Methodological aspects of the implementation of Printmaking in Pre-school, Primary and Secondary education

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Abstract Printmaking, with its technical complexity, has often been neglected in educational praxis, even though it is a discipline which contributes significantly in the developing of children’s creativity. In this work, alternative, non-toxic printmaking techniques have been presented and they are adapted to school conditions and age abilities of children. Art teacher needs to be adequately trained so he could make this art medium closer to children. Initial education teachers get at faculties has an important role in empowering their vocational competences, but a significant place in that process may also take specialized programs of professional training which leads to achieving specific knowledge and skills in printmaking. With suitable education and implementation of modern methodological aspects, teachers have an opportunity to introduce children to values of printmaking and have affirmative effect on the development of children’s art expression.

Keywords: Children’s art expression; art education; printmaking; adaptable printmaking techniques; art teacher.

[es] Aspectos metodológicos de la implementación del grabado en educación preescolar, primaria y secundaria

Resumen. El grabado, con su complejidad técnica, a menudo se ha descuidado en la práctica educativa, aunque es una disciplina que contribuye significativamente al desarrollo de la creatividad de los niños. En este trabajo, se han presentado técnicas alternativas del grabado no tóxico, que se adaptan a las condiciones escolares y a las capacidades de los niños según la edad. El maestro de arte debe estar adecuadamente capacitado para poder acercar este medio artístico a los niños. La educación inicial que reciben los docentes en las facultades desempeña un papel importante en la mejora de sus competencias profesionales, pero los programas especializados de formación profesional también pueden ocupar un lugar importante en este proceso, que tiene como objetivo adquirir conocimientos y habilidades específicas en el campo del grabado. Con una educación adecuada y la implementación de los aspectos metodológicos modernos, los maestros tienen la oportunidad de presentar a los niños los valores del grabado y tienen un efecto positivo en el desarrollo de la expresión artística de los niños.

Palabras clave: expresión artística infantil, educación artística, grabado, técnicas de grabado adaptables, profesor de arte.

Sumario: 1. The role of techniques and materials in achieving goals in art education. 2. About printmaking. 3. The importance of printmaking in art education. 4. Teacher’s role in the process of making children’s prints. 5. Conclusion. References.

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1. The role of techniques and materials in achieving goals in art education

An integrated approach encompassing all dimensions of educating is essential in order to enable the development of the creative potentials of children and young people as a resource for a democratically-oriented society. Art as a school subject is a field which provides exceptional opportunities for the development of creativity, individuality and identity through planned and gradual introduction of children to the world of creativity and art. Continued art education and personality development process happens through art-related activities in pre-school institutions and art subjects in schools.

The significance of art education was recognised by the scientific and professional public a long time ago (Read 1958, Piaget 1968, Vygotsky 1983, Gardner 1982, Parsons 1987, etc.). Different aspects and values are in the forefront: acquiring sensory experiences and the development of perception, the development of motor skills, the development of intellectual functions as well as the social and emotional development and nurturing affinity towards the visually beautiful (Kamenov, Kastori-Stanojević, Panteleyeva 1987: 23-35); establishing an objective relationship towards work and results (Kastori-Stanojević 1984); development of creative potentials in terms of the emancipation of a child’s personality (Karlavaris, Barat, Kamenov 1988); creating artistic interests which have an impact on the formation of the identity, use of free time, development of cultural needs, creative behaviour and the lifestyle in general (Gajić 1999).

Current research also confirms the aforesaid. According to Freedman, in the current educational context, art has a prominent social perspective since it can affect a student’s view of the world, as well as their active participation and the enrichment of the student’s social life and as such it requires changes in the curriculum, introduction of collaboration methods and action within the social environment (2015). In dealing with the role and the status of creativity and art in primary schools, the INTO (Irish National Teachers’ Organisation) highlight that the education in this field is essential, that it contributes to greater goals, i.e. development of creativity in a society and that the teachers have the crucial roles in developing young minds through the research approach. Teaching art has a twofold benefit: it enables the child to be actively creative and it enables the development of competences in the field of aesthetics as a “recipient” of art and as such it requires continuous improvement and support of the education system (2009). The NAEA Research Commission recognised that visual art in education is constantly expanding and that its impact is constantly growing. The Commission has been conducting research and creating an education agenda for the 21st century in the field of visual arts in the USA since the end of the 20th century (1996). Research in the modern educational context demonstrate the significance of this field in the development of the thinking process (Perkins 1994), development of learning in other school disciplines (Yenawine 2013) as well as achieving academic success (Gibson, Larson 2007).
Development of art pedagogy, as well as the objectives of art education in general, depends on the development of the pedagogical thought, the social context and trends in art. Consequently, several phases and concepts may be differentiated. The current humanities-oriented conception of art education is based on the modern methodological approach which finds its stronghold in cognitive development theories. It is characterised by the focus on the creative process and the communication role of creativity, with the purpose of developing a child’s creative potentials as conditions for the development of the personal identity and forming of active members in a democratic society.

