

IS THERE A NEED FOR HANDICRAFT IN PRESCHOOL? ATTITUDES OF PRESCHOOL TEACHERS AND PARENTS ON INCLUDING HANDICRAFT ACTIVITIES IN THE REGULAR PRESCHOOL PROGRAM

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Abstract

Alternative educational concepts have evolved in response to classical educational methods in which children are placed in a passive position and the transfer of knowledge is cultivated as a form of teaching. Models of alternative pedagogy (*Montessori, Waldorf, Reggio, Agazzi*) advocate developmentally appropriate practices which Bredekamp [1] describes as a presence of different strategies, i.e., child-oriented behaviours of teachers and responding to the child's individual needs. In order to help each child to grow into a universal and competent individual from preschool age, it is necessary to encourage their imagination and creativity, as well as to acquire habits of cooperation and coexistence with other children. One of the activities which promote these desirable characteristics in children is handicraft. Many studies and findings in the area of neuroscience, multiple intelligences theories, and the aforementioned alternative pedagogical concepts emphasize the importance of handicraft and point out its benefits not only for children but for the entire community. However, such an approach to children's learning and activity is poorly represented in educational institutions. Therefore, the aim of the study was to examine the views of preschool teachers and parents on handicraft activities and its more frequent use in regular preschool programs. The survey was conducted by an anonymous questionnaire on a sample of 316 respondents, preschool teachers (N=141) and parents (N=175). The results of the study show that both preschool teachers and parents agree that certain elements of alternative concepts such as handicraft have a positive impact on the overall development of the child and that they are useful and practical life skills. They also agree that handicraft activities should be used in educational institutions to a greater extent.

Keywords: alternative concepts, handicraft, the child, creativity, practical skills.

1 INTRODUCTION

The 19th and 20th-century alternative pedagogies movement, i.e. reformative pedagogy, advocates schools appropriate for children and their capabilities, interests, needs, and individual differences, while emphasizing the child's creativity, acquiring practical experience, and nurturing individuality [2, 3] highlight Ellen Karoline Sofie Key's "*The Century of the Child*" [4] as the formal continuation of reformative pedagogy. The book promotes a paedocentric approach to upbringing and education based on the ideas of Rousseau (1712 – 1778) and Pestalozzi (1746 – 1827). In particular, the aforementioned prominent pedagogists were the ones to issue the first criticisms toward the *Intellectualist school* which implies a traditional approach to learning and where the student's role is completely passive. [5] Pestalozzi divided human action – learning into three dimensions: the intellectual, which refers to the head, the moral, which involves the heart, and the physical, belonging to the hands.[6,7] Rousseau emphasized that children, in addition to intellectual education, also needed working education, as well as education for the heart and for kindness.[3] In the 20th century, Steiner, Freinet, Montessori, and other significant pedagogists such as Tolstoy, Claparede, Cousinet, Ferrier, Kerschensteiner, Gaudig, Ficker, Peterson, Averius, and Lichtwark, have embraced the ideas of Komenski, Rousseau, and Pestalozzi, and emphasized the importance of practical work in upbringing and education.[5] Georg Kerschensteiner (1854 – 1932) and Hugo Gaudig (1860 – 1923) are credited in Europe for advocating working schools which involve active learning, i.e. learning by doing. [30] Kerschensteiner pointed out the pedagogical importance of handicraft, while Gaudig emphasized the significance of spiritual work. [3] The foundation of the concept of Maria Montessori's (1870 – 1952) pedagogical model of alternative schools lies in manual learning through practical activities and manipulating various educational materials.[9] Maria Montessori believed that children would realize their natural potential only if they were given the freedom to choose in a supportive educational environment which should meet their developmental needs [10], while education should

