determine whether one and the same stimulus or topic will become the basis of a good-quality or poor-quality task. In all cases, the source of these shifts is the connection to art. Art gives us the opportunity to seek impulses for similar, not stereotypical assignments, and also for conceptual integration and educative elevation, to which art naturally leads us through *images*.

The specificity of art education is that it works with an image, in the sense of a semiotic complex of content and form. Czech philosopher Miroslav Petříček (2009) elaborated on the philosophy of *thinking in images*, which offers a conceptual apparatus for grasping this particular trait. We intuitively understand this trait when looking at an eloquent image, sculpture or photographic documentation of a performance, but it is quite difficult to explain in words. Communication through image brings humankind specific knowledge of reality, which is inherent only in the *image*.

Of course, thinking in images is different from thinking in concepts, hence the problem of analysing expression and its outcome in language. This problem is also the reason why the content in art education often remains fallow and is not fully developed by the teacher. Sometimes this content seems obvious, immanent, but the question is whether pupils can become aware of it without being intentionally led to do so. In any case, the presence of images from the artistic field in the classroom (and not just the images of pupils) tends to be a significant impulse that makes this content more visible and reminiscent when developed in a good manner, and not superficially.

The revelation of various and sometimes surprising layers of content is at the heart of the conceptual integration mentioned above. Slavík and Lukavský (2012) also reflect on its difficulty and the fact that it requires imagination and the ability to realise the identity of the content even when changing forms. In any case, it is the conceptual integration that can become the link between the ontological-didactic and psychological-didactic levels of teaching, especially because it considers the position of the child as the unique author and recipient of the image. When reflecting on the image we can reconstruct the process of conceptual integration and learn to understand it (ibid.). As previously stated, evaluation of the quality of expressive tasks in this approach is not based solely on the evaluation of the artistic qualities of the outcome-artefact. This is understandable, because aesthetically impressive results can also occur accidentally, inadvertently, and if we appreciate them, the pupil often does not understand what quality is and how to achieve it again. On the contrary, quality depends first and foremost on the extent to which the task stimulates conceptual integration set in the context of the cultural base. The task is to inspire pupils to move metaphorically, to »jump« between different domains of meaning (ibid.). In other words, a good-quality learning task should lead the pupil to a new experience and to new knowledge by means of a creative process (ibid.).

During successful tasks that adequately accomplish conceptual integration, pupils receive more: they recognise the cultural meaning encoded during the creative process in a medium perceptible by the senses and shape the

meanings into newly organised structures, thus creating and acquiring new content. These tasks help pupils to understand the social conditionality of art and the process of symbolisation as a key feature of all artworks (cf. Slavík & Lukavský, 2012). Let us leave aside whether this condition can be fulfilled permanently in normal conditions, and whether art etudes or classical, craft-based art tasks or applied art in general can fit into such a concept of quality. What is essential for quality is that the connection with art and the conceptual integration inspired by it takes place to some extent, and that it motivates pupils to achieve a particular goal. The well-known Bloom taxonomy with reference to the existence of higher levels of cognitive functions to which it is desirable to lead pupils is very important here, as well. This level of content cannot be ignored, otherwise the content of the field is drastically reduced and it becomes a mere work activity. From this perspective, thinking about the possibilities of content, and ways of presenting it or offering it to pupils, as well as aiming at higher levels of content, is a prerequisite for quality, a prerequisite for achieving higher quality. This clearly is a difficult task.

Conclusion

An educational field based on practical receptive or expressive tasks has its own specific quality criteria and reference concept of a good-quality creative process and its outcome. A creative process can have value even if it is seemingly ineffective, when pupils makes mistakes, when the outcome of the task is at first glance (without contextual knowledge) of no higher value or even visibly unsuccessful; it can, of course, be an artefact, but many tasks may not have any tangible result, yet pupils learn a lot and have a valuable, formative experience.

Advocating the importance of linking teaching with the artistic field, we did not pay a great deal of attention to the possible pitfalls, so let us at least do so at the end. The practice of our field shows not only the danger that comes when teaching activities are detached from the parent discipline; there is also a second extreme: epigonism, superficial imitation of artworks by students without deeper understanding. While such tasks integrate the artistic field into education and may work well, they do not respect the psychological-didactic level. Artworks in this case are insensitive, sometimes used draconically, not as a formative stimulus and offering content to discover together, but rather as templates or colouring books. Pupils paint like van Gogh or Mondrian, but they do not know why. Such tasks cannot be of good quality, not only because they omit the psychological-didactic level, but also because they are superficial, formalistic and empty.

Sometimes a task may seem to be of good quality because of an interesting result, but this could have occurred inadvertently and the pupil cannot understand the meaning of what they have created without reflection. However, the value in art education is not only in the resulting artefact, but also in the very process of its creation, its reflection, verification through communication, and in the establishment of personal, disciplinary and multi-disciplinary contexts. To achieve this in art education, we use the content and form of the artefact, and thinking in images. Artmaking can never be fully reflected on because grasping with words always means reduction, but resigning from verbal understanding would be a mistake that could lead to a failure to recognise and develop the content at all. In art education, the »oscillation between something and nothing« in relation to the content is ongoing, as we have seen in the variants of the stone-based tasks. The key is reflection, the effort to grasp the content in words, because, as Petříček maintains, the work itself does not say anything unless we ask it and try to establish an interview with it (Petříček, 2009). The first step, however, is recognising that the simple, unreflected »production« of an artefact (as in our painted stone) is far from exhausting the possibilities of art education.

Tasks that the teacher naturally and sensitively attaches to the parent discipline of art education, to the artistic field, i.e., tasks that have support and analogies, far exceed this basal level towards higher quality. Such teaching also naturally builds on divergence, associativity, imagination, creative approach and reflection, because art itself is such. In this sense, the teacher's task is to seek out the intersections between the pupil's experience and the content of the artistic field, and to ask developing, stimulating questions that will shape the pupil. Within this approach, the main players of quality are educators, as they select the content and didactically reduce and recontextualise it. Jaromír Uždil also emphasised the importance of the educator's erudition, their »culture« and »current artistic opinion«. According to him, the teacher's unique experience and erudition cannot be replaced by any fixed and eclectic system of schooluseful rules and laws concerning colour harmony, composition, techniques, etc. (Uždil, 1968). It is the sensibility of each individual that stands above any binding rules: we, just like artists, have the tendency to violate these rules and to experimentally verify the limits of their validity and test the strength of the artistic and communication effects of their disruption. This well-known paradox of art and art education is one of the reasons why teaching in our field is difficult, but also unique and beautiful.

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Interdisciplinary Connections through Transmedia Narratives in Art Education

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The world of new media has inevitably changed teachers' and students' attitude towards information. Data of all kinds and from any scientific field are easily available at any time. Nevertheless, isolated data have nothing to do with knowledge. We refer to »knowledge« when an interdependence of information has a particular significance in defined conditions. How to use and connect this information is one of the primary issues teachers have to engage with since they are still the main organisers of the educational process. Taking into account the objectives of his/her explanations, he/she chooses certain relevant contents, and connects them, striving for an interdisciplinary view of the world that makes sense and gives sense to his/ her explanations, all in an attempt to motivate students in their approach to knowledge. This article presents research in which the participants, future art teachers, had to answer a questionnaire that required comparing artistic compositions and compositions present in nature. Almost half of them could not find proper examples, even though the participants were students who should have been able to manage contents from both fields. Understanding how art follows nature is an important goal within the education of future art teachers. Difficulty in connecting data, transferring knowledge, giving meaning to images and understanding visual and verbal discourse seem to be a persistent problem in many aspects of their education. Possible strategies to improve the situation using transmedia narratives are presented in the conclusion.

Keywords: art and nature, art education, interdisciplinary connections, teachers' education, transmedia narratives

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Interdisciplinarne povezave s transmedijskimi pripovedmi pri umetniški vzgoji in izobraževanju

BEA TOMŠIČ AMON

Svet novih medijev je neizogibno spremenil odnos učiteljev in študentov do informacij. Podatki vseh vrst in s katerega koli znanstvenega področja so lahko dostopni kadar koli. Kljub temu izolirani podatki nimajo nič skupnega z znanjem. Na znanje se sklicujemo, kadar soodvisnost informacij v določenih pogojih dobi poseben pomen. Kako uporabljati in povezati informacije, je eno glavnih vprašanj, ki si ga morajo učitelji postaviti, saj so še vedno glavni organizatorji izobraževalnega procesa. Ob upoštevanju ciljev svojih razlag učitelj izbere ustrezne vsebine in jih poveže med seboj v prizadevanju za interdisciplinarni pogled na svet, ki je smiseln in ustrezen za njegova pojasnila. Tako poskuša motivirati študente za poglabljanje znanja. Ta članek predstavlja raziskavo, v kateri so morali udeleženci, prihodnji učitelji likovne umetnosti, odgovoriti na vprašalnik, ki je zahteval primerjavo umetniških kompozicij in kompozicij, ki so prisotne v svetu narave. Skoraj polovica jih ni našla ustreznih primerov, čeprav so bili udeleženci študentje, ki bi morali obvladovati vsebine z obeh področij. Razumevanje, kako umetnost sledi naravi, je pomemben cilj pri izobraževanju prihodnjih učiteljev umetnosti. Težave pri povezovanju podatkov in prenosu znanja, sposobnost osmišljanja slikovnega gradiva ter razumevanja vizualnega in besednega diskurza se zdijo redno prisotne težave v veliko pogledih v njihovi izobrazbi. V sklepnem delu so predstavljene mogoče strategije za izboljšanje stanja s pomočjo transmedijskih pripovedi.

Ključne besede: umetnost in narava, likovna vzgoja, interdisciplinarne povezave, izobraževanje učiteljev, transmedijske pripovedi

Introduction

On Knowledge

The world of new media has inevitably changed teachers' and students' attitude towards information. Data of all kinds and from any scientific field are easily available at any time.

Nevertheless, isolated data have nothing to do with knowledge. We could refer to »knowledge« when an interdependence of information has a particular significance in defined conditions. It is a concept that is difficult to define from only one point of view because it can hold different meanings, depending on the context. Many authors question the idea that all scientifically produced knowledge is true in all places and for all times (e.g., Gray, 2000; Kincheloe, 2008; Shannon & Galle, 2016).

Kincheloe (2008) opens relevant questions in order to reflect on the role of the teacher in the production and spread of knowledge:

Are teachers merely managers of the predetermined knowledge of dominant cultural power? Is teacher education merely the process of developing the most efficient ways for educators to perform this task? Do teachers operate as functionaries who simply do what they are told? (p. 9)

These questions are not separated from the most fundamental features of teaching and learning.

Gray (2000) thinks that:

[...] a considerable body of literature addresses the management of knowledge from a variety of perspectives: the use of information systems, social networks, communities of practice work processes and other forms of organisational practices as methods for managing the creation and/or transmission of relatively unstructured knowledge. A separate research tradition examines the use of structured knowledge representations embedded in technology to enhance decision making including considerable research into methods and tools for knowledge acquisition. Some knowledge management practices are relatively new while others have long histories. (p. 2)

Regardless, the process of teaching and learning, dealing with the »circulation« of knowledge, is not operated in a single direction and only by the teacher. More often than not, the teacher is a screenwriter creating stories, accounts of a series of related events, experiences which through argumentation, description, exposition, and similar are part of the rhetorical modes of discourse he/she uses

to motivate students in their approach to knowledge. Taking into account the objectives of his/her explanations, he/she chooses certain relevant contents, connects them, striving for an interdisciplinary view of the world that makes sense and gives sense to his/her narration (Seely Brown & Duguid, 2000).

On Interdisciplinarity

Moss et al. (2008) define interdisciplinarity as:

[...] the synthesis of two or more disciplines such that a new level of discourse and assimilation of knowledge is achieved. In practice, the process of interdisciplinary instruction often begins with a topic, theme, problem, or project that requires active student participation and knowledge of multiple disciplines in order to reach a resolution. (p. 72)

The emphasis is on becoming more knowledgeable about a variety of disciplines, making connections within and among disciplines, seeing problems from multiple perspectives, appreciating diversity, and developing an ability to solve complex problems.

Moss et al. (2008) state that

The traditional school disciplines divide knowledge into organised and helpful hierarchies of skills, concepts, procedures, theories, and ways of knowing that bring order to our understanding and structure to our schools. At the same time, the discipline-defined model of curriculum and instruction may prevent students from developing the interdisciplinary perspective required to tackle complex, real-world problems that are rarely aligned with individual disciplines. (p. 73)

As evidenced by Meier et al. (1996), students taught within the lecturebased disciplinary system typically are not able to solve problems that require them to make connections and use relationships between concepts and content.

In most definitions, an interdisciplinary approach means the achievement of certain skills, knowledge and competencies that are shared by different school subjects or disciplines. An integrated interdisciplinary approach deals with concepts that are common to various study areas. It means a meta-curricular approach to the development of mental abilities, social skills, multiple intelligences, technology and learning abilities through different disciplines due to their intrinsic transfer values.

Pedagogical strategies based on interdisciplinary approaches are centred on the fact that integration activates a process derived from explicit learning objectives, conceptual, learning-targeted and development planning (Moss et al., 2008).

According to Tomšič Amon (2020):

The ideological assumptions that form the basis of our school system point to the advantage of subjects that express logical-analytical-mathematical thinking and the ability of verbal expression while artistic-aesthetic experience and expression are pushed into the background. The system clearly gives priority to the development and use of the left brain hemisphere. The recognition that both hemispheres do not function separately, but effectively complement their functions leads to the conclusion that priority should be given to such processes that integrate the ability of both brain cells. Gardner's (1993) multiple intelligence theory, which is in general very well known for at least a couple of decades, distinguishes linguistic, musical, logical-mathematical, spatial, motor, interpersonal and intrapersonal intelligence, supports crosscurricular integration. Children should be able to develop all seven intelligences, as this is the only way to discover and exploit their potentials. (p. 54)

Teaching with or through visual art reveals its interdisciplinary nature. Any other school subjects can be taught in a way that is art-based. Consequently, some crucial questions emerge: How can other subjects benefit from visual art education? What contingencies can be expected from an unsuitable application of interdisciplinary pedagogic strategies for visual art itself? How can specific strategies or methods of visual art (e.g., visualisations, representations, etc.) assist other areas of knowledge? We will not respond to these questions here, but attempt to offer approximate approaches with elements that could indicate a route to the answers.

Transmedia narratives

Transmedia storytelling, also known as transmedia narrative or multiplatform storytelling, is the technique of telling a single story or story experience across multiple platforms and formats using current digital technologies. Transmedia narratives eventually mean using multiple forms of media that deliver unique content through different channels (Jenkins, 2006).

Transmedia narratives traditionally refer to allowing audience participation, such that each successive platform heightens the audience's enjoyment. Pratten (2015, p. 17) completed this definition, stating that »this means taking the audience on an emotional journey that goes from moment-to-moment«. Even if these experiences are difficult to assess, control, and evaluate, the results showed this to be a suitable strategy in the educational process.

The technical means that are today accessible to teachers have changed the nature of their narratives in the context of the teaching/learning process. The stories

that once could be presented only in a textual or audio-visual form, today can be created using a much wider range of possibilities, addressing all the senses, immersing the viewer in a much more convincing new reality and requiring no specific conditions to become effective. However, narrations are always directed to a certain audience because they are an act of communication. In this process, the storyteller is practically as important as the public. An effective narrative points out not only the storytellers' perceptions but also the perceptions of the spectators: the teacher and the students (Kalinov, 2017). "Transmedia storytelling mimics daily life, making it a strong constructivist pedagogical tool for educational uses« (Wilson, 2004, p. 106).

Multi sensorial experiences should unfold the potentialities of cognitive, affective and psychomotor development of the students. In these cases, we can assert that these narratives are transmedia narratives essential in creating an actual community of knowledge (Jenkins, 2010).

Through transmedia approaches, concepts can be presented as different aspects of reality. These concepts enable the transfer of thinking strategies and enhance critical thinking. The promotion of higher levels of mental skills can be intensified through the creative solving of problems within different subjects (Erickson, 1995), which means that a comprehensible conceptual structure stands behind a pedagogic model that assumes that critical thinking capabilities and other abilities need to be developed to achieve desired results.

Contents and learning processes are always intertwined and depend one on the other. Drake (1998) agrees with this view, as he says that holistic information can be easily and quickly recalled in memory as the brain is organised to receive more information simultaneously.

In contrast, Arnheim (1993) insists on the relations between perception and concept formation, stating that:

[...] to simplify the complex process of concept formation, I will say that as optic images become specific, the mind processes the accumulated sensorial material in a very sophisticated way. It identifies the persistent objects and recognises them every time it meets them in an experience [...] to be able to discover the structures that lay under any object, it is necessary to refine visual and analytical skills because the fundamentals of visual concept formation are the optic images. (p. 31)

In a more general scope, but with a similar message Catmull (2014) says that if we do not strive to uncover what is unseen and understand its nature, we will be ill-prepared to lead.

Perception linked to close observation is conditioned by certain important factors, such as attention, linked to emotions, memory, previous experiences,

personal affinities to visual or auditory search, and the individual capacity to rationalise mainly emotional processes that give shape to one's capacities of encoding and decoding signs in the environment (Wright & Ward, 2008).

Perceptions in an overly full environment, where it is difficult to distinguish elemental phenomena of the circumstantial, where stimuli kindle all around us, are miscellaneous experiences that teachers and students bring to the class. Perceptions can limit our emotions, and attention or on the contrary motivate a rich process becoming aware of the world in a particular way.

In contrast, Crary (1992) affirms:

[...] that the more the senses are revealed to be inconsistent, conditioned by the body, prey to the thread of distraction and no productivity, the more a normative individual is defined in terms of objective and statistical attentional capacities that facilitate the subject's functional compatibility within institutional and technological environments. (p. 72)

These suppositions are of crucial importance within the educational process.

The learning process is affected by the process resulting from perception as a current action. The use of the experience of the senses and the detection of information using mental or visual conceptualisation are the main elements that allow students to process information. Reflecting on how to address individual students' learning needs means planning meaningful classroom experiences that improve the process of retaining the learnt information.

Visual Narratives

The diversity of current society requires of each individual the development of creativity – such an irreplaceable factor – in the different aspects of life. Art education helps develop not only artistic creativity but creativity in general. That is why it is an important segment of the educational process.

Artistic creativity is a complex that includes ability in the use of materials and tools, procedures and working methods, sensitivity in the perception of art products and their material qualities, flexibility in the transformation of materials and the solution of artistic problems. That is why the encouragement of artistic creativity is fundamental in the development of the learners' personalities. Linking logic and artistic subjects through interdisciplinary planning at school helps students think how to solve actual analytical problems in different or even, at first sight, contradictory fields, such as sciences and art.

Eisner (2002) reminds us that a wider approach to knowledge is needed, stating that art can make vivid what words and numbers taken literally, exhaust much earlier.

The majority of students nowadays are in daily contact with digital media, manage different computer software, printers and scanners, and know how to manipulate images, but actual mastery in these complex world of possibilities is not entirely common. The photo camera has spread far and wide and has become a powerful instrument in the creation of images. However, despite its popularity, it has not taken the viewers to a higher level of seeing.

Today, everyone can take pictures, shoot a video, and share it on digital social media, but there is a significant difference between randomly capturing daily life, and creating visuals to tell visual stories. Visually interesting content and discussions are at the foundation of visual storytelling. Kroeber (2006) describes the precise differences between the psychological experience of reading a novel and watching a movie and the relation of private experience to the natural environment. Lankow et al. (2012) show the vast potential in using the communication medium as a marketing tool by creating informative and shareable infographic content. These are only two examples of the fields in which transmedia narratives have become extremely popular.

Apart from the conceptual aspects, the proliferation of devices is a major challenge that students face within art education. The ability to see and evaluate images with a well-educated eye is crucial; this is of key importance in the art education teaching and learning process – it is one of its main goals.

This article presents research in which we attempted to evaluate the possibilities transmedia narratives offer to improve the quality of the pedagogical process within interdisciplinary connections.

Method

The research was carried out during the 2018/19 school year. It included 71 students finishing the undergraduate degree of Primary Education Teachers study programme. After the one-year master degree graduation, they would teach fine arts from the 1st to the 5th grade of primary school, as well as natural sciences and mathematics. A primary teacher (i.e., one who teaches all the school subjects from 1st to 5th grade), a biology teacher, and a mathematics teacher also participated as consultants.

The idea for the research came about after we noticed that even though exercises comparing artistic compositions and the compositions present in the world of nature and geometry performed in the class were many times, surprisingly within the final examination, students answering the question were not as successful as expected. Forty-nine per cent of the students did not answer the following question properly: »Find an example of a geometric composition in nature and a similar

example in the field of fine arts and describe them by comparison (with the visual material of your choice)«. An example of the visual material that was expected from the students as an answer to the question is presented in Figure 1.

Figure 1

Example of the visual material that was expected from the students: the geometric composition of a flower around a pentagon and a similar composition in art. In this case, Michelangelo's *Doni Tondo*, tempera on panel, 1506





Dissatisfied with the results within the final examination, we had to accept that probably it is not possible to expect interdisciplinary visual connections if students had not developed these specific competencies in a proper way before and under their teacher's guidance. The question that arose was which teaching and learning strategies may promote the development of these competencies as a transfer between different areas of study, specifically the transfer of visual experiences and knowledge from other subjects?

The research resulted in an action research study with three phases. Within each phase, we tested a specific strategy, attempting to upgrade students' experiences from the previous phase. As Thomas (2019) states:

Qualitative methods were selected because they are regarded as valid and reliable ways of documenting and interpreting the subtlety of social transactions and were well suited to observing at close range the inherently collective and transactional character of the creative classroom«. (p. 4)

In the first phase of the research, students had to find and analyse the graphic material themselves. The task was to find an example of a geometric composition in nature and a similar example in the field of fine arts and describe them by comparison (with the visual material of the students' choice, as in Figure 1) which in many cases proved to be quite problematic. Many of the students stated that it was a difficult task that they had never done anything like it before.

That is why, in the second phase, we decided to prepare a test. It consisted of six similar tasks. This time all the graphic material was given. The geometric elements were presented in a logical order (i.e., line, triangle, square, pentagon, hexagon, and a circle) while the photos from the natural world, flowers, animals and the reproductions of the paintings were given in no particular order (Critchlow, 2011). The task was to link the three examples that had common characteristics with a line.

In this case, the test results were analysed as follows: within each of the rubrics Nature and Fine Arts, we established how many answers were correct. There was a special rubric for the cases that were correct in both rubrics. The results of the test are in Table 1.

Table 1
Results of the test realised within the second phase of the research

	NATURE				FINE ARTS				COINCIDENCE	
GEOMETRY	Correct		Incorrect		Correct		Incorrect		Nature/Fine art	
	f	%	f	%	f	%	f	%	f	%
	64	90.14	7	9.86	71	100	0	0	64	90.14
	71	100	0	0	71	100	0	0	71	100
	65	91.55	6	8.45	25	35.21	46	64.79	22	30.99
	65	91.55	6	8.45	22	30.99	49	69.01	20	28.17
	68	95.77	3	4.23	9	12.67	62	87.33	5	7.04
	71	100	0	0	71	100	0	0	71	100

Although these tasks were easier to understand, there are some interesting points when observing the differences among the six examples. The results for the line, triangle and circle were excellent; in the three cases, there was a high coincidence between Nature and Fine Arts (line: 90.14%, triangle: 100%, and circle: 100%). The square got good marks in Nature (91.55%) and poor in Fine Arts (35.21%). A similar situation happened with the pentagon (Nature: 91.55%, Fine Arts: 30.99%). In these two cases, the coincidence was of 29.58% on average. The hexagon presented different results because the majority (87.33%) had difficulties discovering the hexagonal schema in the composition of the painting. Following this, the coincidences are low (7.04%).

We were still not satisfied with the results. In discussion with the consultant teachers, we confirmed that many students simply could not see the geometrical structure of compositions, neither in nature nor in art. Probably these students perceive contents from different subjects as entirely separated from a core structure of knowledge of which they are part. We had to improve research to determine strategies that would show efficient when interdisciplinary contents were our object.

Following these ideas, a new strategy had to be implemented in the third phase of the research. Teaching and learning experiences become an interconnected complex, stimulating multi-layered sensitive, emotional reactions because students need to develop tools for precise observation, interpretation, negotiation, and meaning-making of the information to which they are exposed. They need to be provided tools that should (in the future) help them make precise interpretations of information. Unconnected information does not mean much if it is displayed in a context that keeps out a holistic representation of the world; this was one of the conclusions we arrived at after the second phase of the research.

How to facilitate the tools students need in a world of endless possibilities of getting information is a query addressed to the teachers. Selecting, decoding, and making meaning from them is a process that primarily engages emotions and attention. Emotions lead to attention; thus, they are an important internal motivation tool in the teaching/learning process (Vimal, 2019; Wright & Ward, 2008). Attention stresses the potentials of multisensory emotional arousal, which increases memory consolidation, the process of creating a permanent record of the encoded information, and allows for different interpretations, negotiation, and meaning-making of them (Yiend, 2010). Teaching and learning are impossible if there is a lack of motivation between the students and the teacher.

To improve motivation among the students, we decided that probably the use of new media should provide us with a new possibility to approach the problem of how to design a more efficient interdisciplinary pedagogical process show. The strategy now was to use transmedia narratives and work in groups. Transmedia narratives, as stated before, use multiple forms of media that deliver unique content through different channels (Jenkins, 2006). Even if these experiences are difficult to assess, control, and evaluate, the results showed this is a suitable strategy in the educational process.

Facebook, Instagram, YouTube, and other platforms in digital media give space to new forms of dialogue among their users, as any material can be easily shared in them. We do not know anything about the destiny of any material we share in such media and the reactions it can produce. Many specific and unpredictable stories can be created out of the departing point that any posted material is.

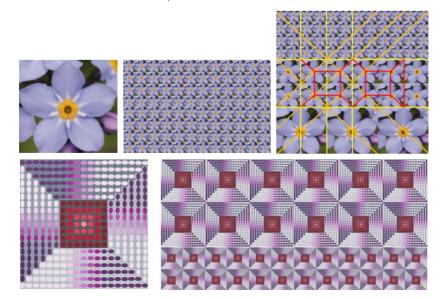
One of the main goals of the third phase of the research was to verify to what extent students would go deep in their acquisition of knowledge through an experience that did not present any limitations regarding learning contents. Another goal was to detect how would students take advantage of the proposal to use different distribution channels during their learning process.

Transmedia strategies present the advantage that educators can create projects that students can begin to develop in classroom settings, and then venture out into the community to complete them, taking control of their learning by becoming actively engaged participants (Shannon & Galle, 2016, p. 38) or, as Wurdinger suggests, »they are more challenging to implement than other approaches because they require spending some time away from the college classroom« (in Shannon & Galle, 2017, p. 51).

We decided to launch the third phase of our research, including three basic parts that considered key activities. The first part included the formation of working groups among students, the presentation of the basic contents by the teacher, the distribution of the themes between the groups of students and the realisation of an introductory art work. It also included individual gathering of information, elaboration, and presentation using multimedia to the rest of the participants in each group. The second phase was meant for the students' interchange in social media, creating a story from the collected information within the groups. The visual stories students created linking the information required the elaboration of ideas and planning solutions, originality, which meant unusual strategies when solving the problem of presenting the results using multimedia. Interchange in social media, creating a story from the collected information, from different viewpoints, was a part of the challenge. In the end, they all had to upload their works in a newly created group that included the whole of the cohort.

The third part included interchange and connection of different viewpoints' stories. The short and essential story of understanding the meanings and scope of the contents should lead to a new original and wider visual story. At the end of this part, students from each group had to propose an activity within art education intended for the students that participated in the rest of the groups. Some activities were very interesting and a very creative way to show how the interdisciplinary knowledge grew through all the pedagogical process. Figure 2 shows two examples of works based either on an example from nature or of the world of Fine arts and became a new object, the design of a pattern for textiles. What is interesting is that the original designs were linked to the shape of the pentagon and the hexagon; »playing« with the shapes made them discover the square in their patterns and develop their knowledge and competencies to link contents that have complementary meanings. This was the conclusion of students' activities and was meant to use and consolidate the acquired knowledge practically. The last part of the project included a meeting of all the participants, where students presented the development of their work during the different phases. This was the material assessed by the teachers. In this way, we could have a picture of the process within all the groups of students, compare the results, and draw conclusions.

Figure 2
Two examples of works based either on an example from nature or of the world of Fine arts and became a new object, the design of a pattern for textiles. From Victor Vasarely, Geometric forms, 1948.



Results and discussion

Regarding the students' answers to the question in the final examination that was the starting point of the research, the most common mistakes were that many students misconceived the role and nature of the photograph, which was only a visual representation of a natural object and took the composition of the photo comparing it with the painting. Many simply interpret the image in a photo as reality, not the work of a photographer that composes the image he/she wishes. This is a profound question that exceeds the limits of this article. Many students could not see the geometrical structure of compositions, neither in nature nor in art. In these cases, these three worlds have nothing in common for them. Probably these students perceive their study programme as organised following a schema in which the different subjects are entirely separated between themselves even though any study programme has a central nucleus of which they are part.

The partial results of the tests carried out through the first and the second phases of the action research were presented in the article following the explanation of each of them. These results were the departure point for the design of the third (probably the most important and decisive) part of the research. That is why we will not repeat them here; we will rather concentrate on the results of the last phase.

Upon completing the course using transmedia storytelling with interdisciplinary integration between different contents from fine arts, biology and geometry, the students, the teacher and the consultant teachers met to discuss the recent activities and its evaluation and hear the students' opinions on the teaching and learning approach.

The students praised the gradual integration of the introduction of an individual strategy for solving tasks and the possibility of individual choice of fine arts examples. They stated that they were highly motivated by the surprise of the unexpected connections between the contents within the different subjects from the point of view of the general artistic, aesthetic experience. They were also motivated by the use of known concepts in new contexts.

The students' responses showed a strong sympathy for the approach used, mainly because of the possibility that each one can create his/her own solutions for artistic tasks expressing the interests, expectations and performing in their own way.

Students who do not use social media often or are reluctant to do so, because they feel they are constantly exposed to unexpected reactions, stated that the task was not easy. Creating groups with colleagues they knew and in which

they felt comfortable and safe made them more confident and, in the end, they were amazed by the different paths to which their works led. Nevertheless, they claimed that they had to work on their motivation to feel included in their working groups. This combination of individual and communitarian activities was a great experience for them because it showed them how they could enrich their visions, and the ways in which they could follow a satisfactory process learning more, and in new ways.

Taking into account the different ways in which students learn best, visual, auditory, reading/writing, kinaesthetic and the learning styles regarding the ways in which students deal with their experiences is of primordial importance when designing multimedia didactic material for the class and planning transmedia educational strategies. Transmedia based on interdisciplinary connections requires that the teacher has an excellent knowledge of the contents and objectives of the correlated subjects and that he/she genuinely believes in the possibility of an integrated work within them (Tomšič Amon, 2020, p. 64).

Interdisciplinary integration is a challenge and an opportunity for internal motivation, professional and personal growth for the teacher, as well as a lifelong experience for the students.

The teacher admitted that it was quite strange to work partly in a virtual space where it was not possible to assess and monitor the students. The class-room offers safety. The didactic material is there to be used. Virtual classrooms do not imply such »commodities«. That was why the final evaluation of the achievements developed by the students required a new and specific approach. It required reflection on what and how to evaluate students' work.

Using transmedia visual narratives was the most successful of the three pedagogical strategies compared in this research. It was the most demanding regarding organisation, preparation of study material, assessment of the students, took more time and was the most unpredictable regarding the results. Nevertheless, its results went beyond our expectations and, as it is quite complex, it would be a good strategy to deepen the demands of the given tasks.

Conclusion

The three phases of our research offered different kinds of data when comparing the strategies used to enhance interdisciplinary, holistic views on the contents we wished students to understand. The first phase gave a somewhat quantitative approach that revealed only raw data and, as such, was not satisfactory. The second phase gave us a general overview of the situation that showed potentials for the third phase's more complex design. Within it, students had

to synthesise the experiences of both previous phases but also make a huge step showing comprehension of meanings and creative capacities to resolve the proposed problem.

The reality of the task, which required creativity using the discovered data to develop a new product and the conditions of work in group and outside the frames of a traditional class, made a critical difference in the results at the end of the third phase. The fact that each narrative process, if we can, by comparison, call the creative process in this way, grew from the experiences of the students, that teachers did not assess each step but acted only as consultants (so they did not know what students were developing) and the use of social media that facilitated meeting others and also »hiding« and working individually if that was the case was interesting to observe during the whole pedagogic process. The possibility to perform an individual learning strategy with a clear creative applicative end was the main cause of the satisfactory results, remarked this by teachers and students. This is an added value given by the use of transmedia strategies.

On the other side, it must be said that such a learning process is very difficult to assess and, in the end, evaluate. The evaluation of such learning strategies should be the next issue for further research. Another question that opens is whether this kind of work is appropriate for different subjects and schooling levels.

Understanding how art follows nature is a primary objective within the education of future teachers of different subjects, from kindergarten to the university (Arnheim, 1993; Klee, 1968; Munari, 2008). This is a central condition if we wish to educate youth, creating a holistic sense of the world and their lives. Difficulty in connecting information and transferring knowledge, poor abilities to give meaning to images and to understand visual discourse seem to be a persistent problem in many aspects within education at all levels.

The use of digital media and its exponential development creates a world of sharp differences. Probably not so important is the social aspect. Any phone can perform all we need to show our life to others on Instagram. On the other side, there is a generational gap between many teachers confronted with the fact that students possess or know how to access an enormous amount of information facilitated by digital media. Quite often, this information exceeds the contents required within curricula. The contradiction consists of the fact that teachers many times possess less information than the students, who, in contrast, do not possess the tools to manage and classify such information critically. Curricular changes develop at a significantly slower rate than students' need to acquire knowledge and experiences. The acquisition of knowledge through experience that does not present any boundaries or limitations regarding learning contents is an exciting potential to improve this eventually

conflictive perspective. Probably, this limitless aspect is, at the same time one of the key difficulties teachers face planning their teaching processes.

Multimedia experiences are important not only in the case of art education but for other school subjects. Most of them deal with visual and auditory representations of all kinds. It is not difficult to imagine the meaning of the capacity to imagine spatial relationships in the fields of geometry, geography, biology, physics or chemistry. Complex and refined means of visual and auditory perception and all the meanings this concept involves and supposes are required in almost all activities. Schools at all levels should offer students proper operative experiences and develop specific competencies. At the start of the second decade of the 21st century, there is no doubt about this. In the last three decades or so, the world changed at a rate we could not have imagined. We have no reason to believe that it will be different in the future.

A dialectic view on experience assumes that it is formed based on exchanges between sensory perception and reflection. Experience is not only part of perceptions from the outside world but gets its meaning through interpretative consciousness. Some life experiences (e.g., an aesthetic experience) can transform a person if he/she recognises a particular type of experience in it. With this project, we could vividly come into contact with this aspect of the teaching and learning process.

This work strategy also opens contradictions between different individual experiences, goals and established method to achieve them, the traditional meaning and the mechanisms of motivation and personal commitment in the whole process. It questions the position of each individual promoting self-reflection in order to connect cognitive and emotional aspects with action. We could say that it realises Dewey's (1949) thoughts that when we look at (or create) an artwork, emotions and thinking work together in their perceptible and sensual connection, so experience is the complex in which the world opens and gives us meanings and values also in a non-verbal way.

We can state without a doubt that art education in the 21st century faces new challenges of all kinds. It is necessary to improve experiences using all the possibilities offered by new media because they facilitate the development of spatial visualisation and operations with complex shapes that practically cannot be realised in the traditional way with paper and pencil; they save time and give the possibility of many variants on the same theme very easily. However, it is obvious that the pedagogical process of art education demands the inclusion of a specific way of accurate evaluation of three dimensional-haptic activities that would enable students to experience the characteristics of materials, like texture, toughness, temperature, elasticity, flexibility, plasticity, and porosity,

which are neglected by screen media. The understanding of past and contemporary art products requires a set of complex and rich experiences, which is one of the principal objectives of education at all levels. Transmedia narratives, because of the potential use of different distribution channels, that are not necessarily connected with screen media, offer a wide range of possibilities tying the real and the virtual in specific modes.