Art education reaches its full value when it is planned and implemented appropriately into the educational system in form of artistic activities in pre-school education and teaching art in schools (Vojvodić 2018). It is crucial that artistic activities implemented on different levels are organised systematically and in affirmative conditions with clearly defined objectives aimed at a child’s development. Adequate organisation implies a planned introduction of children into the creative and artistic world through practical, creative work and learning about art i.e. contents from art theory, art history and technology of art materials (Filipović 2011:17).

Knowing the characteristics and the manner of use for different techniques and materials is one of the conditions for artistic expression. Children can use a large number of techniques and materials for artistic expression; however, it is important that their use pertains to the function of expressing ideas and feelings (Kamenov, Kastori-Stanojević, Panteleyeva 1987: 207-208). Even though certain dexterity with tools and materials is required, their main role is to facilitate the creative process for children, to enable them to express their thoughts and desires freely and without restrictions (Vojvodić 2018). Acquiring skills should not be the purpose in itself so as to suppress the creative process and the feeling of play.

While choosing art techniques and materials for working with children, the teacher must take into account different requirements. Even though the choice must be in accordance with the curriculum, it must also take into account the concrete needs of the children with whom the contents of the curriculum is implemented. It is important that the teacher consider their needs, both in terms of their age and individual capabilities and needs in relation to this particular area. The teacher should also take into account their potentials and inclinations. It is also important to introduce the children to different artistic areas while keeping in mind that it should be done gradually and methodically as a great number of different materials may appear confusing and lead to superficiality in use. The child must have enough time to know the new material and research their own expressive potentials in order to satisfy the need to create something new and develop a whole new array of precious emotions (Karlavaris, Kelbli, Kastori-Stanojević 1986). Frequent changes in tasks hinder the child from having an in-depth inspection of the visual characteristic of a specific medium (Arnhajm 1998).

2. About printmaking

One artistic discipline in art education, which offers a lot of different opportunities, is printmaking. As an artistic discipline, printmaking implies work in several phases
– starting from the idea, followed by sketches and finally making plates and printing the final print.

For a long time printmaking was not considered as an art form, rather a medium of communication and form of serial reproduction. In the 16th century, Albrecht Dürer made a turning point in the history of European printmaking, elevating it to the level of an independent art form. From that time printmaking provided new opportunities for artists to explore their own ideas and interests. Printmaking techniques became the preferred medium of painters and artist-printmakers such as Rembrandt, Piranesi, Blake and later in the first half of the twentieth century artists such as Matisse, Munch, Picasso, Miro, Beckmann and others continued to use printmaking as a mean of artistic expression for its unique visual qualities.

Nowadays, we understand with clarity the difference between printmaking as a tool for reproducing images and printmaking as mean of original artistic creation (García 2013). Original printmaking involves all technical acts of multiplication of drawings and images with matrix. Still, multiplication by itself is not its main goal – it represents one of many individual means of artistic expression which equally stands with all other ones (Hozo 1988). Likewise other artistic media, printmaking is used to express ideas, fears, passion, desires and feelings in a visible aspect intending to be shared with others (Nojs 2009). With multioriginality which characterizes, maintains its emphasized communicability – printmaking is a medium for spreading visual messages and dissemination of ideas. Since it possesses numerous specificities, printmaking often presents a special inspirational challenge for artists.

