

## Attitudes of parents and educators towards picture books with ecological content and the education of preschool-aged children

Antonija Huljev<sup>1</sup>, Irella Bogut<sup>1</sup>, Kristina Krpan<sup>2</sup>

<sup>1</sup>Faculty of Education, University of Josip Juraj Strossmayer in Osijek

<sup>2</sup>Kindergarten Bellflower, Čepin

[ahuljev@foozos.hr](mailto:ahuljev@foozos.hr); [ibogut@foozos.hr](mailto:ibogut@foozos.hr); [kristinavidovic95@gmail.com](mailto:kristinavidovic95@gmail.com)

### ABSTRACT

A picture book, as the first book in a child's life, contributes in numerous aspects to their development and the adoption of educational values. A picture book with ecological content is the richest source of written words a child can encounter in early childhood, through which they learn about ecological educational values and the importance of environmental preservation in a fun and educational way. The aim of this study was to present the results of research conducted on a sample of 141 educators and 120 parents in Croatia, whose children attend kindergarten, in order to gain insight into their attitudes regarding the frequency and role of reading picture books with ecological content to preschool-aged children. Furthermore, in a broader sense, the goal of the study was to present the role of picture books with ecological content in promoting ecological education and values, as well as their impact on the development of ecological awareness in preschool children. The research results showed that educators believe they are sufficiently familiar with global and ecological issues, and the majority of parents believe that educators in kindergartens encourage the development of ecological awareness in children, a viewpoint that educators largely share to a significant statistical degree. This study highlights the importance of picture books with ecological content and their reading to preschool children in kindergarten and the family environment.

**Keywords:** *reading; kindergarten; ecological educational values; environment; picture book*

### INTRODUCTION

Educators in kindergartens should focus on raising awareness among preschool children about the importance of environmental preservation. It is essential to provide age-appropriate reading material and to encourage children to discuss their experiences while reading and viewing illustrations (Zimmermann & Hutchins, 2003). The picture book with ecological content stands out as certainly the richest source of written words that a child can encounter, allowing young children to learn about the importance of environmental preservation in a playful and engaging way. Research from 2012 shows that books with ecological content encourage children and teenagers to become disciplined and caring towards the environment, contributing to the development of local ecological knowledge and monitoring ecological habits within their families, kindergartens, and schools. Connecting issues, guilt, opportunities, responsibility and commitment are just a few of the benefits of ecological education (Larsson, 2012).

The primary aim of this study was to gain insight into the attitudes and opinions of educators and parents whose children attend kindergartens, regarding the frequency and role of reading picture books with ecological content to preschool-aged children. Specifically, the research sought to understand participants' views on the role of picture books in fostering ecological awareness, ecological education, and the development of reading skills in preschool children.

### METHODS

The research was conducted online (via Google Forms) during April and May 2021, on a sample of 120 parents (46%) and 141 educators (54%). Among the participants, 254 (97.3%) were female, and seven

(2.7%) were male. The self-constructed questionnaires (one for parents and one for educators) used in the study consisted of several sections. The first section gathered general information about the participants, while the second focused on picture books with ecological content and their use in kindergartens. The third section addressed attitudes towards using ecological picture books in kindergartens, while the fourth section covered attitudes regarding children's perception of ecological picture books. The fifth section examined views on using picture books in teaching and interaction. The sixth section explored opinions on the use of ecological picture books as a tool to encourage reading skills in preschool-aged children.

Categorical data were presented as absolute and relative frequencies. Differences in the distribution of categorical data were tested using the  $\chi^2$  test, and when necessary, Fisher's exact test. The normality of numerical variables was assessed with the Shapiro-Wilk test. Due to the non-normal distribution of numerical data, these variables were described using the median and interquartile range boundaries, with nonparametric methods applied for testing. Differences in numerical variables between two independent groups were compared using the Mann-Whitney U test. All p-values were two-sided, and the level of significance was set at Alpha = 0.05.

## RESULTS AND DISCUSSION

The results of the study conducted on a sample of 120 parents (46%) and 141 educators (54%), with regard to female (N = 254 / 97.3%) and male (N = 7 / 2.7%) participants, show no significant differences in distribution between the groups. A total of 181 (69.3%) participants agree that the educational institution attended by their child is adequately equipped with picture books of general and ecological content, with significantly more parents (93 or 77.5%) than educators agreeing on this point ( $\chi^2$  test, P = 0.008). Furthermore, 217 (83.1%) participants report reading ecological picture books to children, while 107 (41%) indicate the availability of digital picture books for educational or teaching purposes, with notably more parents (77 or 64.2%) than educators using them ( $\chi^2$  test, P < 0.001). Regarding the frequency of using ecological picture books, 91 (34.9%) participants from both groups report fairly frequent usage in their work. Additionally, 245 (93.9%) participants agree or strongly agree that ecological picture books are an essential aspect of learning and fostering ecological awareness among preschool-aged children, with no significant differences between parents and educators.