This new culture shifts the centre of the educational process from a frontwards relation between teachers and students, with an individual response and engagement from these to a community that is continuously creating and recreating knowledge.

In today's globally connected world, in which it is possible to use different platforms to connect and communicate, learners and teachers are no longer attached to a specific space. In some way, even if it is difficult to imagine, we could say that the classroom, as the material space where teaching, learning, social interchanges, and similar take place is changing. The learning community is, in fact, a global, multicultural community that eventually uses many verbal languages and scripts and does not need a three-dimensional space to live. In these contexts, visual language becomes a universal that should be widely understood, carrying at the same time the particular touch of cultural peculiarities (Brushwood, 2017).

Without a doubt, new special ways of organisation will be readily required from the teachers and the students. Flexibility in planning and evaluating the results of the work and responsibility and interest for novelties from the part of the students will become unavoidable. Our ideas about what we expect from the learning process should also be attuned. Dialectics among successive experiences that involve teachers with their own experience, professionalism, organisational skills, knowledge, and intuition for individual leadership, and the student who interprets and builds a picture of the world is derived from the way each one accepts the world and assembles elements into a new whole with meaning in a particular, renewed context each time.

The meaning of this research should be seen in an extensive and, at the same time, quite eclectic context: major changes in the perception and evaluation of events in the world of arts, which come about at the same time as large changes in the school environment, rapid functional changes in the lives of teachers, students and our society in general, and a school that will not be the building the elders remember with attachment and emotion but a virtual cloud, somewhere in the universe.

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»Do not touch it!« Today's Children's Visual Competencies in Comparison with the Pre-Digital Era in Light of their Art Educational Environment

GABRIELLA PATAKY¹

The task of twenty-first century art education is to contribute to the blossoming of the child's personality. In this article, I approach this challenge from two principal directions, both of which provide a window onto unfamiliar terrain. This project sought to answer the following research questions: How do plastic, spatial (3D) creative capacities develop, and how do they compare with the kindergarten's accustomed advancement of picture-creating, planar (2D) capabilities? How do kindergartners' skills as measured in the 1970s compare with those of kindergartners today? A follow-on project examined children's skills in the context of built environment education, asking the questions: Where, and with whom, do children find the best conditions for creation and arts education? What kinds of environments are most favourable? The results showed a clear deterioration of children's drawing development from 1974 until today, as well as from drawings in both studies to modelling today. However, a more promising discovery was that depictions of movement appear much sooner in the case of plastic arts works than in drawings. This opens the way to an orientation that in our increasingly urbanised world, can help our children grow into adults who responsibly shape our environment, sensitive to their own age, as self-possessed problem solvers, employing the toolkit of education through art. The study is based on ongoing, long-term research of the 3612+ Visual Skills Lab group, employing both qualitative and quantitative methods to evaluate the artistic proficiencies of nearly a thousand children, mostly aged 3-7, in dozens of kindergartens in Hungary, through hands-on exercises as well as surveys of teachers, parents and other interested parties.

Keywords: art education environment, built environment education, design thinking, early childhood art education, visual competencies development

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»Ne dotikajte se!« Današnje vizualne kompetence otrok v primerjavi s preddigitalno dobo v luči njihovega likovnovzgojnega okolja

GABRIELLA PATAKY

Naloga likovne vzgoje 21. stoletja je prispevati k razcvetu otrokove osebnosti. V tem prispevku se tega izziva lotevamo iz dveh glavnih smeri, ki obe ponujata pogled na nepoznan teren. Ta projekt je poskušal odgovoriti na naslednji raziskovalni vprašanji: kako se razvijajo plastične, prostorske (3D) ustvarjalne sposobnosti v primerjavi z običajnim napredovanjem slikovnih, dvodimenzionalnih (2D) zmožnosti otrok v vrtcu; kako se spretnosti otrok, vključenih v okolje vrtcev, merjene v 70. letih, primerjajo s spretnostmi otrok v vrtcih danes. Nadaljnji projekt je preučeval otrokove spretnosti v okviru vsebin prostorskega oblikovanja z naslednjimi vprašanji: v kakšnem okolju in s kom imajo otroci najboljše pogoje za ustvarjanje in likovno učenje; katera okolja so najprimernejša. Izsledki so pokazali očitno poslabšanje razvoja otroške risbe od leta 1974 do danes, in sicer v obeh študijah s področja risanja, pa tudi upad spodobnosti na področju plastičnega oblikovanja. Študija je pokazala tudi obetavne ugotovitve, da se upodobitve gibanja v otroških likovnih delih pojavijo prej na področju plastičnega oblikovanja kot na področju risanja. Ta spoznanja odpirajo pot smernic, ki lahko v našem vse bolj urbaniziranem svetu pomagajo otrokom, da odrastejo v osebe, ki z odgovornostjo oblikujejo naše okolje, občutljivo glede na svojo starost, kot samostojni reševalci problemov z uporabo orodij učenja skozi likovno vzgojo. Študija temelji na dolgoročni raziskavi skupine 3612+ Visual Skills Lab, ki uporablja kvalitativne in kvantitativne metode za oceno likovne usposobljenosti skoraj tisoč otrok, večinoma starih od 3 do 7 let, v več deset vrtcih na Madžarskem, s praktičnimi vajami ter z anketami med učitelji, starši in drugimi zainteresiranimi stranmi.

Ključne besede: likovnoizobraževalno okolje, vzgoja o prostorskem oblikovanju, proces razmišljanja o oblikovanju, likovna vzgoja v zgodnjem otroštvu, razvoj vizualnih kompetenc

Introduction

»Don't touch!« This brutal intervention into the freedom of personal expression of young children is often heard. Has anyone actually counted the number of times a child hears this expression before s/he begins her/his schooling? Even without statistics, it is foreseeable that without independent activity and her/his own experience, the development of the child's personality will be hindered. We have to establish a secure and inspiring creative environment necessary for the attainment of visual education. Learning exercises should be created with an understanding of the characteristics of the particular age group and of the particular children or pupil groups at educational institutions. In practice, however, we see that instead of consciously planned assignments geared towards developing the child's competencies, what is taking place are activities convenient for interested adults (teachers and parents), often spread through social media.

A thorough approach to visual education, grounded in research, is even more important in the age of the democracy of the internet. Abetted by social media, the servile copying of the commonplace increasingly replaces the creation of objectives selected towards the conscious development of competencies. For the most part, this phenomenon does not even consist of the duplication of teaching plans, but images of the products of instruction. If these are pleasing, the necessary materials and tools are obtained, and in subsequent lessons an attempt is made to produce the same result, or something similar, with the pupils. Especially in the case of the youngest pupils, solutions arise through imitation, a kind of dictation on the basis of external images. The problem with this is not only that the children's own internal images and imagination go unused, or that the pedagogical utilisation of the creative process is much less effective, but also that those competencies and abilities that would be necessary for their development are purposely not mobilised. This kind of democracy, while spreading a false feeling of professional security, deprives the community of prospective development based on shared knowledge.

The present paper pursues one of the new objectives of the International Society for Education Through Art (InSEA): offering support to early childhood educators to get to know the most up-to-date trends in visual education (»Education through Art«).² Kindergarten, preschool, elementary/primary school, generalist and in-service teachers all teach art passionately in their day-to-day work, but this practice is not represented enough in art teacher associations. They need more help to develop themselves, especially in relation to new

 $^{{\}tt 2} \quad {\tt See https://www.insea.org/Gabriella-Pataky.}$

concepts of early childhood education and primary schooling in Europe, which propose a complex, transdisciplinary, competence-based curriculum.

UNESCO defines early childhood care and education as follows:

Early childhood, defined as the period from birth to eight years old, is a time of remarkable growth with brain development at its peak. During this stage, children are highly influenced by the environment and the people that surround them. Early childhood care and education (ECCE) is more than preparation for primary school. It aims at the holistic development of a child's social, emotional, cognitive and physical needs in order to build a solid and broad foundation for lifelong learning and wellbeing. ECCE has the possibility to nurture caring, capable and responsible future citizens.³

During this stage, children are highly influenced by the environment and the people that surround them. The younger the children, the more exposed they are; this is a time when their guardian's responsibility is most important, as children are more willing to do what they are told. Despite a child's upbringing being considered one of the most significant future investments, little prestige is given to it.

The speed with which our visual world changes means that the visual development of children in their equally swiftly evolving culture requires special awareness. Previously published models of scientific visual research skills and reinterpretations of pictorial clichés (Mitchell, 1994) are only partially helpful to teachers using traditional methods who wish to cope with the particular challenges of today (Bodóczky, 2003). It is necessary to take seriously the visual turn, long argued as fundamental by Mitchell (2004).

Statistical research on the development of plastic art skills, with the participation of a large number of children, has only been carried out by one researcher, Claire Golomb (1974). For the current research project, I took Golomb's model as my base point. My intention was to compare the drawings as well as the sculptures of that time with those of today. To make the comparison, I have chosen a research project on children's drawings from the same era, Ákos Paál's (1974) quantitative research, performed on a large sample. I endeavoured to answer the question: Have children's drawings changed along with the changes in the world in the past 40 years?

According to my previous research findings concerning diagnostic methods (Pataky, 2012), two-dimensional imaging exercises are disproportionately

³ See https://en.unesco.org/themes/early-childhood-care-and-education. I focus here particularly on the age of 3-7 years, mainly on preschool but also on primary school education. I use the term "kindergarten" for the years from 3-7, recognising that in some countries kindergarten ages may differ.

emphasised in visual education, both in infant nurseries and kindergartens. In that research, an online questionnaire for focus groups, parents, kindergarten teachers and primary school teachers revealed that exercises in the area of 2D visual expression dominated, while object-making (3D) exercises and the time spent on them, as well as the quality of work, fell far behind, despite the recommendations of the National Curriculum 2010 (and 2013) education management documents.

The present article proposes a new research direction in early child-hood education, centred on plastic (three-dimensional) visual education. In the twenty-first century, it is evident that children are losing natural skills, and that results-oriented arts education is failing to meet them where they live and grow, in terms that relate to their own experience (Inspectorate of Education / Ministry of Culture and Science, 2017). Rather than forcing a certain orientation, it is crucial to teach children how to get to know and to express their own world, a world that is undergoing constant shaping and design. Accepting them as autonomous beings, giving them more and more responsibility, sets them on a path to becoming aware citizens. All of this can be fostered through a conscious visual education/arts teaching practice, focused on the constructed environment as children experience it.

This tendency is largely unresearched, with some scattered exceptions, most notably Constance Kirchner's research (2015). Built environmental education has some presence, especially in Germany, and it has been introduced into Hungary by way of the research project *Common European Framework for Reference in Visual Literacy (CEFR_VL)*, operating through our group, the Tudományegyetem Tanító- és Óvóképző Kar (Eötvös Loránd University Faculty of Primary and Preschool Education) (ELTE TÓK) »3612+ Visual Skills Lab«. I will survey the research we have carried out in this area, with reference to the (minimal) precursors to it, and conclude with the prospects and possibilities it projects, as well as the benefits for early childhood education and its subjects, the children.

The project sought to answer the following research questions: How do plastic, spatial (3D) creative capacities develop, and how do they compare with the kindergarten's accustomed advancement of picture-creating, planar (2D) capabilities? How do kindergartners' skills as measured in the 1970s compare with those of kindergartners today? A follow-on project examined children's skills in the context of built environment education, asking the questions:

⁴ Another example is the report »Level Artistic Orientation 2015–2016«, similarly related to art education, in which education inspection experts in the Netherlands expressed their concerns (Inspectorate of Education / Ministry of Culture and Science, 2017).

Where, and with whom, do children find the best conditions for creation and arts education? What kinds of environments are most favourable?

Another aspect of the research examined the value of the sense of touch in artistic perception: To what extent do children actually also »see« with their hands? Valuable research exists on the sensory development of the tactile receptors on the palm of the hands. The specialised innervation of the fingertips allows for very fine and complex movements and precision of sensation. These are not congenital skills, but can be learnt and developed (Katona, 2001), as can spatial perception, by the final year of kindergarten (Szőkéné, 2010). The nerve endings under the skin surface of the palm and fingers can be adapted quickly, which means that so-called »Meissner bodies« are activated when our skin touches something. However, as the years go by (from the age of about 10), the number of tactile receptors in the fingertips gradually decreases (Lakatos, 2007). This indicates a contradiction in a sentence we often hear from adults in reference to young children: »Don't touch this or that!«

Our primary findings were first presented in 2018 in Budapest, and then at the Helsinki session of the InSEA Conference (Tóth & Pataky, 2019)⁵. However, aside from conference presentations and a brief summary of the second part of the research in a conference volume, our results have not been published in English.

Parallel to the development of the CEFR_VL prototype (Pataky, 2016), our study of kindergartners (Pataky, 2017a) has been a test of the practical applicability of the CEFR_VL model. Our results clearly indicate where intervention is most urgent: while visual communication and visual learning today play an ever more decisive role in a world undergoing constant change, today's children show a deterioration in the development of their visual abilities compared to the last forty years.

What kind of development is necessary during the first years of institutional education in order to optimally expand children's visual knowledge? I would like to take our 3612+ Visual Skills Lab group's research results as a starting point and use diverse interactive methods to seek answers to the particular questions of visual education for young children, while surveying possibilities contained in the toolbox offered by the CEFR_VL model (Kárpáti & Pataky, 2016; Wagner, & Schönau, 2016) that can raise awareness of the planning of pedagogical processes for early childhood educators (kindergarten and primary school teachers) who (also) teach visual arts.

Built environment education was first introduced in Hungary in early childhood education in our ELTE TÓK department, making us pioneers. With the first book related to early childhood pedagogy published in Budapest (Guba et al., 2017), endorsed by InSEA, we explore this new, transdisciplinary but less travelled field based on the CEFR_VL, linked strongly to visual education.

Competency measurement as a means to improve pedagogical action

Like other schoolwork, visual education, education through art, is normally organised around tasks. In early childhood, it is a question of a balance between process- and product-oriented exercises or experiments, as a very special and characteristic form of learning in this age group. Even at this age, competency-based tasks allow for complex development of the individual. Personal development may be joined with the development of visual competencies. Knowing their pupils, teachers may then work towards an adaptive, optimal developmental direction for them.

The CEFR_VL model's skills list (Kárpáti & Pataky, 2016; Wagner & Schönau, 2016) offers a collection of competency elements that serves as a basis for pedagogical planning (of lessons, projects, weekly topics, etc.). Teachers can create tasks taking into account personal abilities, the principles of developmental psychology, and the recommendations of educational regulatory documents.

In teaching, the promotion of visual literacy competencies is predominantly induced and realised by means of tasks, especially tasks that promote artistic creativity. Such tasks should be determined by a complex and interdisciplinary approach. These tasks must be developed, yet the question arises how learning processes can purposefully be accompanied by formative evaluation⁶ and a summative assessment of learning results (Bodóczky, 2000). Assessment – in the sense of testing the success of learning through examination tasks – plays a very important role for diagnostic purposes: At what stage is the learner during or after the learning process? What are her or his strengths? Which problems and deficits become apparent? Which (sub-)competencies can be discerned?

This is not, however, only important for the diagnosis of the learners' progress and thus for the improvement of learning, but also for the improvement of teaching. A further purpose of assessment in the context of teaching is the optimisation of pedagogic action. Reulecke and Rollett (1976, p. 177) write that »diagnostics in decisive situations in school serves to gain information for the optimisation of pedagogic action«. They utilised the definition formulated by the Bund-Länder-Kommission from 1974, which contains all of the essential aspects a teacher needs for adequate pedagogic action: »The term pedagogic diagnostics refers to measures to shed light on specific problems, to assess the success of teaching and learning, and to assess the individual's educational potential in the pedagogic field, especially such measures that help to choose a school career, a training course, a vocational training or further education«

 $^{{\}small 6} \quad \text{A continuous dialogue between learners and teachers is crucial for learning (OECD, 2005)}.$

(quoted in Reulecke & Rollett, 1976, p. 177). The PISA Consortium also relates assessment/diagnostics to learning and teaching in this way: »A central precondition for an ideal promotion [of learners] is the teachers' sufficient diagnostic competence, i.e. the ability to correctly assess the learners' level of knowledge as well as their processing and understanding of input. Diagnostics in decisive situations in school serves to gain information for the optimisation of pedagogic action« (Deutsches PISA Konsortium, 2001, p. 132). In this sense, pedagogic diagnostics comprises all measures that contribute to the improvement of learning and teaching through observation, here especially the assessment of teaching-learning success. Thus, teachers must also be diagnosticians, with the capacity to conceive the preconditions, processes, results and environments of learning. Using our ongoing diagnostic research related to early childhood education as an example, I will show how this can be put into practice.

Method

The research presented here focused squarely on the creation of timely models of contemporary children's creation and on the varied development of visual capacities, which play a key role in children's personality growth. The objective was to carefully study the minimal and optimal levels of development in the 3-7-year-old age group, in order to determine the best conditions for arts education. I emphasised three-dimensional (3D) evaluation exercises so as to offset the dominance of two-dimensional (2D) image-making exercises in art education. The project focused on establishing a structure for analysing visual skills, and on aspects of the development of these skills. With support from InSEA Europe, the research was carried out as part of the larger CEFR_VL project, established by the European Network for Visual Learning (ENViL) research group.7 Within the CEFR_VL structure of competencies, a set of measurements enabled evaluation of the three-dimensional visual skill levels of plastic art and construction work by children aged 3 to 7, and focused on drafting an appropriate system of tools to assess skills applied in everyday life, such as creative problem solving, material and tool use, space perception, planning, sign creation and interpretation, and experimentation.

In the main research project, I carried out experimental exercises with 815 children aged 3 to 7 in 28 kindergartens in Hungary. Most of the kindergartens involved are connected to ELTE TÓK kindergarten teacher training, which means that the result of this research is not only put into effect at participant kindergartens, but also directly in kindergarten teacher training. It makes

⁷ Nr.: 538568-LLP-1-2013-1-DE Comenius CMP. (European Research Fund project identifier – 2014-17).

direct and effective use of the CEFR_VL competency model, and thus finds approval with direct users (practising and beginning kindergarten teachers).

The measuring tool system for the plastic (3D) skill research, developed specifically for this project, was organised into four packages of tests and other investigations, divided into equal parts of the 2014/2015 school year.

The first package of plastic exercises for the measurement of visual skills included free experimentation with the material, making imaginative figures and free forms. The resulting creations were analysed on the basis of 13 elements, including the children's choices of materials, perspective and method; the level of differentiation and detail in the works produced; their sense of proportion; recognisability as a human figure; and portrayal (or lack thereof) of a sense of motion.

Part two focused on games based on the coordination of optical and tactile senses. In addition, I recorded precise measurements about the power of the children's hands with a particular instrument (a circus »strongman«, which the children were encouraged to emulate, was the framework of the game). The collected data here, from 2015/16, will have an important role in a future longitudinal study. I obtained information about the coordination of the optical and tactile senses of the children with the help of a tool I developed and designed, nicknamed the »peeking basket«. The children were asked to identify and select 11 different objects (pine cone, plush bunny, chestnut, etc.) by means of touching them while the objects were invisible to them, hidden in a box.

Part 3 studied the sense of proportion and scale. I created a simple puzzle-like game as a measurement tool to assess the awareness of scale (simple egg shapes of differing sizes to which could be attributed family relationships, i.e., a large egg equating to a father, a small egg to a baby). As an additional test, I applied a drawing to compare the drawn figure and the modelled figure. I asked the children to draw themselves with the person who had brought them to kindergarten that day.

In part 4, the children were asked to shape a human figure from clay. This part of the investigation was the most influential. We then evaluated the exercise results in the light of the kindergarten background variables. These variables were mapped (charted) by analysing the data from two surveys:

1. the children's development survey,8 and

⁸ Questionnaire on background variables concerning the development of each child. We asked:

[•] the exact age of each child;

[•] the duration of involvement in institutional education;

[•] the gender of each child for gender-specific questions/findings;

[•] the teacher's evaluation of each child's performance in these exercises in kindergarten;

[·] a statement of special needs;

[•] which hand is dominant.

2. the institutional environmental facilities survey.9

The credibility of the study is based in the joint employment of qualitative and quantitative research methods. In the first, diagnostic phase, qualitative elements predominated: the field work and the processing and analysis of the data gained from the children's work and resolution of tasks were carried out with statistical methods.

In the case of the kindergarten cohort, the observation of process was a key aspect, since the creations declared finished were only evaluable by means of the creator's narrative. For this reason, the recording of the children's descriptions of their work was especially important. To this end, after the procurement of the appropriate parental permissions, detailed photographic documentation of the phases of creation was carried out, while video recordings were made of the creators' self-reflections. The process diagnostics of distinct series were produced for the whole sample, while the video recordings were made only of certain children, utilising the insights of qualitative research methods (Bodor, 2013).

Document analysis was used to examine the educational prescriptions relevant to our topic: the national basic programme for kindergarten education; the national school curriculum, relevant to the transition period from kindergarten to school; the curriculum framework for visual education; and the visual education methodological programme principles for preschool and primary school teacher training in Hungary. Prior to the diagnostic examination, we considered it particularly important to register a situation report on the current regulatory system; the "weightlessness" of the above documents, which do not deserve a systematic evaluation, are characteristic of the kindergarten environment.

In the following (2015/16) school year, I carried out a follow-on study aimed at imagining optimal art educational spaces. I utilised iconographical analysis to evaluate 714 drawings by Hungarian children aged 5–10 years, expressing how they imagine the spaces they would be happiest to create in.

In the aforementioned ongoing investigation (Pataky & Rekvényi, 2016), one of the three main research directions was asking the children to draw *where* they like to create. The images in this research model are specially coded forms

⁹ Questionnaire on the background variables of the institutional environment facilities. This questionnaire asked:

[•] the qualifications of the teachers;

[•] the creative circumstances plus the material and tool supply;

[•] the basic data for kindergartens and kindergarten teachers.

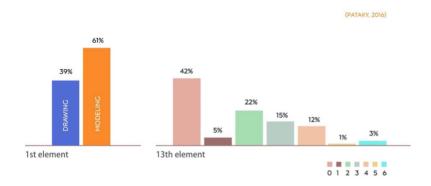
The questionnaire ended with a question directing a short essay, from which we aim to discover the reasons why these invaluable dimensional exercises are ignored or not more widely used.

of messages. This indirect iconographical method is useful in this case as well as others, because it does not idealise reality, but rather faces the truth. In this ongoing investigation, we are analysing these drawings in many aspects.

Figure 1

Two aspects of the evaluation criteria: 2D v. 3D (1st element) and recognisability of human form (13th element), from least (on the left) to most recognisable (on the right)





Results

Part 1 of the research showed both the potential and weakness of plastic creation skills. When the children could choose their materials and subjects freely, most of them (197 of 323, or 61%) created a 3D form instead of a drawing (Element 1 of the evaluation criteria; see Fig. 1). However, a detailed examination of the recognisability of the human form (Element 13) in the sculptures created showed that the largest proportion, 42%, were classifiable as "amorphous", not at all resembling a human figure; only 3% made a sculpture that was perfectly recognisable from all angles.

Figure 2Materials used in various kindergartens of the sample (the top line represents all kindergartens)

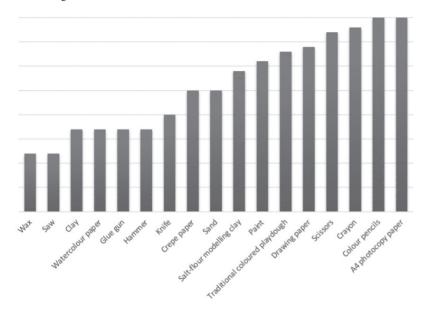
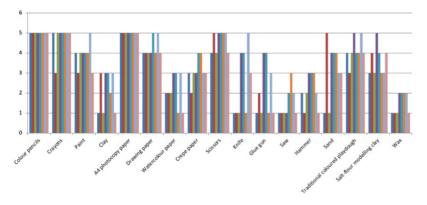


Figure 3
How the kindergartens judged the importance/frequency of the use of tools and materials on a five-point scale

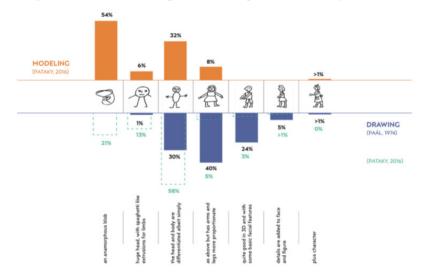


Generally, it can be stated that familiarity with the modelling materials (e.g., playdough, clay and wax) enables better results in the area of human figure depiction. The survey of the art materials available in each kindergarten

and their relative importance made clear the predominance of 2D materials (see Figures 2, 3). We should not be surprised by the weakness of plastic skills, when kindergartens mostly offer only coloured pencils and A4 printing paper for the children to use.

This fact, already proven by the 2011 survey (Pataky, 2012) on the development of construction skills of children aged 6 to 12, was once again verified by the interviews and focus group discussions with preschool teachers involved in the current investigations: plastic artwork – object-making – is dangerous, messy and complicated. Fortunately, we have a reason to be optimistic, since, as can be seen here, this is not the case in every kindergarten.

Figure 4Comparative model of drawing and modelling in 1974 and today

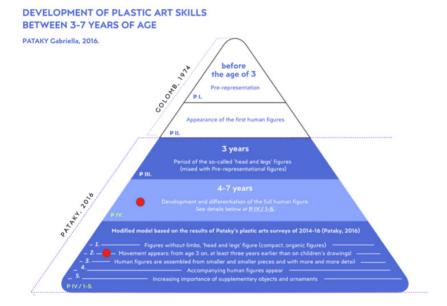


Taking the results of my research on both modelling (3D) and drawing (2D) together with Golomb's (1974) modelling and Paál's (1974) drawing results, it becomes clear that both modelling and drawing skills are less developed today than 40 years ago (Pataky, 2017a, 2017b) (Figure 4).¹⁰ In addition, children's plastic skills are even less developed today than their drawing skills. The reason for this phenomenon is rooted in the background variables, including the relative lack of 3D materials and emphasis (Figures 2, 3). Plastic art skills are

¹⁰ Although my results represent conditions in Hungary, education inspection experts in the Netherlands expressed their concerns related to art education similarly in the report »Level artistic orientation 2015–2016« (Inspectorate of Education / Ministry of Culture and Science, 2017).

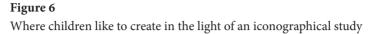
delayed in comparison to drawing skills, and this development – just as in the case of drawing – is not linear. Plastic art representational skills 40 years ago developed parallel to the model of the development of drawing. In 2016, this does not seem to be the case.

Figure 5Developmental model of plastic art skills in 2016



However, as shown under »Development and differentiation of the full human figure« in the model (Figure 5), the main and most promising difference in comparison to Golomb's (1974) results is in the early appearance of the representation of movement. This starts around age 3 in the case of plastic art figures created by children in my sample, at least three years before movement appears in their drawings. Although the figural aspect of the modelling was often difficult to recognise, the children's narration made clear their intent to represent action rather than static bodies. We constantly supplemented our participant observation with recording and analysis of the valuable narratives given by the children during the act of creation (that is, of the narration that accompanied the process of creation, and/or their commentaries on the work that they declared to be complete).

Children's creation in the art educational environment





At this stage of the follow-on research (ongoing), the first impression of the observer is that the drawings are incredibly diverse in terms of drawn spaces and activities. Locations and activities appear on a wide spectrum. From this range, the locations can be narrowed down to three main categories (Figure 6). Some characteristic findings are:

- Surprisingly, a school environment only appears on a few drawings.
 When it does, a painful and closed environment, frontal teaching, and copying rather than creative approaches are emphasised.
- On most drawings, the environments are not even close to anything institutional.
- On many drawings, outdoor environments can be seen.

We preserved not only the drawings, but the accompanying narratives. Although many of the children commented on their drawings that creating is an activity they like pursuing together with those who love them – hence all of the grandmothers that appear – they do not think of creating as a social activity. The key finding: almost half of the children like to create amongst their family members, most of them at home. More than a third, 36%, prefer to do so outside, while a mere 16% like to create at school! It would be fantastic if the children could find enjoyable, exciting creative spaces within institutional art education. These

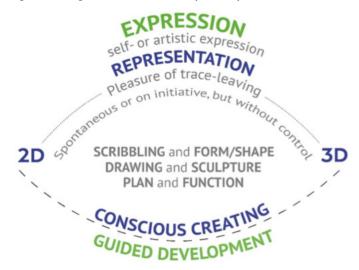
findings offer a clear message regarding what we, educators, should do: create enjoyable, exciting creative spaces within institutional art education.

Discussion

The research questions posed here asked how plastic, spatial (3D) creative capacities develop, and how they compare with the kindergarten's accustomed advancement of picture-creating, planar (2D) capabilities, and how kindergartners' skills as measured in the 1970s compare with those of kindergartners today. The follow-on project brought built environment education into the equation, asking what kinds of environments – where, and with whom – are most favourable to creation and arts education.

The research findings are summarised and visualised in the comparative model shown in Figure 4. The deterioration of children's drawing development from 1974 (Paál) until today is apparent, as well as deterioration from drawings in both studies (Generation Alpha and Generation X) to modelling today. A more promising result of comparing children's drawings and their plastic arts works, however, is the new pattern with respect to movement, with its depiction appearing much sooner in the case of plastic arts works than in drawings. The subject of our further research, currently already in progress, is the question of whether this observed result is due to the changed life conditions of the twenty-first century and the spread and character of entertainment practices aimed at children.

Figure 7The complex development of visual literacy in early childhood



What is decisive is not the activity – drawing or modelling – but rather the medium, the material. Soft material in modelling makes it easily possible to change the form and give children a sense of achievement. When drawing, we leave enduring marks on the paper, choices that we cannot undo. Creations made from pliable materials are easily modified: the child is the immediate executor of the creative process and can alter it according to his or her wishes. This results not only in the pleasure of impact, but also the experience of success, a feeling of security and increased self-esteem (Figure 7).

Let us get back to the sentence: »Don't touch this or that!« What is the teacher's role in this? As well as being essential that the teacher offer the materials and tools, she or he must also initiate rather than direct. Instinctive adult examples develop analytical thinking, something that is anyway given far more emphasis than would be appropriate for this age group. Instead of template-based activities focusing on the end product, our results point to the importance of sensory play activities and process-oriented creative activities as the desirable visual tasks in the preschool classroom.

The importance of sensory play is huge! Children should use clay, touch clay, collect experiences. What is needed is multifaceted development based on competence and rooted in real, lifelike situations. Moreover, it is not sufficient to initiate this just before school-entering age. Our activity system, aimed at fostering the complex development of visual literacy, goes beyond two-dimensional representation and the spontaneous, pleasurable trace-leaving of early childhood: it points the way to the development of multifaceted, balanced, competent personalities, focuses on *expression* rather than *representation*, and runs past imagery, across making forms in three-dimensions, through construction and modelling spaces, to the production of functional objects. The presence of this activity, based on a methodology reinforced by appropriate empirical research results, is essential to early childhood education.

In order to counteract the overemphasised presence of image-making exercises (Pataky, 2011), built environment culture is especially important in transdisciplinary visual and complex art education. The transdisciplinary aspect deserves more mention, as its competence range mixes elements of visual literacy with generally expected everyday skills development. A relevant example from the new branches of early childhood pedagogy is outdoor pedagogy, primarily on account of its competence set, effect mechanism and interaction with visual education.

Built environment education engages with the theory and practice of the deliverance of knowledge of the built environment, as well as with strengthening the connection between people and their own life-space. In contrast to passive observation, this kind of intervention inspires critical and analytical reception

and the analysis of the various environmental stimuli. The proactive, creative perspective developed in this way contributes to the acquisition of the appropriate skills for the creation of common life-space. Education in the discipline of architecture has evolved, mirroring societal challenges and conditions. Built environment education can also be considered as a multitude of traditions with different national flavours.

Built environment education is becoming more and more important, not only in international pedagogy. This is illustrated by a government regulation created in Hungary in January 2015, which calls for the teaching of built environment and spatial culture from kindergarten to university. The basis of this regulation is the realisation that, on the one hand, knowledge about architecture and spatial culture improves visual skills and fundamental competencies needed in the twenty-first century, such as creativity and innovation, critical thinking, problem solving, decision making, civics, communication, cooperation and team work, self-understanding and self-regulation. On the other hand, as participation in urbanisation processes and in the shaping of the built environment comes to the fore, built environment competencies, such as spatial perception and the use and shaping of space, also become more prominent. Developing these competencies and teaching pupils about the built environment should be part of education from an early age, so that pupils develop a need for a quality environment and sensitivity towards aesthetic and social problems. As such, it is essential that the methodology of built environment education, the fundamental information and the educational opportunities present in the subject are made accessible to all participants in early childhood education.

Conclusion

One of the precursors of the research on educational spaces has a strong connection to the CEFR_VL prototype as well as to built environment education and young children's education. I am currently working on mapping basic elements of artistic and art educational environments, based on the CEFR_VL. My new project is how to put CEFR_VL into practice in particular situations. As a result, a pedagogical innovation will be developed for teachers (decisionmakers, curricula developers) to detect whether an environment is suitable for a particular assignment/task/test/exercise/activity, and how it can be developed and improved effectively and sustainably.

Materials, equipment, tools and personal conditions will also be researched, the fortunate combination of which facilitates the optimum

¹¹ See http://envil.eu/the-benefits-of-the-nvil-situation-wheel/.

development of visual competencies. The system forms the basis of computer software that is now in the phase of development and testing, which will help schools and teachers to identify what needs to be done in order to optimise conditions or gain reinforcement if these conditions are already optimal. Serving the purpose of both evaluation and optimisation, the program (application) also hopes to provide teachers working under more difficult circumstances with reliable feedback on areas of performance that are not affected by material conditions. Teachers will find information and encouragement to improve the efficient use of resources available for development by devoting them to a well-defined group of conditions. In South Korea, we have already introduced the research design and the measurement tools with the first results of a currently ongoing pilot survey (Pataky & Rekvényi, 2017). We are in the process of formulating collaboration on common research projects with several partner universities with teacher training programmes. We want to explore whether our experiences in Hungary are characteristic of the rest of Europe, and what similarities and differences can be determined for the rest of the world. Under the auspices of the InSEA organisation, we are now in contract discussions with several programmes in the Asian section (Japan and China).

Possible obstacles are that there are no or very few references that we can use for guidance, and those that do exist do not share our orientation. It is very invisible territory, because those who are not versed in children's plastic creation and its assessment will not see anything in what they do. There are major material challenges: although the materials are cheap, a great deal of expertise is required from those who are familiar with the area and know how to work with the materials, in order for them to be used effectively. Productive research requires participant observation, which is very work- and energy-intensive.

At this point, it is worth recalling the directions in early childhood visual education that are relevant here:

The goals of the development of visual competences and its elements were defined for us by the CEFR_VL. Some specific elements of the prototype, such as experimentation, are extremely important for the very young. We have to take the skills that we are born with and that may be dormant and bring them back to life, making them vibrantly alive again with appropriate motivation, that is, exercises. In everyday practice, as well as in the research field, it is equally important that these exercises work incorporated into situations relevant to children's everyday lives, using the toolset of contemporary visual art. As with all developments and improvements, they have to be calibrated to children's age particularities. Knowing our options, as age and development progresses, these

calibrations need to be adaptive, tailored to the individual and made with more and more challenges. Special forms of assessment, the example or narrative, as well as other kinds of formative assessment in early childhood, can be definitive in terms of the long-term fostering of creativity. Educational-psychological research in connection with built environment research shows just how large an effect environment and institutional infrastructure has on the development of children.

Based on the data drawn from children's drawings, it becomes clear just how important it is to view visual development in early childhood with criticism and self-criticism. The competence development of visual literacy, as one of the most important transversal competencies, needs a paradigm shift. This is what enthusiastic art educators are working on worldwide, together with In-SEA; we welcome all colleagues who wish to join us in this quest.