Printmaking is a language of forms, of lines, textures and reliefs in which the artist expresses himself, with its powerful graphic gestures and essential simplicity. The wealth of materials and processes, and their wide range of effects, make printmaking unique in the field of art. As new images inspire the artists to discover fresh ways and means of expressing them, the field is in constant state of renewal, full of experiment and innovation (Reddy 1997). With openness for different concepts, transformations and multidisciplinary approaches, printmaking can efficiently be repositioned in the contest of contemporary art and affect other forms of expression (Calle 2015).

Apart from drawing and painting, printmaking matrix “remembers” the whole working process, that is all that has previously been done and modified on it, and which stays noted on proof prints. Matrix testifies on the skill and hard work of artist, which creates in a dialogue between tools and materials. Artist’s handwriting is designated by the tools he/she uses – from chisel which is used for making expression on linoleum or wooden blocks, over fine engraving tools for dry needle printing, to colour tones got by a chemical reaction.

Printmaking has accepted the development of technologies and contemporary printmaking artists have an access to both, the latest and traditional techniques for manually made prints. There are artists who, in combination of these two approaches, in confronting of traditional techniques and new technologies, find means for art expression. This sort of combining and digression from established printmaking rules can be the way to individualization of art expression. Precisely in this experimental approach, artists analyze and transform established printmaking norms and find solutions which would fully express their ideas. Some of these changes are to be seen on prints which become bigger and encroach standard aspect ratios, come out in space and become a sort of a sculpture. Also, there are prints which are done with
combination of completely different techniques or on unusual materials like glass, leather, metal and plastic.

It is of paramount importance for the artists to explore the materials and get closer to them. The closer one gets to the material – the more one learns on their nature, their behaviour and their interactions - the more pliable they become to one’s senses. This journey into the deeper sources of materials should heighten our sensibilities and deepen our understandings, essential in creating a vital work of art (Reddy 1997).

3. The importance of printmaking in art education

While making prints, children can be introduced to the artistic discipline which has a long tradition and an important communication role in copying and transferring words and images. Children can get acquainted with cultural heritage – with old masters like Dürer, Rembrandt, Goya and Piranesi who made a great contribution to development of printmaking, but also with many modern and contemporary artists who brought new approaches to this discipline. They can be introduced to the characteristics of printmaking as an art medium, the origins and development of printmaking, types of print as well as the types of adapted printmaking techniques which represent a simulation of classic printmaking techniques and which can be done with children. The production process of the printmaking depends on the technical performance and technological processes and requires certain strategies for the cognitive solution in order to achieve the artistic intentions, which makes work in the field of printmaking complex and multi-layered. The processes involved in working a plate and making a print from it are pathways of learning and discovery. Recognition that the image is shaped by material process brings clarity, humility, and a sense of participation in the act of composition to the artist (Reddy 1997). Printmaking, maybe even more than other disciplines, requires more to be said about the process and techniques since they have to be in synchronisation with the artistic intention and artistic contents of the artwork (Sredanović 2010: 101). However, the techniques and the production process should not be considered to be more important than the creative process, so coincidences which happen during this process may lead to unexpected discoveries (Sredanović 2009:98).

Due to the aforementioned complexity of the printmaking medium the children are only introduced to the elements of printmaking in art classes. Only those printmaking techniques which can be adapted to conditions in schools and which are safe for the health of the children can be selected. The simplest printing processes are most commonly used i.e. imprinting different objects on a surface, frottage i.e. rubbing objects of different structure, cardboard printing, monotyping and linocut. The demands for the production of complex matrices and printing procedures grow with age.

As any other art discipline, printmaking has its own specifics and advantages which can be used in the educational process in more manners. Printmaking is crucial in art education for a number of reasons, out of which the following are especially highlighted:
It contributes to the development of cognitive thinking in children – the creation of prints represents a more complex, rounded process which has several connected phases which also require both convergent and divergent thinking;

It contributes to the development of observation and perception – the creation of a print enables direct tactile experience of the material and the development of senses;

It contributes to the development of persistence and consistency – the creation of the prints demands that the entire process be respected from the beginning to the end which provides for a unique experience;

It contributes to the development of concentration – numerous phases in the creation of prints require the children to be focused and centred both on the creative process and on manual labour;

It contributes to the development of team spirit and cooperation – in applying colour, putting paper and during the printing process itself the children can be divided in groups, they cooperate and help each other, but they can also create joint prints by printing individual plates on a bigger surface.