be based on experimental and active learning, as well as balanced pedagogical guidance by a teacher or educator.[9] At the same time, Rudolf Steiner (1861 – 1925) also founded his alternative school model, which places particular emphasis on the development of fine motor skills along with various artistic activities and handicraft, emphasizing how important it is for the development of the child's brain, especially in preschool and early primary school.[9,11] The most important principles of Waldorf's approach to education are the motivation of the child's artistic and creative sensitivity, the monitoring of the child's overall personality development according to the curriculum, and the encouragement of particularly gifted children in certain areas.[12] Alternative programs or pedagogies in Croatia are regulated by the State Pedagogical Standard of Preschool Education [13], as well as the Programme Directive of Preschool Education [14], under which the Montessori, Waldorf, and Agazzi programs operate. Croatian educational policy has recognized the need to transform the preschool system in accordance with the new requirements of the age, with changes in the field of the national curriculum being of particular importance [15], and putting the child at the centre of educational activities. Keeping pace with accelerated technological breakthroughs and changes and at the same time creating the conditions for new discoveries and creative innovations are just some of the requirements imposed by society to modern individuals. Therefore, it is important to encourage the preschool-age child to be creative, inventive, and smart, as well as to be able to solve various problem situations while acquiring habits of collaborating and working in a community with other children, namely, collaborative learning.[16] One of the activities which promote these desirable characteristics in children is handicraft. This type of activity has been neglected, particularly in educational institutions, and has not been given significance[5,17,18], and this was largely influenced by industrialization, consumerism, and mass production of inexpensive use items available to all, resulting in the lack of need to practise such skills in families and therefore in the community. Today's children and young people cannot experience the practice of useful skills such as handicraft at all. However, studies confirm that manual skills have a significant impact on satisfaction, optimism, and creating positive connections and support, not only in children but in all generations. [19-24] Pöllänen [21-22] suggests that handicraft in the future might promote sustainable development by helping people assess the environmental impacts of their actions. Children today are surrounded by a variety of toys and objects whose use is very short-lived. The accelerated life of the family and the community in which they live is also imposed on childhood which should primarily be carefree and filled with play space and imagination. Their entire daily schedule is intertwined with a variety of media that inevitably attract the attention of the children and draw them into worlds in which they are not active creators. Children's activity, especially in learning, is extremely important, because, as Centofanti [25] notes, children are mostly tactile learners, learning through touch, movement, feeling, and experience, so in preschool and primary education they learn best through physical activities. This is also evidenced by the practice of Waldorf preschools, where they avoid giving children ready-made toys, but rather provide them with a variety of natural materials with which children can create their own handmade objects with the help of their teachers. The importance of the material environment in kindergarten was particularly emphasized by the creators of alternative pedagogies: Maria Montessori [10], Rudolf Steiner [11], and Loris Malaguzzi. [26] Kozulin et al. [27] note that it is important how the materials are prepared and accessible to children because this is what influences how much children will use them in their creative activities. The availability of materials in preschool offers meaningful ways for children to deepen their experience, express themselves creatively, and at the same time helps enhance cognitive abilities.[28] Handicraft and its impact on the well-being of children are, unfortunately, not sufficiently studied in our country. Studies were conducted in the lower grades of primary school, where, using motor dexterity tests, it was proved that handicraft affected the motor skills of students after a certain number of hours because most students had noticeable progress in motor skills. Despite the lack of evidence for the impact of handicraft on social competence, there was an improvement in the students' social competence as well.[29] In addition, the results of studies conducted with Year 5 pupils who have, together with their teachers, practised various types of practical work and skills such as knitting, embroidery, and sewing since Year 1, showed that the promotion of the concept of practical work was extremely important for the development of children's multiple competencies and the creation of a positive environment. [17] The fine motor movements of the fingers develop the intelligence of the hand, which is also the most complex area of physical-kinesthetic intelligence that enables the use of the hands in creating handmade crafts, in which we also include handicraft. Research in the field of neuropsychology has shown that there is a connection between the brain, i.e., cognitive abilities, and hands, i.e., motor skills. Dexterous finger movements have been shown to stimulate the development of cells in the brain, thereby strengthening the organ of thought and stimulating its virtuosity, flexibility, and stability. It has been found that at the time of birth, there are billions of active neural pathways in our brains that will not atrophy if we engage in