How, then, is the optimal and supportive educational space created in the digital era? What could be a truly inspiring environment for art education? How should a studio be best set up in the twenty-first century? Is there a reason for the clean desk policy (CDP) to be present in schools?

To summarise the results of this research at the current stage, which has been undertaken together with artists, teacher training students and children: the attitude and desire is the same in all three groups; creating and self-expression are such natural activities and strong drives that we can confidently say that creative spaces are not location-specific, but personal. Creation takes place wherever the creator is or where they like to be. If we want to improve institutional art education, we have to work on school creative spaces becoming creative person-focused. We have to make art classes and art education into an adventure; both teaching and learning will then be effective in the art room.

We have a clear message from children as to what we should do: help to create enjoyable, exciting creative spaces within institutional art education. Based on all of the outcomes presented here, it is clear that we have to reinvent art education: the conditions of art education are not optimal or supportive enough!

Acknowledgment

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The State of Art Appreciation among Nine- and Ten-Year-Old Students in Slovenian Primary Schools

Jerneja Herzog*1 and Matjaž Duh²

In the contemporary process of teaching fine arts, the students' own creative expression and art appreciation are used to encourage learners towards both perception and reception; consequently, the evaluation and internalisation of works of art play an equally important role. In art education practice, we manage to provide adequate incentives and are able to follow incentives for artistic expression, but pay less attention to developing art appreciation. This research presents the results of a study that monitored the development of art appreciation abilities among 9- and 10-year-old students (4th and 5th grades; n = 2794) in Slovenian primary schools. The level of art appreciation abilities was rather average, but was more developed among older students and girls. In monitoring the school stratum, we did, however, notice a statistically significant difference regarding perception, whereby students in urban schools performed better than their peers in suburban schools.

Keywords: art appreciation, perception, primary school, reception, visual arts education

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Stanje ravni likovne apreciacije med devet- in desetletnimi učenci v slovenskih osnovnih šolah

Jerneja Herzog in Matjaž Duh

V sodobnem procesu poučevanja likovne umetnosti sta lastno ustvarjalno izražanje učencev in likovna apreciacija namenjena spodbudi likovne percepcije in recepcije učencev; posledično imata vrednotenje in
ponotranjenje umetniških del enako pomembno vlogo. V likovnovzgojni praksi uspevamo zagotoviti ustrezne spodbude za likovno izražanje
in sledenje, medtem ko manj pozornosti namenjamo razvoju likovne
apreciacije. Ta raziskava predstavlja izsledke študije, ki je spremljala razvoj sposobnosti likovne apreciacije med učenci, starimi od 9 do 10 let
(4. in 5. razred; n = 2.794) v slovenskih osnovnih šolah. Stopnja sposobnosti likovne apreciacije je bila precej povprečna, se je pa pokazala za
razvitejšo pri starejših učencih in deklicah. Pri spremljanju stratuma šol
smo opazili statistično pomembno razliko pri percepciji, pri kateri so se
učenci v mestnih šolah bolje odrezali kot njihovi vrstniki v primestnih
šolah.

Ključne besede: likovna apreciacija, osnovna šola, recepcija, percepcija, poučevanje likovne umetnosti

Introduction

Visual arts education has five main positive outcomes: art-sense-making, enriching experience, aesthetic appreciation, entertainment, and bonding. (Lomas, 2016). »Creativity and achievement, in seemingly all age groups, may be related to personal commitment and investment. It may be that time is necessary for the creative process, or that creative people tend to devote themselves to whatever grabs their interest« (Healey & Runco, 2006, p. 39). In primary school, modern didactics of arts education is based on the development of the productive - hence artistically creative - and receptive artistic abilities of students. The latter also includes art appreciation, whereby students are challenged by perceiving and receiving, and hence by evaluating and internalising works of art. »The development of artistic design, sensitivity for artistic language and the aesthetic experience in the process of expression, obtaining technical experiences, work with different materials and similar have a beneficial effect on the development of art appreciation abilities« (Duh et al., 2012, p. 640). The development of artistic appreciation is based on developing a perception of the artwork that is as subtle as possible. In the process, students are trained to see the work of art, understand it and enjoy it. The factors that influence art appreciation are numerous and are not limited to understanding the artist's intention (Jucker & Barrett, 2011). Art appreciation focuses on the »intrinsic values of art, by analysing and appreciating the qualities specific to the various artistic elements, such as composition, form, colour, light and space« (Law, 2010, p. 94). At the affective and cognitive levels, artistic appreciation thus deals with emotions and feelings about art, while including knowing and understanding its development. If both objectives - the affective and the cognitive - are met, the result is artistic appreciation (Seabolt, 2001). Tinio (2013) believes that, »The aesthetic experience of art begins with the perception of the surface features of an artwork and peaks when the viewer achieves a sense of having grasped an underlying meaning, context, or concept regarding the work that might have some personal relevance« (Tinio, 2013, p. 265). When we see the context of the theory of aesthetic experience, we can say that, »Sensibility to the appearance of works of art is a precondition for the constitution of concealed emotions, because the work of art provides a distinct form to the emotion in question« (Funch et al., 2012, p. 98). One's own ideas are related to associations, which in artistic education are revealed as a self-assumed way of thinking, primarily because »as a component of creative artistic activity they refer directly to the subject arts and to its receptive, productive, and reflective treatment« (Seumel, 2001, p. 8). Today, we know that art appreciation abilities are just as equally present in students as all of their other abilities.

The goal of developing artistic appreciation is for students to be able to identify the complex relations that constitute a work of art with reference to a few exemplary works. They thus acquire aesthetic experience that requires sensory, emotional and cognitive competences. The development of this perception is probably the most important phase in the development of (artistic) appreciation. Students can respond to one and the same work of art in three ways: (1) at the emotional level; (2) at the associative level (relating to the associations that arise in the onlooker in the presence of an artwork); (3) at the formal intellectual level (relating to the responses that arise in onlookers after formal analysis and interpretation of an artwork). These three types are subject to oscillation and change, as they depend on both the viewer and the artwork (Duh & Zupančič, 2013). Roald articulates this issue similarly (2008), distinguishing between three types of experience. (1) The first type of experience with art emerges as a fairly direct and immediate response to what appears as a »good Gestalt«, or a pleasurable response to what is regarded as beautiful. What is beautiful is manifest in a specific shape that is inherently meaningful; the mere experience of the form is pleasing and does not demand any considerations of its underlying significance. It only demands attentiveness and wonder. (2) The second type of experience appears as an intellectual appreciation of art, where the focus is upon understanding. It can comprise an understanding of other cultures, and thereby, indirectly one's own. It can also take the form of learning about new trends, styles and artists. (3) The third type of experience appears as a more bodily type of emotionality. The body is always there, of course, but can be more or less pronounced or thematic in the experience of an emotion. In this kind of experience, the body is at the centre of the experience, and the bodily sensations follow the nature of the exhibit (Roald, 2008, pp. 208-209). In other words, »art appreciation is highly idiosyncratic and seems to be in the eye of the beholder« (Leder et al., 2012). Observing and receiving an artwork, and thus the development of art appreciation, go through multiple phases that various authors interpret in different ways. Pagany (1993) determines four phases: (1) the perception of the artwork with all of the senses; (2) the release of emotions; (3) the transformation of the images into speech according to the impression left by the painting on the student; and (4) activity. A group of authors (Ishizaki et al., 2008) emphasise six fields in art appreciation: (1) Association, (2) Observation, (3) Impression, (4) Analysis, (5) Interpretation and (6) Judgment. Another group of authors (Anderson, 1988; Clark, 1960; Feldman, 1987; and Mahon Jones, 1986; as summarised in Arts Education, 1996) describe seven steps or phases: (1) preparation for viewing; (2) first impression; (3) description; (4) analysis; (5) interpretation; (6) background information; (7) informed judgement as a culminating reflective activity in which students come to certain conclusions about the artwork. Marsh says that the modified version of the Student Centered Art Appreciation Model (SCAA) is "the best available and enjoyable and successful strategy for developing art appreciation" (Marsh, 1992, p. 13). The SCAA model has six question steps: (1) What is your first impression of the work? (2) What can you see (Description, Analysis)? (3) What does it mean (Analysis, Interpretation)? (4) What do other people think of the work (Evaluation)? (5) Do you like the work (Appreciation, Judgement)? (6) What is your impression of the work now? Has it changed? How (Conclusion, Final Personal Response)?

Encouraging the development of artistic appreciation must begin sufficiently early, believes Payne, saying: »It is necessary to keep in mind with younger learners a creative approach to art appreciation is needed« (Payne, 1990, p. 105). Research (Duh, 2016) has shown that children respond to artworks on several levels, depending on the procedure of presentation. The paintings shown in the procedure for developing appreciation through gradual uncovering evoked the most diverse associations from the children, associations that they verbalised in their own practical way. »In their imagination, they played with combinations of parts of paintings, created new links between them, and changed them as they pleased« (Duh, 2016, p. 91). Systematic teaching of art appreciation should take place on the whole vertical of institutional schooling. With little children, the level of appreciation is low; we should, however, be aware that these children are still too young and that they are unable to use the appropriate terminology. At the elementary level, E. Coates (1993) identified appreciation in 4-year-old children with the children describing objects. A guided conversation additionally activated the children's thinking, which will certainly help them in other areas of learning and in solving problems. In this way, when dealing with an artwork, students reach into their own range of mental capacity. According to Uhlig, »in intuitive thinking, which results as the continuation of thinking bound to direct observation, children aged six to eleven find it easier to perform abstract mental operations without direct observation« (Uhlig, 2005, p. 63). Today, we know that among older students, art is processed differently than other classes of objects. »Examples include style based representation semantic indeterminacy, and features that disrupt perceptual processing routines that are active in everyday perception« (Belke et al., 2010).

In conveying an artwork, "there is the fundamental question of interaction of independent perception on the one hand and the provided explanation on the other (Barth, 2000, p. 7). When observing a painting, what we see is often conditioned by what we know (Duh et al., 2014). A directed discussion with

students can substantially contribute to a more open approach to the artwork. »As the dialogue proceeds, comments become more and more individualised, reflecting each viewer's environment, cultural background, personal experiences, and lifestyle« (Hino et al., 2008, p. 6). A group of authors says: »Consequently in museums accompanying information should consider the possibility that understanding could be increased by carefully selected, understandable information which goes beyond mere descriptions« (Leder et al., 2006, p. 192). Concerning the nature of aesthetic experience, we believe that a combination of dependent variables covers the main dimensions of the aesthetic process. How information affects appreciation of works of art through finding meaning depends on a complex interplay of perceptual and higher order processes. This evaluates the appropriateness of information for the processing of a specific work of art for a specific perceiver (Leder et al., 2004). Higher order cognitive processes, such as finding meaning and understanding, play important roles in the appreciation of art (Leder et al., 2006).

From the viewpoint of pedagogical work in schools, we need to avoid intellectual evaluation and focus on the perception and reception of the artwork as important components of appreciation. Observation of a work of art should be an experience that »draws us to look closer, takes us into the past or future or takes us into a different world, emotionally attacks us triggering emotions that are as different and diverse as the observer himself« (Bertscheit, 2001, p. 10). A premature explanation of the artwork would be wrong, as it wastes the research capacity provided by the work of art. Research is reduced to the activity of the knowledge provided about the work of art and is at most limited to seeking conformity between the heard and the seen. In this case, the instruction and the processing of knowledge determine the action. Instead of generating a situation that would help students discover and observe, and that would establish a certain relationship to the work of art, appreciation is guided by what has been said. We are thus dealing with the speech fixation of our approach to the painting, or the victory of speech over sight (Didi-Huberman, 1990). »As part of the visual arts education of students, besides the visual expression of children, more and more attention is dedicated to the meeting of children with works of visual arts« (Kuščević et al., 2014, p. 297).

Definition of the research problem

In the present study, we monitored the development of art appreciation abilities in 9- and 10-year-old students at Slovenian primary schools. We assumed that appreciation is accessible to everyone, although not to the same

extent, and that it is an ability that must and can be developed at school and systematically brought closer to learners. It is important that the development of artistic appreciation be more than just viewing and reacting quickly; it must be a meaningful experience. Viewing must lead to interaction between the student and the artwork, where sensory stimuli establish a direct link with memory, experience, emotions and associations. Associations allow the integration of various ideas based on common features and similarities, such as external form, colour, line and composition. They are subjective and often biographically received, and because of their proper perspective, they differ for each learner (Duh, 2004). Teachers who teach arts education must be aware that different students react to one and the same artwork in different ways, and it is important that each should react to the same work in more than one way.

Purpose

The purpose of the empirical study was to monitor the development of appreciative abilities of students in the second educational cycle of primary school. We studied the following:

the level of development of art appreciation abilities (perception, reception and knowledge) in students;

differences in the level of development of art appreciation abilities (perception, reception and knowledge) with regard to age (9 and 10 years), the student's gender and school stratum (urban, suburban).

Hypotheses

- H1: It is assumed that older students (10 years) have a higher level of appreciation.
- H1.1: It is assumed that older students (10 years) have a higher level of perception.
- H1.2: It is assumed that older students (10 years) have a higher level of reception.
- H2: It is assumed that girls have a higher level of appreciation.
- H2.1: It is assumed that girls have a higher level of perception.
- H2.2: It is assumed that girls have a higher level of reception.
- H3: It is assumed that there are no statistically significant differences in the level of appreciation between students in the urban and suburban strata.
- H3.1: It is assumed that there are no statistically significant differences in the level of perception between students in the urban and suburban strata.

• H3.2: It is assumed that there are no statistically significant differences in the level of reception between students in the urban and suburban strata.

Method

The empirical study is based on the descriptive and causal non-experimental method of empirical research.

Research sample

The study was conducted among a non-probability convenience sample of 9-year-old (n=1492) and 10-year-old (n=1365) students in Slovenian primary schools. Together, the sample comprised 2,794 students (n=2794). The sample differs with regard to school stratum, with 1579 students (56.51%) attending urban schools and 1215 students (43.49%) attending suburban schools. There were 1449 (51.86%) boys and 1345 (48.12%) girls. At the level of inference statistics (statistics of testing hypotheses), the sample represents a simple random sample from a hypothetical population.

Data collection procedures and instrument

The data were collected by students of primary education from the Faculty of Education, University of Maribor, within the framework of their mandatory practice teaching in primary schools in April 2015 and 2016. The AP test, which previous studies (Berce-Golob, 1990; Duh, 2004; Duh et al., 2012; Duh & Herzog, 2015; Duh & Kljajič, 2013; Duh & Korošec, 2014; Duh et al., 2014; Kraguljac & Karlavaris, 1970; Matrić & Duh, 2015;) have shown to be a test with appropriate measurement characteristics (validity, reliability, objectivity and sensitivity), was used. The reliability of this test is confirmed by its use in the present study as the Cronbach alpha coefficient of reliability ($\alpha = .745$).

The test comprises eight questions: seven closed type (multiple answers) and one open type question. The questionnaire adheres to the following principles: (1) the questions must be designed on the basis of concrete reproduction, (2) the questions must require a descriptive answer, not an evaluative answer, (3) each question must shed light on the observed part that the tester is interested in, and (4) the number of elements to which the question relates must be limited. All of the questions relate to Paul Cezanne's *The Blue Vase* (oil on canvas 52 x 63 cm, Musée d'Orsay, Paris). The first set of questions (1–4) resulted in data on the perceptive abilities of the students. The first question in this set establishes whether

the students perceive the essence of the artistic message or the dominant part of the motif. Viewing the reproduction, they are asked for the most important object in the painting. They can indicate the wall with the window, the vase and flowers, or the table and its objects. The next question is aimed at establishing the students' sensitivity to the quantity of the colours in the painting. They can choose between three pairs of colours that they see as predominant (red and blue, green and blue, ochre and blue). In the next question, the students establish the intensity of the colours in the painting. They must indicate the part of the painting in which the colours are the strongest. The following answers are provided: in the bouquet, on the desk, in the background. The answers to the last question reflect the students' sensitivity to the painting's design. Their answers allow us to determine the extent to which the students are familiar with artistic language. The students note down whether they would add anything to the painting (on the plate, the table or in the bouquet). The second set of questions (5–7) resulted in data on the students' receptive abilities. In the first question, they have to find and indicate the part of the painting or the motif that drew their attention. They need to express in one sentence what drew their attention and why. The next question relates to the understanding of the painting as an enduring work of art. Based on their observation of the painting, the students had to answer the following questions: Do the beauty and the freshness of the depicted flowers give an impression of current growth and freshness, or an impression of eternal duration? The next question in this set is aimed at establishing the students' overall impression of the artwork. While observing the reproduction, the students note how they would feel in a room that held the vase and flowers from the painting. They are able to choose from three pairs of moods: sad and unhappy, calm and pensive, cheerful and vivacious. The last question (8) resulted in data on the students' knowledge of the basics of visual arts theory. This question is used to verify the students' understanding of the basics of visual arts theory, as they need to identify the basic means of expression in painting. The following answers are provided: colour and surface, line and form, space and mass.

Data processing procedures

The collected data were processed at the level of descriptive and inference statistics. The following methods were used:

- frequency distribution (f, f%) of the characteristics of the participants;
- descriptive statistics of the scores in individual questions, sets of questions and the whole test (Minimum MIN, Maximum, MAX, Mean ^X, Standard Deviation SD, Skewness Skew, Kurtosis Kurt);

- t-test for independent samples to verify differences with regard to the students' age, gender and stratum in their achievements in sets of questions and the whole test (perception, reception, appreciation);
- Cohen's *d* value as the measure of effect size;
- regression analysis of the influence of predictors (gender, grade, stratum).

Results

Analysis of the students' results in the AP test: The sample of students as a whole

We analysed the results in individual tasks and in sets of tasks related to perception, reception and knowledge, as well as the result in the AP test as a whole.

Table 1
Descriptive statistics of students' results in the AP test

Tasks	n	Range		Mean	Standard deviation	Skewness	Kurtosis
		MIN	MAX	\overline{x}	SD	Skew	Kurt
Perception 1	2794	0	4	2.623	.827	-1.834	1.712
Perception 2	2794	0	3	1.467	.767	-1.003	549
Perception 3	2794	0	4	3.150	1.508	-1.273	240
Perception 4	2794	0	4	3.148	1.120	983	104
Reception 5	2794	0	4	2.121	1.050	514	497
Reception 6	2794	0	3	.985	1.408	.731	-1.465
Reception 7	2794	0	4	2.010	1.116	372	-1.550
Knowledge 8	2794	0	3	1.846	1.459	473	-1.774
Total							
Perception	2794	1	13	10.388	2.300	753	.027
Reception	2794	0	10	5.117	2.225	.082	558
Appreciation	2794	2	26	17.351	3.742	368	067

The distribution of the results achieved in all of the perception tasks (4) is left asymmetric, and thus dominated by high values. This is particularly true for task one (KA = -1.834), where the data shows extreme pointedness (KS = 1.712),

which means that there are few differences between the results. The other tasks show the kurtosis of the results, which means that there is a larger distribution of average results, or that there is a medium-large difference between them. Perceiving artworks is a continuous practice, and the students recognise the basic artistic structures of artworks, so this part did not represent a particular problem for students. Question four (Perception 4) required a more comprehensive response concerning the students, but they answered this question well, too.

In the reception tasks (3), the distribution of scores is rather symmetric and slightly more flattened. This indicates that the students were somewhat less successful in the reception tasks than in the perception tasks. In this case, it is about receiving a work of art as an integral masterpiece. The questions examined the students' artistic experience of the painting, which concerns their emotions. The analysis of the overall results confirms the left asymmetry in perception; thus, the prevailing above-average solving of tasks involving perception and symmetry, and the prevailing average success level of students in the reception tasks, resulting in a prevailing average level of appreciation among 9- and 10-year-old students.

Analysis of the students' results in the AP test according to their age and gender, and the stratum of school

First we present the students' results in individual tasks, then combined according to the set (perception, reception), and finally their results in the AP test as a whole, according to age, gender and stratum.

a. The role of age

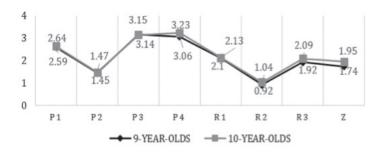
In the case of perception, the assumption of homogeneity on which the t-test is based is not justified, so we quote the outcome of the approximation method, while in the other two cases the condition for the usual t-test is fulfilled. The outcomes indicate that in perception, the difference between 9- and 10-year-old students is statistically significant (P = .008), with 10-year-old students performing better. Likewise, there is a statistically significant difference (P = .000) between 9- and 10-year-old students in reception. Based on this, we can confirm research hypotheses H1.1 and H1.2. With the level of art appreciation ability, the results also indicate a statistically significant difference (P = .000) in favour of the older students. With this result, hypothesis H1 is also confirmed. Art appreciation is an ability that can be developed with quality educational work in the same way as other abilities. The older students' richer experience of art, as well as their associations with and knowledge of art, corroborate this.

Table 2
Results of the t-test in the total results for perception, reception and appreciation with regard to the students' age

Ability	Age	n	Mean Standard deviation		Test of homogeneity of variances		Test of differences between means		Cohen's
			x	SD	F	Р	t	Р	d
Perception	9	1429	10.276	2.352	4.012	.045	-2.636	.008	10
	10	1365	10.505	2.240	4.012		(approxi	.10	
Reception	9	1429	4.962	2.213	.477	.490	-3.790	.000	.14
	10	1365	5.280	2.226	.4//				
Appreciation	9	1429	16.980	3.755	075	035 .853	-5.389	.000	.20
	10	1365	17.740	3.690	.035				

It is worthwhile noting, however, that for the different abilities (perception, reception, appreciation), the size of the effect of age is small (d < .50); therefore, the determined advantage of 10-year-old students over 9-year-old students is small, and thus presumably also practically irrelevant. The level of development of art appreciation could increase if the teacher placed more emphasis on in-depth, empathic observation of artworks in the introductory part of art classes. Along with motivation, the latter is intended for the recognition of the individual elements of an art task and their visualisation, which can lead to higher quality and more creative artistic solutions. The quality performance of art evaluation in the concluding section of art education classes can also contribute to the development of art appreciation.

Figure 1 Distribution of arithmetic means (\overline{x}) of scores with individual tasks according to the age of the students



From the graph in Figure 1, it is evident that the older students were more successful in solving the tasks than the younger ones. Their advantage is somewhat more noticeable with the reception tasks than with the perception or knowledge tasks. Better perception and identification of what is essential in a work of art involves experience and learning, which is why the older students performed slightly better in these tasks. Similarly, in the last task, the older students also demonstrated better knowledge. The test of statistically significant differences is based on the overall results for the sets of tasks.

b. The role of gender

Table 3 presents the results of the statistical tests of the gender differences in the overall results for the sets of tasks.

Table 3
Results of the t-test in the total results for perception, reception and appreciation with regard to the students' gender

M		<u>x</u>							
М		-	SD	F	Р	t	Р	d	
11	1449	10.086	2.3802	15 767	.000	-7.295	.000	20	
F	1345	10.713	2.166	15.363		(approxi	.28		
М	1449	4.929	2.220	.289	.591	-4.657	.000	.18	
F	1345	5.320	2.213	.289		-4.05/	.000		
М	1449	16.810	3.803	0.704	0.704	002	-8.014	.000	70
_	1345	17.933	3.587	9.594	.002	(approximation)		.30	
		M 1449	M 1449 16.810	M 1449 16.810 3.803	F 1345 5.320 2.213 M 1449 16.810 3.803 9.394	F 1345 5.320 2.213 M 1449 16.810 3.803 9.394 .002	F 1345 5.320 2.213	F 1345 5.320 2.213	

In the case of reception, the assumption of the homogeneity of variance is justified, so here we refer to the usual t-test and to its approximation in the analysis of perception (P = .000) and appreciation (P = .000), since the assumption of homogeneity is not justified.

There is a statistically significant difference between boys and girls in all three abilities: in reception (P = .000), perception (P = .000) and in overall appreciation (P = .000), with girls having the advantage. This result confirms hypotheses H2, H2.1, and H2.2. In the period of late childhood, affectivity and emotionality, as essential elements of reception and appreciation, are obviously slightly more strongly expressed in girls than in boys. The differences in perception can, however, be explained by greater attention, which, at least in the

school environment, is more characteristic of girls. Values d (d < .50) confirm that the effect of gender is small in all three dimensions. Like age, gender is not a factor that plays an important role in practice from the viewpoint of the development of art appreciation abilities. We can therefore conclude that from the viewpoint of reception and appreciation, there are indeed differences between the genders at a statistically significant level; from the viewpoint of developing art appreciation as an ability that should provide girls with better functioning levels than boys, these differences are not significant.

Figure 2 Distribution of arithmetic means (\overline{x}) of scores with individual tasks according to gender



As shown in the graph in Figure 2, the girls solved all of the AP test tasks better than the boys. The advantage of girls at the level of the development of art appreciation abilities is expected, since in the period of adolescence girls are emotionally more receptive, which predominantly shows in reception, hence in the reception of works of art.

c. The role of stratum

The results of the statistical test of the differences in the overall results for the sets of tasks according to stratum are presented in the following table.

Table 4
Results of the t-test in the total results for perception, reception and appreciation with regard to stratum

Ability	Stratum	n	Mean	Stand. Test of homogeneity of variances		Test of differences between means		Cohen's	
			X	SD	F	Р	t	Р	d
Perception	urban	1579	10.484	2.305	.113	.736	2.523	.012	.10
	suburban	1215	10.263	2.289					
Reception	urban	1579	5.184	2.267	4.300	.038	1.816	.069	.07
	suburban	1215	5.031	2.167	4.300				
Appreciation	urban	1579	17.461	3.738	.039	.844	1.777	.076	.07
	suburban	1215	17.207	3.744					

The assumption of the homogeneity of variance is justified in all three analyses. The outcomes of the t-test indicate that in perception (P = .012), there are statistically significant differences between students from the urban and suburban strata. This result indicates that hypothesis H_{3.1} must be rejected. For the other two abilities, a tendency towards difference is expressed. Given this result, hypotheses H₃ and H_{3.2}, referring to the role of stratum, can be confirmed (reception: P = .069; appreciation: P = .076). The higher average scores of students in urban schools indicate that the urban or suburban school environment affects students' art appreciation abilities. These results are certainly surprising, since all schools, both urban and suburban, are equipped with modern ICT that allows direct observation of quality reproductions of artworks during the educational process. This should also be a constant in modern teaching of art. From the results, we can conclude that students in urban schools are more frequently in contact with visual artworks; it is also likely that they have better access to museums and art galleries. The values of d (d < .10) are, however, low, which suggests that the effect of stratum is so small that it is practically irrelevant. Art appreciation is an ability that teachers should develop in students with quality educational work, irrespective of the stratum of the school.

Figure 3 Distribution of arithmetic means (\overline{x}) on scores in individual tasks according to stratum



The results indicate that in solving all of the tasks, students in urban schools performed better than students in suburban schools, except in knowledge, where students in suburban schools performed better.

Conclusion

Within the framework of empirical research performed on a large (n =2794) non-random sample of 9- and 10-year-old students at Slovenian urban and suburban schools, we examined the level of students' appreciation abilities, while also statistically controlling the role of age and gender, and of school stratum. We found that the students' perceptive abilities are more highly developed than their receptive abilities, while the overall level of appreciation abilities is rather average. The perception of a work of art is the condition for developing art appreciation and is, to a large or small degree, innate to all students. Art activities in school should evoke emotional responses in students. Subtlety of perception, which may lead to the quality reception of an artwork, whereby emotional and spontaneous components are gradually joined by conscious and rational components, is a matter of learning and exercise (Duh, 2004). The existence of statistically significant differences (either in perception or reception only, or in appreciation) was detected in the factors of age and gender. Regarding the total sample, we can see that appreciation abilities are more highly developed in older students and in girls. The differences in the level of art appreciation abilities detected between 9- and 10-year-old students are small (d < .50) and thus statistically practically insignificant. This finding has been confirmed in other research (Duh & Kljajić, 2013), with progress in the area of art appreciation having been determined among 6-, 7-, and 8-year-old students. A study (Duh et al., 2014) in which a higher level of art appreciation development was

identified among 14-year-old students than 11-year-old students presents similar findings. In the latter study, girls also performed better than boys. In another study with interesting results (Jackson, 2009), the author does not find progress in the development of art appreciation during the transition from primary to secondary school at a level of statistical significance, instead finding regression.

In our research, we have also reached conclusions about all three factors: age, gender and especially for stratum. It is true, however, that their effect is small; based on our findings, we do not, therefore, ascribe them a practically relevant role in the existing process of the development of students' appreciation abilities in the second educational cycle of primary school. We have known for a long time (Kraguljac & Karlavaris, 1970) that we can achieve a positive effect on students' artistic creativity by developing art appreciation abilities. This means that teachers in schools should devote the same level of attention to the development of art appreciation as they do to the artistic creative work of the students. School programmes should develop art appreciation in all students on the basis of artistic content. The task of teachers is to find possibilities and realise them in accordance with the modern paradigm of visual arts education, which stresses the equal importance and positive mutual interaction of artistic creation and art appreciation. Art appreciation is certainly an ability that can be developed through quality educational work.

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Artists/Ceramists in the Role of University Teachers

SILVIE NOVOTNÁ¹

The teaching of ceramics is a topic that has been much discussed in pedagogical discourse throughout the entire second half of the twentieth century and until today. The present study deals with the topic of third-level education in the field of ceramics at Palacký University Olomouc, Czech Republic. The incorporation of ceramics into the education of future art teachers in Olomouc was not always a matter of course as it is today. It underwent many changes during the second half of the twentieth century. Several personalities played an important role in the process of the gradual consolidation of its position in pedagogical education. The most important of these are presented in this study. It describes their main contribution to the field, deals with their attitudes to teaching ceramics, and above all analyses the interconnection of their own art or scientific research theoretical work with the content of teaching. The historical-methodological study connects its theme with historical socio-political events, as well as with the development of fine arts in the second half of the twentieth century. Thus, it contributes to the formation of a comprehensive picture of the topic »artists as art teachers« in the Europe-wide context.

Keywords: ceramics, applied art of the second half of the twentieth century, Palacký University Olomouc

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Umetniki/Keramiki v vlogi univerzitetnih učiteljev

SILVIE NOVOTNÁ

Poučevanje keramike je tema, o kateri se razpravlja v celotni drugi polovici 20. stoletja vse do danes. Ta študija obravnava temo tretjestopenjskega izobraževanja na področju keramike na Univerzi Palacký Olomouc na Češkem. Vključevanje vsebin keramike v izobraževanje prihodnjih likovnih pedagogov v Olomoucu ni bilo vedno samoumevno. V drugi polovici 20. stoletja je program doživel številne spremembe. Številne osebnosti so igrale pomembno vlogo v postopnem utrjevanju vsebin keramike v pedagoškem izobraževanju. Najpomembnejši med njimi so predstavljeni v tej študiji. Prispevek opisuje njihove zasluge na tem področju, obravnava njihov odnos do poučevanja keramike, predvsem pa analizira medsebojno povezanost lastnega likovnega ali znanstvenoraziskovalnega - teoretičnega dela z vsebino poučevanja. Zgodovinsko-metodološka študija svojo temo povezuje z zgodovinskimi družbenopolitičnimi dogodki pa tudi z razvojem likovne umetnosti v drugi polovici 20. stoletja. Tako prispeva k oblikovanju celovite slike teme »umetniki kot likovni pedagogi« v evropskem kontekstu.

Ključne besede: keramika, uporabna umetnost druge polovice 20. stoletja, Univerza Palacký Olomouc

Introduction

Working with clay is an ancient field of human activity. Clay objects have accompanied humankind throughout history and to some extent have always been a measure of the maturity of a civilisation (Warshawová, 1999). Budak (2017, p. 12) highlights thousands of years of the ceramics tradition with the engaging words »ceramics have kept humans in close company since the Neolithic Age; it represents perhaps the most varied and versatile material, both humble and refined, noble and mundane, simple and costly, used in everyday life as well as in palaces and in rituals«. Creative work with clay has always enriched and deepened the relationship of a human being to matter, material and structure, supporting creativity and spatial imagination, and developing fine motor skills and the ability of tactile perception and tactile experience. Its relaxing effect is undeniable, especially in today's over-technological world. According to Šicková-Fabrica (2008, p. 136), clay and activities associated with it (squeezing, shaping, manual modelling, imprinting, etc.) are also suitable »for breaking through barriers of fear, as a material replacing verbal communication, for eliminating aggressive behaviour, for the development of imagination, threedimensional perception, for the creation of space for foresight as a background for changing attitudes towards oneself and others«. Working with clay offers experiences that contribute positively to the development of an individual.

Despite these facts, creative work with clay earned its place in the primary education system only gradually, and unfortunately even today, its inclusion in art lessons is not a matter of course. Whether working with clay is implemented in compulsory education depends not only on the technical capabilities of schools or the support of their management, but above all on the attitudes, abilities and interests of art teachers themselves. In this respect, the motivation and experience that teachers gain during their training for their profession is crucial, and the individual university personalities who impact their teacher training play a paramount role.

At Palacký University Olomouc today, ceramic art making, as one of the possible methods of creative work with clay, is an integral part of the art teacher training programme. However, ceramics did not always enjoy its current position as an independent taught subject at the university; it had to build it gradually during the decades of the development of university art education.

The history of the University of Olomouc has been addressed in many studies and in a number of publications. Bieberle (1996, 2003, 2011, 2016), Horejsek (1996), Kováříček (1996, 2005) and a teams of authors (Fiala et al., 2009; University Palacký, Faculty of Education & Kováříček, 2006a, 2006b; University

Palacký, Faculty of Education & Serafín, 2005; University Palacký, Faculty of Education, 2016; Urbášek et al., 2003) evaluate the topic in texts published after the change of political regime in 1989. Due to the spread of the topic, they do not focus on the field of art, and therefore the teaching of ceramics is not evaluated in any way in these texts., They nevertheless form key study material, as they provide a quality basis of the socio-historical context for the subject of research. A critical assessment of the history and the present situation of teaching at the Department of Art Education is given in texts by Myslivečková (e.g., 2002, 2018) or in collective monographs by members of the Department of Art (Myslivečková & Šobáňová, 2007, 2014; University Palacký, Faculty of Education, 2007).

To date, the development and changes in the field of art and pedagogy at Palacký University Olomouc have been most comprehensively evaluated in the publication entitled *Josef Vydra* (1884 - 1959) v kontextu umělecké a výtvarně pedagogické avantgardy 20. století. Historie a současnost univerzitního výtvarného vzdělávání v Olomouci [Josef Vydra (1884–1959) in the Context of the Art and Art Pedagogical Avant-Garde of the Twentieth Century. The History and Present of University Art Education in Olomouc] (Kavčáková & Myslivečková, 2010). However, the text contains only fragmentary information about the teaching of ceramics. Significant factual data, extremely valid at the time, are provided in publications or articles published by the university on the occasion of various anniversaries (e.g., Dvořák, 1976; Navrátil, 1973; Novák, 1976; Přikryl, 1976; University Palacký, 1983, 1984) and in small catalogues of art exhibitions of students' and teachers' artworks (e.g., 1970, 1973, 1981). Catalogues accompanying individual or collective exhibitions of independent artworks of teachers also have a significant informative value, but they do not critically evaluate teaching practice.

Since the post-war period, the interest in integrating the teaching of ceramics into teacher training programmes has been closely connected not only to cultural and political context, but also to the development of pedagogical-psychological professional discourse. In particular, key professional studies on the ontogenesis of children's artistic expression that classify the three-dimensional artistic expression of children by Krautter (1930), Lowenfeld (1947), Bender (1952) or Osten (1965, pp. 87–92) drew attention to the need for the development of the individual in the area of three-dimensional artmaking, as well. A major contribution to the development of the study of children's artistic expression in the Czech lands was made by the texts entitled *Vnímání a výtvarný projev* [Perception and Artistic Expression] (1970), *Výtvarný projev a výchova* [Artistic Expression and Education] (1974), and the overview publication entitled *Čáry, klikyháky, paňáci a auta* [Lines, Scribbles, Panners and Cars] (1974) by Uždil. Although these texts deal with children's drawing in psychological and didactic contexts, they also

reflect on other art techniques, including modelling from clay. Within the theory and methodology of Czech art pedagogy, interest in integrating ceramics into the concept of teaching art education culminated in works by Zhoř (1995, 1996), Cikánová (1995) and Roeselová (1996, 1997, 1999).