However, even though the contributions of the printmaking medium to the development of the artistic expression are significant, it more often remains neglected in the existing educational practice. In addition to the complexity of the mechanical processes, another prejudice is that in order to create a print one needs expensive, impractical equipment, as well as that teachers do not have an excess of knowledge in this field (Andrews 1964). By taking into account the aforesaid, it is necessary find answers to several questions: How to place a child’s drawing characterised by freedom and unrestricted expression, into the framework of a clearly defined art discipline such as printmaking? How to get children to participate in a long and complex process which requires them to be persistent in their efforts?

However, it is precisely these specific processes which require complex solutions that make them even more motivating. In addition, since children have the opportunity to see how their idea and sketch become the final print, it can represent an incentive for them. Introducing printmaking techniques and material requires intellectual and emotional engagement from children, which also has an educational benefit – it awakens their curiosity, it incites them to think and experiment. By handling tools and materials seen for the first time, a child may incur difficulties which resolutions demand different strategies and research approach. In these situations, the assistance of the teacher must be there, however it cannot take the form of intervention or imposing. In addition to the aforesaid, printmaking requires patience, persistence and the ability to predict the final goal which in turn helps the cognitive development of the child (Karlavaris, Berce-Golob 1991). Creating prints can be stimulating if it is organised as part of workshops which enable mutual communication and thus contribute to the development of socialisation and respect of differences. This also cultivates the social and emotional sphere of personality in both children and young people. The workshops must be designed in a manner which enables active participation of all participants and the requirements must be set in a way which would stimulate the progress of all individuals.

However, it is not only the complexity of the processes that makes the application of the printmaking medium difficult in the educational process. The largest number
of traditional printmaking techniques does not meet the safety standards which have to be fulfilled in the context of the school’s facilities so as not to endanger children’s health and the environment. For the last 30 years awareness of these traditional hazard techniques has been growing. Around the world, artists, printers and manufacturers have been busily creating new ways to produce old effects, applying new technologies to old problems, inventing their own recipes and methodologies (Kent 2012). With the development of the environmental awareness in the broadest sense, significant developments were made in several educational programmes devoted to the studying of printmaking which are based on the non-toxic modern approach discussed in more detail by Sabour in his papers. These programmes offer a wide range of different technical and technological solutions as alternatives for traditional printmaking techniques. The concept of non-toxic graphic art techniques was initially introduced in 1972 by the Australian artists Dan Welden who started using photopolymer plates instead of metal ones. This started a revolution in printmaking. What makes these alternative non-toxic techniques even more precious is the fact that they are easily available and that they leave a lot of room for experimentation (2017). Even though the greatest numbers of the alternatives available are primarily used in institutions which educate future artists, some of them can be used when working with children. Some of those no-toxic engraving techniques are suitable even for work with adolescent and children of different age with physical and intellectual disabilities (Albar, Martínez 2012).

There are three printmaking techniques which were adapted so as to be child-friendly and are quite suitable for work with children of all ages. These techniques meet all the safety conditions and do not require expensive equipment, thus allowing for a research approach to resolving different art problems. They could be done in conditions when there is no printmaking studio and the printmaking process could be done manually with - a spoon, ladle (wooden spoon) or handprint barens. The first one is the white-line print which can primarily be used as a relief print technique – making incisions on a clean milk carton with a pen, which are not saturated with colour once the roller with the dye is applied over it (Figure 1). This technique allows for direct drawing on the print plate, without any sketches, which in turn safeguards the unrestricted nature of a child’s drawing and it allows for the option to make simple corrections such as cutting and removing part of the plate (Figure 2). It is suitable for the purposes of research of the linear drawing as well as for raising awareness on the importance of recycling in order to protect the environment. This technique presents a replacement for linocut technique, it is simple to perform, there are no unsafe carving knives involved, so it is handy for working with the youngest.
The second technique is the *cardboard print* which is used in schools as a primary relief printing technique as well – adequate materials are cut and glued on a cardboard surface and their textures provide different effects after printing. For gluing of textures, ribbed cardboard and plastic packings, ropes and nets can be used, but it is important to pay attention to glue these used materials in low relief (Figure 3). With using of different recycling materials, this technique helps promotion of environmental consciousness. Surprise factor and coincidence that collagraphy offers, makes this technique recommendable for development of imagination and creativity, as well as breaking rigidity, solving problems of motivation lack and prejudice which lead young people to think they cannot draw (Aguilar Moreno...
This technique provides variations in printing but also allows for group work on a joint print, thus fostering the team spirit and cooperation. It is recommended in problem-solving tasks which pertain to form and texture, as well as for constructing different compositional solutions by assembling and fitting different forms (Figure 4). Finished matrices with paint applied, own specific artistry so they can be presented as objects, that is, sole art products independent from printing proofs.

