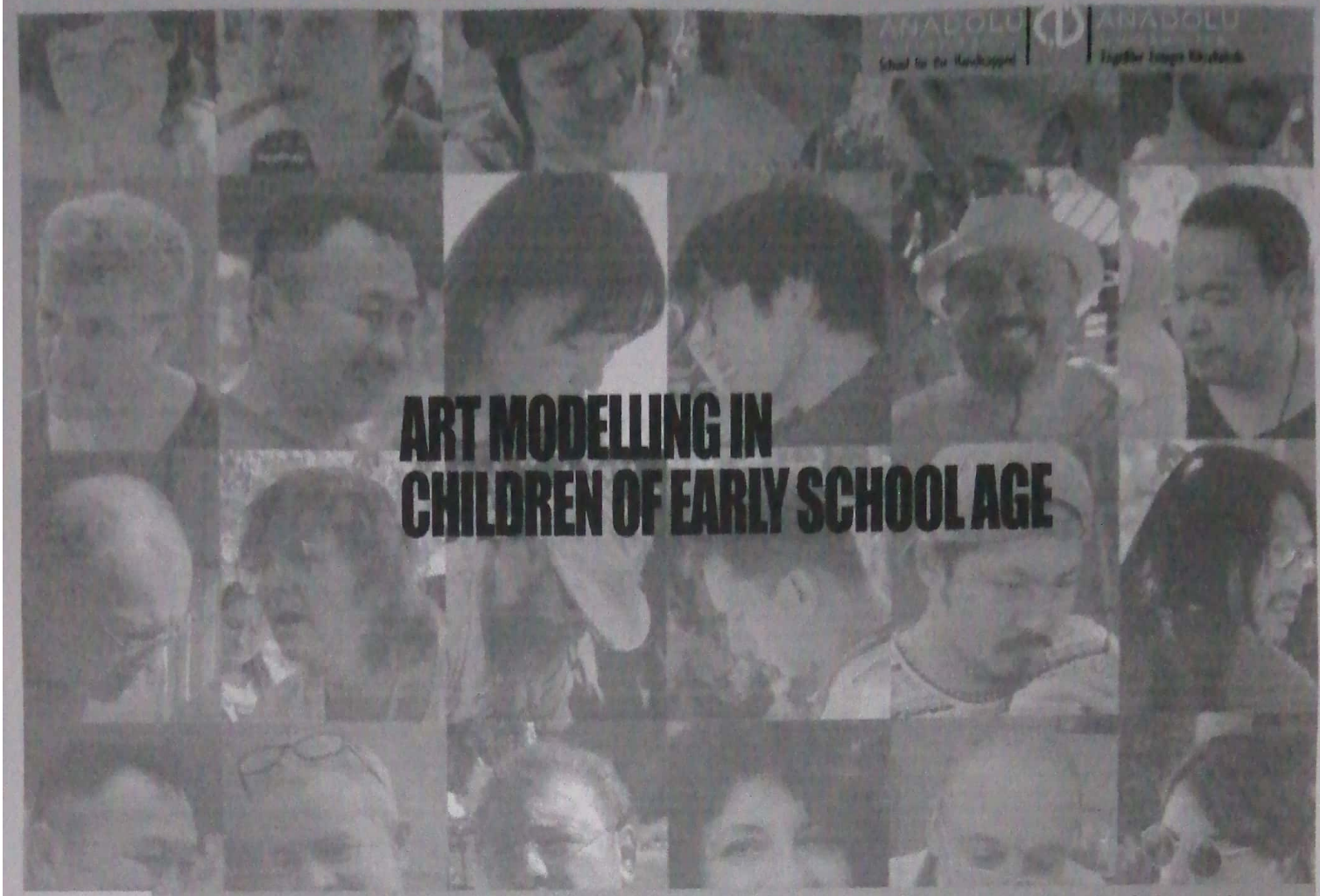

ART MODELLING IN CHILDREN OF EARLY SCHOOL AGE

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ABSTRACT

Art modeling has actual volume features and holds a traditional, episodic place in art education in pre-school and primary education od children. As such, it was the main subject of interest in this research.