practical work from early childhood. [30] Handicraft can help us practise multitasking, perform new motor movements, exercise internal control, tranquillity, concentration, and can also affect spatial intelligence. Children with difficulties such as hyperactivity, or borderline cases with reduced mental abilities and the like can also engage in handicraft activities very successfully. Studies have proven progress in the sense of greater self-confidence and greater therapeutic possibilities. [29] In addition, scientists studying the child's psyche and speech development have also found a great stimulating value of hand function. Researchers from the Institute of Children and Adolescent Physiology of the Russian Academy of Sciences proved that the degree of speech development in children directly depends on the degree of formation of finger movements. [31] Thus, on the basis of studies of a large number of children, the following legality is found: when the development of the child's finger movements corresponds to the child's age, the development of speech also progresses properly. When the development of fine motor skills is slowed, the development of speech is also slowed, even when gross motor skills (movements of arms, legs, torso, jumping, running, etc.) are well developed. The formation of speech centres in the brain is carried out under the influence of nerve impulses of the fingers. [31] Since the development of fine motor skills of the fingers is one of the important parts of speech stimulation, handicraft is an ideal activity for creative education in preschools. Simply keeping in mind all the listed benefits for child development that can be achieved through handicraft, this study focuses on studying the attitudes of parents and educators to the practice of handicraft, as they are the initiators of such activities, and if adults conduct practical work activities, they also stimulate the child's play or activity. [32]

2 METHODOLOGY

The aim of the study was to examine the views of preschool teachers and parents on handicraft activities and its more frequent use in regular preschool programs. The following hypotheses were considered in data processing:

- H1: There is a statistically significant difference in the opinions of preschool teacher respondents on the impact of handicraft on a child's intellectual development in relation to their initial education.
- H2: There is a statistically significant difference in opinions on the impact of handicraft on a child's intellectual development among the preschool teacher respondents regarding their years of work experience.
- H3: There is a statistically significant difference in opinions on the impact of handicraft on a child's intellectual development among the parent respondents regarding their education.
- H4: There is a statistically significant difference in opinion on the impact of handicraft on a child's intellectual development among parent respondents regarding their age.

2.1 Sample

For the purposes of the study, an anonymous survey was developed, and a call to participate in the study, that is, a link to the survey was sent to parents and preschool teachers using the Google Forms tool. Relevant online groups were targeted. The groups the survey was distributed to were the following Facebook groups: Razvojne igre za djecu, ARTete, RODA – Roditelji u akciji, and Tete u vrtiću. The survey collected demographic data without the respondents' personal information, as well as their views on handicraft activities and more frequent use of handicraft in regular preschool programs. Data were collected from 17 January 2019 to 26 January 2019. The survey was completed by a total of 316 respondents, 141 preschool teachers and 175 parents. Respondents were mostly female (N = 310). Most were from urban environments (N = 240) and under 40 years of age (N = 256). The lowest level of education of preschool teachers was a vocational qualification, while most parents have earned a Master's degree (N = 75) or have completed secondary education (N = 41). Their demographic characteristics are described in more detail in Table 1.

Table 1. Characteristics of respondents

Variable	Category	Preschool teachers		Parents	
		N	%	N	%
Gender	Male	0	0.00	6	3.43
	Female	141	100.00	169	96.57
Age	20 – 30	57	40.43	25	14.29
	31 – 40	49	34.75	125	71.43
	41 – 50	27	19.15	25	14.29
	51 and above	8	5.67	0	0.00
Place of residence	Rural environment	38	26.95	38	21.71
	Urban environment	103	73.05	137	78.29
Degree of education	Secondary school	0	0.00	41	23.43
	Vocational qualification	55	39.01	28	16.00
	Bachelor's degree	50	35.46	22	12.57
	Master's degree	35	24.82	75	42.86
	PhD	1	0.71	9	5.14

The survey for preschool teachers was adapted to collect information about their years of work experience and educational degrees specific to preschool teachers. Their response rates are shown in Table 2.

Table 2. Education and work experience of preschool teachers

Variable	Category	N	%
Initial education	Graduate study	46	32.62
	Undergraduate study	32	22.70
	Vocational study	37	26.24
	Teachers' Academy	26	18.44
Years of work experience	0 – 5	55	39.01
	6 – 10	29	20.57
	11 – 20	35	24.82
	21 – 30	22	15.60

2.2 Instrument

With the anonymous survey, demographic data of respondents were collected: age, level of education, and years of work experience of respondents who were preschool teachers. The processing used the answers of respondents to the questions: "Do you believe that handicraft activities have a positive impact on the overall development of the child?" (Yes or No) and "Handicraft activities affect the intellectual development of the child." (1 = I disagree; 2 = I partially disagree; 3 = I neither agree nor disagree; 4 = I partially agree; 5 = I strongly agree).