Figura 3. Matrixes prepared for Cardboard print technique. Different materials are cut and glued on a cardboard surface and their textures provide different effects on paper (Photograph by the author).

Figura 4. Printing cardboard matrixes on bigger paper and creating a group work, thus fostering the team spirit (Photograph by the author).
The third one is the kitchen lithography – aluminium foil is used as a canvas for the drawing. The drawing is done with oil pastels and the greased hydrophobic areas printed (Figure 5). By using this technique, children can explore rhythm and construct surfaces with different artistic values but also learn about chemical properties of materials with which they work (Figure 6). It is characterised by the opportunity to experiment due to accidental “mistakes” which are common, but which provide a certain challenge and charm. Technique of kitchen lithography demands concentration and skill and therefore it is recommended for work with older children. If it is done with younger children, teacher’s assistance is necessary, especially during the application of paint.

Figura 5. Process of drawing with oil crayons on the plate which is wrapped in aluminium foil, so the greased hydrophobic areas are printed on the proof (Photograph by the author).

Figura 6. An imprint realized in Kitchen lithography technique, Girl, 10 years, (Photograph by the author).
It is recommendable for every child to make at least two imprints so one could get an idea on possible multiplication of prints. Children can print more than one imprint and exchange it among themselves which helps them develop precious virtues and friendly relations. Children are usually very interested in the printing process, so after demonstration they should be involved in this process as much as possible. Beside this, every child should get the chance to try oneself out in all the phases that make the process of creating imprints. Considering the mentioned techniques, children are introduced to the facts on printmaking as new art area in a fast and simple manner and they relate this knowledge to other art disciplines they had met earlier. They easily learn new concepts such as printing, imprint, matrix and they are able to verbalize the manner of printmaking process. These techniques allow children to use new knowledge in a new and unusual way by combining materials and exploring their art values. However, to achieve these outcomes, children must be „involved“ in the whole process through conversation and rich visual motivation which is added to their previous experience.

4. Teacher`s role in the process of making children`s prints

Teacher is important factor of success in achieving art teaching objectives, among which is to enable children for art expression by different art techniques and materials, and all in function of developing their creative and general potentials. Teacher`s competences, attitudes and acts have a huge impact on conditions in the classroom and whether they will be proper for children`s creative expression. Art teacher has an obligation to help development of consciousness and interests of children for the world around them which make them active and integrated members of society.

A methodically well-designed teaching process is crucial for achieving these complex goals and tasks. Methodical preparation for printmaking activities involves few elements which need to be carefully prepared by a teacher before entering a classroom. According to the curriculum, the teacher determines: drawing motif, educational goals and learning outcomes, teaching methods, printmaking technique, tools and materials etc. Considering rules of time management, teacher also defines introductory, practical and closing activities. Introductory activities include psychological preparation and motivation of children through conversation and numerous visual examples. During practical activities every step should be properly planned – after drawing scathes and preparing the print plate, children can apply color and print in groups in adequately organized space. The teacher should also prepare some open questions or didactic games for evaluation of artistic process and products during closing activities. In the following text, we will explain in more detail some specific elements of methodical preparation.