The research included analysis of artworks with human figure as a theme, made by children and students of 5, 8 and 10 years of age, in terms of complexity, symmetry, balance, size, movement, and understanding of gender differences. As a specific group, the group of 10-year olds was selected, in order to assess the differences of the abilities in art modeling of the human figure in children of the same age and different gender. For this research, a descriptive - explicative method was applied, using the techniques of participatory observation, collecting and analysis of children's / pupils artworks. This paper presents the theoretical knowledge of modeling, combined with the results of the conducted empirical research. Recommendations for improvement in this area are also presented.

Keywords: Art modeling, Three-dimensional representation, Children, Artistic development, Human figure.

Introduction

The contemporary educational process in preschool and elementary school through the discipline of fine arts education, enables acquisition of emotionaly driven aesthetic relation of the child's personality to the objects, events and processes that origin from the surrounding activities, but also relations to the expressive art. By increasing the general educational, artistic and intellectual abilities, that is, by learning fine arts, a space is provided for the divergence of children's creative abilities.

Art education curricula cover many art sub-disciplines, with art modelling being one of them. Art modeling is characterized by actual volume and holds traditionaly an episodic place in art education in preschool and elementary education.

The methodological foundations of the artistic modeling activity, as well as its place in the system of children's art education are linked to a great degree of mastery of space and artistic experience. The development of shaping, modeling unconditionally coincides with solving the problem of defining expression in one's own way in space.

The inclusion of plastic expression in preschool and primary education is a complex process. The complexity stems from the age and the individual artistic expression abilities of children, which often results in incidental inclusion of modeling in everyday education practice. Modeling as part of the educational process and the pedagogical matter faces a number of challenges. Among them, there is the issue of representation in the process of art education; teaching staff competences, spatial requirements for the realization of the teaching process, work material, compatible teaching topics, but also faces the lack of relevant research and directions.

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A closer acquaintance with the artistic abilities of the children and pupils in the field of modeling, can give teachers and educators a deeper insight into their meaning. At the same time, by improving the methodological activities of teachers, an influence to the improvement of upbringing / education and art culture can be given, as well as an impact of the art education to the psychosocial development of children's personality.

The lack of relevant research that relates solely to art modeling contributes to retaining its enigmatic status. Increase of the scientific interest in this area can contribute to improving the status of art modeling from an educational, methodological, pedagogical and psychological point of view.

Adopting art culture as part of the educational process means adopting / practicing the different art areas and getting to know the art language. Therefore, the representation of art modeling among other fine arts areas is a necessity.

Visual expression in children and pupils

Children's artistic expression began to intensify the interest of scholars at the end of the 19th and the beginning of the 20th century, when the developmental phases were defined through the child's creativity, primarily through drawing. During this period, three general developmental phases in children were defined:
a) Drawing phase, consisting of unplanned scattered plot lines, which later take the form of grouped lines and circular lines / shapes;
b) Scheme phase, in which children develop a pattern of representation of human objects, figures and objects from the environment;
c) Realism phase, when children are able to present more realistic and vivid details in their drawings.

These phases have been defined as a result of the extensive studies and classifications of children drawings and shapes made by several researchers, and are based on the observation that the children, at the age of 2-3 begin to scribble and model the first shapes (make balls, sticks and tiles), and after the fourth year, lines appear in the children's drawing, and elliptical shapes are created, which is noted as creation of basic forms of human and animal representations.

Three-dimensional activities are also very interesting for young children, and the same sequence of developmental stages is observed in plasticine modeling, as with drawing. Plasticine is much more interesting for children than clay because it is not sticky, does not need to be prepared beforehand, does not dry and can be used multiple times.

Three-year-olds enjoy manipulating with plasticine by squeezing, kneading, punching, etc. This is an uncontrolled kinetic activity that corresponds to the first scribbling. As the child develops the ability to control what he/she is doing, the forms he/she develops become meaningful and purposeful. With this the child's creative play continues, along with the shaping of plasticine. First the shapes are in the form of balls or in the form of elongated worms, and then the shapes move to some kind of animal, car or any other object of interest to the child at the given moment.