3 RESULTS

Out of 141 preschool teacher respondents, 138 (97.9%) said that, in their opinion, handicraft activities had a positive impact on the overall development of children, while 3 (2.1%) said that, in their opinion, handicraft activities did not have a positive impact on the overall development of the child. Table 3 shows descriptive statistics of preschool teachers' views on the impact of handicraft activities on the intellectual development of the child with regard to the years of work experience of the preschool

teacher. It is noted that basically all groups believe that handicraft activities have a positive impact on the intellectual development of the child.

Table 3. Opinion on the impact of handicraft activities on the intellectual development of the child with regard to the preschool teacher's years of work experience

<i>Years of work experience</i>	<i>N</i>	<i>mean</i>	<i>sd</i>	<i>median</i>	<i>min</i>	<i>max</i>	<i>skew</i>	<i>kurtosis</i>
0 – 5	55	4.36	0.80	5	2	5	-1.15	0.73
6 – 10	29	4.38	0.82	5	3	5	-0.75	-1.14
11 – 20	35	4.43	0.65	5	3	5	-0.66	-0.68
21 – 30	22	4.45	1.01	5	1	5	-1.99	3.66

Given that in the group of preschool teachers with 21 – 30 years of work experience, the variable has a kurtosis deviation of 3.66 compared to the normal distribution, the Kruskal-Wallis test was used, because it proved to be more reliable than the ANOVA test in previous studies and in similar circumstances. [33] The test results showed that there were no statistically significant differences between the groups, $\chi(3) = 1.03$, $p = .80$.

Descriptive statistics of preschool teachers' opinions on how much handicraft activities affect the intellectual development of children are presented in Table 4.

Table 4. Opinion on the impact of handicraft activities on the intellectual development of the child with regard to the preschool teacher's initial education

<i>Initial education</i>	<i>n</i>	<i>mean</i>	<i>sd</i>	<i>median</i>	<i>min</i>	<i>max</i>	<i>skew</i>	<i>kurtosis</i>
Graduate study	46	4.52	0.72	5.0	3	5	-1.11	-0.25
Undergraduate study	32	4.28	0.85	4.5	2	5	-0.84	-0.33
Vocational study	37	4.41	0.72	5.0	2	5	-1.17	1.31
Teachers' Academy	26	4.31	0.97	5.0	1	5	-1.62	2.72

In the group of preschool teachers who graduated from the Teachers' Academy, the variable measuring opinion on the impact of handicraft activities on children's intellectual development has a kurtosis deviation of 2.72 compared to the normal distribution. Although deviations from normality in terms of distribution asymmetry do not significantly affect the results of the ANOVA test in large samples, the ANOVA test is sensitive to deviations from normal distribution when it comes to the kurtosis distribution.[33] For this reason, the Kruskal-Wallis test was used as a non-parametric alternative, and the test results showed that there were no significant differences between the groups $\chi(3) = 2.04$, $p = .56$, which means that basically, all respondents agree with the statement that handicraft activities affect the intellectual development of children.

Of the 175 respondents, 171 (97.7%) said they believed that handicraft activities had a positive effect on the overall development of children, while 4 (2.3%) believed that handicraft activities did not affect the overall development of children. Parents' views on the impact of handicraft activities on children's intellectual development in relation to the parents' level of education are presented in Table 5. In general, all respondents agreed with the statement that handicraft activities affect the intellectual development of children, and there were no statistically significant differences between the groups, $\chi^2(4) = 7.22$, $p = .12$.