One of conditions a teacher should maintain are suitable tools and materials which would be stimulating for children and give them various experience. In order to make adequate choice, it is very important for the teacher to know features and manners of using the tools, art techniques and materials according to art areas and children`s age. So, a teacher needs to be familiar with a wide specter of different techniques and materials, and also methodological aspects of their application in working with children. The role of the teacher in the process of making prints is significant – the teacher should have hands-on experience in making plates and printing and to be
able to organise artistic activities pertaining to printmaking in an adequate manner. While organising the activity it is important for the teacher to choose the right printmaking technique for the task and problem of the artistic activity, to adapt the chosen printmaking technique to the working conditions and the spatial capacities. The teacher should also provide safe working conditions for printmaking. The adequate choice of materials will spark the child’s interest for this medium, it will motivate them to do research and allow for successful expression. It is important that the teacher be informed about the particularities of classic printmaking techniques and materials as well as to independently research on alternative methods for the inclusion of printmaking in teaching activities. However, above all the teacher must be aware of their own role in introducing children and young people to the cultural heritage of printmaking through independent artistic expression.

During adaptation of printmaking techniques, children’s age possibilities, individual abilities and this field preferences must be taken into consideration. This implies to the fact that a teacher is familiar to specificities of using art materials according to age, so that elements of printmaking are implemented systematically and gradually. Some techniques and materials leave a lot of space for experimenting, while other require procedures which need to be adapted to a child’s age. Nevertheless, it is important to keep the spirit of the game while accepting these rules. In a period from 2 to 4, when a child collects kinetic experience, it should be let do printmaking of the simplest level by printing hands soaked with liquid paint. At the age from 4 and 6, children realize expressive strength of lines and colored surface, so they can meet the simplest elements of printmaking. From 6 to 12 handling more complex printmaking materials skills are developed gradually and at their usage it is important to put an accent on research process and avoid highly-structured models. At the age of 12 to 14 manual skills are well developed so children may try out in more complex printmaking techniques. At this age interests in decorative motives are highly increased, so printmaking medium can be used in creating one’s own design. After the age of 14 young people are, without any help, ready to realize very complex art tasks in printmaking medium. Experimental approach is often familiar to them, so a teacher can direct them into research of digital print to find the way to express their individuality.

The analysis and evaluation of the printmaking process and the resulting prints is an integral part of the educational practice implementing the printmaking medium. If it is done in accordance with principles of the modern concept of art teaching, the evaluation of the achieved results helps to improve the work of both children and teachers. While evaluating children’s artworks in general, it is important to put focus on the creative process first, and not on the resulting products (Kamenov, Kastori-Stanojević, Panteleyeva 1987: 225-227). Thus, the evaluation criteria should not only pertain to aesthetics. The teacher should also keep in mind the fulfilment of the educational tasks, motives, efforts, satisfaction while working as well as the personal needs of the child. Each child is its own person, so it is desirable to monitor their personal improvement and not adhere to the prescribed criteria which may appear strange and out of place. A good artwork shall imply any artwork which reflects positive developmental tendencies, reveals the artistic sensitivity of the child and successfully coordinates all the components in the creative process, showing a clear absence of negative influences such as imitation, kitsch, copying or tracing (Karlavaris 2007:12).
However, by keeping in mind the specificity of the printmaking medium, it is important to put focus on a few other aspects of the analysis. In evaluating prints made by children the focus should not be put solely on the technical dexterity or tidiness which characterise printmaking. Printmaking technique and principles should not outweigh the point – that the creation process, fluency in thinking, unusual ideas and expressiveness are issues to be evaluated primarily.

Miller (2015) provides specific criteria for the evaluation of artistic activities pertaining to printmaking. According to her, the following should be highly evaluated:

- creativity, originality and idea – the print provides an artistic approach, encourages children to experiment and try different strategies in resolving problems, making these elements particularly important for the evaluation of the children’s artworks;
- organisation – implementation of printmaking workshops requires developed organisational potentials and self-discipline of children. The possibility to make several printworks makes organising exhibitions and entering competitions easier, which allows for the greater inclusion of children;
- personal relations and communication – the printmaking process requires teamwork and the development of communication abilities, making these aspects also noteworthy for evaluation (how a child accepts the ideas of their friends form their class or group, does the child cooperate with them…);
- joint reflections and analysis – special attention should be paid to the joint evaluation of the entire process, however, the process of creation should also be analysed since printmaking enables “pausing” and “saving” in all phases of work, as well as several variations.

In order for this analysis to be efficient, functional and affirmative, the children must be free to express their opinions and feelings, but also to ask and receive feedback i.e. they must be included as equal partners.