Teaching in the field of ceramic work was introduced into the framework of the third-level art teacher training programme in Olomouc as early as in 1946. However, the description, analysis and evaluation of this segment of education in Olomouc has not yet been theoretically reflected on. To date, no comprehensive study has been prepared dealing with the pedagogical practice of individual teachers of ceramics either at the University of Olomouc or at associated workplaces (Pedagogical Institute, Pedagogical University).

The presented historical-methodological study focuses on ceramics education at Palacký University Olomouc from 1946, which marks the renewal of third-level education in Olomouc, to the present. The study selects the personalities who played the most important role in the integration and gradual consolidation of the position of teaching ceramics, analyses their importance for the field, and examines and evaluates the extent to which their own works were connected and interacted with the goals and content of teaching, as well as the student requirements. The personality of Jaroslav Nerad, whose teaching has been obscured by the course of history, is excluded from the study. Although research has shown a high proportion of ceramic work in Zdeněk Přikryl's modelling lessons, due to his primary focus on sculpture he is not included in the study either. The topic of the study is placed within the contemporary socio-political climate and is connected with events that occurred in fine arts in the second half of the twentieth century in the Czech lands. It monitors the development of teaching ceramics and its qualitative changes primarily in connection with the personalities of individual teachers. The text follows the latest published works of the author entitled Výuka keramiky na Univerzitě Palackého v Olomouci v minulosti a dnes [Teaching Ceramics at Palacký University Olomouc in the Past and Now] (Novotná, 2019) and Vývoj a kvalita výuky keramiky v rámci vysokoškolského vzdělávání [The Development and Quality of Teaching Ceramics in University Education] (Novotná, 2019).

Research questions

In order to define the scope of the subject matter, the following initial research questions were set: Which personalities fundamentally contributed to the development of education in the field of third-level teaching of ceramics in Olomouc? What was their contribution to the field? What were/are their

attitudes towards teaching ceramics? In what way and to what extent was their own artistic or scientific research theoretical work interconnected with the content of teaching?

Method

The study presents the results obtained during long-term historicalpedagogical research. It presents knowledge gained from mixed research, as it is a combination of qualitative and quantitative research, using methods of historical and pedagogical research (study of primary sources, secondary literature, interviews with direct participants or witnesses of observed events, observation, analysis of verbal statements, content analysis). The study of primary sources consisted mainly of the analysis and critical evaluation of archival materials from university sources, primarily of the complete Lists of Lectures of Palacký University Olomouc from 1946 to the present, Registers of Diploma Theses and volumes of Records of Diploma Theses, as well as all final (master's) theoretical and practical theses on ceramics from the first one dated 1951/1952. Furthermore, official study materials (university textbooks) and private texts of former and current teachers of ceramics were collected and analysed, as well as records of lectures or other notes taken by graduates. Last but not least, as a method of collecting data on the pedagogical reality, a number of semi-structured interviews were held with former and current teachers (Teplý, Hejný, Přikryl, Bébarová, Selingerová, Dokoupilová, Buček), graduates (Ovčáčková, Marková, Varmuža, Kocábová, Otrusinová, Koláčková, Stiborová, Poláková, Outlá, Tarašková, Vlčková) and other witnesses whose statements were relevant to the subject matter of the research (e.g., Vymětalová, Ovčáček).

Results

The institutional training of art teachers in the field of teaching ceramics was faced with many twists in the second half of the twentieth century in Olomouc. The introduction of ceramics into teaching, its expansion and the stabilisation of its position to the point where it became an independent compulsory subject was influenced not only by the opinions of the heads of art departments (institutes) of the Faculty of Education and Faculty of Arts or associated workplaces (Pedagogical Institute, Pedagogical University) in Olomouc, but mainly by the ambitions, interests and attitudes of individual teachers of the subjects in which ceramics was included. Moreover, the quality and content as well as the formal and thematic focus of the teaching of ceramics were predestined not

only by contemporary art tendencies or priorities in the general socio-cultural context, but primarily by the own artmaking or scientific research work of the given teachers.

Difficult beginnings in the post-war period

World War II ended in victory for the allies; Czechoslovakia was restored. However, it was not possible to revive the First Republic democracy; society was strongly pro-Soviet and the government was rather authoritarian. The state »began to programmatically build a new socialist world with a new man and created a system of precise instructions for meeting his needs. The motto of the time became »coordinated planning, which was supposed to guarantee a reasonable arrangement, no longer limited as before by »the whims of private property' and »unorganized ideas«, where economic life was defined by entrepreneurial arbitrariness« (Skřivánková, 2016, p. 325). The post-war situation was further complicated by the events that took place in February 1948, when the Communists seized power in Czechoslovakia. Citizens were guaranteed some social security, but at the same time their basic human rights and freedoms were curtailed. At the Congress of National Culture in Prague in April 1948, the requirements for a new role for artists in society were clearly formulated (Kouřil, 1948; Zeman, 2007, p. 32). Politically engaged works aimed at creating a new, socialist culture were to be preferred and generally accepted. For the fine arts, 1948 meant not only the forced cessation of avant-garde groups that sought their theoretical foundations in the interwar art of civilism, cubism, futurism, constructivism or surrealism (e.g., Group 42, the RA Group), but also a number of other changes that had an adverse effect on the further development of Czech fine art.

Even for applied and freestyle ceramic works, the situation in post-war Czechoslovakia was not favourable. After World War II, the Union of Czechoslovak Works (founded in 1914 as the Union of Czech Works), »an institution with an avant-garde programme« (Petrová, 2005a, p. 267) supporting the art industry and designers themselves, continued to develop its activities, but in 1948 it merged with the Headquarters of Folk and Art Production, a corporation that during the 1950s, »narrowed its scope only to the protection and development of folk art production« (Žižková, 2008, p. 131). Ceramic production was also significantly negatively affected by the war and the events that ensued. Post-war nationalisation led to lower competitiveness of companies, limited quality of products and lower demands on product design. The closure of vocational secondary schools during the war resulted in the loss of experts,

not only in business and administration, but mainly specialists in the field. In Prague, the activities of the Academy of Arts, Architecture and Design were terminated in 1944, as well as other schools, including the State Vocational School of Ceramics. Ceramics of the post-war years thus had to face the difficult task of maintaining its own high quality while waiting for the moment to build on its industrial and artistic production. Petrová (2005a) finds these enduring values mainly in the studios and workshops of artists who established themselves, or at least graduated, in the pre-war period. In addition to Julia Kováčiková-Horová and Vincenc Vingler, Otto Eckert was one of these artists. After World War II, he took over the area of teaching ceramics in Prague at the renewed Academy of Arts, Architecture and Design. Eckert was a state-sponsored artist who participated in dozens of exhibitions and competitions not only in Czechoslovakia but also abroad (e.g., Expo Brussels, 1958; International Exhibition of Ceramics, Ostende, 1959). Through his pedagogical work and his own work, he maintained and further developed the tradition of Czech ceramics and became a personality influencing several other generations of Czech ceramics. The breadth of his work not only impacted the territory of the capital city of Prague, but spread throughout the country. One of the admirers of his work was Stanislav Vymětal (1929–1992), a generation younger and a student of the University of Olomouc.

Figure 1Otto Eckert, Vases, 1964, Regional Museum in Olomouc, photo by P. Rozsíval







Olomouc introduces the teaching of ceramics

There was no tradition of third-level teaching of ceramics in Olomouc that could be continued after 1945. Nevertheless, after World War II, ceramics began to slowly but surely find its place at the university. The crucial moment in this respect was when the renewed University of Olomouc acquired the personality of Josef Vydra (1884–1959), an art historian, academic painter, ethnographer and critic, and a supporter of modern Czech ceramics. His professional attitudes, pedagogical views and ambitions played a major role in the decision to include ceramics in the education of future teachers.

Vydra was interested in ceramics all his life. He published a number of studies and reports, and reviewed exhibitions in this field (e.g., 1927, 1943, 1948, 1949, 1950, 1957). Completely in accordance with the principles of the muchadmired avant-garde school, Bauhaus, he perceived ceramics as the primary skill and a key prerequisite for students' further creative art activity. In an effort to interconnect the theoretical and practical as well as the artistic, arts and crafts and methodological components of the study as effectively as possible, he established drawing, painting, graphics and modelling in the curriculum as basic studio disciplines and, similarly to Bauhaus, he balanced these subjects with training in workshops focused on mastering craftsmanship and technological aspects of artwork, and on understanding the importance of product design (Kavčáková & Myslivečková, 2010). Assuming the post of the head of the Institute of Art in Olomouc, he included in the first year of the study programme a theoretical subject designed to introduce students to the technologies and

history of ceramic production. As the name of the subject – Art Production: Ceramics, Glass Art – suggests, ceramics and glassmaking had to share the allotted time of two hours per week. The lecturer was Vydra himself.

When forming the pedagogical staff, Vydra focused on acquiring personalities who were in accord with the Bauhaus type of school, and who would suit his efforts to build a modern workplace of supranational importance in Olomouc. Vydra offered the position of leading the sculpture and modelling studio, which included a ceramic workshop, to Josef Vinecký (1882-1949), an artist with great international experience (from 1907 he was the head of the workshop of artistic modelling at the Weimar Großherzoglich-Sächsische Kunstgewerbeschule, in 1909 he founded his own ceramic workshop in Sinn, in 1928-1932 he worked in Wroclaw at the Staaliche Akademie für Kunst und Kunstgewerbe, then until 1937 in the Staatliche Kunstschule in Berlin) and extraordinary versatility, which can be perceived in his sculptural expression. Vinecký's work included the field of freestyle and pottery ceramics, which suited Vydra's concept of teaching (recall the Bauhaus principle of the combination of werkmeister - formmeister, which Vinecký adhered to closely). In addition, Vinecký and Vydra held the same views on contemporary Czech ceramic production. They criticised it for being »imprisoned in painted decor« and repeatedly pointed out that it was asking »for a renaissance in the aesthetics of shapes under the influence of purism and constructivist style«. Among Czech artists, they praised the aforementioned Eckert for his »ceramic primitivism in engobes« (Vydra, 1948, pp. 357-384). Vinecký became the first personality among a number of art educators who, with Vydra's theoretical support in the form of lectures, had the professional qualifications to incorporate practical training in ceramics at the University of Olomouc.

However, the entire and most generous project of the first Institute of Art Education in Olomouc began to fail due to politically conditioned school reforms after 1948 and innumerable other obstacles (frequent involuntary relocation of the institute, material difficulties, delays in reconstruction, teaching in temporary premises). In particular, Vydra failed to build a workplace with all of the necessary workshops, including a suitably equipped ceramic workshop. In addition, the ruling party's political screening of employees resulted in Vydra being removed from the post of the head of the institute in 1948 on the grounds of being politically unreliable, and Vinecký was made redundant (due to his long work abroad, his marriage to Le Thorn of German origin, and his artworks leaning towards modernism; for more see Kavčáková, 2009). With the departure of Vinecký, the personality of a teacher who could intensively develop the third-level teaching of ceramics in Olomouc disappeared from the institute.

Despite these changes, ceramics did not disappear from the teacher's art

field in Olomouc. From the 1948/1949 academic year, the already established lectures of Vydra were supplemented by practical exercises, the content of which was to include ceramic work. It was newly entrusted to sculptor and restorer Karel Lenhart (1904–1978). Although his work also included terracotta, the degree to which he incorporated pure ceramic work in his lessons was reduced to a minimum. Even though there was a pottery wheel at the Olomouc Institute of Art at that time and there was a certain – albeit modest – ceramic workshop, it was used only sporadically during Lenhart's lessons. At this moment, the preferred way of working with students at the then art institute, based on the principle of giving maximum support to the individual interests of students, became crucial for the further development of the history of teaching ceramics in Olomouc. At the Institute of Art Education, another student who was completely taken by ceramics and later became a long-term guarantor of ceramic teaching at Palacký University Olomouc began to develop. His name was Stanislav Vymětal (1929–1992).

Vymětal began studying a double-major in Art Education and English Language at the University of Olomouc at the time when February 1948 gradually ended the discussion on the position of Czech art in socialist culture, when only those who respected official ideological requirements could remain on the official art scene (Petišková, 2005), when the Central Union of Czechoslovak fine artists was established as a state body of control of the art community, and when the new regime did not tolerate even the slightest hint of avant-garde art or thought. The lectures of the ambitious and persistent Vydra on ceramics became so motivating for Vymětal that he began to devote himself intensively to this field. He dusted off the potter's wheel in the student workshop and spent many hours in the routine of mastering his craftsmanship with the aim of conquering shapeless clumps of clay and transferring his creative ideas to them. He consulted with Vydra on the theory of the field and the practice of production, and was interested in contemporary Czech ceramic production. In his master's thesis, entitled Ceramic Ornament - Its Forms and Development (1952), which was also based on lectures by Vydra, he highlighted the aforementioned Otto Eckert, who, according to Vymětal, »understood the requirements of modern artistic ceramics«. For the young Vymětal, Eckert's work was »perfect both in terms of shape and function, as well as in terms of decor and ornamental decoration«, He also adored Eckert for his incessant search for creative attitudes. Vymětal saw one of Eckert's greatest advantages in the sobriety and simplicity of his artistic expression, where he »achieved the unique impact of the work by the simplest and plainest means«. In his master's thesis, Vymětal also criticised the contemporary »exuberant naturalism in decor«, which, according to him, corresponded to »the poor taste of capitalist society, and which is not actually a ceramic decor, but a bad painting painted on ceramics« celebrating the

so-called »functional and natural ornament, whose aesthetic properties result directly from the perfection of shape and material«. Guided by Vydra and acquainted with the views of Itten (Keramische Formgebung: Werk, 1948, no. 2) and the critique of Tilkovský relating to the personality of Eckert, Vymětal formulated his attitude to ceramic work with the following words: »Once all the proportions of a product are in mutual harmony, if the beauty of the shape is in accord with its purpose and perfection of craftsmanship – then such an object can satisfy all the aesthetic requirements one can ask of it.« Without realising it at the time, in his master's thesis, the young student summarised his own lifelong attitude to ceramic work, as well as his respect and admiration for the work of Eckert.

Figure 3 Stanislav Vymětal, Bottle, 1970s, Regional Museum in Olomouc, photo by P. Rozsíval



Figure 4Stanislav Vymětal, Jug, 1970s,
Regional Museum in Olomouc,
photo by P. Rozsíval



Stanislav Vymětal teaches

Stanislav Vymětal began working at the University of Olomouc in 1954, a time marked by modernist tendencies in Czech ceramics (despite the entrenched socialist realism as official doctrine) (see more in Petrová, 2005b). Ceramics was given state support in two directions. First of all, it was an artist's experiment, especially in the field of monumental tasks for architecture and garden sculpture; secondly, it was a branch of industrial design. Thanks to his monumental realisations in architecture, which could be found not only

in Olomouc but also elsewhere in Moravia (e.g., Šternberk, Přerov, Nový Jičín, Hranice na Moravě), as well as his small-scale studio production, Vymětal was part of a group of important Czech artists/ceramists that included Julie Kováčiková-Horová, Pravoslav Rada and Alena Kroupová. He could relate to the accent of the time, especially the demand of the late 1950s for a hollow shape turned on a potter's wheel combined with handicrafts. His work also reflected the trend of pastel colours and the »dictate« of respect for the function of the object, in which Petrová (2005b, p. 459) rightly sees variants of the Bauhaus principles. Vymětal's earthenware vases, cups, bowls and mugs made on a potter's wheel, as well as his decorative works, are characterised by extraordinary richness in the variety of shapes, the solidity of design, the sober décor, and the earthy colours with many shades of ochre, grey and brown. He respected contemporary society's tendency towards purposeful and harmonious simplicity.

Like his teacher Vydra, Vymětal understood the need for perfect mastery of the craft as a key requirement for high-quality ceramic work. Only on this basis could artistic invention be realised. As Vymětal explains in one of his lectures (1970s): »Creative invention is associated with perfect mastery of production processes and techniques. Knowledge and practical experience in the field of production technology and mastery of craft technical procedures are an important precondition for achieving the set goal. Ceramic work becomes art when a harmonious balance is achieved between mastering the craft and the ability to realise an artistic intention in a given material in a perfect artistic form« (pp. 3–4).

Even in teaching, Vymětal's goal was for his students to gain knowledge of the basics of the craftsmanship and technical principles of ceramic work, while obtaining an understanding of the properties and possibilities of ceramic material. He trained his students mainly in a craft routine, contributing to the development of the skill and mastery of working on a potter's wheel. To this he added an emphasis on a narrower understanding of ceramic sculpture as a genre of fine art, which gives us the possibility for the expression of intimate scale and poetic imagery. This was also part of the period goals of Czech freestyle ceramic work, as evidenced by the work of Bohumil Dobiáš Jr., Marie Rychlíková, Lydie Hladíková, Lubor Tehlík, Dagmar Handrychová, Václav Dolejš, and others. The creative passion that Vymětal transferred to teaching was also supported by the atmosphere of the approaching 1960s. These were the years of fading enthusiasm from the success of Czechoslovakia at the World Exhibition EXPO 58 in Brussels and the intoxication from other competitions and exhibitions of ceramics at home and abroad, especially at the International Exhibition of Ceramics, which took place in 1962 in Prague under the auspices of International Academy of Ceramics. Furthermore, the study programme for teacher training was extended from four to five years in Czechoslovakia in the early 1960s. The number of hours was increased for the subject of Art Production and Architecture, within which ceramics was taught, and by implication the share of Vymětal's teaching also increased.

Figure 5Stanislav Vymětal at work, around 1980, photo private archive



The invasion of the Warsaw Pact troops had an unfortunate impact on the Czech-nation in many ways, but the normalisation of cultural policy did not intervene too destructively in Czech ceramics (Petrová, 2005c), and it essentially continued to find a great deal of support in society. A period text by authors Růžička and Vlček (1979) comments on the position of ceramics in the 1970s. According to them, in the 1970s, ceramics was rediscovered as a means of artistic expression of contemporary sculpture. For its sudden development in recent decades, wider changes in the development of art and in people's lives had become essential. They recognised the urgent need for art to act as a unifying link between nature and civilisation. Ceramics thus became interesting as an area of activity involving both natural and cultural principles of creation. In addition, according to them, the whole process of forming a ceramic object was gaining in importance in an environment determined by modern technology. The University of Olomouc responded to this by introducing a new

subject called Ceramic Practice. Led exclusively by Vymětal, it was a so-called »recommended lecture«. The position of teaching ceramics in Olomouc in the 1970s is specified in the catalogue of the exhibition of artworks by students of the department held during the celebrations of the 400th anniversary of the University of Olomouc: »The place of ceramics in the overall content of the art education study programme is proportional to the importance of this discipline in the context of industrial art and architecture (...) We strive to ensure that the ceramic products of our students are not self-serving, that they are intended for the fulfilment of certain functions, that they have a social purpose« (1973, without page no.).

When, in 1980, two Olomouc art departments operating in parallel were merged and all of the teacher training art disciplines were integrated into a single Department of Art Theory and Art Education, Vymětal moved from the Faculty of Arts to the Faculty of Education, where he continued to inspire future teachers and awaken their feeling and passion for ceramic work until 1992.

Changes in the 1990s and the personality of Jana Bébarová

In 1989, a revolution broke out in Czechoslovakia. It brought about the fall of the communist regime and opened the way to democracy. Subsequent changes also affected the Department of Art Education in Olomouc. The development of ceramics lessons was mainly influenced by the then head of the art department of the Faculty of Education, Hana Myslivečková, when in 1990 she submitted a proposal for the establishment of a new field of study entitled Art Education for Specialised Schools and Folk Art Schools. In the proposal, ceramics was newly included in the study programme as a separate subject. The approval of the submitted proposal meant a major breakthrough for the position of ceramics within teacher training studies in Olomouc. For the first time since 1946, it began to be taught as a separate compulsory subject! Ceramics no longer had to share the hourly allowance with other arts, as it had before. For all of the students of the newly established single-major five-year study programme, as well as for those who chose a double-major combination with art education for their professional focus, ceramics became a binding experience immediately in the first years of study. Gradually, the established subject Ceramic Work and Methodology transformed into a subject stretching over two semesters and more, and in addition to compulsory status, it acquired an optional subject status intended for those with increased interest in the field as well as for those who chose ceramics as the topic of their thesis. The teaching management was newly entrusted to artist Jana Bébarová, also a graduate of Palacký University.

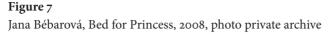
Just like Vydra many decades earlier and Vymětal in the period immediately prior, Bébarová considered the craft and its mastery as a key requirement not only for the success of her students' artistic realisations, but also for strengthening their self-confidence, without which they would not be able to implement ceramics in their future pedagogical practice. In accordance with her motto, which says »If teachers do not know how to make ceramics, they will not make it«, she demanded that students master the basic procedures and techniques, as well as learning all of the possible pitfalls that can be encountered in ceramic materials. In addition, in her classes, Bébarová applied not only traditional methods, but also new technologies, which made the whole subject more attractive. Motivated by lectures on the aesthetics, theory and history of art by art critic and theorist Václav Zykmund, which she had attended with enthusiasm during her studies at Palacký University, Bébarová also set education through art as her main goal. This led students to a discussion about fine arts in the broadest sense of the word, and specifically with regard to arts and crafts, the present and the past, and domestic and foreign ceramic work. She also considered it essential to give her students the opportunity to create large-scale sculptures. She rightly perceived the experience with a large format as an essential moment for the personal development of students, conveying to them the feeling of a person dedicated to »great art«, and with this a stunning impression of generosity as well as the necessary tolerance and respect for the work of others. Bébarová also aimed to ensure that future teachers were fully acquainted with the important role of spatial - especially ceramic - work in the educational process. She wanted her students, who were aware of the merits they had achieved in their own work in the field, to have the ability and desire to pass on their experience as well as their theoretical and practical knowledge, and to apply them broadly in their future pedagogical practice.

At a number of solo and group exhibitions by Bébarová, students had the opportunity to confront the value passed on with her own work, in which she always defended her attitudes towards modern ceramic work. Inspired mainly by nature and music, to this day she transforms shapeless lumps of clay into abstract units, thus recording her »feelings from the landscape«. Her objects, reliefs and spatial realisations are in direct harmony with nature; they are a manifestation of respect and reverence for the landscape, its power and the unceasing cycle. »They are the breath of a human being walking through the landscape« (Koval, 2010) and they are a symbol. Bébarová models, imprints into clay, impresses. Although pure craftsmanship is present in everything, her work transcends the boundaries of craftsmanship and turns into freestyle art. In her work, the definition specifying applied and freestyle ceramics thus completely loses its significance.

On many occasions, Bébarová had to fight to preserve the teaching of ceramics at the university and to defend this field. Moreover, when she first came to the art department, the pottery workshop was in poor condition, with the minimum necessary technical equipment. As she herself states, it was »essentially non-functional, with two obsolete potter's wheels and a burnt-out kiln« (Open Letter to the Dean, 2008, private archive). She had to devote a great deal of time and energy to the difficult task of modernising the workshop. This was made even more difficult by the fact that the art department had to relocate several times. Thanks to her diligence and her belief in the importance of ceramic work for the development of the individual, she was able not only to keep ceramics as a main subject in teaching at the Department of Art Education in Olomouc, but above all to inspire many students, many future teachers. Bébarová was succeeded by one of her graduates, Veronika Selingerová. During her work at the department in the years 2008-2015, she also strove to ensure that students mastered the technological processes of ceramic work, but her primary objective was to stimulate their interest in the field. She consciously motivated students mainly through passionate discussions, revealing her own principle of thinking about the creative process and repeatedly encouraging them to work intensively on their own creative ideas.

Figure 6Jana Bébarová, Jana Bébarová, Relief of Rustle, 1980s, Regional Museum in Olomouc, photo by P. Rozsíval







Personalities of contemporary teaching of ceramics

At present, the guarantor of ceramics at the Department of Art Education in Olomouc is sculptor Robert Buček. Aware of the fact that working with clay is not a matter of course in art lessons at primary or secondary schools, he reconceptualises his approach to teaching ceramics around the requirement that the acquired theoretical and practical knowledge be of the utmost use to students in their future pedagogical activities. During his lessons, he continuously points to the knowledge from psychology, and specifically from the ontogenesis of children's artistic expression, and purposefully leads students to understanding the importance of incorporating work with clay into teaching. Buček aims to break down the prejudice that working with clay is by necessity a complex and technically demanding task, and motivates students to master an expanding range of techniques applicable in art lessons, as well as to pursue their own freestyle expression. His aim is for students to thoughtfully complete their intentions and increase them with the element of self-knowledge in their artistic reactions to the assigned topics. At the same time, he attaches paramount importance to the experience of own creative activity, thanks to which students are able to promote and implement ceramics later in their art education classes.

Buček has been working at the Department of Art Education in Olomouc since 2014. He shares the teaching of ceramics in the first year of the study programme with Monika Dokoupilová. With the cooperation of these two personalities, the Olomouc Department of Art Education has achieved perfect functionality and above-standard quality teaching of ceramics. In her classes, Dokoupilová mediates the basic techniques of ceramic work to students in the form of practical tasks, acquainting them with production processes from the processing and preparation of clay, through the creation process itself, to firing and glazing. This practical part is complemented by lectures by Buček. From the second year of the study programme, Buček takes over all of the workshops. Since he is not an artist who focuses only on ceramics, but on the contrary, uses a wide range of materials (wood, glass, stone, clay), often combining them, he also naturally offers his students the possibility of this direction. This completely - but not necessarily - eliminates the clear definition of ceramics with regard to other materials. At the same time, the boundary between low and high art, between craft and freestyle creative work, is dismantled. A conservative approach turns into a completely free and stimulating one, providing unlimited creative possibilities. In this concept, both teachers aim not only at the primary goal of leading students to acquiring or consolidating basic knowledge about ceramics, but especially to breaking down the fear of artmaking and to applying their own creativity to their artistic realisations.

Figure 8Robert Buček, Well. Being, detail, 2020, photo private archive



Figure 9Robert Buček, Lent Intervention in the Church of Our Lady of the Snows, 2020, Installation in the Church of Our Lady of the Snows in Olomouc, photo private archive



Conclusion

From the very beginning, third-level teaching of ceramics in Olomouc has taken place against the backdrop of frequent changes in the system of the education of future teachers. In the first post-war years, the professional training of all categories of future teachers in the Czech Republic first belonged to the faculties of art and the newly established pedagogical faculties of universities. From the 1950/1951 academic year, the education of kindergarten and national school-teachers was excluded from the university setting and entrusted to pedagogical grammar schools. Only a few years later, in 1953, the faculties of education were abolished. Their role was taken over by higher pedagogical schools (for teachers

of grades 6 to 9) and pedagogical universities in Prague and Olomouc (for teachers of grades 9 to 11 of eleven-grade schools, pedagogical and vocational schools). Five years later, new pedagogical institutes were established by government decree for teacher erudition. However, in 1962, the government of the Czechoslovak Socialist Republic declared that pedagogical institutes were universities, and two years later pedagogical faculties were again established from pedagogical institutes. From the 1964/1965 academic year, the third-level education of art teachers in Olomouc took place in parallel at two art departments: the Faculty of Education and the Faculty of Arts. It was not until 1980 that all teaching disciplines were integrated exclusively under the Faculty of Education. Alternation in the structure of pedagogical education intertwined and clashed with the work of the individual personalities who were selected as essential for the history of university teaching of ceramics in Olomouc by the present research.

Vydra's initiative personality stood at the beginning, and Myslivečková advocated a post-revolutionary turning point. The practice was, however, determined - with marginal exceptions - by the teachers themselves, who, in addition to their artistic careers, engaged in pedagogical professions. The quality of their teaching always depended on their artistic and pedagogical attitudes, personal interests and artistic ambitions. However, the political circumstances and time itself did not allow Vinecký to develop his full potential. Vymětal's lessons reflected the diligence, kindness and prudence of the teacher, as well as the modesty and disciplined fantasy of the artist/ceramist. Bébarová sacrificed her artistic career to build and actively lead a ceramics studio. Selingerová worked as a teacher for too short a time for the manuscript of her pedagogical work to be inscribed in the direction of the studio. This does not, however, apply to the activities of Buček, whose creative ambitions and pedagogical attitudes are significantly reflected in the direction of teaching ceramics at the University of Olomouc at present. It is thanks to all of these personalities that the Department of Art Education at Palacký University Olomouc can be rightly proud of the long tradition of its teaching of ceramics.

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The Self-Portrait as a Means of Self-Investigation, Self-Projection and Identification among the Primary School Population in Croatia

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The self-portrait is a reflection of the personality in a visual, physical sense, as a concrete form, a summary of the external characteristics of the artist, but also in a psychological sense, when the self-portrait becomes a mediator of communication with the self, a medium of self-investigation. In this way, the self-portrait exists as a means of self-reflection, self-awareness and acceptance of the Self. It contains three primary values: subjective, objective and the archetype. Considering that the self-portrait is not exclusively a means of introspection reserved only for artistic practice, but also includes activities of the entire population, ranging from early child-hood to old age, the projective and reflexive features of this motif began to be used for diagnostic and therapeutic purposes.

These findings, as well the need for a new role for art teachers arising from the cognitive, emotional and moral needs of children and youth involved in the regular education system in the Republic of Croatia, gave rise to the project *The Self-Portrait as a Means of Self-Investigation, Self-Projection and Identification*, which was realised in the regular primary educational process, in fifth-grade art classes. The expressive and projective dimensions of children's drawings, which can indicate the possibility of diagnostic and potentially therapeutic activity within the regular primary education system, were taken as a starting point. The project also sought to examine the impact of rational-cognitive principles of teaching on children's creativity and expression.

Keywords: children's art expression, diagnostics, education, self-portrait, self-projection

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Avtoportret kot sredstvo samoraziskovanja, samoprojekcije in identifikacije med osnovnošolsko populacijo na Hrvaškem

Dunia Pivac in Maia Zemunik

Avtoportret je odsev osebnosti v vizualnem, fizičnem smislu kot konkre- \sim tna oblika, povzetek zunanjih lastnosti umetnika, pa tudi v psihološkem smislu, ko avtoportret postane posrednik komunikacije s samim seboj, kot medij samoraziskovanja. Tako avtoportret obstaja kot sredstvo za samorefleksijo, samozavedanje in za sprejemanje jaza. Vsebuje tri osnovne vrste vrednot: subjektivno, objektivno in arhetip. Glede na to, da avtoportret ni izključno sredstvo introspekcije, rezervirano samo za umetniško prakso, ampak vključuje tudi dejavnosti celotne populacije, vse od zgodnjega otroštva do starosti, so se projektivne in refleksne značilnosti tega motiva začele uporabljati za diagnostiko in terapevtske namene. Te ugotovitve pa tudi potreba po novi vlogi likovnih pedagogov, ki izhaja iz kognitivnih, čustvenih in iz moralnih potreb otrok in mladine, vključenih v redni izobraževalni sistem na Hrvaškem, so sprožile projekt Avtoportret kot sredstva samoraziskave, samoprojekcije in identifikacije, ki je bil uresničen v rednem osnovnošolskem procesu pri pouku likovne vzgoje v petem razredu. Kot izhodišče so bile vzete izrazne in projektivne dimenzije otroških risb, ki lahko izkazujejo možnosti diagnostične in potencialne terapevtske dejavnosti v okviru rednega osnovnošolskega sistema. Projekt je poskušal preučiti tudi vpliv racionalno-kognitivnih načel poučevanja na ustvarjalnost in izražanje otrok.

Ključne besede: otroško likovno izražanje, diagnostika, izobraževanje, avtoportret, samoprojekcija

Introduction: About the self-portrait and its use in the art class

One's own character, one's own reflection and personal reflections are enduring human fascinations. The need to study and question oneself develops in parallel with the development of self-awareness. It is groundwork in the formation of the Ego. This need represents a logical quest for a person's own being, his/her integrity and self-actualisation as a primary goal in life. In this sense, the self-portrait represents a tangible manifestation of this quest, its beginning and end, a permanent record of variations of personal questions and answers. It is a record of the trajectory towards myself and a concretisation of I, summarised importance (Lacković-Grgin, 1994).

It is precisely due to the intrigue and importance of the self-portrait that we establish it as the framework of the present work and research. In the research, the self-portrait is presented primarily as a reflection of personality, a means of self-exploration and research in physical and psychological terms, a synergy of introspection and visual concretisation that often appears quite instinctively, without regard for time and age, and is common to all people.

Taking into account the various possibilities of self-portrait representation throughout the history of art (Jiang et al., 2017; Lucie-Smith & Kelly, 1987), as well as the comprehension that an individual who is expressing him/herself visually, consciously and unconsciously projects his/her personality into his/her work, and the fact that the human figure is the first universal visual identification factor that appears quite instinctively at the very beginning of visual expression development (Malchiodi, 1998) and successively reflects the development of the personality, the self-portrait finds a wide use outside art, especially as a projective diagnostic tool in psychiatry and paediatric psychiatry, psychology and therapeutic/rehabilitation activities (Alter-Muri, 2007).

In the field of art education, in many European countries and the USA, the self-portrait motif is recognised as an interesting starting point, both for various artistic research and for communicating and dealing with oneself. This is evidenced by the titles of some selected articles: *The Significance of Self-Portraits: Making Connections through Monotype Prints in Letras y Arte* (Armon et al., 2009); *Self-Portraits with Expression* (Daseler, 2001); *Self-Portraits with a Twist* (DeMarco, 2010); *Self-History Project in Visual Arts Education* (Coşkun, 2017); *Face (in) the Mirror* (Hoedekie, 2008).

In the case of teaching visual culture in Croatian primary schools, the self-portrait is not given special significance. The motive of self-portraits can only be found among visual stimuli, but always in context and depending on

the specific teaching topics and units, with the aim of clarifying key concepts that are ultimately aimed at achieving the expected educational attainment. In this sense, the self-portrait corresponds to a visual task; it illustrates a visual problem. In the practical work of the students, the representation self-portrait motifs, just like any other visual or non-visual motif, depends on the individual teacher's preference. Although modern methods of teaching art should develop a creative approach and aim to explore the various forms of visual reality, they most often omit the necessity of primer identification, i.e., of subjective experience. Thus, the value of motifs in the visual arts, especially portraits, is reduced to mere visual form. This disregards their reflective, introspective and projective value, as well as the significance of self-exploration of the psychophysical personality structure, which is necessary for identification, self-awareness development and recognition of one's place in society (Nuñez, 2009). It is incorrect to think that the entire comprehension is realised only within the domain of reason; it necessarily includes an emotional (intuitive) aspect that is often indicated as essential for the acquisition of permanent knowledge, attitudes and values, as well as for the successful configuration of the whole personality.

Viewed as a reflection of the bio psychosocial personality structure, the self-portrait goes below the surface of the purely visual world. It opens the door to subjective and objective self-evaluation and may point to the essence and objective that are the aim of the development of the individual. It can have a diagnostic character and a reintegrating and revitalising effect, which is especially important in working with students with special educational needs, who are now commonly integrated into regular arts teaching programmes in Croatian schools. Unfortunately, in today's primary education system schedule, art classes are reduced to only 35 hours per year, during which all of the mandatory subjects must be implemented. This shortened timeframe does not provide the necessary conditions for the adequate development of this motif, nor does it enable the use of its multiple potentials (educational, identification, introspection and, potentially, therapeutic).