Table 5. Opinion on the impact of handicraft activities on the intellectual development of the child with regard to the parents' education

Degree of education	n	mean	sd	median	min	max	skew	kurtosis
PhD	9	4.22	0.97	5	3	5	-0.38	-1.94
Master's degree	75	4.55	0.74	5	1	5	-2.03	5.45
Bachelor's degree	22	4.59	0.80	5	2	5	-1.90	2.92
Vocational qualification	28	4.61	0.69	5	3	5	-1.37	0.43
Secondary school	41	4.22	0.94	4	1	5	-1.32	1.77

The frequency of conducting handicraft activities with children with regard to the parents' education is shown in Table 6. Given that the kurtosis in the group of subjects with secondary education was affected by normal distribution kurtosis, and that the uniformity of dispersion test was borderline significant $F(4) = 2.40, p = .05$, the Kruskal-Wallis test was used. It was shown that there are no significant differences between the groups: $\chi(4) = 7.41, p = .12$, which means that the frequency of conducting handicraft activities with children does not depend on the level of parents' education. Most parents believe that handicraft activities affect the intellectual development of children (Table 5.). The youngest parents in the 20- to 30-year-old group are the least likely to agree with this statement, and the Kruskal-Wallis test showed significant differences in parents' attitudes toward the impact of handicraft activities with respect to their age, $\chi(2) = 7.14, p = .03$. The Mann-Whitney p -corrected test for multiple comparisons showed that parents in the 20 – 30 age group were significantly less likely to agree with the statement that handicraft activities affect a child's intellectual development compared to parents in the 30 – 40 age group, $U = 1103, p = .02$.

Table 6. Opinion on the impact of handicraft activities on the intellectual development of the child with regard to the parents' age

Age	N	mean	sd	median	min	max	skew	kurtosis
20 – 30	25	4.20	0.71	4	3	5	-0.27	-1.08
31 – 40	125	4.54	0.78	5	1	5	-1.85	3.57
41 – 50	25	4.40	1.00	5	1	5	-1.78	2.89

4 DISCUSSION

The H1 hypothesis ("There is a statistically significant difference in the opinions of preschool teacher respondents on the impact of handicraft on a child's intellectual development in relation to their initial education") was not confirmed. The results of the test showed that there are no significant differences between preschool teachers who have graduated from the Teachers' Academy, vocational study, University undergraduate study programme, and University graduate study programme, meaning that, in general, all respondents agree with the statement that handicraft activities affect the intellectual development of children regardless of their initial education. The H2 hypothesis ("There is a statistically significant difference in opinions on the impact of handicraft on a child's intellectual development among the preschool teacher respondents regarding their years of work experience") was not confirmed. The results of the test showed that there are no significant differences between preschool teachers regarding their years of work experience, which means that, in general, all respondents agree with the statement that handicraft activities affect the intellectual development of children regardless of the years spent working in preschools. These results suggest that teachers track studies of the impact of handicraft activities on social competencies in children [29] and recognise the concept of hands-on work as extremely important for the development of multiple competencies in children and the creation of a positive environment. [32] The H3 hypothesis ("There is a statistically significant difference of opinion on the impact of handicraft activities on the intellectual development of children between the parent responders with regard to their education") was not confirmed, because all respondents who participated as parents agreed with the statement that handicraft activities affect the intellectual development of children regardless of their level of

education. However, the H4 hypothesis ("There is a statistically significant difference in opinion on the impact of handicraft on a child's intellectual development among parent respondents regarding their age") was confirmed. Most parents believe that handicraft activities affect the intellectual development of children, but there was an observable difference regarding age. The youngest parents, in the 20–30-year-old group, are the least likely to agree with this statement. Such a distribution of data surprised me greatly because I assumed that young parents would be more open to alternative methods of education and that they would recognize the importance and positive impact of handicraft activities on the intellectual development of children. Perhaps, in this case, the lack of parental experience influenced the negative opinion about the impact of handicraft activities on the intellectual development of children.

5 CONCLUSION

The aim of the study was to examine the views of preschool teachers and parents on handicraft activities and its more frequent use in regular preschool programs. The results showed that regardless of any education or work experience of preschool teachers, most of them agreed with the statement that activities in which handicraft is involved affect the intellectual development of children, which allows us to say that they recognise the importance and significance of such activities. However, in the survey of parents, it was noted that the youngest parents between the ages of 20 and 30 did not believe that handicraft activities have an impact on the intellectual development of children. We can find the reason for this in their experience of implementing handicraft activities. Unless someone has engaged with such practical activities throughout their life, it is logical that they would not consider them significant for the intellectual development of either their child or themselves. This brings us to the conclusion that if we want children to acquire working practical skills through which they can creatively express themselves, it is important to sensitize both parents and educators to encourage and support handicraft activities with children.

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