In art modeling, a shape research can be observed when children start to connect the torn plasticine parts and form an original three-dimensional representation, which is very much like a two-dimensional representation-drawing. At the age of 5 or 6 y., children can present a character that is something they see in their surroundings, and while modeling of the shapes becomes solid, there is poor harmonization of the proportions, and there is an attempt to approximate real visual values. From the seventh to the eleventh year, there is an increased ability to paint / model an object that realistically displays or reveals spatial depth, motion, color, etc.

The elements through which the development of the three-dimensional concept can be monitored, are:
- Complexity, that refers to the number and arrangement of the various elements that make up an object, and vary from simple forms, to forms consisting of many different elements.
- Symmetry, that refers to the number of sides of the object, having the same or similar characteristics. This can vary from complete symmetry of the six sides to partial symmetry and bilateral symmetry of the human figure, whose front and back are different.
- Balance is very specific to the clay/plasticine medium and refers to the construction of a free-standing figure that requires understanding of the mechanical properties of the material and overcoming the technical difficulty of balancing a straight figure.
- Size refers to the proportionate representation of the human figure and its elements in the childrens' artworks.
- Movement refers to the representation of the figure in motion.
- Familiarity refers to the familiarity and knowledge of the object and ability to create trained representative models. For example, familiarity with drawing may predispose a child who has not previously worked in clay to rely on well-trained graphic models (or schemes) and transfer them to the clay medium.

Methodological approaches to art modeling

Art modeling as part of the fine art can help in observing and defining children's visual representations. This provokes creating various combinations and variations of the thought operations that undoubtedly influence children's creativity.

The demonstration method, which involves problem-creation and problem-solving through play, helps activate children/pupils to present visual tasks related to variations and non-traditional ways of constructing a form (e.g. displacement, replacement, combination of parts and other structural elements). The process of observation helps children to gain insight into the nature of the form, the size of objects, the construction, scope and modeling plan, and at the same time to acquaint themselves with the structure and texture of the material.

When choosing modeling objects, the tasks to be mastered by the teacher are similar to those of nature drawing. It is probably the best that the first modeling objects have forms readily available for reproduction, to have compact structural elements that are not overly complex. It is recommended that children/pupils are given tasks that are related to other known objects, or geometric shapes.

In addition to visualizing the quality of the material, children can also tactfully feel it, grasp it with their own hands, so that they can better understand its structure, volume and texture properties. Deliberate and focused observation helps in better understanding of the object intended to be represented.

The use of verbal methods and principles in fine arts includes prior acquaintance and introduction to the tasks and issues of fine arts, self-contained visual expression (including corrections), and also conversation at the end of the class.

Figure 1. Mean scores of the examined variables in male and female respondents, aged 10 years.

The art teacher should be familiar with the specifics of theoretical and practical art modeling issues. Only in this way it can be easier to solve the problems / requirements brought by the plastic molding, which, in accordance with the methodological skills used in the teaching process, will provide a complete insight into the artistic abilities of the child. The verbal communication as a basis for early learning, enables building of more detailed and durable theoretical knowledge of the forms, and offers the opportunity for active involvement of children/pupils and their guidance in solving the simple and complex modeling issues and giving directions in obtaining compatible art results.

(a)

(b)

Figure 2. Three-dimensional representation of human figure in a female ten year old (a) and in a male ten year old (b).

Art modeling of the human figure is a complex task. When children begin to express themselves in three dimensions around the fourth or fifth year of life, their three-dimensional concept evolves, from basic three-dimensional expression based on their perception of the concept, through a gradual understanding of volume, vertical alignment and vertical placement of the human figure, to detailed and complex representations.

Art modeling as a process, especially the modeling of the human figure, was the subject of interest in our small micro-research. The focus of our research was on the abilities of children/pupils of 5, 8 and 10 years of age to present the three-dimensional concept, i.e. in modeling the human figure using a variety of work techniques and materials.

Aim of the research

The aim of this research was to obtain qualitative insights into the differences in representation of the three-dimensional concept in art modeling of the human figure in children, and more specifically, the differences in art modeling abilities and figure representation that are related to gender. Our hypothesis was that there are differences in the abilities in art modeling of the human figure in children of the same age and different gender.