Art project: The Self-portrait as a Means of Self-Exploration, Self-Projection and Identification

The art project *The Self-Portrait as a Means of Self-Exploration, Self-Projection and Identification* emerged due to the specificity and importance of the motives of self-portraits in art and their common usage in diagnosis, therapy and rehabilitation. It is an interdisciplinary research project in which many

insights from fine arts, psychology, educational science, art therapy expression and teaching arts permeate and complement the possibility of realisation within art classes in primary school. The need for this project arose from one of the *new roles* of art teachers. According to Pivac (2006), this is reflected in the teacher qualification for working with students with different abilities, difficulties, needs (cognitive, emotional, moral) and habits, as well as the multicultural differences that are encountered when teaching art in Croatian schools. It also includes the identification, prevention and treatment of traumatised children and youth through visual expression.

The aim of the project: The research problem and research questions

The starting point of the project is considered to be within the expressive, projective dimensions of children's drawings and paintings, which suggest the possibility of diagnostic and potentially therapeutic effects. The construction of the project also aimed at examining the influence of the rational-cognitive principle in art teaching on children's creativity and expression.

The aim of the research project was to know whether the selected works of art used in the teaching of art culture could be not only a direct incentive for the art activity/creativity of the students, but also indirectly enable the students to express their personality in their artworks (not only in the artistic sense, but also in psychological terms). A further aim of the research project was to determine the extent to which the motive of the self-portrait allows students to express their personality.

In view of the goals set, the following research questions were constructed:

- Do selected works of art, especially through their emotional transfer,
 affect the expression of personality in the artworks of the student?
- Can a chosen self-portrait motif allow students to express their personality, and in what ways?

Description of the project implementation

The art project was realised in one of Split's primary schools, as a three-hour block within regular teaching of art in fifth-grade classes. Twenty-eight students of around eleven years of age participated in the project. We selected this age group because students from the Arts Academy of the University of Split, with their professor as a mentor, performed art lessons in these classes on

an ongoing basis and we therefore expected a high level of motivation among the children during the realisation of the project.

The research within this art project is based on a qualitative research paradigm that encompasses the method of observation, description and interpretation of a phenomenon, leading to new insights and the expansion and redefinition of our common understanding, as opposed to the generalisations and strict numerical classifications characteristic of quantitative research (Glaser & Strauss, 1967; Willis, 1978). The research included three stages: data collection, content analysis and comparative analysis (Strauss & Corbin, 1990).

Implementation of the project also entailed processing the curriculum scheduled by the primary school teaching curriculum content (Curriculum for Primary School, 2006). The teaching process for each of the teaching topics was performed during two school hours (90 minutes) and included the following stages: learning, creative games and activities, creation and evaluation.

During the first teaching topic, *Surface – Figures on the Surface* (key terms: figure, surface, two-dimensional, symmetry-asymmetry), the students were presented with reproductions of artworks: *Black Square on a White Field*, K. Malevich, 1915; *People and Dog under the Sun*, J. Miro, 1949 and *Big Head*, P. Picasso, 1962. In the practical realisation, the self-portrait had a simple title: *This is Me*. Considering that this title is quite instinctively reminiscent of the real image of one's own character, as a contrast it was stated that the realisation should be based upon the imagination. This shifted the focus of the creative act to the search, rather than the expected solution. This approach opens the possibility that the visual expression of a person becomes an instrument of communication, individualisation and integration. The students' visual artwork was made using the monotype graphic technique. Due to the specificity of this technique, the students expressed themselves directly and quickly, without having time for fear and superfluous questioning, which resulted in authentic expressive self-reflections of the given moment.

In the second teaching topic, *Point and Line – The Course and Character of the Line, Structural Points and Lines* (key terms: line course, line character, line construction, structure), the following reproductions were used: *Portrait of Diego* by A. Giacometti, 1940; detail of the artwork *Holy Face* by C. Mellan, 1649; and *Head of an Angel* by A. Sadeler, 1598. The motive of the second student artwork was a portrait of a class colleague in the coal technique. Coal provides a high level of accuracy, but also a distinct freedom and expressiveness, which can result in a series of random effects and a layered view. The portrait drawing took place alternately every 10 minutes. The main emphasis was directed not on showing the appearance of the person portrayed, but on expressing the

feeling and emotions related to the person. This artistic product would present a combination of portrait and self-portrait, as it contains subjective reflection, the experience of another.

The third teaching topic was related to the *Redefinition of the Surface* (key terms: colour, redefining, re-composing). During this larger and more focused research, the students were presented with reproductions of artworks of A. Warhol, *Marilyn Monroe*, 1953 and P. Picasso *Weeping Woman*, 1937. Given that the visual element of *colour* is one of the key terms and essential components of practical work, the students were encouraged to become aware of the different possibilities of the experience of colour in the emotional, mental, physical, optical and symbolic sense. The motive of the third student art assignment was a self-portrait, but it involved reshaping the students' own physical reality. The students were given printed black and white photographs, their real self-portraits taken in the previous class, which they had to redefine by recomposing the shapes (breaking, cutting, pasting on the surface) and colour (warm and cold colours, pastels). The students' task was to change their self-portraits, not only in artistic terms (redefinition), but in terms of showing what they would like to change on their faces.

Results

Children's artwork is a permanent document that reflects numerous components in the process of its formation, both individual and social. It reflects not only the intellectual and emotional development of children, but also the impact of the environment, family and school. This was pointed out by Malchiodi (1998) when she explained the multidimensional aspects of children's drawings. Fifth-grade children (around 11 years) are at the age that corresponds to the phase of pseudorealism (Löwenfeld & Brittain, 1987), which covers the period from 11 to 13 years. During this period, children tend to progress in optical-thematic form, but there is also a gradual stagnation in the creative abilities. Their artworks are based more on experience, knowledge, dexterity and skill, and less on expressiveness and originality. Pursuit of truer representation of the real is emphasised, and this is evident in dealing with movement, space and overall composition. Children aged around 11 years are in the period of early adolescence, so the characteristics of this developmental stage influence their artistic expression. Significant changes occur in terms of personality awareness, in the direction of strengthening oneself, and individuals question themselves with regard to interpersonal relationships, character and personal interests during this transitional period. This transitional period is therefore fluid and insufficiently constructive for artistic expression. Although there is substantial interest in the arts among individuals, certain negative reflexes also occur, such as a loss of attention towards and interest in artistic expression (Grgurić & Jakubin, 1996; Malchiodi, 1998). At this developmental stage, children have not yet developed sufficient capacity for a full aesthetic experience, but the ability for the visual presentation of abstract concepts, appearances and feelings, with an emphasis to their specific communication, nonetheless begins to develop. If the works contain specific symbolic representations, they occur automatically and are often ambiguous, requiring careful reading.

Regarding the basic objective of the project, the primarily creative, expressive, reflective and projective dimensions of the children's drawings and paintings were analysed, taking into account the developmental level of the children and, inevitably, a certain degree of conditionality determined by the teaching subject. The children's drawings and paintings were categorised and analysed according to common features as well as the specific features observed in their artworks. By analysing and comparing the common and individual elements present in the children's works of art, we concluded that the selected works of art used in the study as a whole had an impact on the expression of personality in the artworks of the students. However, their influence is limited by the method of teaching, the time of experience, as well as by the personality of the individual child and his/her responsiveness to the individual work of art. Moreover, at this age, the expected level of reception of an artwork is spontaneous and critical. It is precisely these levels of reception and responsiveness to the selected works of art that are observed in the detailed analysis and the comparison of the student works of art presented below. The common elements present in the drawings and images are generally expected, while the specific elements are unexpected and may indicate emotional and intellectual deviations from the expected developmental phase of the student. By analysing the individual artworks of the students created in this project, we concluded that the selected self-portrait motif as an incentive for artistic expression enabled students to express their personality in different ways, and to a greater or lesser extent. All of the ways in which the motive of the self-portrait encouraged the students to express certain aspects of their personality are shown below, highlighting the influence of gender, age, motivation and the artwork they experienced as key variables. Based on the observation method (which included analysis and comparison) and description and interpretation of the students' artwork, we conclude that the results of the research carried out during this art project gave positive answers to both of the research questions.

Analysis of the students' artworks with regard to common features

We can observe typical negative impacts of this developmental phase in several of the artworks created during the implementation of this project. This came to the fore especially during the methodical elaboration of the theme *Point and Line – The Course and Character of the Line, Structural Points and Lines.* It is conditioned by the negative reaction to the selected reproduction of the A. Giacometti artwork, which has an expressive, cathartic nature, or by the identification with the works of C. Mellan and A. Sadeler, which have a very technical nature. With the exception of a few highly subjective-expressive works, most of the students resorted to the formal implementation of the task. These student artworks do not show great expressive quality or a special creative approach in developing visual problems; most of them tend towards a stereotypical impression derived from the visual disparity between desires and abilities. These works require a very different reading, which is particularly related to the work of girls.

Figure 1 Female student A. V. drawing, portrait of A. B., 5th grade



Figure 2
Female student A. B. drawing, portrait of A. V., 5th grade



Figure 3 Female student M. M. drawing, portrait of S. S., 5th grade



Figure 4 Female student S. S. drawing, portrait of M. M., 5th grade



The portraits of the school bench colleagues shown (Figures 1, 2, 3 and 4) represent works by four girls who were sitting on two benches, one in front of the other. In their artwork, one can observe:

- an extraordinary similarity derived from mutual influence;
- a tendency towards idealisation and quaintness, implemented by drawing a template (template drawing indicates a desire and approach by which the child identifies with the environment in easiest way);
- a careful enumeration and rendering of women's attributes, which points to the definition of gender and is a reflection of the expected mental and physical development of adolescent girls;
- emotions are not explicitly expressed, but can be inferred from the mutual influence, a sort of principle of appearement and community (this may indicate strength of character, submission or supremacy in dependent relationships, an ability to adapt to certain deviations);
- added symbolic repertoire in different constellations (if it exists, it could be read as an individual personality characteristic).

We find a similar mode of artistic expression in many other examples, predominantly female work. Such works of art remain sketchy, reflecting a blank artistic form and lacking quality or projective expressive values.

We encounter the same problem in the works of the male population. This mainly arises from the identification and fascination with the technical aspect of the works of C. Mellan and A. Sadeler. However, such works are rare.

Generally, with regard to the works by the male population we can observe that:

- they rarely show mutual influences and similarities (which may indicate a greater degree of independence in searching for own expression, arising from a desire to prove themselves);
- they are more experimental (they provide a wide variety of experience and expression, and various subjective-expressive variations in order to prove themselves);
- they do not explicitly express emotions (because a such mode of expression is seen as a weakness):
- most of the works of students made during this lesson are self-portraits according to their psychological content, because they take the form of portraits (the face of the colleague in the school bench) solely as a means of indirect representation, the promotion of oneself (the inscriptions on the back of the drawings support this, with some students writing: *from...to...* or work *made by...*).

Figure 5 Male student J. C. drawing, portrait of P. B., drawing, portrait of J. 5th grade



Figure 6 Male student P. B. C., 5th grade



Figure 7 Male student M. M. drawing, portrait of A. D., 5th grade



Some students were arranged to sit together, despite their opposition. The tensions arising from this relationship can, to some extent, be read from their works. In the case of the artwork in Figure 5, these tensions are manifested through the caricature view. In the work in Figure 6, they speak through the structure of the face, which cancels and covers all of the individual facial features, including the name of the person portrayed. Although the artwork of A. M. (Figure 7) has a highly expressive nature, there are very few references to the actual appearance of the person portrayed. In this case, the portrait serves merely as a background for expressing their tensions.

When setting the goals to be realised in the first motif of the self-portrait lesson Surface - The Characters on the Surface, the students were not asked to represent the emotions and experiences that they were able to express through artistic expression; they had great freedom of expression (limited only by selecting the number of colours that they were able to use: two colours of their choice - one warm and one cold – as well as black). There was a tendency to dismiss the real physical appearance in favour of the imagination. The self-portraits created during this lesson are imbued with the specific child's symbolism, subject to their own rules. Individual symbolism derives from the ways in which children identify with the world and identify themselves, so it is a logical reflection of psychosexual orientation. Moreover, it is noticeable that the content and artistic treatment of many of the works go beyond the simple male-female conception, and therefore resist similar rigid categorisations.

In general, all of the works present unique reflections of different personality and character, in which:

- interdependent negative impacts do not come to the fore significantly;
- works by boys and girls mostly have a very positive effect;
- as expected, girls were more prone to female gentle symbols, themes and handwriting (the most common identifying attributes are hair, eyes, blush and to a lesser extent the mouth (Fig. 10); within the symbolic presentation they are more prone of gentle forms that are suggestive, e.g., the shape of the sun, flowers, etc., and often use warmer colours and brighter colour combinations, although this may not necessarily be the case);
- boys have a slightly more aggressive approach and artistic repertoire (identification attributes are manifested, for example, in painting the beard, emphasising the teeth and mouth, with some aggressive content, such as a black eye (Figure 8), or various beasts, such as Cyclops (Figure 9).

Figure 8 Monotype, self-portrait Black Eye of male student J. C., 5th grade



Figure 9 Monotype, self-portrait Monster of male student Ugly Doll of female T. M., 5th grade



Figure 10 Monotype, self-portrait student D. F., 5th grade



Of course, all of the aforementioned results derive from a variety of environmental influences and traditions, as well as different educational and social norms, and reflect the child's receptivity of these factors and ways of dealing with them. Moreover, all of what has been described thus far points to the necessity of a deeper level of reading different constellations of individual symbolic and universal characteristics of children's drawings. In this regard, we should also bear in mind that an adequate analysis of individual child works cannot be based on just one drawing, and necessarily requires a comparison of all of the works made in the project. The presented works (Figures 8, 9 and 10) are some of the examples in which specific differentiated attributes, symbols and themes can be noted as reflections of the psychosexual orientation of the children. Some of the works survived with the initial title *This is Me*, but some of the students gave titles to their works themselves, e.g., Black Eye, Monster, Toothy (in the case of boys), or Ugly Doll, Monster, Colourful Thong (in the case of girls). In the case of both boys and girls, these titles (with the exception of the last title) imply negative content that may suggest resistance, defiance or exhibitionism, but may also indicate genuine negative connotations.

The visual artworks shown below (Figures 11, 12 and 13) belong to a group that is not subject to differentiation by gender characteristics. These are works of a universal character, containing archetypal shapes and formations (such as a square, a circle, a mandala shape, the symbol of trees, houses, etc.) as stated by Jung (1968), but they are characterised by distinct and subjective symbolism, which requires a special approach in analysing the visual elements of form and content. Such acts are present in equal measure in the works of boys and girls, and are particularly interesting and open to multi-layered reading.

Figure 11 Monotype, stencil, unknown student, 5th grade

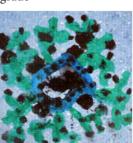


Figure 12 Monotype, self-portrait *This is Me* of female student M. D., 5th grade



Figure 13Monotype, a self-portrait *Monster* of female student A. P., 5th grade



In the last segment of the teaching project, *Redefinition of the Surface*, the students used their own photographs (printed black and white portraits taken at the previous class) in the visual realisation of the task, which they use to achieve a new visual reality in the process of re-composition of the colour. The students were encouraged to think and express what they wanted to change about themselves. The use of colour was relatively limited to the relations of warm and cold colours, with regard to which their symbolic significance and use was primarily discussed. Although the majority of the artworks created during this lesson again represent a unique example of the children's imagination and a wide variety of subjective considerations, unlike those previously described, these works are less constructive: there is a certain degree of disintegration and occasionally we find traces of the template.

Perceiving the work process, it can be observed that in the self-portraits:

- the task is not of particular value to boys (which indicates the lower degree of importance they attach to physical appearance; personal photos are treated as part of the technical material);
- boys are more in favour of experimentation and exploration of technical possibilities (without fear of approaching the decomposition of their own portrait; however, the lack of identification with their own character can be negatively reflected in the creative process and result in works that do not contain actual expressive auto-projection);
- girls establish the emotional connection with the photo at the very beginning (they want to preserve it and reluctantly approach the process of decomposing);
- most girls retain greater integrity of their compositions with minimal colour changes and upgrades, or accentuate the elements that they like the most in the portrait, although the task was exactly the opposite;
- some examples of girl self-portraits have a tendency to present the final explicit expressions of feelings (usually elements of the template); the feelings presented in this way do not necessarily reflect the real situation: they may only represent a blank form resulting from the aspiration for the consistent execution of visual tasks).

It should be noted that this work process inevitably requires the degree of self-criticism, observing and questioning one's own conflict zones, for which students may not have been ready or did not want to communicate openly. Furthermore, the ability of conscious symbolic transcription of the content, which, in this case, could provide students a degree of security and freedom, is just beginning to develop at this developmental stage.

Figure 14 Re-composition, self-portrait of female student Z. K., 5th grade



Figure 16Re-composition, self-portrait of male student J. C., 5th grade



Figure 15 Re-composition, self-portrait of female student D. D., 5th grade



Figure 17Re-composition, self-portrait of male student P. B., 5th grade



Analysis of the students' artworks regarding specific features

In the current review of children's artworks created during this project, we investigated the projective, cathartic and potentially diagnostic and

therapeutic possibilities of self-portraits in education. Attention was given to certain specific impacts arising from the cohesion of the teaching process, the students' level of development, and social interaction. The students' work was analysed in the context of the general and the collective, and thus we defined the regularities and accented the differences that arise in the clash of individual and general, subjective and objective, conscious and unconscious, and that are present within the school class. In this way, we have tried to create a starting point for further analysis of the students' works in terms of individual diagnostics.

In achieving this goal, and for the purposes of the present paper, we will present the individual creative products of one student that can be sorted and categorised according to the principles of subjective expression. The analysis will cover the entire set of works made by the student during the project. We will consider motivation, the course of the creative process, the use of technical materials, visual elements, compositions, present content, and consistency and discontinuity in utterance, as well as detecting whether some discrepancies are present. When analysing the works, we will also take into account the personality of the student, the way he acts and presents himself within the class collective.

Of course, this project is of a very experimental nature in order to study the projective and potentially prophylactic possibilities of artistic expression, rather than making an individual diagnoses. Diagnosis of the cognitive and affective aspects of a personality that could indicate a negative deviation from the standard requires the work of an interdisciplinary team of experts, which cannot be achieved during the teaching process (De Zan, 1994; Pivac, 2006).

Student P. B., 5th grade

In terms of social adaptation, student P. B. seems isolated to a certain extent. The lack of social engagement is evident. However, this student does not aim to change the existing situation, but lets it remain the way it is. He rarely participates independently in the educational dialogue, he is hard to motivate, and he is reluctant to execute his work, so it mostly remains unfinished. One possible source of all of these problems is a fundamental lack of concentration and focus. Consequently, his works are rarely appropriate to the specific teaching assignment and do not reflect a systematic approach, creating the impression of confusion and disintegration. The positive features of his works are derived from instinctive impulses, with an accent on unconscious processes, giving them a very clear expressive-projective value. The student does not show a tendency towards compensation for negative feelings through his artistic

expression. In addition to the standard stereotypical patterns of behaviour characteristic of his age, he does not express the need to define his psychosexual orientation. His works therefore have no role as a means of identification, at least not on a conscious level, and the effort that students might make in pursuit self-actualisation through the creative process is absent.

During the first teaching unit of the project, which includes artistic work on the motive of self-portraits, the student made two matrixes (Figures 19 and 20), both of which are poorly made in a technical sense, so their printing was unsuccessful. The first matrix (Figure 19), which is a collection of failed attempts, is partially preserved. The stains that it contains are the traces of the constant rewrites; they suggest insecurity and an inability to make a decision. The first stage of realisation of the matrix contained a snowman in the lower left corner, along with the sun and birds (pattern), which can still be seen in the upper part of the matrix. The snowman was very small in relation to the surface and was outlined in a timid, meandering thin line in a contour only, without filling the surface with paint. In the far lower left corner, the remains of his leg can still be seen. This placement of the main identifying character in the corner leaves a great deal of empty, negative space on the surface. In his work, the student selects colours arbitrarily. In this case, there is a combination of red, brown and black, whose interdependent operations create a negative impression (the black birds in the upper part of the matrix). In the second stage of the realisation of the matrix, after deleting the previous drawing, we see the beginning of an idea that will occur on the second matrix. It is a composition made up of a series of interconnected black circles (Figure 20) with a set of points scattered in the background. According to Rudolf Arnheim (1982), the circle is the most basic visual circuit and the first organised form that occurs in children's artistic expression development. It can symbolise the experience or knowledge of oneself as a separate entity. In this paper, the circle appears in its original symbolism, but the manner in which the student arranges the circles on the surface suggests a different reading. By creating a conglomerate of circles, the student denies the positive aspects of this symbol, instead suggesting diversification and an inability to focus. The scattered points in the background present the repeated circle shape; therefore, the composition may suggest the repetition of a certain state, or its durability without the possibility of change. In this context, the circle may suggest durability, containment and isolation. The colour is almost completely abolished, so we only see traces of red.

Figure 18 Photo of student P. B., 5th grade



Figure 19 Monotype, stencil of student P. B.



Figure 21
Male student P. B. drawing, portrait of J. C. (colleague on bench)



Figure 20 Monotype, stencil of student P. B.



Figure 22 Re-composition, self-portrait of student P. B.



If we analyse all of the factors observed in terms of the flow of the creative process (insufficient level of motivation, lack of concentration, indecisiveness, inability to perform the task, how to use technical materials) and the content (described visual elements, their location, negative space, symbolic content), these works have a negative diagnostic sign and indicate the possible need for therapeutic effect.

The remaining works (Figures 21 and 22) of this student do not indicate negative connotations, but they do contain some of the aforementioned features, such as the impossibility of identification, the inability to concretise, incompleteness, etc. When making portraits of a colleague on a school bench (Figure 21), the student was moved to sit with the student, with whom he does not normally sit (imposed situation). The student accepted the situation without excessive emotions. The work task sought to create a portrait with structural lines in order to express their own impressions and feelings related to the portrayed person. In technical terms, the student completed his task. We can notice that the entire face is made of variations in different structures, different expressive potential. In psychological terms, we note that although the face has all of the elements (eyebrows, eyes, circles under the eyes, a nose, a mouth, emphasised teeth, flush, a mole, etc.), all carefully drawn, the student denies those elements by making a network of wavy lines across the face like a wire membrane. In this case, we also find a characteristic dotted pattern applied to the face, which may suggest a dispersal of thought, as well as wavy lines that hover around the head covering the portrayed person and the name inscribed in the upper part of the paper. Regarding the character of the line, it is primarily wavy and gentle, and does not reflect determination but rather fluidity, movement, multi-faceted orientation.

The last work of the student (Figure 22) is particularly interesting for its relatively unusual method of composition: the use of different colours and free forms that are difficult to define and to attach any meaning to. This work is rich in subjective symbolism that is not subject to standard terms of reading and definitely requires a verbal explanation of the student. Despite the fact that the work makes a positive impression with its coloration, we notice a lot of empty space, which the student seeks to fill by drawing and accumulating unusual shapes and objects. Furthermore, we notice that the face has no contour lines; it actually opens up from the neck up. Visible are the wavy lines that run from the mouth across the chin, which might represent a beard, an attribute of masculinity, as well as the cigarette in his mouth. The neck is this time mottled in colour, as in the case of the previous portrait. The line that runs from the upper-right corner – connecting the eye, the right ear, above the nose, the left ear and down

the cheek to the mouth – is particularly interesting and unusual. As in the previous works, the overall composition gives the impression of disintegration and confusion. Considering that the assignment in this task was for the students to show what they wanted to change about themselves, this unusual work certainly demands further analysis and reading.

Conclusion

Due to the fact that our own character and its reflection represent one of the enduring human fascinations, the motive of self-portraits was established as the framework of this project. Self-portrait is, at the same time, presented as a reflection of personality, and is potentially a means of self-exploration and research in the physical and psychological sense. The project results indicate the possibility of an appropriate application of the self-portrait, not just as an artistic motif, but also as a projective diagnostic and potentially therapeutic agent. Analysis of the students' artworks showed that they generally correspond to the expected developmental stage of artistic expression of children of around 11 years; however, it also indicated individual differences that would require orientation towards further diagnostic and therapeutic actions.

The extremely small unit of the subject Visual Culture in Croatian primary schools (35 hours per year) and the extremely rational cognitive-oriented principle of teaching, conditioned by the propositions of the Curriculum for Primary School (2006), unfortunately does not provide adequate conditions for this kind of action. Although, through the realisation of this project, the motive of the self-portrait successfully exhausted the projective, diagnostic dimensions of children's drawings and paintings, a further therapeutic procedure would inevitably demand the establishment of separate art workshops with the aim of providing adequate attention to children with such needs. Through them, sensitised art teachers (individually or in teams with other professionals) would really be able to carry out their motivational (encouraging creativity and experience), supportive (emotional and moral), mediation (a mediator between the sign and meaning) and partly therapeutic role, according to Pivac (2006).

For the purposes of the prophylactic and therapeutic use of artistic expression within the education system, it would be necessary to upgrade the dominant rational-cognitive process of learning and teaching art with the emotional dimension of experience. As Pivac (2009) explained, this change would enable better understanding not only of visual art phenomena, but also of the ability to achieve a fuller aesthetic experience and an understanding of the creative process, and to influence the development of empathy and visual and

communication skills, as well as identification, projection and self-realisation, thus rebuilding the personality through art. This is precisely what the new curriculum for teaching the subject Visual Culture in primary schools in Croatia (2019) allows. Such efforts, worldwide, are being promoted by the Australian project *ELVA* (*Enhancing Emotional Literacy through Visual Arts*), an innovative approach developed by the Dax Centre, which incorporates visual arts and mental health for school students (Nikon, 2016).

Finally, we would like to stress that the conclusions we have reached based on the results of the research undertaken within this art project are nevertheless limited by the small number of students who participated. Therefore, future similar research will confirm or reject our conclusions.

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Cross-Curricular Analysis of Picture Books in the Fifth Grade of Primary School: A Case Study

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Picture books discussed with pupils in primary school are considered multimodal texts, as they combine at least two communication codes (verbal and visual). A discussion involving picture books will normally be included in Slovenian language lessons, with pupils focussing mostly on the text. The visual aspect, which equally carries a message, is often neglected. The objective of the present case study that was conducted among fifth-grade primary school pupils in the 2018/19 school year was to explore how a cross-curricular approach to planning and executing the lessons in the Slovenian language and visual art can help pupils learn about the characteristics of the picture book as a multimodal text. We conducted a set of didactic activities entitled Getting to know the picture book, introducing selected picture books to pupils as part of their Slovenian language classes, which resulted in them developing their receptive skills while observing and defining the structure of the texts. In visual art classes, the pupils learned about the visual features of the picture book. As a productive response to the picture book discussed, the pupils were instructed to complete the following tasks: design a cover for their own picture book, design endpapers, illustrate their own poem, and produce their own leporello. The survey involved 21 pupils, a generalist teacher, and a researcher in art didactics. The case study was completed in five weeks. The data were obtained by means of initial and final testing, questionnaires for pupils, and participant observation.

Keywords: art education, the Slovenian language, cross-curricular teaching, multimodal literacy, picture book

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Medpredmetna obravnava slikanice v petem razredu osnovne šole (študija primera)

JANJA BATIČ IN PETRA LEBAR KAC

Slikanice, ki jih obravnavamo z učenci v osnovni šoli, spadajo med multimodalna besedila, saj imajo najmanj dva koda sporočanja (literarnega in likovnega). Obravnava slikanic običajno poteka pri pouku slovenščine, pri čemer je pozornost učencev usmerjena predvsem na besedilo. Pri tem je likovni del, ki je v slikanici enakovreden nosilec sporočila, pogosto zanemarjen. Namen študije primera, ki smo jo izvedli v petem razredu osnovne šole v šolskem letu 2019/20, je bil raziskati, kako lahko s pomočjo medpredmetnega načrtovanja in izvajanja pouka slovenščine in likovne umetnosti učencem omogočimo, da spoznajo značilnosti slikanice kot multimodalnega besedila. V raziskavi nas je zanimalo, kako medpredmetno zastavljene naloge, ki vključujejo cilje s področja slovenščine in likovne umetnosti, vplivajo na učenčevo dojemanje multimodalnega besedila. Izvedli smo didaktični sklop Spoznavam slikanico, v katerem so učenci ob izbranih slikanicah pri slovenščini razvijali recepcijske zmožnosti in opazovali ter določali členjenost besedil. Pri likovni umetnosti pa so s pomočjo slikanice spoznavali likovne zakonitosti, likovne tehnike in oblikovne značilnosti slikanice. Produktivni odziv na prebrano slikanico je vseboval naslednje dejavnosti: oblikovanje naslovnice za lastno slikanico, oblikovanje veznih listov, ilustracija avtorske pesmi in oblikovanje avtorskega leporela. V raziskavo smo vključili 21 učencev petega razreda osnovne šole, učiteljico razrednega pouka in raziskovalko s področja didaktike likovne umetnosti. Študija primera je trajala pet tednov. Podatke smo pridobivali z začetnim in s končnim testiranjem, z vprašalniki za učence, intervjujem z učiteljico in z opazovanjem z udeležbo.

Ključne besede: likovna vzgoja (likovna umetnost), slovenščina, medpredmetno poučevanje, multimodalna pismenost, slikanica

Introduction

Picture books are, by definition, multimodal ensembles combining two communication codes: the visual and the verbal codes (Batič, 2017; Batič & Haramija, 2015; Haramija & Batič, 2013). Serafini (2014) introduces the term »multimodal continuum«, comprising a range of diverse multimodal ensembles: textually dominant ensembles (e.g., essays, lectures, legal documents), composite structures (e.g., picture books, magazines, webpages, graphic novels), and visually dominant ensembles (e.g., photography, painting, sculpture, picture books without text). Notwithstanding this, picture books are generally discussed in Slovenian classes, focusing on textual analysis with illustrations considered to be an addition to the text. Serafini (2014, p. 17) notes: »A focus on written language to the exclusion of visual images may be problematic given the multimodal nature of modern communication«. Cappello et al. (2019, p. 208) note: »Often learners are limited by a print-centric curriculum in schools despite the many options for demonstrating and making meaning«, which means that understanding and teaching literacy must be broadened to encompass both visual and multimodal literacies. Multimodal literacy is developed through a variety of multimodal practices in almost all subject areas. The results of a survey of teachers' views of multimodal practices and K-12 classrooms showed that teachers positively acknowledge the potential of multimodal practices, but at the same time, they also have some concerns (i.e., time for planning and implementation of multimodal lessons) (Yi & Choi, 2015). The question that arises first is that of teachers' visual and multimodal literacy, as it is impossible to expect teachers to help children develop competences that they do not possess themselves. Visual literacy is the ability to interpret visual images and create messages with images. Eilam (2012, pp. 3-4) expands the notion by saying that teachers' visual literacy is »not only the learned ability to interpret visual messages, and even to create them, but the ability to locate relevant visual materials and evaluate their suitability for communicating, learning, and teaching purposes«. Visual literacy is one of the conditions for multimodal literacy, which is the ability to decode the message of multimodal ensembles, that is, the ability to discern the meaning created by a combination of different communication modes (Jewitt, 2008; Serafini, 2014). For this reason, picture book discussion is an excellent opportunity for children to develop their visual and multimodal literacies in school.

One question that arises is what model should a teacher use in discussing picture books and in which school subject it should be included. There are several models used for discussing picture books (Doonan, 1993; Serafini, 2014). What they all have in common is that they introduce children to various

communication codes and relevant terminology, and teach them to decode the meaning from image and text (multimodal analysis) as well as enabling the construction of one's own multimodal message. All the above characteristics imply this is an interdisciplinary model that can be implemented only through cross-curricular teaching. Pavlič Škerjanc (2010) introduces three types of curriculum: a traditional curriculum (isolated teaching, hardly any integration within the subject), enriched traditional curriculum (occasional interdisciplinary connections), and integrative curriculum (searching for answers to a common problem or question). Picture book discussion tends to search for answers to a common problem or question, making one wonder what message a picture book is trying to convey. To understand the overall message, however, one needs to combine the messages incorporated in both the text (the objectives of Slovenian language teaching) and the image (the objectives of art education). The question of what message a picture book is conveying can only be answered once we intertwine both spheres. A survey completed in 2017, which included 443 preschool and classroom teachers, showed that while picture books were frequently present in the teaching process, there was unused potential in terms of developing children's visual and multimodal literacy (Batič, 2019). The question is how to construct a model of picture book discussion that will support an interdisciplinary concept, development, and use of vocabulary from the fine arts while developing multimodal literacy.

Method

Research problem and research questions

The objective of our survey was to identify, through cross-curricular planning and delivery of Slovenian and art education lessons, the means to construct a model of interdisciplinary picture book discussion that will help children develop multimodal literacy. We based our survey on the observation that visual literacy is a precondition for the development of one's multimodal literacy, which is, in turn, is related to the development of viewing skills which comprise »observing, interpreting what one sees, probing and reflecting on first and second thoughts, considering alternative meanings«, (Yenawine, 2013, p. 12). Therefore, it is vital that in a cross-curricular discussion of a multimodal text, pupils are allowed enough time for active observation, which will then serve as their basis for further steps towards gaining visual and multimodal literacy. We created a case study showcasing a specific example, comprehensively and systematically (Sagadin, 1991; Vogrinc, 2008).

- We posed the following questions:
- 1. How do pupils evaluate individual activities within an interdisciplinary module?
- 2. What are pupils' attitudes to a teaching module delivered in an interdisciplinary manner?
- 3. How do pupils perceive the message of a multimodal text before and after the delivery of an interdisciplinary module?

Sample and participants

We used a convenience sample, as our survey was conducted among fifth graders in a primary school with which we frequently collaborate on prospective teachers' training. The survey included all fifth graders (n=21) but not all were present during all units due to occasional legitimate absences. The class include 13 boys and eight girls, of which two were gifted pupils, three pupils were of the Roma nationality, and two were special needs pupils. One pupil suffered from severe scotopic sensitivity syndrome and needed some adjustments to the working materials; his handouts were printed on green paper, which best suited his condition.

The survey included a generalist teacher with 11 years of experience, who delivered the content related to Slovenian classes, and a faculty researcher with 17 years of experience, who delivered the content related to art education classes. Both teachers were in class at the same time, complementing each other's work.

Instruments

The interdisciplinary module (*Getting to know the picture book*) is an attempt at constructing a model for an interdisciplinary approach to picture book discussion, which incorporates gradual terminology acquisition (cover, inside cover, endpaper, text, illustration, illustrator), text reading, active observation of the illustrations, multimodal analysis (identifying the meanings of both communication codes), and producing a multimodal text.

Before and after the delivery of the interdisciplinary module (*Getting to know the picture book*), we tested the pupils' ability to comprehend the message in a multimodal ensemble. The pupils were shown the cover of *Slovenian Fairy Tales (and One German) in Comics* by Matjaž Schmidt and were asked to identify the message it conveyed. They had ten minutes to observe the cover and write down their answers. Before and after each learning unit, the pupils were given a questionnaire, the first testing their prior knowledge and the second

examining their response to the learning unit delivered. The answers provided were transcribed, and the data were grouped into categories (Mesec, 1998).

Data acquisition also included participant observation. After each unit, the teachers delivering the lessons evaluated the learning unit completed in view of the goals set and the pupils' responses to the activities performed.

Results

Delivery of the interdisciplinary module entitled *Getting to* know the picture book

The first unit of the interdisciplinary module

The first unit of the module comprised three lessons. Regarding the Slovenian language, the pupils developed their reception skills, explored sensory imagining of literary characters and space, and identified the use of non-literary elements in the text, trying to relate these to the personalities and other traits of the literary characters. They further collected the information regarding the course of events and the information needed to wrap up the development of events not included in the text. Regarding art education, the pupils learned some terms related to two-dimensional design (colour tone, familiar colours, contrast colours), and produced a collage that helped them develop their understanding of the spatial arrangement of various shapes on a surface.

The pupils were initially given a short questionnaire with a series of openended questions to test their knowledge of the term »picture book«. The questionnaire was completed by 18 pupils. We discovered that the majority of pupils associated picture books with pictures. Also, we concluded that over half of the pupils were unable to name the last picture book they had read. What attracts the pupils most in a picture book is the abundance of pictures and the scarcity of text.