5. Conclusion

We can witness that the holistic approach pertaining to fostering and development of creativity and creation as an immanent human need is not present in the current educational practice and that the creative potentials are mostly fostered during artistic activities i.e. during art classes.

Visual thinking cannot be constrained to an atelier; it can survive only if it is not simplified and buried in other subjects (Arnhajm 1998: 176). Aesthetic education must become an integral part of the educational process, and that is possible if the scientific-conceptual, subject-matter and practical and aesthetic approaches to reality are combined within different contents (Mitrović 1982). The school should be “one of the most important mediators between artistic creation and its perception, understanding, experiencing, evaluating and creating” since it can develop the culture of aesthetics and shape the artistic awareness in young people (Gajić 1999:95).

Although creativity cannot be “expected” or “asked” from children, different elements of the modern educational practices, the principles behind the fostering of children’s artworks as well as the procedures implemented by teachers in art
education may be motivating to foster and nurture the creativity in children and young people. Due to diverse opportunities it provides, which were described in more detail in the previous pages, printmaking could hold an important place in this complex process. A plethora of experiences in printmaking offers a foundation for the development of aesthetic values. Consequently, the modification which would provide an opportunity for these experiences should be an imperative (Andrews 1964). If we want to preserve an unrestricted expression of child’s drawing, we need to simplify the technical performance of printmaking. Only if the child is not covered by specific frameworks of printmaking, he/she will be able to draw freely and without boundaries. It is possible for children to be involved in such a long and complex process, but only if the printmaking activity is methodological well planned and organised.

A teacher needs to have common methodical competences and a set of specific competences in the area of printmaking so one could do mentioned modifications and develop children’s printmaking expression. Teacher’s competences are achieved during initial education at universities, but these specific types of knowledge usually require additional vocational training. Programs of vocational training of art teachers should contribute the quality of practical pedagogical work, could be organized by different institutions of formal and informal education. Programs promoting printmaking in the field of pedagogies are precious, but not enough used in actual praxis. Therefore, organizing of these profiling programs of vocational training is imperative if we want adequately educated teachers to transfer their knowledge on printmaking to new generations. In long lasting terms, seminars and workshops dedicated to printmaking not only do they help its popularization among teachers, but develop love and interest of the young for the charms and values of this slightly forgotten art medium.

Referencias

Aguilar Moreno, M. (2010). La educación ambiental a través del collagraph: propuesta dirigida a la enseñanza del grabado en la Educación Secundaria Obligatoria. Arte, Individuo Y Sociedad, 22(1), 49 - 58.
Albar, J. & Martínez, A. (2012). Engraving workshops with no toxic techniques for disabled adolescent and children. Arte, Individuo Y Sociedad, 23 (Esp.), 69-75. doi:10.5209/rev_ARIS.2011.v23.36744
Andrews, M. F. (1964). The Art of Creative Printmaking, Art Education, 17:4, 23- 25.
Arnhajm, R. (1998). Umetnost i vizuelno opažanje (Psihologija stvaralačkog gledanja). Beograd: Univerzitet umetnosti u Beogradu, Studentski kulturni centar
Calle, R. (2015). En favor de una práctica reflexiva. en En torno al grabado: La estampa y su práctica reflexiva. Juan Carlos Ramos Guadix. Granada: Entorno Gráfico, 15-21.
Filipović, S. (2011). Metodika likovnog vaspitanja i obrazovanja. Beograd: Univerzitet umetnosti u Beogradu, Izdavačka kuća Klettd.o.o.
Freedman, K. (2015). Social Perspectives on Art Education in the U.S.: Teaching Visual Culture in a Democracy. Studies in Art Education. 41:4, 314-329
Gajić, O. D. (1999). Umetnost – moja izabrana stvarnost. Novi Sad: Savez pedagoških društava Vojvodine
Gardner, H. (1982). *Art, Mind, and Brain: A Cognitive Approach to Creativity*. New York: Basic Books

Gibson, M. & Larson, M. (2007). *Visual Arts and Academic Achievement*. *Journal for Learning through the Arts*, 3 (1)

Hozo, D. (1988). *Umjetnost multioriginala: kultura grafičkog lista*. Mostar: Prva književna komuna

INTO (2009). *Creativity and the Arts in the Primary School. Discussion Document and Proceedings of the Consultative Conference on Education 2009*. преузето са https://www.into.ie/ROI/Publications/CreativityArtsinthePS.pdf, очитано 5.5.2018.