Research method

In order to conduct this qualitative research, a descriptive-explicative method is used, and the activities were monitored in their natural context. The participatory observation technique was used to monitor the course of the educational process, the level of autonomy in presenting the three-dimensional concept of the human figure and the frequency of feedback in the cognitive process. This technique yielded two sets of data: data obtained with global description, aimed at describing the working conditions in the school and children's facilities (equipped space, easel stands for art modeling, teaching activities, events, time) and data obtained with focused description, aimed at tracking and describing age-related differences in the representation of the three-dimensional concept of the human figure.

The subjects of the observation were preschool children from six senior kindergarten groups, and pupils from six second-grades and six fourth-grades. All the pupils were attending school in the Repulic of Macedonia, coming from preschool facilities in Stip: "Astibo", "Vera Ciriviri-Trena", and Veles: "Dimce Mircev", and primary schools in Stip: "Toso Arsov", "Vanco Prke", and Veles: "Vasil Glavinov".

The role of observer - participant was the researcher himself. For greater objectivity, technical aids were used to record the situation, as camera photoshoot and records of the individual activities.

Results and discussion

The aim of this research was to investigate the existence of differences in children abilities of presenting the three-dimensional concept of a human figure that are gender-related. The analysis was conducted to a chosen sample of pupils, in total 195, aged 10 years and symmetry, balance, familiarity, complexity, movement and size, were assessed on a scale from 1-5. The collected data were analyzed using INTERIM analysis. The statistical analysis included indexes of structure and arithmetic mean value.

Although all subjects from the research were analyzed, this group was selected for analysis because the scores for symmetry, balance, complexity, size, movement and familiarity, are the highest at this age, thereby enabling detection of any gender-related differences. At the same time, within the examined age groups, this age is closest to the onset of puberty period, making it most relevant for comparison.

Figure 1. Mean scores of the examined variables in male and female respondents, aged 10 years.

The results show that the scores of complexity, symmetry, balance and familiarity in female respondents are higher than in male. On the other hand, male respondents have higher scores for movement and size / proportion (Figure 1).

Forms made by female respondents were notably rich in details and decorative elements, there is a greater balance of figures, and additional attention is paid to the harmonization of the figure and symmetry (Figure 2(a)), which can also be seen in the raised scores for this parameters in Figure 1.

Male respondents were more skilled at representing the movement of the form and model figures that are dimensionally adequate to the real image of a human figure. The figures and decorations of the male respondents are scarce (Figure 2 (b)). (Figure 2.)

Conclusion

These results, obtained on the basis of participatory observation and descriptive analysis of the three-dimensional representation of the human figure provide the following summarizing conclusions:

A slight difference between the sexes exists, in terms of the visual abilities of the respondents. Among female respondents, there has been progress in introducing the three-dimensional concept in terms of complexity, symmetry, balance and familiarity. Male respondents noted progress in representing movement and size / proportionality.

These results can be useful in assessing the needs and abilities of young children and identifying the need for early intervention. At the same time, the suggestions and comments received throughout the process of

research, coming from the direct participants in the teaching process were of extreme importance.

The analysis of the artistic abilities of children in presenting the three-dimensional concept in art modeling of the human figure, opens a way also to several recommendations and suggestions. These can be a foundation of further activities in order to improve the development of the artistic abilities in art modeling of the human figure in children, and art modeling in general, by improving the methods and conditions for realization:

- Education of the teaching staff for better understanding of the visual abilities of children and pupils of different ages;
- Permanent monitoring, innovation and enrichment of the programs for teaching / educational work in art education, which will include the opinions and attitudes of the immediate participants in their realization;
- Organization of workshops and seminars for better mastering of art techniques and introducing new strategies in all art areas;
- Equipping the kindergartens and primary schools with better conditions for realization of art education curricula;
- Educating parents by organizing exhibitions with children's artworks that will enable greater involvement in the school and familiarization with their child's artistic abilities
- Providing an inspiring atmosphere for children by visiting museums and art studios.

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