The pupils were first introduced to the Slovenian translation of the picture book by Mélanie Watt, entitled *Vilibald* (Chester, 2014). They were initially motivated by being instructed to identify the author of the picture book merely by observing the book cover. The picture book is entirely designed as a dialogue between the author and her cat, who keeps correcting her text and illustrations with a red pen. After reading the picture book, the pupils were encouraged to discuss the illustrations, focusing on two different artistic expressions (Mélanie's paintings and Vilibald's drawings). Using a worksheet provided, they described the literary characters (Mélanie, Vilibald, mouse, dog), distinguishing between the information they derived from the text and that which was provided by the illustrations.

Mélanie Watt is simultaneously telling a story and illustrating it in the picture book; she appears in a photograph and a simple drawing (drawn by her cat Vilibald). When asked about what they learned about this particular character from the text and from the illustrations, the pupils provided various answers, which are listed in Table 1 below.

Table 1 Answers to the question: What did you learn about Mélanie Watt based on the text and what based on the illustrations?

Answers to the question: What did you learn about Mélanie Watt based on the text and what based on the illustrations?	Based on the text	Based on the illustrations
	She is angry with Vilibald (4 pupils)	Angry or very angry (5 pupils)
	She is telling a story (3 pupils)	No answer (4 pupils)
	She wanted to write her own story (2 pupils)	She is happy because she is smiling in the picture (4 pupils)
	She is kind (2 pupils)	Her drawings are funny (1 pupil)
	No answer; the answer does not refer to this character (2 pupils)	She is vindictive (1 pupil)
	She likes writing books and drawing (1 pupil)	She has eyebrows on the drawing made by Vilibald (1 pupil)
	She made fun of herself (1 pupil)	Her hair is dark (1 pupil)
	She is angry and happy (1 pupil)	
	She is a writer (1 pupil)	

The teachers showed the pupils several other picture-book covers and introduced them – by way of demonstration – to the art technique they were to use later, while simultaneously reviewing relevant art terms. The pupils were instructed to create a cover for their own picture book (Figure 1). Once the creative process was completed, their work was evaluated based on previously agreed criteria (different types of lines, familiar and contrasting colours, combining letters and images, composition).

Figure 1 Designing picture book covers



Participant observation showed that the pupils were somewhat reserved, not being used to having two teachers in class simultaneously, but within minutes, they relaxed and started to participate more actively. It should be noted that the group was rather heterogeneous with regard to their prior knowledge. The teachers spent quite some time encouraging the pupils who were less willing to cooperate, which was most evident during questioning when the same set of pupils kept volunteering to answer the questions posed. The worksheet that was provided to help the pupils describe the literary characters proved to be a very positive aid, as they were able to work individually while assisted and encouraged – as much as was needed – by the teachers.

After the first learning unit, the pupils were given another short questionnaire. There were 18 respondents. We can conclude that the majority of the pupils liked the activities and would not change them.

The second unit of the interdisciplinary module

The second unit of the module comprised four lessons. As regards the Slovenian language, the pupils identified non-verbal messages incorporated in the text (pictograms, images, etc.), became aware of the poem's sonority (relating it to the images that constitute textual reality), perceived the rhyme as a sound device, observed the relations between the rhymed words in terms of their meaning, perceived the visual imagery of the poem, understanding the relationship between the visual aspect of the text and its message, and observed the structure of the poem (i.e., the verse and the stanza first, followed by the length of the verse, and the number and the length of the stanzas). As regards art education, the pupils learned (by observing the artworks (i.e. the illustrations)) the visual art terms related to two-dimensional design (symmetry, asymmetry, familiar colours). The pupils' assignment was to use mixed media (combining collage and pencil drawing), thus developing their sense of arranging various shapes on a flat surface.

First, the pupils were presented with a questionnaire composed of three open-ended questions (What information is normally included in a picture book cover? Can you remember what you saw on the cover of the picture book Vilibald? What information is normally included in a picture book cover?). Although there were 18 respondents, we excluded two pupils who were absent from the previous learning unit, so we only analysed the responses of 16 pupils. The pupils listed the author, the title, and the illustration as the most vital information on the book cover, which means that, in their view, the illustration was equally important compared to other elements of the book cover. The ability to derive information from all communication codes equally begins when a person understands all communication codes and treats them as equal.

In the second unit, the pupils were introduced to the picture book *Zdrav*ljica written by France Prešeren and illustrated by Damijan Stepančič (2003). While reading the poem, the pupils observed the illustration (two pupils shared one copy of the picture book). In the discussion that followed, the pupils were encouraged to inspect and describe the illustrations and discuss the arrangement of illustrated figures on each double-sided illustration (asymmetrical composition). They were then given a worksheet and were asked to fill in the gaps with the number of stanzas, verses, and the names of famous people from Slovenian history. They also had to find and write down the rhymes and associated historical characters from the illustrations. After reviewing the worksheets with the teacher, they realised that each double-sided illustration contained a different number of illustrated historical people. Their next task was to write their own verses and form stanzas. The teacher encouraged them to play with the shape of their poem like France Prešeren had done (the verses created the shape of a chalice). The book covers that they had produced in their previous lesson were also distributed to the pupils, which served as a prompt for writing verse. Once they were done with their verses, they discussed with the teacher whether they could illustrate them. The teacher demonstrated a mixed media technique (which combined gluing different pieces of paper to a surface (collage) and drawing with a soft pencil) and explained the term »harmonic colours«. Next, the pupils were instructed to illustrate their verses, combining various materials and techniques, paying attention to familiar colours, expression through lines, composition, technical execution, and originality (Figure 2a, Figure 2b).

Figure 2a
Illustrating poems – work in progress



Figure 2b A finished product



Participant observation revealed that the assignment posed a huge challenge for the pupils, particularly due to the lessons' interdisciplinary nature. The pupils dealt with the problem over a longer period and from the point of view of two school subjects. They spent quite some time pondering on what to write.

Having their visual art product (the book cover) from the previous lesson in front of them proved very positive, as it served as an encouragement. Every one of the pupils came up with an idea. The covers also helped the teachers, as they used them to encourage the pupils by directing their attention to their artworks.

After the second learning unit, we examined the pupils' responses by means of a questionnaire, which was completed by 19 pupils (one pupil was late for class and therefore did not participate in the first questionnaire). We discovered that the majority of pupils liked artmaking and verse writing.

The third unit of the interdisciplinary module

The third unit of the interdisciplinary module comprised three lessons. With respect to the Slovenian language, the pupils identified (with the help of the teacher) the rhythm of the poem, distinguished fast and slow rhythm, perceived the rhyme as a sound device, observed the structure of the text (first with regard to the verse and the stanza), considered the emotional and imaginational richness of the poetic language, and constructed unusual phrases, based on which they composed a short text, in this case, a poem. As regards art education, the pupils learned, through artwork (illustration) observation, new terms related to two-dimensional design (rhythm, colour relations), combined various art forms (graphics, drawing), and developed their sense of arranging different shapes on a flat surface.

Initially, the pupils were given a short questionnaire. It was distributed to 21 pupils, but we analysed only 19 questionnaires, as two pupils who were not present at the last session were excluded from the survey. The first question was designed to verify whether the pupils recalled what they had observed on the cover of *Zdravljica*. The next question was designed to discover whether the pupils recalled any famous people from the picture book discussed. The last question was aimed at discovering what the pupils remembered best from the picture book *Zdravljica*. In terms of the complexity of the text and the illustrations, the picture book *Zdravljica* was considerably more demanding compared to the picture book *Vilibald*. The pupils' responses revealed that they were mostly attracted to rich illustrations, which they described as interesting and weird, recalling several specific motifs.

In the third learning unit, the pupils were instructed to examine endpapers in various picture books and classify the books based on what type of endpapers they featured (coloured or illustrated, identical or different front and back endpapers). By examining various illustrated endpapers, the pupils learned the notion of rhythm in composition, which was followed by a discussion of the rhythm in poems. The pupils read the poem *Velike in male noge* (»Big and little feet«) from the collection *Klepetosnedke* (1996) by Bina Štampe-Žmavc and had to find the basic poetic elements (rhyme, stanzas, and verses). Learning that rhythm can be found in poems, artworks, nature, and so on, they were encouraged to suggest the easiest way to display rhythm in an artwork. The technique of seal printing and drawing on toned paper using a felt-tip pen was then demonstrated to them (thereby revising the terms, such as "seal printing", "rhythm", "drawing", and "line types") and they were instructed to design endpapers for their picture books, focussing on rhythm, technical execution, combining stamps and drawing, and originality (Figure 3). They had to source the idea for the recurring shape on the endpaper from the product they made in the previous session (the pupils who missed the previous lesson had to invent a shape).

Figure 3 Endpaper design



Participant observation revealed that the pupils enjoyed taking part and mostly had no problems making the endpapers. It was obvious that they had not known the term »endpaper« before and had hardly paid any attention to endpapers in the books they had read. When asked to classify various picture books based on the type of the endpaper used, they showed great interest in the illustrated endpapers, particularly when the front endpaper was different from the back one. The pupils had no difficulty applying the term »rhythm« to either visual arts or poetry. It needs to be underscored that in the creative process the pupils derived much inspiration from their previous products, which again proved extremely positive.

After the completion of this learning unit, the pupils were given a questionnaire. It was answered by 21 pupils. We discovered that the majority of pupils generally liked the activities, with seal printing being their favourite.

The fourth unit of the interdisciplinary module

The fourth unit of the interdisciplinary module comprised four lessons. As regards the Slovenian language, the pupils had to identify (with the help of the teacher) the theme of the text and its message (tradition and heritage) and write their own texts, dividing them into paragraphs, observing orthographic rules, paying attention to the legibility and aesthetics of their handwriting, and deciding on the use of either handwritten or printed letters. Working with artworks, the pupils learned the art terms related to two-dimensional design (»familiar colours«, »warm and cold colours«), combined various artforms (by producing a coloured drawing), developed their sense of arranging various shapes on a surface, and gained experience in colour mixing techniques.

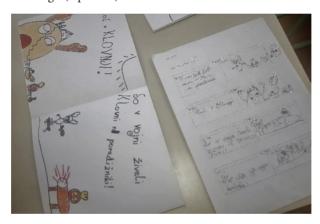
Prior to the learning unit, the pupils were given a questionnaire with open-ended questions, which was answered by 19 pupils In the first question, they were asked to name the components of a picture book cover by circling the right answer among a set of possibilities: picture book title, poem, author of the text, author of the illustrations, illustration, story, and publishing house.

The next question was designed to determine what they thought was more important in a picture book. The pupils were given three possibilities: (a) the illustrations are more important than the text, (b) the illustrations and the text are equally important, and (c) the text is more important than the illustrations. In the last question, the pupils had to match word pairs (illustration—lines, colours, and shapes; text—words, sentences, various fonts; cover—title, author, illustration; and endpapers—can be only coloured or illustrated). Judging by the answers, the pupils recognised the vital elements, most of which are included in the picture book cover, as well as their visual and content-related characteristics (in a pair matching task). An interesting observation was that nearly half of the pupils thought that the illustrations were more important than the text.

At the beginning of the fourth learning unit, the pupils were asked to recall the first picture book from their childhood. They were then shown various leporellos, which are folded picture books made of cardboard, and introduced to a picture book by Andreja Peklar, Fant z rdečo kapico ("The Boy with a Little Red Hood", 2006), which is also a leporello but is not only intended for younger children. While reading the book, the pupils attempted to discover where the author found the inspiration for the story. They were then introduced to the Vače Situla and instructed to find a correlation between the historical artefact and the picture book in terms of the motifs and the forms used. After that, the pupils were given a worksheet entitled A draft for my picture book and had to write five sentences (one covering the introduction, three outlining the body of the text, and one for the ending) and draft an illustration to go with the text. We used an example from

the picture book to explain the relationship between the text and the illustration in terms of the content (a piece of information that is included both in the text and the illustration vs a piece of information that appears in the illustration but is not mentioned in the text). After the pupils finished the draft of their picture book, we discussed how they could produce an actual picture book. The teacher demonstrated how to draw with a black felt-tip pen and fill the spaces created with colours (using crayons). During the demonstration of various expressive possibilities, the pupils and the teacher discussed warm/cold colours and familiar colours. The pupils produced their own leporello, paying attention to line as the basic tool for artists, along with warm and cold colours, familiar colours, colour mixing, composition, and originality (Figure 4).

Figure 4Picture book design (leporello)



Participant observation showed that the pupils approached the set tasks with considerable confidence and certainty during the last session. In earlier sessions, it was noticeable that they found dealing with one problem from two different perspectives rather demanding over a long period. In the last session, however, the pupils seemed very relaxed and hardly uncertain in the assignments they were given (writing, creating a draft of a picture book, and the final making of a picture book). In the design process, the pupils focussed on both texts and images: specifically, the messages conveyed through the words and illustrations. Participant observation revealed that they were very successful and understood that certain pieces of information could appear twice, while others only appeared either in the text or in the illustrations. As regards the format, half of the pupils designed their picture books so that the text and the

illustrations appeared as two separate elements (Figures 5a and 5b), while the other half of the pupils merged the two to create a whole (Figures 6a and 6b).

Figures 5a and 5b

A. K., Neuničljiva ladja (Indestructible ship)





Figures 6a and 6b:

N. B., Jež se izgubi v svojem gozdu (Hedgehog gets lost in its forest)





After the fourth learning unit, the pupils were again given a questionnaire designed to examine their opinions of the entire interdisciplinary module. We analysed the questionnaires of 16 pupils who were present during all four units. Everyone agreed that they liked working with picture books.

Furthermore, we asked the pupils how much they liked individual activities, offering several possible answers: I did not like it, I somewhat liked it, I liked it, and I liked it a lot (Table 2).

Table 2 How did you like individual activities?

Activities/Answers	I did not like it		I some- what liked it		I liked it		I liked it a lot		Total	
	f	f%	f	f%	f	f%	f	f%	f	f%
Reading picture books	1	6.3	1	6.3	3	18.7	11	68.7	16	100
Designing one's own picture book cover (collage)	0	.0	0	.0	3	18.7	13	81.3	16	100
Writing poems	1	6.3	1	6.3	2	12.5	12	75.0	16	100
Illustrating one's own poem (collage, pencil drawing, making rubbings', etc.)	0	.0	3	18.7	1	6.3	12	75.0	16	100
Endpaper designing (potato stamping and felt-tip pen drawing)	2	12.5	2	12.5	3	18.7	9	56.3	16	100
Making one's own picture book (writing the story and making the illustrations)	0	.0	0	.0	3	18.7	13	81.3	16	100

The last question was open-ended and allowed the pupils to share anything else related to their work or leave a message for the teachers. Their responses were grouped into categories. The first group comprised eight pupils who liked the work and had fun. The second group comprised five pupils who expressed their hopes that something similar would be repeated. One pupil wished that the reading and the explanations would not have taken as much time as they had, one disliked the questionnaires, and one did not write anything.

The results of testing the effects of our case study

The survey involved 18 out of 21 pupils and examined their ability to decode the message of a multimodal ensemble, which was conducted prior to the interdisciplinary module. The same number of pupils participated in the survey after the completion of the interdisciplinary module. We analysed the

responses of the pupils that were present for both surveys (n = 16).

Decoding the message from illustrations prior to the interdisciplinary module delivery

The responses clearly showed that 12 pupils wrote down what they saw in the central illustration on the cover.

Five of the 12 pupils described only the central illustration. Their responses can be divided into those that provided detailed descriptions (three pupils) and those whose descriptions were rather brief (two pupils). Four pupils provided other details along with a description of the central illustration, three of them mentioning the motifs located on the far-left side of the cover page.

The responses of three pupils, however, included their interpretation of the central illustration.

Decoding the message from the text prior to the interdisciplinary module delivery

Only five pupils used the information from the text in their answers. Four pupils mentioned the word »comics«. Three pupils mentioned »Slovenian fairy tales and a German one« (this was obvious from the title). Two pupils mentioned the title; one only as a term, with the other citing a part of the title (»Slovenian Fairy Tales in Comics«). Two pupils mentioned the publishing house, and two recalled the reference to the author.

Decoding the message from illustrations after the interdisciplinary module delivery

After the delivery of the interdisciplinary module, 10 pupils described the illustration, of which five mentioned the motifs both in the central illustration and the side illustrations. Two pupils shared their interpretations of the central image.

Three pupils mentioned the illustrations, but either did not describe them or just made a brief reference to the story they recognised from the illustration.

Decoding the message from the text after interdisciplinary module delivery

Ten pupils mentioned the publishing house and seven pupils mentioned the title (either mentioning the term or writing down the actual title). Six pupils noted that the book included Slovenian fairy tales, while two of them mentioned that one fairy tale was German. The author was mentioned (either

referring to the term author/illustrator or to the actual names) by six pupils. The same number of pupils mentioned the word comics.

Survey findings

The objective of our survey was to discover pupils' viewpoints regarding an interdisciplinary module. Based on the analysis of their responses and participant observation, we established that the pupils were generally enthusiastic about this particular learning method with and about picture books, even if it was entirely new to them. They had little prior knowledge, and the majority thought a picture book was a book with many pictures. When asked about the most recent picture book they had read, over half of the pupils provided no answer. We noticed that the pupils were predictably more reserved at the beginning of the module but became more active and motivated with each successive session. In the beginning, focussing so much time (i.e., three lessons) on a single problem through different tasks was rather unusual to them. It turned out that the tasks were adequately demanding and interesting for most pupils. Some issues appeared with the pupils who otherwise have difficulties composing text. For the pupils that came from a different speaking environment, Slovenian was not their mother language, while two of the pupils had speech and hearing impairments. Due to concentration issues, some pupils required additional guidance and encouragement to finish their writing and/or art assignments. The pupils were given a questionnaire before each interdisciplinary module. Their answers showed that individual picture books discussed were not retained their minds (specific illustrations, motifs). At the same time, it was made clear that they still had significant issues recognising the components of a multimodal ensemble (e.g., a picture book cover) even after three units had been completed. At the end of the module, the pupils exhibited positive attitudes towards an interdisciplinary approach to picture book discussion.

We were also interested in how the pupils felt about specific activities within the interdisciplinary module. The results we obtained through the questionnaires showed that the pupils generally liked various activities. In the first learning unit, they were fond of reading the picture book and designing their own picture book cover. In the second learning unit, the pupils generally preferred artmaking and writing activities, with their suggestions for improvement referring exclusively to their work. In the third learning unit, the majority found seal printing to be their favourite activity. The individual activities that the pupils found the most enjoyable were designing book covers and making their picture books. Based on the results derived from the questionnaire and

participant observation, the pupils most frequently favoured artmaking and liked writing verses (poems), whereas they never mentioned working with worksheets. The results are hardly surprising, given that the pupils were allowed creative freedom in artmaking, the design of their picture books, and the writing of poems while being encouraged to find their own solutions. Worksheets, in contrast, focussed on detailed observation, writing down comments, and decoding messages from the text.

We observed a switch in the approach of the pupils to comprehending the messages contained in a multimodal ensemble before and after the delivery of the interdisciplinary module. After the module, the pupils could better decode the message from the text. Before the delivery of the interdisciplinary module, the responses to the questions regarding the messages conveyed by the book cover included mostly the motifs that the pupils saw in the central image of the cover. As regards the messages conveyed by the text on the picture book cover, they were summed up in a few words mentioned by only five out of 16 respondents. After the delivery of the interdisciplinary module, the approach to decoding illustrations remained more or less the same, though the descriptions of the illustrations became somewhat detailed and longer. Decoding of the messages from the text, however, changed to a greater extent, as 12 out of 16 respondents included the information contained in the text in the picture book cover (author, title, publishing house, title summary, comics, etc.). We believe that this helped them understand the overall message of the multimodal ensemble much better. Our experience with adult readers has shown that while adults generally perceive book images passively, focussing more on the text, the situation with the pupils in our case was just the opposite. Prior to the delivery of our interdisciplinary module, the pupils did not pay particular attention to the text on the book cover and tried to express the message by listing images. After the interdisciplinary module, however, they also paid more attention to the text.

Conclusion

In our research, we addressed the literary and visual part of the picture book equally. In the field of picture book research, it can be observed that the focus is mainly on the text and on the conversation about the illustrations, but without the inclusion of visual elements of art and design (Baird et al., 2016). However, picture books are an important resource for developing visual literacy, multimodal literacy, visual aesthetic understanding and visual aesthetic development (Bukovec & Potočnik, 2019; Pantaleo, 2012; Serafini, 2014; Sipe, 2008). Doonan (1993, p. 8) notes, at some point in a child's development, a

spontaneous response to a picture book is not enough and »knowledge is needed«. Furthermore, when pupils »have been told and shown how lines and shapes and colours are able to refer to ideas and feelings, they can explore the dimension beyond what is literally represented« (Doonan, 1993, p. 8).

Throughout the design, delivery, and evaluation of the interdisciplinary module, we focussed on the advantages and the disadvantages of an interdisciplinary model of discussing picture books as multimodal texts. The advantage revealed itself through a holistic and interdisciplinary approach to the picture book, which allowed the pupils to deal with a single problem for a longer period, focussing on two different aspects of it. Pupils need enough time to explore the illustrations, as Serafini (2011, p. 343) notes, "cognitive strategies that focus on comprehending written texts will not be sufficient to help readers comprehend the various modes of representation incorporated in multimodal texts."

However, limiting ourselves to only two fields proved to be a disadvantage as regards interdisciplinarity, as we realised rather early into the planning process that we could have included several other subjects (social sciences – history, music – poem/song, natural sciences – dyes, mathematics – measurement units, etc.). The advantage of our delivery was the generalist teacher and the art teacher collaborating on lesson planning and delivery. In practice, such an interdisciplinary lesson in the fifth grade would be delivered by a generalist teacher alone, on condition that they had a sufficient level of visual and multimodal literacy. Our multimodal text discussion model might become a problem in higher grades of primary school, as this type of class would have to be delivered simultaneously by two teachers of different profiles (e.g., a teacher of Slovenian and an art teacher). Potočnik and Devetak note (2018, p. 126): "Works of fine art could be a great tool for interdisciplinary approaches [...] so cooperation between teachers is necessary."

It should be underscored that the results of our survey should by no means be generalised. However, the findings will help us with further study of the field of developing multimodal literacy by means of cross-curricular teaching.

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Teachers' Views on the Use of Photography in Teaching Arts in Croatian Primary Schools

NINA LICIII.1

Contemporary art education relies on the use of diverse methods, approaches, art techniques, and technologies. Although photography is part of daily visual communication and gallery exhibitions, there is no structured approach to photography as a medium for learning the arts in Croatian primary schools. The objectives of the quantitative study were to determine art teachers' views on (1) their knowledge about photography, (2) their abilities in using photography in art teaching, (3) obstacles to using photography in art teaching, and (4) the importance of photography in students' visual culture. Regarding the fourth objective, we wanted to examine possible differences in terms of the teachers' gender, age, and length of service. A survey was conducted with 112 teachers who teach arts in 5th to 8th grades in 17 Croatian counties. The results of the descriptive statistics were supplemented with a qualitative analysis of the teachers' responses in the questionnaire. The results show that the teachers perceive their knowledge about photography obtained by formal education as average, but they assess their abilities to apply photography in their lessons as slightly better. The main problem, in their view, is a low number of art lessons in the Croatian curriculum. The teachers generally agree that photography is very important in a student's visual culture, regardless of the teachers' gender, age. and years of service. These findings indicate the need to place greater emphasis on photography as an artistic medium in primary school, as it may generate new visual knowledge and artistic skills.

Keywords: art education, art teachers, photography, visual communication

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Pogledi učiteljev na uporabo fotografije pri poučevanju likovne vzgoje v hrvaških osnovnih šolah

NINA LICUL

Sodobna likovna vzgoja temelji na uporabi različnih metod, pristopov, likovnih tehnik in tehnologij. Čeprav je fotografija del vsakodnevne vizualne komunikacije in razstav v galerijah, v hrvaških osnovnih šolah ni strukturiranega pristopa do fotografije kot medija za poučevanje o likovni umetnosti. Cilji kvantitativne raziskave so se nanašali na poglede učiteljev likovne vzgoje glede 1) njihovega znanja o fotografiji; 2) sposobnosti uporabe fotografije pri poučevanju; 3) ovir pri uporabi fotografije pri poučevanju; 4) pomena fotografije pri učencih. Izvedena je bila raziskava med 112 učitelji, ki poučujejo likovno vzgojo od 5. do 8. razreda v 17 hrvaških okrajih. Izsledki analize opisne statistike so bili dopolnjeni s kvalitativno analizo odgovorov učiteljev v vprašalniku. Rezultati kažejo, da učitelji svoje znanje o fotografiji, pridobljeno s formalnim izobraževanjem, dojemajo kot povprečje, vendar sposobnosti uporabe fotografije pri pouku ocenjujejo kot nekoliko boljše. Po njihovem mnenju je glavni problem majhno število učnih ur likovne vzgoje v hrvaškem učnem načrtu. Učitelji se na splošno strinjajo, da je fotografija zelo pomembna v učenčevem dojemanju vizualnega sveta, ne glede na spol, starost in delovno dobo. Te ugotovitve kažejo na potrebo po večjem poudarku fotografije kot umetniškega medija v osnovni šoli, saj lahko ta ustvari novo vizualno znanje in likovne veščine.

Ključne besede: likovna vzgoja, likovni pedagogi, fotografija, vizualna komunikacija

Introduction

It is difficult to imagine life without photography. Photography permeates all aspects of human activity – it is a communication, documentary, scientific, mimetic (Sontag, 2005), aesthetic, creative, and artistic medium. Photographers influence the consciousness of individuals (Bedi & Varga, 2018), provide evidence of time and space (Peraica, 2010), and shape our ideas (Freund, 1980; Share, 2015).

Technological development has enabled artists to use different media to express their ideas. At the same time, art education must be in constant harmony with the development of art (Tomšič Čerkez, 2014). However, Gadsden (2008) justifiably wonders whether certain forms of art or fields of art are considered less valuable than others and therefore omitted from education programmes. Based on the guidelines for arts education (UNESCO, 2006), photography, with its specific processes and results, is among the areas of art with which students have to be familiarised. Because of its special characteristics, photography allows students to develop specific knowledge and skills that cannot be developed in other fields of art (Eisner, 2002), which themselves are characterised by specific artistic processes and transfers of particular knowledge and skills (Linardić, 2015). Moreover, in the context of photography, Eisner (2002) claims that in artistic expression we tend to search for elements in our environment that we can reproduce. For example, if we use a camera with black-and-white film, we search for shadows, exploring the relationship between light and dark; if we use colour film, we normally search for colours in our environment.

The aims of art education are focused on the holistic development of the child, which involves the development of three important categories of behaviour, based on the so-called Bloom's taxonomy of educational objectives: cognitive, affective, and psychomotoric. The psychomotoric domain in art education refers to the reproduction of knowledge in artistic expression, meaning the creation of practical solutions in art-related tasks (Tacol, 1999). In the process of taking photographs, it is necessary to learn to react to visual inputs in our environment and to possess the relevant knowledge that helps our sensory system complete the activity with a successful photograph (Rand & Zakia, 2006). The relevant knowledge about photographic procedures can also be used in other areas of art: video, film, animation, graphic design, and web design.

Besides the possibility of psychomotor development, the advantages of photography are shown in the cognitive processes of learning. Photography is a means of the author's visual communication with the environment, and it is unique for its instantaneous and simple conveyance of visual messages. A

possible way of using the communicative functions of photography in classes is the application of »photolanguage«, which involves understanding and verbalisation of different contents, as well as one's own perceptions of photography, in smaller groups, which facilitates verbal expression (Cooney & Burton, 1986, as cited in Bessell et al., 2007; Ledinšćak et al., 2017). In this aspect, photography is a teaching method, a prompt for critical thinking and creative associations. Cognitive processes in learning and teaching photography are the result of the understanding of artistic and visual concepts and the creation of visual metaphors and allegories (Beck, 2009), which are accomplished by selecting motifs, frames, and visual language.

The affective domain in teaching photography includes aesthetics, experience, and the interpretation and evaluation of photographs (Rand & Zakia, 2006). Research conducted by Sharples et al. (2003), which involved 180 children of different ages, indicated the advantages of photography as a medium that enables the development of interpersonal activities. The results of this research indicated that from the perspective of children photographs did not represent only their views of the world around them but also signified an active relationship with their parents, peers, and other contents. Therefore, photography is an adequate means of forming an active and creative relationship with the environment, which is one of the basic objectives of art education.

A form of teaching that includes photography as a medium of artistic expression is affected by different factors: the pedagogic, didactic, and methodological competences of teachers, their personal views of the importance of photography, which affect the level of motivation for including photography in the teaching programme in the first place, and physical and organisational conditions for implementing such programmes. Triacca argues that the use of photographs in teaching art is »a necessity, an opportunity and a challenge for the modern teacher« (2017, p. 1). A teacher can use photography in art classes in many ways. The common practice of art teachers is the use of photography as a printed and digital source of knowledge in teaching the language of art. In this case, photography acts as a mediator in the reproduction of the original reality or an original work of art when there is no possibility of introducing students to the authentic or immediate environment or when there is no opportunity for observing the original work of art. Mobile phones with built-in digital cameras, which are widely available today, open up a range of possibilities of using photography as a medium of artistic expression. In this case, a photograph is an artistic medium, and the camera is a modern teaching tool that replaces a pencil, brush, or clay knife.

In comparison with traditional tools, the use of cameras requires a higher level of knowledge in technical characteristics, but the time needed for

creating a final work of art is shorter. Therefore, the teacher should have specific photographic competences that provide for a high quality of such classes. Furthermore, the teacher has to be able to convey such specific knowledge to the students and provide the students with the opportunity to gain knowledge through experience (Kolb et al., 2001), meaning through using the method of trial and error.

The fact that photographs are not just something found in our textbooks and digital presentations but also permeate social networks, posters, and advertisements, provides considerable evidence about the importance of photography in education. Nowadays, children use mobile phones with built-in cameras at an early age. Research conducted by Bedi and Varga (2018) demonstrated that high school students recognise the importance of photography in contemporary media. However, there is still not enough structured knowledge about photography-based art teaching in primary schools that would be harmonised with the curricula. Croatia has recently started introducing a new national curriculum, but until the process is fully completed, it is carried out in parallel to the current curriculum. In the old programme for art classes in primary school, specific terms related to photography appear in one teaching unit in the 2nd grade (photography, photographer), and in two in 8th grade (photomontage; digital image and other terms within the area of film, that can also refer to photography) (Ministry of Science, Education and Sports, 2006). In the new curriculum, a camera and a smartphone also appear in the 2nd grade as content for achieving outcomes, but also in the 3rd - 8th grades, »the student uses the technical and expressive possibilities of new media technologies« (Ministry of Science and Education, 2019). Newbury (1996) says that photography is a marginalised part of primary and secondary education and that it is mostly treated as part of free time or a subject in higher education. Despite that, photography can give a unique contribution to general education, Newbury argues. Judging from the structure of photography teaching present in current art teaching programmes, the situation is slightly better, but methodically still insufficiently shaped. In higher education, teachers develop their photographic competences in different study programmes, but the specificities of holding art classes that include photography are related to the methodology of teaching photography. Conditions of using specific photographic procedures in teaching also differ. Therefore, it is particularly important to determine if there are any prerequisites for the implementation of high-quality, structured photography teaching in primary school art education.

This research aimed to assess the opinions of primary school art teachers about the use of photography as a medium of expression in art lessons. We

posed specific research questions: the first three refer to the teachers' opinions about the conditions of using photography in classes, and the fourth question refers to their opinion about the importance of photography in classes:

- 1. How do teachers perceive the level of their knowledge and competences in photography obtained in formal education? Have they received any informal education in this area, if yes, in what forms?
- 2. How do teachers perceive their abilities in holding art classes that include photography?
- 3. In art teachers' opinion, what are the obstacles to using photography in art classes?
- 4. What is the art teachers' opinion about the importance of photography in art education and do demographic characteristics (age, sex, and years of service) affect their opinion?

Method

Participants

The research included 112 art teachers who teach fifth- to eighth-grade students in primary schools in 17 of 22 counties in the Republic of Croatia, of which 87 (77.7%) were women, and 25 (22.3%) were men. In the 2018/2019 academic year, when this research was conducted, there were 2029 primary schools in Croatia (Croatian Bureau of Statistics, 2019). Because art lessons in the Croatian primary schools are reduced to only one school lesson a week, art teachers usually work at two or three schools, so the number of art teachers is significantly lower than 2029. Therefore, the research encompassed 5.52% of the primary schools and at least 5.52% of art teachers in Croatia (the exact number is unknown). The lowest number of participants was in the group of teachers aged 30 and younger, while the other three groups were relatively equally distributed: 33% of the participants were aged 31 to 40, 27.7% of the participants were aged 41 to 50 and 25% of the participants were older than 50. The participants' years of service were also relatively equally distributed: 23.2% of the participants had up to five years of service, 22.3% had five to ten years of service. The largest share of the participants, i.e., 31.3%, were in the group with 10 to 20 years of service, while 12.2% of the participants had more than 20 years of service.

Instrument

The questions that we posed for this research formed a larger part of the questionnaire for the assessment of art teachers' opinions about the use of photography in primary school art lessons. The questionnaire was sent to art teachers in an electronic form, through the expert committees of all the examined counties. It was also handed out in printed form at the sessions of the expert committees in Primorje-Gorski Kotar County, Zadar County and Istria County.

The teachers assessed their level of photographic knowledge and competences gained in formal education on a five-point Likert scale (1 – insufficient to 5 – excellent). Due to filter questions, the participants could either skip or respond to the question on the ways of learning about photography outside formal education. The teachers assessed their own ability to hold classes that include photography on a five-point Likert scale (1 – insufficient to 5 – excellent), in 15 specific items that referred to all stages of a school lesson: motivational part of the lesson, the transfer of knowledge, correlation, technique demonstration, introduction of assignment, encouragement of students to do practical work, evaluation and grading. To determine the opinions about obstacles to using photography in art lessons, teachers chose from among 13 listed obstacles, but they could also add a response of their own. The teachers also assessed the importance of photography in art lessons by responding to 17 statements on a five-point Likert scale (1 – I fully disagree to 5 – I fully agree). Finally, the teachers could explain their opinions about the use of photography in art teaching by responding to an open-ended question.

The content validity of the questionnaire was reviewed by three research experts. The objectivity was ensured by using clear and unambiguous instructions for filling out the questionnaire. The reliability of the scales was tested using Cronbach α , whose values range from .68 to .97 and offer a satisfactory level of the instrument reliability.

Data analysis

The data were processed using IBM SPSS Statistics 20 (IBM Corporation, 2016). The level of statistical significance was set at p < .05. Quantitative analysis of data was supplemented with a qualitative analysis of responses to the openended question about the use of photography in primary school art classes.

Descriptive data are shown in the form of frequencies (f), percentages (f (%)), arithmetic means (M), and standard deviations (SD). To examine the differences among the normally distributed measures, we used a t-test for independent variables (difference in the opinions of men and women about the

importance of photography in art teaching) or a one-way analysis of variance (differences in the opinion of teachers in terms of age and years of service). In the variables expressed in categories, we used nonparametric tests: the χ^2 - test, the Mann-Whitney U-test, and the Kruskal-Wallis test. In statistically significant differences, the effect size was expressed using the Cramer's V Coefficient. The data obtained in the responses to the open-ended question were analysed using the open-coding approach (Vogrinc, 2008).

Results

1. Teachers' self-assessment of knowledge in photography and ways of learning about photography outside formal education

The examined teachers assessed their knowledge in photography gained in formal education as good or very good. The participants' responses to all items ranged from 2 (poor) to 5 (excellent). The average result in the scale measuring knowledge in photography gained in formal education was 3.05 (.92) (Table 1).

Table 1
The respondents' self-assessment of photographic knowledge and competencies gained in formal education

N = 112	M (SD)
Knowledge of photographic equipment	2.61 (1.07)
Knowledge of photo-camera parts	2.55 (1.05)
Control of auto modes of the camera	2.93 (1.18)
Control of »manual« settings of the camera	2.68 (1.07)
Photo editing	2.85 (1.24)
Understanding of artistic language in photography	3.53 (1.03)
Knowledge of compositional principles in photography	3.76 (1.15)
The ability to convey »message« by means of photography	3.64 (1.09)
Knowledge of history of photography	2.91 (1.01)
Total	3.05 (.92)

Sixty-seven (59.8%) of the examined teachers learned about photography outside formal education systems. Based on the ways they learned about photography outside their formal education, which are listed in Table 2, we may assume that most of the respondents were learning about photography in informal rather than formal ways.