Kamenov, E., Stanojević-Kastori, M. & Pantelejeva, L. V. (1987). Likovno oblikovanje u dečjim vrtićima SFRJ i SSSR. Beograd: Zavod za udžbenike i nastavna sredstva

Karlavaris, B. (2007). *Fenomen dečijeg crteža*. Novi Sad: Vojvodanska akademija nauka i umetnosti, ITP “Zmaj”

Karlavaris, B. & Berce-Golob, H. (1991). *Likovna vzgoja : priročnik za učitelje razrednega pouka*. Ljubljana: Državna založba Slovenije.

Karlavaris, B., Barat, A. & Kamenov, E. (1988).*Razvoj kreativnosti u funkciji emancipacije ličnosti putem likovnog vaspitanja*. Beograd: Institut za pedagoška istraživanja

Karlavaris, B., Kellblj & J., Stanojević-Kastori, M. (1986). *Metodika likovnog vaspitanja predškolske dece za IV godinu pedagoške akademije*. Beograd: Zavod za udžbenike i nastavna sredstva

Kastori-Stanojević, M. (1984). *Papir-plastika u igri vašeg deteta*. Gornji Milanovac: Dečje novine

Kent, J. (2012), *Printmaking Revolution: New Advancements in Technology, Safety and Sustainability*. *Art in Print*, Vol.2, No.2, 49-50.

Miller, M. (2015). *Drucken ohne Presse: Kunst und Unterricht*, Nr. 391/392

Mínguez, G. H. (2013). *Copy “versus” original - multiple. A dialogic relationship in the reproducible graphic art*. *Arte, Individuo Y Sociedad*, 25(1), 77-93. doi:10.5209/rev_ARIS.2013.v25.n1.41165

Mitrović, D. (1982). *Savremeni problemi estetskog vaspitanja*. Beograd: Zavod za izdavanje udžbenika Socijalističke Republike Srbije

NAEA Commission on Research in Art Education & National Art Education Association. (1996). *Creating a visual arts education research agenda towards the 21st Century*. преузето са https://trove.nla.gov.au/work/35698956, очитано 10.5.2018.

Nojs, R. (2009). *Grafika na ivici*. Beograd: Galerija Grafički kolektiv

Parsons, M. (1987).*How We Understand Art: A Cognitive Developmental Account of Aesthetic Experience*. New York: Cambridge University Press

Perkins, D. N. (1994). *The Intelligent Eye – Learn to think by looking Art*. Santa Monica: The Getty Center for Education in the Arts

Pijaže, Ž. (1968). *Psihologija inteligencije*, Beograd: Nolit

Read, H. (1958). *Education through Art*. London: Faber and Faber

Reddy, N. K. (1997). *Intaglio Simultaneous Color Printmaking: Significance of Materials and Processes*. SUNY Press

Sabour, W. A. (2017). *The Non- Toxic Contemporary Approach to Teaching Printmaking Art*. *Arts and Design Studies*. Vol.58, 52-55. преузето са https://www.iiste.org/Journals/index.php/ADS/article/viewFile/39053/40161, очитано 16.2.2019.

Sredanović, J. (2010). Izlaganje na simpozijumu o savremenoj grafici: Između istoka i zapada do fotografike. Novi Sad: Akademija umetnosti
Sredanović, J. (2010). Izlaganje na međunarodnom simpozijumu: Grafika na ivici – Grafika i njena granična područja u 21. veku, Beograd: Grafički kolektiv

Vigotski, L. S. (1983). Mišljenje i govor. Beograd: Nolit

Vojvodić, M. (2018). Kompetencije nastavnika kao faktor razvoja likovnog stvaralaštva učenika osnovnoškolskog uzrasta, doktorska disertacija odbranjena na Filozofskom fakultetu, Univerziteta u Novom Sadu

Yenawine, P. (2013). Visual Thinking Strategies: Using Art to Deeper Learning Across School Disciplines. Cambridge: Harvard Education Press