Table 2
Frequencies of responses about ways of learning photography outside formal education

	/ = 112	f (f%)
I have used a camera on my own		59 (52.7)
I have read literature about photography on my own		54 (48.2)
I have joined a photo club		7 (6.3)
I have finished a course in photography		10 (8.9)
I have been taught by someone who is good at photogr	aphy	28 (25)

2. Teachers' self-assessment of knowledge and skills for holding classes that include photography

Table 3 shows teachers' self-assessment of knowledge and skills for classes that include photography in relation to specific elements of art lessons in primary schools. The average result in the scale measuring knowledge and competences for holding art lessons that involve photography was 3.50 (.79). The responses for all the domains of knowledge and competences ranged from 2 (poor) to 5 (excellent), while most responses ranged from 3 (good) to 4 (very good).

Table 3
Self-assessment of knowledge and skills required for classes that include photography

N = 112	M (SD)
Teaching history of photography	2.86 (1.19)
The ability to correlate photography with contents of other subjects	3.55 (1.00)
The ability to correlate photography with phenomena from students' environment	3.80 (.92)
Motivation of students by using a photo analysis	3.85 (.93)
Demonstration of photographic technique	3.03 (.97)
Teaching about visual language of photography	3.66 (1.01)
Teaching about the principles of composition in photography	3.83 (.95)
The transfer of knowledge about technical possibility of the camera	2.85 (1.05)
Teaching about photo editing	2.92 (1.16)
Announcement of a photographic assignment	3.60 (1.00)
Encouragement of students to be creative in taking photographs	3.85 (.91)
Encouragement of students to create meanings in photography	3.70 (.90)
Encouragement of students to find their own expression in photography	3.73 (.92)
Encouragement of students to express emotional reactions while taking photographs or in contact with a photograph	3.63 (.93)
Evaluation and assessment of photographs	3.72 (.91)
Total	3.50 (.79)

3. Obstacles to holding art lessons that include photography

Of the most frequently reported obstacles to holding art classes that include the use of photography, as much as 92 (82.1%) of the respondents said there was an »insufficient number of art lessons in the curriculum« (Table 4).

Table 4
Frequencies of responses about obstacles to holding art lessons that include photography

	N = 112	f (f%)
Continuo abata alaa	Inadequate classroom size	11 (9.8)
Spatial obstacles	Inadequate classroom layout	16 (14.3)
	Lack of computers	57 (50.9)
Material obstacles	Lack of cameras / mobile phones	65 (58)
	Lack of projectors	26 (23.2)
	No possibility of importing photos into computer	25 (22.3)
Technical obstacles	No possibility of printing photos	69 (61.6)
	Poor lighting in the classroom	23 (20.5)
Functional obstacles	Insufficient knowledge and competence of the teacher	32 (28.6)
	No possibility of holding lessons outside the classroom	24 (21.4)
0	Insufficient number of art lessons in the curriculum	92 (82.1)
Organisational obstacles	Limitations in arts curriculum	55 (49.1)
	Limitations imposed by the school leadership	13 (11.6)

As for other obstacles to holding art classes that include the use of photography, a respondent mentioned a spatial obstacle (we don't have an art workshop with adequate equipment), while another pointed to organisational flaws (there is no literature and experts who would agree on photographic contents that should be taught).

4. Perception of the importance of photography in students' visual culture

Table 5 shows the teachers' opinions on the importance of photography in students' visual culture, based on the statements that were mostly formed in accordance with objectives of art education of the National Curriculum for Primary Schools (Ministry of Science, Education and Sports, 2006) and the Decision on Adopting the Curriculum for Arts in Primary School and the History of Art in the Croatian High Schools (Ministry of Science and Education,

2019). The examined teachers agree that photography is important in students' visual culture.

Table 5
Teachers' opinions about the importance of photography in students' visual culture

N = 112	M (SD)
Photography is one of the most important means of communication today.	4.43 (.68)
Knowledge of photography is important for students' success in education.	3.62 (.89)
Photography is suitable for adoption of moral and educational values.	4.05 (.81)
Understanding of photography is of utmost importance in visual culture of students.	4.15 (.79)
Photography is closer to students than traditional fields of art and techniques (drawing, painting, sculpting, printmaking).	3.87 (.95)
Understanding of visual language in photography is important for the recognition of advertising deceptions (subliminal messages) in a photo.	4.17 (.80)
The ability to use photographic tools is a competence that can be important for further education of students.	3.73 (.83)
The ability to use photographic tools is a competence that can be important for employment.	3.74 (.86)
Photography is a neglected area in primary school education.	4.29 (.74)
Photography encourages an active and creative relationship to the environment.	4.21 (.62)
Photography encourages imagination, to the same extent or even to a larger extent than the traditional areas of art (drawing, painting, sculpting, printmaking).	3.77 (.89)
Photograph taking encourages the development of aesthetic sensitivity.	4.28 (.62)
Photography encourages development of visual perception.	4.41 (.64)
Photography encourages interest and care for cultural and natural heritage.	4.17 (.72)
Photography correlates with other areas of art: painting, sculpture, architecture, applied arts and design, new media.	4.39 (.66)
Photography encourages visual, critical and creative thinking.	4.39 (.63)
Photography facilitates the expression of thoughts, feelings, experiences, opinions and values.	4.49 (.66)
Total	4.13 (.51)

In relation to the presented results, we wanted to examine if sex, age, and years of service affected the teachers' opinions. It turned out that men and women did not significantly differ in the overall result of the questionnaire about the importance of photography in students' visual culture (t = .97; p > .05), neither did they differ in other statements.

The examined teachers did not significantly differ in the overall result of the questionnaire about the importance of photography in students' visual

culture in terms of their age (F(3.107) = 1,19; p > .05). However, we found a statistically significant difference in the responses to this statement: *photography* correlates with other areas of art: painting, sculpture, architecture, applied arts and design, new media ($\chi^2 = 8.28$; p = .040; Cramer's V = .18). Respondents older than 50 agree with the statement to a much lesser degree than their younger colleagues do.

The results also demonstrated that the examined teachers did not statistically differ in the overall result of the questionnaire about the importance of photography in students' visual culture in terms of their years of service (F(3.107) = .74; p > .05), except in the responses to this statement: *understanding of photography is of utmost importance in visual culture of students* ($\chi^2 = 8.25; p = .041$; Cramer's V = .23). The respondents with five to ten years of service agree with the statement to a much higher degree than their colleagues.

The response to the open-ended question *Do you think it would be desirable that students use photography in art lessons at school and why?* was given by 96 (85.7%) respondents. Two (2.1%) of the responses were irrelevant, while 93 (96.9%) of the responses were positive: the respondents said it would be desirable that students use photography in art lessons at school. There were no negative responses, while the remaining one response refers to the impossibility of introducing photography in art lessons (*Until the problem with insufficient number of lessons is resolved, it is not possible to introduce any novelties*).

Since almost all the responses were positive, Table 6 shows eight identified categories that present the advantages of using photography in art lessons.

Table 6
Content categorisation of responses to the question about the advantages of using photography in art lessons

Category	Description	Example
Development of knowledge and skills (26)	Learning visual language, specific terminology and techniques	Easier and more suitable acquisition of key terms from certain topics of teaching. (M, age 41-50, >20 years of service) The use of photography in teaching is needed for several reasons: students learn based on reproductions of artworks, they are introduced to analogue photography and the works of renowned world photographers; by taking photos on their own, students can reflect on artwork elements and composition (F, age 41-50, 10-20 years of service)

Category	Description	Example
Medium characteristics (20)	Closeness, availability, omnipresence, contemporariness, attractiveness, applicability and comprehensibility of photography, its simple and diverse use	It is easy to use thanks to the development of technology; it is close and attractive to students (because it is omnipresent) (F, age 31-40, 5-10 years of service)
Creativity development (13)	Development of imagination, different perspective of the environment, diversity of final work, new experience	I think that students' fear of creating a bad photo is less intense than the fear of doing a bad drawing or painting. Photography offers them a different perspective in comparison to drawing, painting or sculpture, and each new perspective opens new viewpoints. (F, age: up to 30, up to 5 years of service) I think that learning about photography can be useful because it can change students' perspective of the world. (F, age 31-40, 5-10 years of service)
Visual communication (11)	Understanding and conveying messages, everyday communication, advertising	There should certainly be more of it in teaching, because it is part of everyday communication, understanding and the conveying of messages. (F, age >50, 10-20 years of service) I think that photography could inspire students to think about visual problems but also about the topic and the motif. Moreover, students would learn how to convey a message to a larger number of people more easily and inspire them to think. (F, age: up to 30, up to 5 years of service)
Competence and competitiveness (9)	Preparation for life after finishing school, develop- ment of generic and specific competenc- es, development of digitalisation	I think it would be good if students used photography in art lessons at school, because we live in a digital and virtual age, which will be even more like that in the future (M, age 31-40, up to 5 years of service) Unfortunately, photography is highly neglected, and many jobs depend on it. (M, age 31-40, 5-10 years of service)
Motivation (8)	Satisfaction with the resulting artwork, interest in solving visual tasks, inspiration to make art	the level of interest and success is high, and the work can be finished faster than »classic« forms of artworks (F, age >50, >20 years of service) It is a medium that is very close and interesting to stu- dents, which means the motivation is higher at the very start (F, age 41-50, 10-20 years of service)
Active relation- ship to the environment (3)	Development of environment perception, correlations	It surrounds students in real world; what they do first is open their social networks and communicate with photos. So why wouldn't this medium be used when students have it »in their hands« every day? (F, age >50, >20 years of service)
Self-achievement (3)	Personal develop- ment, general knowledge	It enables personal development and acquisition of general knowledge (M, age >50, >20 years of service)

Discussion

Art teachers often have a dichotomous role: the role of transmitting knowledge and skills and the role of artists who also continuously develop their skills and then use them in education. Problems concerning teacher guidance and developing appropriate artistic approaches and strategies remain open (Tomšič Čerkez, 2015). Skill improvement and the personal development of teachers have become a necessity, a condition of survival in the profession, and a guarantee of high quality of educational work. The examined art teachers perceived their knowledge about photography obtained by formal education as good (average), but we must take into consideration the fact that most of them acquired additional knowledge of photography outside their formal education, by reading and exploring camera features on their own, which may indicate two things: there is a need for a higher level of photographic competences gained in formal education, and there is a greater interest in photography. In both cases, we may conclude that it is necessary to enrich the academic knowledge in photography. This is supported by results of the research statements, which show that teachers assess their knowledge of visual and compositional elements in photography as the greatest, while the level of their technical knowledge about cameras and photographic equipment was assessed as lower.

However, teachers perceive their knowledge and competences for holding classes that involve the use of photography as slightly better (very good), which may point to a greater self-confidence of teachers in their own pedagogic rather than area-specific competences. Research conducted by Županić Benić (2017) demonstrated that the self-assessment of competences and the use of competences in teaching art are in a positive correlation, so we may assume that teachers who perceive their photographic competences as better would apply their knowledge and competences in photography-based lessons more successfully, which, in turn, would positively affect the quality of the teaching. Based on the results of the statements, our research confirms the results of the research conducted by Županić Benić (2017): art teachers had the lowest selfassessment in area-specific elements of photography (history of photography, parts of camera, equipment, control of manual settings and photo editing) and, consequently, the application of these elements in classes was also assessed as lower (teaching the history of photography, transfer of knowledge about technical possibilities of the camera, demonstration of photographic techniques and photo editing).

The research results referring to teachers' opinion about obstacles to using photography in classes must be interpreted in the context of the Croatian

education system, while the perception of the importance of photography in students' visual culture may have broader implications. In a comparative analysis of the position of visual arts education in 12 European countries, Turković (2009) finds that visual arts education has a better position in the other 11 countries than in Croatia and that the quality of contents is higher. The position of visual arts education is manifested in the status of the subject and the number of weekly lessons. A large percentage of art teachers in our research expressed dissatisfaction with the number of art lessons per week/year in the Croatian schools and they see this problem as an obstacle in introducing photography to their teaching. Due to this obstacle, certain art techniques are either underrepresented or completely omitted from art education (Linardić, 2015; Turković, 2009). While considering photography from the perspective of the current plan and programme, we encounter another problem, which is that teachers can devote more time to photography only to the detriment of other fields of art.

Nevertheless, the teachers in our research recognise the importance of photography in students' visual culture, and they largely agree that photography is a neglected area in primary school education. In the research of Bedi and Varga (2018), most of the examined high school students saw photography as important for learning and as something ubiquitous in everyday life. If we consider the art education tasks prescribed by the curriculum, the categories arising from a qualitative analysis of the teachers' responses about the advantages of using photography in classes reflect almost all educational tasks of art education (Ministry of Science and Education, 2019; Ministry of Science, Education and Sports, 2006), with the exception of three related categories: »medium characteristics«, »competence and competitiveness«, and »self-achievement«, which cannot be found in the prescribed tasks but represent an additional value in this area. The teachers mostly observed photography characteristics as general specificities that make photography applicable in all aspects of life. However, photography is also important for its specific features that cannot be compared to the features of other areas of art, for example, technical rules of taking photographs, framing and the effect of light. Owing to these specificities, photography enables the development of competences that are highly valued in the labour market today, competences that become more and more needed for establishing a harmonious development of an individual and the society. Finally, they become more and more needed for successful communication between an individual and the environment.

Conclusion

This research illustrates the opinions of teachers about the need and feasibility of using photography in art education. Referring to the first two research questions, the conditions of using photography in classes do exist, they are average, and they can be improved. Photography is undoubtedly a widespread and widely available form of art, but it is poorly or insufficiently structured in the Croatian primary school art education. One of the biggest reasons that photography and some other areas of art are so underrepresented in Croatian education is the fact that there are not enough art lessons in the national curriculum, which has already been shown in our results and in previous research (e.g., Turković, 2009). However, teachers recognise the importance of photography as a medium of art and visual communication, and they consider it an appropriate area for the students' acquisition of visual language.

The obtained results have practical implications, and they may offer guidelines for the improvement of the quality of art education. The research results point to the need for the better training of teachers in the use of photography, in the integration of photography in teaching programmes as well as the need for increasing the number of art lessons in the national curriculum. The data obtained in this research can be used in shaping the teacher training programme according to their needs. Better teacher education in art photography may increase the quality of art teaching and create possibilities for additional art classes in the scope of extracurricular activities or after-school programmes. More systematic teaching of the methodology of photography may be achieved with methodological and didactic materials for teachers and students, which would help increase the quality of photography teaching and learning in arts education.

With all the advantages of this research, we must also take into consideration its limitations. The teachers' photographic knowledge and competences, as well as knowledge and competences in teaching photography, were based on self-assessment. A more objective evaluation would include an analysis of students' opinions and an analysis of experts in art didactics. The other critical limitation is the convenience sample. Even though the questionnaire was sent all over Croatia through the county councils and even though the exact number of art teachers was unknown, we believe that the teacher turnout in certain counties was low. Hence, for a better generalisation of results, we would have to motivate a larger number of teachers to respond to the questionnaire. Future research should explore the effectiveness of using photography in teaching and form guidelines for the teachers. It would also be interesting to examine the

possible ways of correlating the specificities of artistic photography with other school subjects.

As already mentioned, the objectives of art education are focused on the holistic development of children and their active relationship with the environment. Photography as an artistic medium may allow for the realisation of these objectives and offer some specific aspects of artistic expression. The teachers' awareness of the importance of this medium is a step forward in the development of better art education.

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Biographical note

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Changes in Learning Style Preferences of Physical Education Students

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Identification of learning styles is one way of contributing to a more efficient teaching process, and it helps teachers choose an effective teaching strategy. This study reports a three-year process to explain the change in the learning styles of physical education students. It also involves an assessment of the overall academic achievement of physical education students based on their learning style preferences throughout this process. Forty-one physical education students, 41.5% of whom were female, comprised the sample. The study used a longitudinal study/panel study design to observe the time-dependent variation of learning styles. The data were collected using the Kolb Learning Style Inventory 3 and analysed using a Chi-Squared (x2) test, Kruskal-Wallis H test, and Mann-Whitney U test. The results of the analysis showed that the curriculum of the PE teaching department did not lead to a change in the learning styles of students studying in this department. Additionally, the overall academic achievement of the physical education students did not vary for the first (Semester 3) and second measurements (Semester 5) based on their learning style preferences. However, for the third measurement (Semester 7), learning style preferences had differing effects on their academic achievement.

Keywords: study process, learning style, longitudinal study, teacher candidate

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Spremembe v izbranih učnih stilih študentov športne vzgoje

CEYHUN ALEMDAĞ

Določitev učnih stilov je eden izmed načinov, ki prispeva k učinkovitejšemu procesu poučevanja in pomaga učiteljem pri izbiri učinkovite strategije poučevanja. Študija pojasnjuje spremembe učnih stilov študentov športne vzgoje skozi triletno obdobje in vključuje oceno njihovega splošnega akademskega uspeha na osnovi izbranih učnih stilov v tem procesu. Vzorec je obsegal 41 študentov športne vzgoje, od katerih je bilo 41,5% žensk. Namen longitudinalne/panelne študije je bil spremljanje kronološke spremembe učnih stilov. Podatki so bili zbrani s pomočjo Kolbovega modela učnih stilov 3 in analizirani s hi-kvadrat testom (χ 2), Kruskal-Wallisovim H-testom, in Mann-Whitneyjevim U-testom. Rezultati analize so pokazali, da se zaradi kurikuluma oddelka za športno vzgojo niso spremenili učni stili študentov tega oddelka. Prav tako se njihov splošen akademski uspeh ob izbranih učnih stilih ni razlikoval pri prvem (3. semester) in drugem (5. semester) merjenju, pri tretjem merjenju pa so se pokazali različni vplivi izbranih učnih stilov na akademske dosežke študentov športne vzgoje.

Ključne besede: študijski proces, učni stili, longitudinalna študija, študentje pedagoških smeri

Introduction

Literature Review

The extent to which students make use of teaching practices varies based on their individual characteristics (Felder & Brent, 2005; Kuzgun & Deryakulu, 2006). This variation is revealed by associating the content to be learned with that previously learned and structuring it in the mind (Connell & Franklin, 1994; Felder & Brent, 2005; G. H. Hein, 1991; Jonassen, Davidson, Collins, Campbell, & Haag, 1995; Yaşar, 1998). Thus, teachers are expected to take into account students' characteristics and needs while deciding on many topics including which method, approach or strategy to use, how to organise the content of courses, or which measurement and assessment approach to use (Kuzgun & Deryakulu, 2006). Learning styles refer to an approach of perception, processing, and interpretation that occurs as an individual difference (Kolb & Kolb, 2005). Learning styles provide many clues as to students' learning characteristics and provide teachers with background information on how to plan the teaching process. Although the results of research on which learning style is more functional in educational processes are not consistent, learning styles are generally known to affect learning and facilitate the acquisition of certain types of learning outcomes (Şimşek, 2006).

Research on learning styles in the field of PE and sports has mostly used a cross-sectional survey design and associated learning styles with independent variables including gender, grade level, sportsmanship, education level, the field of graduation, and academic achievement (Alemdağ et al., 2018; Alemdağ et al., 2016; Alemdağ & Öncü, 2015; Çağlayan, 2011; Çelik & Şahin, 2011; Coker, 1996; Ristori et al., 2011; Yalız & Erişti, 2010). Considering the methodological approach of previous research, researchers generally use a cross-sectional, not a longitudinal design as a way of investigating learning styles. The difference in how researchers deal with the issue stems from their conception of learning styles as a »structure« or the way they think learning styles are related to a »process«. It is assumed that it is challenging to intervene if learning styles are seen as a structure; however, it is much easier if they are seen as a process. An interaction between content and practice is accepted to exist if learning styles are regarded as both a structure and a process (Şimşek, 2006).

Researchers outside the field of sports have examined the change in students' learning styles over time (Busato et al., 1998; Cimermanová, 2018; Pinto & Geiger, 1991; Rakoczy & Money, 1995). However, the field of sports has failed to conduct studies observing changes in the learning styles of students.

Accordingly, this study seems to be of importance in observing the learning characteristics of PE students and thereby helping sports educators take some action.

This study is concerned with changes in students' learning styles in departments of PE and sports teaching that teach mainly applied courses as well as theoretical courses. Research on learning styles suggests that students have higher academic achievement in programmes that are designed taking into consideration the learning characteristics of students (Birrell et al., 1985; Burns et al., 1998; Fan et al., 2015; Gökalp, 2013; Hein & Budny, 2000; Horton & Oakland, 1997; Komarraju et al., 2011; Reynolds & Gerstein, 1992; Uzuntiryaki, 2007; Yazıcılar & Güven, 2009). Against this background, this study analysed the overall academic achievement levels of PE students based on their learning style preferences.

Research Questions (RQ):

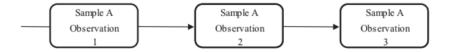
- **RQ1.** Is there a significant association between the learning style preferences of PE students and the teaching process in which they are involved?
- **RQ2.** Does PE students' overall academic achievement differ based on their learning style preferences (for each measurement/semester)?

Method

Model

The study used a longitudinal design. The status and characteristics of the cohort were identified through a tracking approach. The sample was selected by cluster sampling among individuals who shared common characteristics and experiences (Ekiz, 2009). The data were collected from students studying at the Department of Physical Education and Sports Teaching at Karadeniz Technical University. Repeated measurements were performed on the same respondents in certain intervals over time in line with the principles of longitudinal studies (Figure 1) (Cohen et al., 2000; Fraenkel & Wallen, 2008). Measurements were repeated three times at the beginning, middle, and end of the study. The first measurement (Time 1) was performed in the fall term of the 2015/2016 academic year (at the beginning of Semester 3) and the last two (Time 2 and Time 3) in one-year intervals.

Figure 1 A sample for developmental research. Adapted from *Research methods in education* (p. 175), L. Cohen et al., 2000, Routledge Falmer, Taylor & Francis Group.



The data were collected using the questionnaire method, which is frequently used for surveying (Erkuş, 2009). The questionnaire forms were administered by the researcher after obtaining informed written consents.

Sample

The sample consisted of 41 PE and sports students, among whom 41.5% were female (the last measure was performed on 40 students due to the withdrawal of a student). First-year students were not involved in the measurements since they had just started university and were adjusting to a new level of education

Instruments

The data were collected using the original Kolb Learning Style Inventory 3 (KLSI-3) developed by Kolb, Rubin, and McIntyre (1971). The inventory that was developed to identify preferred learning styles was adapted to Turkish by Evin Gencel (2007). It consists of 12 sentence-completion items that ask respondents to rank four sentence endings from 1 (least like me) to 4 (most like me). Item scores (ranging from 18 to 48) result in four different values. Each value represents one learning mode of the learning cycle (concrete experience-CE, abstract conceptualisation-AC, reflective observation-RO, and active experimentation-AE). Subsequently, combination scores are computed. Combination scores range from -36 to +36. Two combination scores measure an individual's learning style preference, that is, abstractness over concreteness (AC-CE) and action over reflection (AE-RO). Two combination scores are placed on the horizontal and vertical lines (x-axis and y-axis) in Kolb's coordinate system (Devid A Kolb, 1999), and the intersection of the scores represents an individual's learning style. Cronbach's alpha coefficient of the learning style dimensions was found to range from .71 to .80 (n = 320) in Evin Gencel's study (2007). In this study, the value of the Cronbach's alpha coefficient was found to range from .75 to .86 (n = 41) using the data collected in the first measurement.

The *overall academic achievement* of the respondents was determined by considering their grade point average (GPA) in each measurement term (at the beginning of Semesters 3, 5, and 7).

Data Analysis

A frequency analysis was performed to determine missing or incorrect data, but no missing or incorrect data were found. The data were analysed by SPSS statistics 22.0 using the Chi-Squared (χ^2) test, Kruskal-Wallis H test and Mann-Whitney U test.

Results

The study first aimed to determine whether the curriculum of the PE teaching department caused a change in the learning styles of students studying in this department (RQ1). The frequency and percentage distributions of the PE students were analysed to determine their learning style preferences. Table 1 shows the χ^2 test results of the measurements performed in three different time intervals.

Table 1
The distribution of learning styles by time

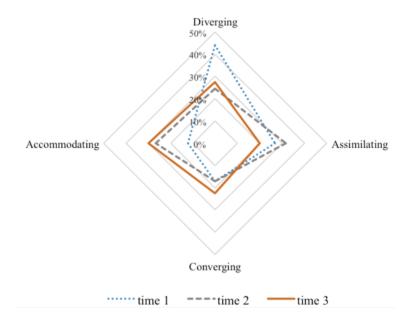
		Learning Styles						
		Diverging	Assimilating	Converging	Accommodating	Total		
Time 1	n(%)	18(43.9)	11(26.8)	7(17.1)	5(12.2)	41(100)		
Time 2	n(%)	10(24.4)	13(31.7)	7(17.1)	11(26.8)	41(100)		
Time 3	n(%)	11(27.5)	8(20)	9(22.5)	12(30)	40(100)		
Total	n(%)	39(32)	32(26.2)	23(18.9)	28(23)	122(100)		

Note. χ^2 = 7.5, df = 6, p = .28

Considering the χ^2 test results on learning styles, the respondents with assimilating and converging learning styles had similar/close ratios for the three measurements. The ratio of those with diverging and accommodating learning styles changed more markedly in the second and third measurements in comparison to the first measurement (Figure 2). The ratio of those with a diverging learning style was 43.9% in the first measurement but dropped to 24.4% and 27.5% in the second and third measurements, respectively. The ratio of those

with an accommodating learning style was 12.2% in the first measurement, but this ratio rose to 26.8% and 30% in the second and third measurements, respectively (Table 1). This difference found in learning styles in different time intervals was not statistically significant ($\chi^2(6) = 7.5$, p > .05).

Figure 2 The cycle of learning of PE students



RQ2 asked whether PE students' overall academic achievement differed based on their learning style preferences throughout this process. Table 2 presents the Kruskal-Wallis H test results on the overall academic achievement of PE students with different learning styles.

Table 2
The distribution of overall academic achievement according to learning styles

	Learning Styles	n	Mean Rank	df	χ ²	р	Significance
T' 1	Diverging (Di)	18	16.11				-
	Assimilating (As)	11	23.77	7	6.09	.11	
Time 1	Converging (Co)	7	23.57	3			
	Accommodating (Ac)	5	28.9				

	Learning Styles	n	Mean Rank	df	χ^2	p	Significance
	Diverging (Di)	10	19.95		3.58	.31	-
Time 2	Assimilating (As)	13	16.65	7			
Time 2	Converging (Co)	7	25.5	3			
	Accommodating (Ac)	11	24.23				
	Diverging (Di)	11	16.09		7.93	.04°	As-Ac
Time o 7	Assimilating (As)	8	14.31	3			
Time 3	Converging (Co)	9	22.61	5			
	Accommodating (Ac)	12	27.08				

Note. *p < .05.

The result of the analysis showed that the overall academic achievement of PE students did not differ based on their learning style preferences for the first $(\chi^2 (df = 3, n = 41) = 6.09, p > .05)$ and second $(\chi^2 (df = 3, n = 41) = 3.58, p > .05)$ measurements.

For the third measurement, however, the participants' academic achievement differed based on their learning style preferences (χ^2 (df = 3, n = 40) = 7.93, p < .05). This result demonstrated that preferred learning styles had different effects on the academic achievement of the PE students. The mean ranks of the groups showed that the PE students with an accommodating learning style enjoyed the highest academic achievement, and they were followed by those with convergence, divergence, and assimilations in order. The source of the significant difference between the learning styles was analysed by the paired combinations of the groups (using the Mann-Whitney U test). Accordingly, the PE students with an accommodating learning style enjoyed higher academic achievement than assimilators did. According to the sequential measurements, accommodators enjoyed high academic achievement in all three measurements, while the academic achievement of assimilators showed a downward trend starting with the first measurement.

Discussion

This study found that although there were some variations in the PE students' learning style preferences in the measurements made in different time intervals, these variations were not statistically significant. This result means that learning styles are more stable for PE students to change in time. Although a considerable volume of cross-sectional research has found significant differences among the grades of an education level (high school, university etc.) in terms of preferred learning styles (Alemdağ & Öncü, 2015; Baldwin & Reckers, 1984;

Cavas, 2010; Evin Gencel & Köse, 2011; Katrancı & Bozkuş, 2014; Kurbanoğlu & Akkoyunlu, 2008; Özdemir & Kesten, 2012), research on the same groups has reported that the change in preferred learning styles is not very marked (Busato et al., 1998; Pinto & Geiger, 1991; Rakoczy & Money, 1995). Considering previous research reporting a significant difference among grades in terms of preferred learning styles, researchers used a cross-sectional survey design. Indeed, they noted that it is inconvenient to use cross-sectional data to explain a longitudinal phenomenon (Pinto & Geiger, 1991). In this study, therefore, the results derived from the measurements performed on the same respondents at different intervals had similar characteristics to the results of other longitudinal research.

A review of literature in the field of sports (sports sciences faculties, sports high schools, student-athletes, etc.) (Alemdağ et al., 2016, 2018; Alemdağ & Öncü, 2015; Çelik & Şahin, 2011; Ristori et al., 2011; Yalız & Erişti, 2010) showed that diverging and assimilating were the most preferred learning styles while accommodating was the least preferred learning style. Considering the distribution of learning styles in the sum of three measurements (see Table 1) in this study, the students mostly had diverging and assimilating learning styles. This result was consistent with research on learning styles in the field of sports (unlike other research reports, accommodating was the least preferred learning style for the respondents in this study). After taking sports into consideration as a defining feature, it seemed that the similarity between the results was due to the measurements performed on students with similar qualifications. Even if students are involved in different levels of education (high school, university, etc.), the results are close due to their shared characteristics, mainly including sports. Alemdağ et al. (2018) argued that it would be expedient to pay attention to group work in practical courses and give feedback during sports practice in line with the general characteristics of the diverging learning style. They emphasised the importance of active participation within the group in terms of students' social and emotional development and noted that feedback would facilitate practising and remembering sports skills. Although the dominant learning style of the PE students was diverging, it will be useful to know what the approaches that are suitable for other learning styles are. This is because knowing about the dominant learning style of the group in question does not mean those with other learning styles may be neglected. In this sense, considering the characteristics of those with the assimilating learning style, it was emphasised that they are highly competent in putting very comprehensive knowledge into a short and logical form.

Additionally, the theory has a more logical robustness than practice for them, and they are interested in ideas and abstract concepts more than they are

interested in people (Kolb & Kolb, 2005). Individuals with the converging learning style are highly competent in finding practical implementations for ideas and theories, they have problem-solving skills and prefer dealing with technical tasks and problems rather than social and interpersonal issues (Kolb & Kolb, 2005). Based on all these characteristics related to learning styles, there is a clear need for teachers to focus on these features that represent learning styles.

In the search for an answer to RQ2, the overall academic achievement levels of the PE students were analysed at different intervals in relation to their learning style preferences. The primary purpose of this study for analysing PE students' academic achievement based on their learning styles was not to reveal which learning style is more useful or helpful, but rather to examine the compatibility or incompatibility between learning style preferences and academic achievement. The result of the analysis showed that the dominant learning styles of the PE students were diverging and assimilating, considering the total of the three measurements. However, those with an accommodating learning style enjoyed the highest academic achievement in the measurements taken in three different intervals. This incompatibility between the PE students' dominant learning styles and academic achievement levels may mean attention was not paid to PE students' learning style preferences at the beginning and end of the programme. In other words, this may suggest that the PE students' dominant learning styles were not identified, and lecturers did not design their semester or annual syllabus in line with these learning styles. A similar incompatibility was previously reported in a study on sports high school students (Alemdağ et al., 2018). The fact that students with an accommodating learning style have high academic achievement may suggest that courses are mostly taught in line with the learning characteristics of these students. Kolb (1984) described accommodators as individuals who engage in new experiences, plan frequently, seek opportunities, take risks and adapt to changing circumstances. Additionally, accommodators prefer to work with others and pay attention to effectively communicate with athletes, coaches and other colleagues (Stradley et al., 2002).

Conclusion

The primary results of the study showed that the learning styles of the PE students were more stable in time based on the measurements performed at different intervals. This situation suggests that when PE students' learning styles are identified, one can be informed about their learning characteristics for a specified period (2-3 years). This period may be regarded as reasonable, considering the duration of the PE teaching programme. Thus, lecturers or

those who do not manage teaching programmes will not have to apply a very strict programme to identify PE students' learning styles.

The secondary result of the study showed an incompatibility. The dominant learning styles of the PE students were diverging and assimilating, considering the sum of the three measurements. However, the highest academic achievement was obtained by convergers and accommodators in three different intervals.

Lecturers should be willing to identify students' learning characteristics before designing their semester syllabus so that they can adopt an effective teaching strategy. Provided that students with different learning characteristics are not disregarded, a course design conforming to dominant learning styles will result in a more effective and efficient education process. Especially in PE and sports departments, which teach both theoretical and practical courses, it is useful for lecturers to frequently review their teaching strategies to keep up with students' learning characteristics.

Future research may adopt a qualitative approach to investigate whether courses are taught in keeping up with the learning characteristics of students. If any relevant compatibility or incompatibility is discovered, more appropriate measures may be taken regarding the education and teaching process of PE students.

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The Relevance of Learning Approaches and Temporal Perspective for Test-Taking

Andreja Bubić¹

Test-taking is an integral part of students' lives, and the way they approach tests may be of high relevance for their academic outcomes. Therefore, the present study addressed the way college students reflect on the process of preparing for tests. Specifically, it investigated the relevance of students' achievement goals, perceived academic control, and consideration of future consequences for several aspects of the test-taking process. The results obtained revealed mastery goals, perceived academic control, and the ability to disengage from the present moment as significant predictors of students' satisfaction with knowledge. Furthermore, higher success optimism was associated with having higher perceived academic control, more pronounced mastery goals, less pronounced social solidarity goals, and a higher tendency to focus on the future, whereas perceived academic control was revealed to be a significant predictor of the perceived ease of preparing for tests.

Keywords: achievement goals, consideration of future consequences, higher education, perceived academic control, test-taking

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Pomembnost učnih pristopov in časovni pogled na opravljanje preizkusov znanja

Andreja Bubić

Opravljanje preizkusov znanja je sestavni del življenja študentov; način, na katerega pristopajo k opravljanju preizkusov, je lahko zelo pomemben za njihove študijske dosežke. Zato se je zadevna raziskava ukvarjala z ugotavljanjem načina, na podlagi katerega študentje razmišljajo o procesu priprave na opravljanje preizkusov. Raziskava se je osredinila zlasti na pomembnost izvedbenih ciljev, zaznan akademski nadzor in na premislek o prihodnjih posledicah za različne vidike postopka opravljanja preizkusov znanja. Pridobljeni rezultati so pokazali, da so visoki cilji, zaznan akademski nadzor in sposobnost odmika od sedanjosti pomembni napovedovalci zadovoljstva študentov z znanjem. Poleg tega je bila višja stopnja optimizma glede uspeha povezana z večjo zaznano stopnjo akademskega nadzora, bolj izraženimi visokimi cilji, z manj izraženimi cilji glede družbene solidarnosti in z večjo težnjo po usmerjenosti v prihodnost, medtem ko se je zaznan akademski nadzor izkazal kot ključni dejavnik napovedi zaznane preproste priprave na opravljanje preizkusov.

Ključne besede: izvedbeni cilji, upoštevanje prihodnjih posledic, univerzitetno izobraževanje, zaznan akademski nadzor, opravljanje preizkusov znanja

Introduction

Obtaining a college degree is a process that involves not only learning and participating in various academic activities but also demonstrating the acquired knowledge and skills that is typically accomplished through various forms of evaluative events, namely tests. Although the format of such tests generally varies across teachers, subjects, schools, and education levels, test-taking is a process that always includes a forethought or preparatory phase during which students prepare for the test, a performance phase during which they take the test, and a self-reflection phase during which they reflect on the results of the test (Schutz & Davis, 2000; Zimmerman, 1998, 2000). All of these phases may be very cognitively and emotionally demanding for students, and often require a considerable amount of self-regulation efforts and skills (Schutz & Davis, 2000). Interestingly, although most students are typically very motivated to provide their best performance in testing situations, their perception of their efforts and progress is not always objective and realistic. Specifically, it has been demonstrated that students tend to experience difficulties judging their readiness and performance on tests, even in college (Peverly et al., 2003; Pressley & Ghatala, 1988; Pressley et al., 1990).

The self-reflection phase (Zimmerman, 1998, 2000) is a vital part of the test-taking process because, although it may not influence the outcomes of completed tests, this period can provide students with an opportunity to reflect on their previous behaviours and learning. During this time, learners' satisfaction with the acquired knowledge and the achieved grades, as well as their perception of actions undertaken while preparing for tests, may provide strong motivation and guidance for changing future behaviours. Therefore, this phase offers students a unique opportunity to develop deeper metacognitive insights (Brown, 1978; Flavell, 1979; Veenman et al., 2006) that may allow them to accomplish more favourable outcomes in the future. Consequently, it is crucial to better understand students' considerations of their behaviours and performance during this phase, as well as factors that influence these.

The Role of Academic Motivation and Perceived Academic Control in Students' Educational Outcomes

Among different determinants of students' academic behaviours and outcomes, numerous studies have previously demonstrated that motivation, achievement goals, and views of one's abilities are some of the most relevant factors associated with individuals' success and attributions of one's success in the academic domain (Nilsen, 2009; Pajares, 2003). Consequently, various theoretical

conceptualisations have thus far been developed that offer different approaches to understanding student motivation. A number of these theories has recognised the relevance of individuals' expectations regarding the outcomes, subjective value of the task, and achievement goals that reflect the purpose of one's engagement in a specific activity (Eccles, 2005; Eccles & Wigfield, 2002; Wigfield & Eccles, 2000, 2002). Within the Personal Investment Theory (Maehr, 1984; Maehr & Braskamp, 1986), such goals are defined as students' beliefs regarding the purpose of academic work, achievement, and success (Urdan & Maehr, 1995). According to this theory, it is possible to distinguish between four types of relatively stable achievement goals that include mastery (task), performance (ego), social solidarity (social relations), and extrinsic goals (Maehr, 1984; McInerney et al., 2002; McInerney et al., 1997). Among these, mastery or task goals are directed towards knowledge, learning, and tasks, and are utilised by students who typically have good self-regulatory skills, use deep processing strategies, and experience more positive emotions during learning (Covington, 2000; Urdan & Maehr, 1995). In contrast, performance or ego goals reflect individuals' strivings towards accomplishing socially acceptable standards and excel in performance when compared to others. Next, extrinsic goals are related to learning because of rewards received from others, whereas social solidarity achievement goals reflect individuals' attempts to belong to a peer group or gain the approval of others.

In addition to students' achievement goals, academic behaviours and success are also related to their views of their characteristics and potentials. One aspect of such beliefs includes perceived academic control that reflects individuals' beliefs regarding their abilities and other characteristics that are relevant for academic success and the accomplishment of favourable educational outcomes (Perry, 1991; Perry et al., 2001). Similarly to the related construct of academic self-efficacy, perceived academic control influences individuals' motivation, academic achievement as well as emotions typically experienced in school (Bandura, 1977; Multon et al., 1991; Robbins et al., 2004; Schunk et al., 2008; Zimmerman & Kitsantas, 1997).

The Relevance of Temporal Perspective for Students' Educational Outcomes

In addition to the described characteristics that are specifically associated with the educational domain, individuals' academic outcomes are also influenced by other characteristics, such as abilities, interests, personality traits, or emotions (Slavin, 1991). Furthermore, persons' cognitive and decision-making styles, namely ways that they typically collect, process, and use information in

decision-making situations, may also be of relevance in this context (Appelt et al., 2011). Among these, the present study explored one aspect of individuals' temporal perspective: the tendency to explicitly consider the potential future outcomes of actions (Strathman et al., 1994). Specifically, it has previously been demonstrated that people differ with respect to their tendency to focus on the present moment and the willingness to sacrifice immediate wishes in order to secure the desired future outcomes (Strathman et al., 1994a; Zimbardo & Boyd, 1999). Earlier studies that have investigated this characteristic have indicated that individuals who carefully consider future consequences more frequently engage in different types of responsible behaviours (Joireman et al., 2008; Joireman et al., 2001; Moore & Dahlen, 2008; Strathman et al., 1994a; Strathman & Joireman, 2005). Similar to other domains, within the educational context such individuals invest more efforts and persist in academic activities, indicating the relevance of this trait for their motivation, self-regulation and academic achievement (Bembenutty & Karabenick, 2004; Husman & Lens, 1999; Joireman et al., 2008; Malka & Covington, 2005; McInerney, 2004; Taber, 2013).

Research Questions and Hypotheses

The present study focused on the self-reflection phase of the test-taking process, during which students consider test results, and investigated the way they reflect on the process of preparing for tests, its outcomes, and expectations regarding future success. Specifically, within this study, college students majoring in the social sciences and humanities in Croatia assessed their perceived ease of preparing for tests during the previous year, satisfaction with knowledge acquired while preparing for tests, and optimism regarding success in completing future tests. Next, we addressed the importance of several characteristics whose impact on other segments of students' academic behaviours has previously been described, namely perceived academic control, achievement goals and the tendency to consider future consequences, for these criteria.

In doing so, it was hypothesised that mastery goals would be associated with higher commitment to the process of preparing for tests, resulting in students' higher satisfaction with the knowledge acquired while preparing for tests and higher optimism with respect to achieving success in future tests. Next, we expected that higher perceived academic control would be associated with a more dedicated and successful approach to test-taking, which would be reflected in students' higher satisfaction with the knowledge acquired while preparing for tests and higher optimism regarding future success. Furthermore, given that students with higher perceived academic control view their abilities

in a more favourable light, they were expected to perceive the process of preparing for tests as being easier than those students characterised by lower perceived academic control. Finally, within the present study, it was hypothesised that individuals who carefully consider future consequences would be more responsible with respect to the way they approach test-taking, which would result in their higher satisfaction with the knowledge acquired while preparing for tests as well as higher optimism regarding future success.

Method

Sample and Procedure

Among 291 college students (average age M = 21.32 years, SD = 1.98) who participated in the present study, 15 (5.2%) were male and 276 (94.8%) female. The participants were all students majoring in different social studies (e.g., sociology, pedagogy) and humanities (e.g., history, art history, philosophy) at the University of Split, Croatia. Participants were approached at the college premises during their lectures. There, they completed the prepared questionnaires within a group setting for course credit. The following instruments were used in the present study: Perceived Academic Control Scale (Perry et al., 2001), Consideration of Future Consequences Scale (Strathman et al., 1994) and the Inventory of School Motivation (McInerney et al., 1997; McInerney et al., 2000; McInerney & Sinclair, 1991, 1992). In addition, the participants reported the perceived ease of preparing for tests using a five-point Likert-type response scale (1 – very easy; 5 – very difficult). Furthermore, they reported their level of satisfaction with the knowledge acquired while preparing for previous tests using a five-point Likerttype response scale (1 - completely unsatisfied; 5 - completely satisfied), and optimism regarding their chances of successfully completing future tests (success optimism) using a five-point Likert-type response scale (1 - very pessimistic; 5 – very optimistic). Their reported ease of preparing for previous tests was 2.95 (SD = .63), satisfaction with the knowledge acquired while preparing for previous tests 3.66 (SD = .76), and optimism regarding future chances for success 4.45 (SD = .74).

Instruments

The *Perceived Academic Control Scale* (Perry et al., 2001) is a questionnaire used for measuring students' perceived academic control that reflects their beliefs regarding the capacity to influence their academic outcomes. This scale comprises eight items (e.g., *My grades are basically determined by things* beyond my control, and there is little I can do to change that) that the participants rated on a five-point Likert type scale (1 – strongly disagree; 5 – strongly agree). Among them, four items, including the presented one, were negatively phrased and therefore reverse scored. A higher score on this scale reflects a higher degree of perceived academic control.

The Consideration of Future Consequences Scale (Strathman et al., 1994b) is a 12-item instrument used for assessing the extent to which individuals focus on the short-term or long-term consequences of their actions. As previous studies have indicated a two-factorial structure of this scale, within the present study, participants' scores were calculated separately for two distinct subscales: one reflecting present-oriented, and one future-oriented tendencies (Bubic, 2015; Joireman et al., 2008). The first, the Present Focus scale, comprises seven items that primarily describe individuals' tendency to focus on the current moment (e.g., I only act to satisfy immediate concerns, figuring out the future will take care of itself). In contrast, the Future Focus scale comprises five items that describe individuals' willingness to disengage from the present and consider the future (e.g., I am willing to sacrifice my immediate happiness or well-being in order to achieve future outcomes). A higher score on these scales reflects a higher degree of present and future orientation, respectively.

The *Inventory of School Motivation* (McInerney et al., 1997, 2000; McInerney & Sinclair, 1991, 1992) is an instrument that measures different types of achievement goals that include mastery (task and effort), performance or ego (competition and social power), social solidarity (affiliation and social concern), and extrinsic goals (praise and token rewards). The whole instrument comprises 43 items that the participants rated on a four-point Likert type scale (1 – strongly disagree; 4 – strongly agree). Among these, 11 items are used for measuring mastery goals (e.g., *When I am improving in my schoolwork I try even harder*), 12 for measuring performance or ego goals (e.g., *I like to compete with others at school*), 8 for measuring social solidarity goals (e.g., *I prefer to work with other people at school rather than work alone*), and 12 for measuring extrinsic goals (e.g., *I work best in class when I get some kind of rewards*). A higher score on these scales reflects a higher degree of each achievement goal, respectively.

Table 1
Psychometric Properties of the Administered Instruments

Measure	М	SD	Min	Max	Cronbach α
Present focus	18.99	5.02	8	32	.81
Future focus	18.75	3.27	9	25	.73
Mastery goals	36.07	4.09	22	44	.80
Performance goals	19.14	5.99	12	45	.90
Social solidarity goals	24.67	4.02	13	32	.81
Extrinsic goals	24.48	7.06	12	47	.89
Perceived academic control	32.88	4.06	19	40	.74

Results

Correlation analyses were conducted as the first step in investigating the relations among the explored variables. The results revealed positive correlations among participants' mastery goals, perceived academic control, satisfaction with acquired knowledge, and success optimism. Furthermore, a positive correlation between mastery goals and future focus, as well as a negative correlation between these goals and present focus were also revealed. The remaining correlations are presented in Table 2.

Table 2
Correlation Matrix for the Tested Variables

	2	3	4	5	6	7	8	9	10
Present focus (1)	13°	19**	05	01	.01	16**	05	19**	04
Future focus (2)		.39**	.24**	.13°	.19**	.18**	.03	.04	.23**
Mastery goals (3)			.25**	.21**	.23**	.28**	.10	.26**	.31**
Performance goals (4)				10	.59**	06	.09	06	.05
Social solidarity goals (5)					.04	.05	.11	.07	12°
Extrinsic goals (6)						.01	.12*	.02	02
Perceived academic control (7)							22**	.21**	.29**
Ease of preparing for tests (8)								.09	14*
Satisfaction with acquired knowledge (9)									.15°
Optimism regarding future tests (10)									

Note: *p < .05; ** p < .01.

Next, the relationships among the investigated variables were explored in more detail using three hierarchical regression analyses in which students' perceived ease of preparing for tests, satisfaction with knowledge acquired while preparing for tests, and optimism regarding success in future tests served as criteria. Within these analyses, participants' present and future focus were entered in the first step on the analyses as domain-unspecific individuals' characteristics associated with their general decision-making tendencies. Four types of achievement goals were entered in the next step of the analyses, whereas perceived academic control was entered as the last potential predictor in the third step (Table 3). The conducted analysis in which the ease of preparing for tests served as a criterion indicated that the regression model became significant only in the last step of the analysis, after including perceived academic control in the model, which then explained 10% of the variance. In contrast, regression models in which satisfaction with knowledge and success optimism served as criteria reached significance in the first step of the analyses, at which point individuals' general temporal perspectives explained 4% and 5% of the variance, respectively. Although their contributions were not high, it has to be noted that temporal orientations represent individuals' characteristics that are not related to any specific context but reflect their general decision-making tendencies. Not surprisingly, the amount of explained variance increased after including academically-specific predictors in later steps of the analyses and reached 12% for satisfaction with knowledge and 20% for success optimism.

Overall, the obtained results revealed mastery goals and perceived academic control as significant predictors of students' satisfaction with knowledge and success optimism. Furthermore, future focus was identified as a significant predictor of success optimism, whereas present focus was negatively associated with students' satisfaction with knowledge. In addition, lower levels of social solidarity goals predicted higher success optimism among students. Finally, perceived academic control was identified as a significant predictor of students' perceived ease of preparing for tests. Although performance goals did not significantly contribute to any addressed criteria, they were identified as a predictor of satisfaction with knowledge after the second step of the analysis but lost their significance after including perceived academic control in the model.

Table 3 Results of the Regression Analyses using Ease of Preparing for Tests, Satisfaction with Acquired Knowledge, and Optimism Regarding Future Tests as Criteria

		Criteria						
Steps	Predictors (β)	Ease of preparing for tests	Satisfaction with acquired knowledge	Optimism regarding future tests				
1.	Present focus	04	18**	02				
	Future focus	.03	.02	.22**				
	R	.05	.19	.23				
	R^2	.00	.04	.05				
	F (df)	.39 (2, 288)	5.16** (2, 288)	7.76** (2, 288)				
2.	Present focus	04	15*	.04				
	Future focus	03	06	.16**				
	Mastery goals	.05	.28**	.33**				
	Performance goals	.04	16*	04				
	Social solidarity goals	.11	.00	21**				
	Extrinsic goals	.09	.07	09				
	R	.18	.33	.40				
	R^2	.03	.11	.16				
	Δ R ² (95% CI)	.03 (007)	.07** (.0113)	.11**(.0418)				
	F (df)	1.58 (6, 284)	5.75** (6, 284)	9.19** (6, 284)				
	Present focus	07	14*	.06				
	Future focus	01	07	.13*				
	Mastery goals	.12	.25**	.28**				
	Performance goals	01	14	.00				
	Social solidarity goals	.10	.00	20**				
3.	Extrinsic goals	.10	.06	10				
	Perceived academic control	27**	.12*	.21**				
	R	.31	.35	.45				
	R^2	.10	.12	.20				
	Δ R ² (95% CI)	.06** (.0111)	.01* (003)	.04** (008)				
	F (df)	4.25** (7, 283)	5.58** (7, 283)	10.22** (7, 283)				

Note: *p<.05; **p<.01.

Discussion

The present study focused on the self-reflection phase of the test-taking process that represents a crucial part of students' academic lives and strongly impacts their final learning outcomes and achievements. In doing so, it investigated the relevance of students' achievement goals, perceived academic control and consideration of future consequences for their evaluations of the test-taking process, namely the perceived ease of preparing for tests, satisfaction with knowledge acquired while learning for tests, as well as optimism regarding success in completing future tests. The results obtained identified perceived academic control, mastery achievement goals, and the ability to disengage from the present moment as significant predictors of students' satisfaction with knowledge. In addition, perceived academic control was revealed to be a predictor of the perceived ease of preparing for tests. Finally, individuals' perceived academic control, higher levels of mastery goals, lower levels of social solidarity and the tendency to focus on the future were identified as significant predictors of success optimism.

The Role of Academic Motivation and Perceived Academic Control in Students' Educational Outcomes

First, the present study revealed the relevance of participants' achievement goals with respect to their satisfaction with knowledge acquired while preparing for tests and optimism regarding success in future tests. Specifically, higher levels of mastery goals were associated with both of these outcomes, whereas less pronounced social solidarity goals were related to higher optimism regarding future success. With respect to the mastery goals, the obtained findings are not surprising, as these goals reflect individuals' strivings towards knowledge and learning (Maehr, 1984; McInerney et al., 2002; McInerney et al., 1997; Urdan & Maehr, 1995). Consequently, individuals who develop such goals would be expected to learn more while preparing for tests, and should, therefore, be more satisfied with the acquired knowledge. As indicated by the obtained results, such experiences would also allow them to develop more optimistic expectations regarding their success on future exams, as such predictions are typically formulated based on previous experiences (Bandura, 2006; Maddux, 1999). With respect to the social solidarity goals, the findings indicating its negative association with success optimism were not expected. However, these may be interpreted if we consider the fact that individuals who are oriented towards social relations and helping others generally, as well as in academic settings, may have different values and priorities when compared to those who are oriented towards learning or achieving more (Covington, 2000; Urdan & Maehr, 1995). Although such strivings often converge with other academic goals, in some situations they can also conflict, in which case students may place more value on social relations than learning itself (Dowson & McInerney, 2001, 2003; Wentzel, 1996, 1999; Wentzel & Wigfield, 1998). Therefore, these individuals may not always consider their future academic achievements with such care or reflect on them in great depth, potentially resulting in their lower expectations of future accomplishments.

Next, within the present study, perceived academic control was revealed to be a significant predictor of students' perceived ease of preparing for tests, their satisfaction with knowledge acquired while preparing for tests as well as optimism regarding potential success in future tests. Such a role of this characteristic in the present context was expected, as previous studies have indicated the relevance of different types of students' views of their abilities for their academic accomplishments and outcomes (Bandura, 1986; Bandura et al., 1996; Pajares & Urdan, 2006; Perry, 1991; Perry et al., 2001). Given that students with higher perceived academic control tend to view their abilities in a favourable light, they also evaluated the process of preparing for tests as easier than those characterised by lower perceived academic control. Furthermore, as such students typically invest more efforts and are more dedicated to learning (Bandura, 1986; Perry et al., 2005; Schunk, 1990, 1991; Sorić & Burić, 2010; Zimmerman, 1995), it is not surprising that they were also more satisfied with their accomplishments. This resonates with previous studies indicating that self-efficacy and perceived academic control are related not only to students' higher academic achievement, but also to higher satisfaction with school (Ainley et al., 1991; Mok & Flynn, 2002; Raboteg-Šarić et al., 2009). The present study indicates that this satisfaction also extends to their views of their accomplishments and outcomes. In addition to showing higher satisfaction with the acquired knowledge, students with higher perceived academic control also posited more favourable expectations for the future. The relevance of such expectations has been repeatedly demonstrated in the context of social cognitive theory (Bandura, 2006), indicating that these may not only facilitate future success but are also related to individuals' increased well-being and satisfaction (Cummins & Nistico, 2002).

The Relevance of Temporal Perspective for Students' Educational Outcomes

Finally, the present study revealed the relevance of one aspect of participants' temporal perspective, namely the consideration of future consequences, for their satisfaction with acquired knowledge and optimism regarding future success. Specifically, whereas the ability to disengage from the present moment predicted students' satisfaction with knowledge, a higher tendency to focus on the future was associated with higher success optimism. The general impact of these traits in the present context was expected, as it has previously been repeatedly demonstrated that temporal orientations have an essential role in individuals' cognitions, emotions, motivation, and behaviours (Frank, 1939; Gjesme, 1979; Husman & Lens, 1999; Lewin, 1935; Nuttin, 2014).

With respect to the orientation towards the present, previous studies indicate that focusing too much on the present moment may often lead to unproductive behaviours (Beal & Crockett, 2010; Joireman et al., 2001, 2008; Strathman et al., 1994a; Strathman & Joireman, 2005). Therefore, our findings indicating higher satisfaction among students who are able to sacrifice their current pleasures and wishes in order to accomplish future goals are in accordance with results showing that such individuals are more committed to learning and typically show less procrastinating behaviours during learning (Ferrari & Tice, 2000; Specter & Ferrari, 2000; Van Eerde, 2000), resulting in more favourable educational outcomes (Beal & Crockett, 2010; Kauffman & Husman, 2004; Manzi et al., 2010).

With regard to the orientation towards the future, it has been shown that individuals who are able to dissociate themselves from the present moment more often tend to show more positive motivation, as well as persistence and satisfaction from the undertaken actions than those with a stronger orientation towards the present moment (Husman & Lens, 1999; Husman & Shell, 2008; Zaleski, 1994). In the educational context, such individuals invest more efforts in learning and are better able to regulate their behaviours in order to achieve the desired academic goals (Husman & Lens, 1999; Malka & Covington, 2005; McInerney, 2004). Therefore, the results of the present study indicating that individuals who tend to focus more on the future also hold more positive expectations regarding future success were not surprising, as such individuals would be expected to prepare for tests in a timely and organised fashion given their ability to clearly define long-term goals and organise their behaviours accordingly (McInerney, 2004; Simons et al., 2004).

Limitations of the Present Study and Directions for Future Research

The interpretation of the obtained results may be influenced by several factors that can limit the generalisability of the reported findings. First, it is necessary to note the retrospective nature of this study, which was chosen because we wanted to capture the perspective of students in the self-reflection phase who had already had a chance to evaluate the results of their behaviours. However,

this procedure may introduce a recall bias (Podsakoff et al., 2003) because the retrieval process is often influenced by the respondents' current states (Bradburn et al., 1987; Linton, 1982), suggesting that future studies should implement longitudinal designs and investigate all phases of the test-taking process. In addition, several variables assessed in the present study, in particular participants' satisfaction with acquired knowledge, ease of preparing for tests, and success optimism, were based on one-item estimates associated with limited reliability and validity. Therefore, these measures should be refined and further examined in future studies. Next, the gender distribution of participants in the present study was unbalanced, reflecting the above-average representation of female students in the college majors included within this study. As previous research has demonstrated the existence of gender differences with respect to students' learning approaches and academic achievement (Anderman & Anderman, 1999; Baharudin & Zulkefly, 2009; Bodill & Roberts, 2013; Midgley & Urdan, 1995; Patrick et al., 1999; Pomerantz et al., 2002), as well as some aspects of temporal perspectives (Petrocelli, 2003; Zimbardo & Boyd, 1999; Zimbardo et al., 1997), the relevance of gender differences should be investigated with more scrutiny in future studies. Finally, these studies would benefit from further investigating the role of students' learning approaches as well as other characteristics in related aspects of their test preparation approaches and academic behaviours more generally. In doing so, it would be of great importance to focus on their objective outcomes as well as subjective beliefs regarding their accomplishments, and implement longitudinal research designs which would allow researchers to follow students as they transition from elementary to high school, and subsequently to college.

Implications for Practitioners

Practitioners, teachers and counsellors alike, often consider tests in terms of their ability to evaluate student knowledge and orient themselves primarily to test effectiveness and their outcomes. However, students' perception of the test-taking process, as well as their personal experiences related to this process should also be considered with regard to teaching across all educational levels. The results of the present study indicate differences with respect to the perception of the test-taking process among individuals who approach decision making and learning in different ways which should be considered by counsellors and teachers working with college students.

Specifically, although we may often consider student counselling centres as services dedicated to dealing with potential mental health issues (Kitzrow, 2003), it should be noted that these may also be used to promote students' more positive self-beliefs and constructive attributions in the academic domain

(Perry et al., 2005; Perry et al., 1993), similar to the way these may be malleable in other domains (Di Fabio & Kenny, 2011; Gist & Mitchell, 1992; McNatt & Judge, 2008). Comparable with this, interventions aimed at raising students' awareness of the relevance of considering future outcomes when engaging in present behaviours et al., 2014) may also be helpful in this context because this awareness should promote their timely preparation for tests. It can be speculated that better preparation would, in turn, result in higher satisfaction with the acquired knowledge and more positive expectations, which may facilitate students' preparation for future tests and result in more favourable educational outcomes as viewed by themselves as well as their teachers (McInerney, 2004).

Similarly, teachers may be advised that discussing students' experiences and perception of the test-taking process can, even without formal interventions, influence students' views and approaches to test-taking, as even small changes in attributions may sometimes result in measurable improvements within the academic context (Wilson et al., 2002). Therefore, the present findings, together with future studies addressing individual differences related to the way students approach and evaluate the test-taking process, should be considered in the context of higher education as they reveal important insights that can inform the practitioners regarding ways of aiding their students in achieving better educational outcomes.

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Boštjan Jurečič, *A Study of the Parallels between Visual Art and Music: The Big Misconception*, Cambridge Scholars Publishing: 2019; 147 pp.: ISBN 978-1527540224

Reviewed by Jurij Selan¹

Boštjan Jurečič's book is controversial and provocative! It confronts standard and well-established theories and perspectives on contemporary art by putting forward an unconventional historical parallel between visual arts and music. According to Jurečič, if it can be assumed that Rembrandt is parallel to Beethoven, Velasquez to Mozart, Manet to Debussy, then a crucial question arises: what are the parallels in contemporary music to the most renowned visual artists in postmodern and contemporary visual art, such as Warhol, Koons, and Hirst?



So, what is controversial and provocative about that? It is the fact that Jurečič compares these »high end« visual artists to pop stars like Britney Spears and Lady Gaga.

With parallels between contemporary visual art and popular music, Jurečič wants to convince us that established perceptions of contemporary visual art as something exceptional and special are like the »emperor's new clothes«. He suggests that contemporary visual art is neither what it pretends to be nor what the established theories of contemporary art want us to convince it is.

The starting point for Jurečič's analyses is the deep-rooted parallels, which imply that there is a continuity between visual art from the past, like Rembrandt and Caravaggio, with visual art in the present, like Koons and Hirst. However, Jurečič attempts to show us that such parallels are misleading and that historical parallels between music and visual arts should be made instead, to put the nature of contemporary visual art in a more appropriate perspective.

The reason that parallels between visual art and music can be more revealing lies in the distinction, which is standard in music, between serious,

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classical music and popular music. There is essentially no such distinction in visual art, since we are accustomed to thinking that all famous contemporary visual art is "art" of the high-end quality and complexity. However, in contrast, in music, not all famous contemporary music is "high end" art, but there is a clear distinction between contemporary classical music and trivial pop music.

The intention of Jurečič's book is, therefore, to analyse why and how we arrived at the point of »great confusion« about contemporary art and how the parallel between music and visual art can put contemporary visual art in the proper perspective.

So, how does Jurečič explain his idea? The book is structured into three parts: *Apparatus*, *Parallels*, and *Reflections*.

In the first part, the author introduces the sort of Hegelian »methodology« of thinking about contemporary art, which he links to the Indian concept of three Gunas. Similarly to Hegelian dialectical process, Gunas are also a »play« of thesis, antithesis, and synthesis. Such a dialectical process is based on a presumption that something is missing in the assumed thesis and antithesis; synthesis thus resolves this by providing the missing information. In relation to contemporary art, Jurečič makes such a methodological »play« based on the ordinary reactions of the everyday observer when facing contemporary art, which can be summarised by statement: »I don't understand what this is«. Jurečič asks, why contemporary art is so difficult or impossible to understand, and »plays« with this in dialectical process: Thesis: I don't understand because it exceeds the capability of my comprehension; Anti-thesis: I understand that it doesn't mean anything; Synthesis: I don't understand, because it doesn't mean anything.

Based on such a dialectical »game«, Jurečič develops his provocative and outrageous hypothesis, which he attempts to verify in the rest of the book: there is nothing to understand in contemporary art because contemporary art is trivial and – in a way – meaningless.

To exploit the trivialness of contemporary art, Jurečič focuses on historical parallels between music and visual art. The second part of the book is thus the core of the book where the author analyses historically the parallels between music in visual art, offering a wide diapason of examples. Jumping back and forth between historical epochs, from antiquity, the renaissance to modern and contemporary art, Jurečič shows the surprisingly analogous phenomena we can find in music and visual art. He does that by comparing Van Gogh to Schoenberg, Cezanne to Stravinsky, Picasso to Gershwin, Matisse to Ellington, Kandinsky to Messiaen, Duchamp to Schaeffer, Rothko to Grisey, Gnamuš to Haas, Braque to Varese, among others. Through such meticulous analyses, it

becomes increasingly obvious that when modern art progresses towards contemporaneity, visual art could no longer be compared to classical music, but parallels with popular music become more appropriate. Jurečič gradually develops such thread starting from correlations between the king of pop art Andy Warhol and the king of pop music Michael Jackson, leading him to compare Roy Lichtenstein to Madonna, Jeff Koons to Britney Spears and, finally, Damien Hirst to Lady Gaga.

In the third and final part of the book, Jurečič summarises his discoveries regarding contemporary art by stressing the "symmetries" between contemporary art and pop music, which surfaced in the second part of the book. One important symmetry worth mentioning is the following: as in popular music, for which "artists" must put incredible effort into the production and branding of their music, similarly contemporary visual artists have to make a lot of fuzz and "text" about the meaning and purpose of their work. In contemporary visual art, the work of art by itself is not enough, which is like in popular music for which only the spectacle counts. Jurečič is not optimistic that this will change any time soon, so he concludes his book with the observation and prognosis that the examples of serious and complex contemporary visual art will remain in obscurity until something changes at the level of the governing art establishment.

Jurečič's language is direct, without embellishment or political correctness. Someone may find the book tactless or even tasteless, but it is graphic and forceful. The book doesn't leave you cold – you may either love it or hate it.

As I see it, Jurečič's robust language and style come from two sources. First, he is not so much of an art theorist as he is an art critic with strong personal preference and opinion (which an art critic should have!). The book is filled with anecdotes from Jurečič own life as an art critic, art journalist and an art reporter, covering various artistic events for Radio Television Slovenia. He also wrote columns for that organisation, which were short, sharp, and to the point – and this is also reflected in the book, which is developed based on those columns. The second reason for Jurečič's uncompromising language comes from his dual role as an artist. He is not only a painter with a strong affinity to technique and material, but also has experience in classical music. So, this dual expertise motivated Jurečič to explore and make parallels between music and visual art that no one else has done before, which is what fascinates me about the book the most: the parallels Jurečič makes seem so familiar and self-evident when we are confronted with them, that I am astonished that no one else has figured them out before.

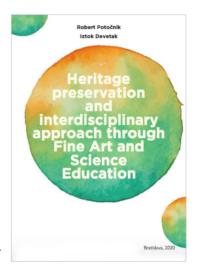
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Robert Potočnik and Iztok Devetak, *Heritage Preservation and Interdisciplinary Approach through Fine Art and Science Education*, Digit s.r.o.: 2020; 110 pp.:

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Reviewed by Matija Purkat¹

In recent years, an interdisciplinary approach through fine art and different school subjects has been gaining popularity and receiving more coverage among practitioners, teachers, authors and academics. This book offers and promotes more specialised content focused on heritage preservation. It is a monograph derived from the results of the study obtained through a project titled »Fine Art Materials and Heritage Preservation Education«. The main part of the project was the execution of three interdisciplinary workshops, focused on different educational periods of elementary school. The content of the book



is, therefore, mainly based on these workshops and their practical implications are the primary strength of the book.

The authors are Dr Robert Potočnik and Dr Iztok Devetak, both members of the Faculty of Education, University of Ljubljana. Dr Potočnik is a certified curator and assistant professor of fine art didactics at the Department of Fine Art Education. His research interests cover the areas of didactics of fine art education, attitudes to preservation and protection of cultural heritage, preservation education, and cultural heritage conservation. Dr Devetak is a professor of chemical education at the Department of Biology, Chemistry, and Home Economics and the head of the department. His research interests cover the triple nature of chemical concepts, misconceptions about chemical concepts, chemical knowledge assessment, environmental chemistry education, and scientific literacy. The presented work is the result of the authors' collaboration on the interdisciplinary approach through fine art and science education.

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The book consists of (in addition to the foreword, bibliography, and subject index) six chapters, organised according to the content: two chapters acquaint the reader with theoretical starting points, two chapters then deal with the practical contents of the interdisciplinary approach through fine art and science education, one chapter introduces the research results, and the shortest chapter summarises the ideas of the entire monograph.

In the first chapter, the term "heritage preservation education" is presented through content suitable for teaching in different educational periods of elementary school. Every subchapter is meant for a different educational period. Through paintings, sculpture, and architecture, every educational period requires a different focus. Furthermore, different cognitive activities are emphasised as specifically beneficial.

The second chapter is focused on the interdisciplinary approach. Firstly, the term is explained. Next, the interdisciplinary teaching of fine arts and science are presented, and specific characteristics of each are accentuated. Again, the fact that every educational period has its requirements on interdisciplinary teaching is stressed and presented with arguments. The last subchapter is interesting because it offers a more thorough argumentation of the interdisciplinary teaching of fine arts and science. A major part of the argumentation relies on the experience-based learning and the guideline that

[an] interdisciplinary approach [...] cannot be of high quality if Fine Art is subordinated to another school subject, (if) its objectives are not fully taken into account, if it is only used for the purpose of illustrating a specific topic or if the teacher requires only one »correct« definition of aesthetics. (Potočnik & Devetak, 2020, p. 14)

Unfortunately, the interdisciplinary approach is often mistreated: subordinated, unequal, and used for supporting other content with visually appealing information.

It is also worth emphasising that the work in this section highlights the idea that the approach does not mean simplifying or degrading the theoretical foundations of (in this case) fine arts and science, but provides a different and new perspective on both subject areas.

The third chapter presents a thorough description of each activity at a conservation and restoration workshop. It gives insight into the design and partly into the course of the workshops themselves, which were attended by students of all three age groups. This gives the reader useful insight into the design of the practical work.

The fourth chapter goes beyond the basic activities mentioned above. In this set, modules designed to be used to work with students in the classroom are briefly presented. Thematically, the modules are grouped into the following titles: Pigments and dyes, Adhesives (glues) and binders, and Paper.

The first part of the fourth chapter presents the theoretical background of the contents on colours, such as historical background about pigments, dyes, and primers. Despite the professional language, the content is presented understandably and can be a good reference point for teachers of practice, even for those who do not have in-depth knowledge of chemistry or fine arts (cf. classroom teachers). The end of the subchapter about pigments and dyes presents a set of proposed contents and concepts from science and fine arts, which are suitable for consideration in selected periods of primary school, and ends with the proposed practical contents and described work procedures.

The same concept is used in the second and third parts of this fourth chapter. This group of chapters presents the much-needed theoretical background of key concepts and concepts to the reader who comes from the professional field of teaching science and fine arts, and thus raises the quality of the practical content that the book proposes in the following chapter.

The next chapter then acquaints the reader with the results of the research, which also included the previously described workshops. In the introductory part, it is explained that in their qualitative research, the authors were interested in the attitude of stakeholders (students and curators) towards cross-curricular integration in workshops. The authors seem to have deliberately highlighted the interdisciplinary approach primarily from the perspective of the experts and less from the perspective of the students participating. This perspective is even more important because it is the opinion of the profession that plays a critical role in planning and implementing quality learning activities in science and fine arts lessons on the one hand and thus raising the quality of the included content on the other. Specifically, teachers are the key factors for introducing changes in teaching.

Works that are based on an interdisciplinary approach in theoretical starting points, practical contents, or further guidelines are subjects of great interest nowadays. It should be noted that increasing emphasis is placed on the participation of experts from various fields and disciplines and the quality exchange of verifiable information. It is also observed that practising teachers are looking for innovative teaching models with a desire to introduce improvements in teaching.

The book is interesting because it offers a quality insight not only into the theoretical starting points of the project but also into the argumentation of the approach and aspects of the implementation of the teaching model in practical work. Although the authors emphasise the inclusion of the contents of fine arts and science concerning the preservation of cultural heritage, the chapters are sufficiently rich with information to allow consideration of other contents of both subject areas. Nevertheless, it must be acknowledged that the field of cultural heritage preservation deserves a special place in education, as such content is unfortunately too often beyond the interest and understanding of teachers and students of different ages of primary school. To avoid such important content not being included in the realisation of an individual subject, teachers can also draw ideas from this work and thus ensure the appropriate treatment of the content, which with their potential enable interdisciplinary treatment and thus the usefulness of knowledge that students acquire at the same time.

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