Most participants (187 or 71.6%) fully agree with the statement that picture books are an important learning tool in ecological education within kindergartens, again without significant differences between parents and educators. With the statement that preschool-aged children find reading picture books more engaging than eco-projects or workshops, 28 (10.7%) participants, predominantly educators, disagree entirely ( $\chi^2$  test, P = 0.04). Out of 62 (23.8%) participants who completely agree that educators actively collaborate with parents in fostering environmental education and ecological awareness, a significantly higher proportion are parents rather than educators (Fisher's exact test, P = 0.005). Similarly, 103 (85.8%) parents agree or strongly agree that educators promote ecological awareness in children, a perspective significantly more prevalent among parents than among educators themselves (Fisher's exact test, P < 0.001). Parents also show statistically significant agreement, with 47 (39.2%) fully supporting the statement that educators use picture books for environmental education during children's time in kindergarten ( $\chi^2$  test, P < 0.001).

The study by Martín Martín et al. (2019) found that most children's picture books positively influence awareness of the environmental impact of human activities. The findings of the present study indicate that 72% of participants fully agree that picture books are an important medium for learning and

imparting values in the context of ecological education in kindergartens. Almost 40% of educators frequently use ecological picture books in their work, while slightly fewer than half of the parents sometimes use such books when spending time with their children. Educators agree to a statistically significant degree (65%) that kindergartens include ecological picture books as a tool for early reading stimulation among preschoolers, compared to parents. Additionally, the study results indicate that nearly two-thirds of surveyed parents believe educators are sufficiently ecologically aware to teach environmental education in kindergartens.

## CONCLUSIONS AND DIDACTIC SIGNIFICANCE

Educators use picture books with ecological contents in their educational work in kindergarten, but not to the extent that it would be desirable, which is supported by the fact that only 40% of educators often use picture books with ecological content during their work with children. Almost 73% of educators use picture books for the purpose of raising ecological awareness and ecological education in preschool children. Furthermore, educators think positively about the picture book as a means of environmental education and use it as an incentive for early reading when working with children. The research also shows that the vast majority of participants use the picture book for educational purposes. Parents also think positively about picture books with ecological content, most of them use them for educational purposes while spending time with their own children, and they believe that educators are sufficiently environmentally aware to teach environmental education in kindergarten. In conclusion, in kindergartens in Croatia, it is necessary to provide children with access to a greater number of picture books with ecological content. The Ministry of Science and Education should continuously provide educators with more programs on environmental education, provide them with professional meetings and training for education and the environment.

## LITERATURE

- Altun, D. (2018). Preschoolers' pro-environmental orientations and theory of mind: ecocentrism and anthropocentrism in ecological dilemmas. *Early Child Developments and Care*, 190(11), 1820–1832. doi: 10.1080/03004430.2018.1542385
- Atkinson, P. M., Parks D. K., Cooley S. M i Sarkis, S. L. (2002). Reach Out and Read: a pediatric clinic-based approach to early literacy promotion. *Journal of Pediatric Health Care: official publication of National Association of Pediatric Nurse Associates & Practitioners*, 16(1), 10–15.
- Anđić, D. (2018). *Djeca, okoliš i održivi razvoj*. Učiteljski fakultet u Rijeci, Sveučilište u Rijeci.
- Fang, S.-C. (2018). The influence of parental education on the environmental education of pre-schoolers. A case study of self-designed picture book. *Journal of Baltic Science Education*, 17(2), 187–199.
- Flogaitis, E., Daskolia, M. i Liarakou, G. (2005). Greek kindergarten teachers' practice in environmental education: an exploratory study. *Journal of Early Childhood Research*, 3(3), 299–320. doi:10.1177/1476718X05056529
- Krpan, K. (2021). Slikovnica u funkciji ekološkog odgoja (Diplomski rad). Sveučilište Josipa Jurja Strossmayera u Osijeku, Fakultet za odgojne i obrazovne znanosti. <https://urn.nsk.hr/urn:nbn:hr:141:781025>
- Larsson, B. (2012). The Cosmpopolitanization of Childhood: Eco-Knowledge in Children's Eco-Edutainment Books. *Young*, 20(2), 199–218. doi:10.1177/110330881202000205
- Majdenić, V. (2019). Slikovnice za djecu mlađe školske dobi u svrhu ekološkog odgoja. *Pannoniana*, 3(1-2), 199–238.
- Martín Martín, N., Hageman, J. L., Montgomery, S. E. i Rule, A. C. (2019). A Content Analysis of Thirty Children's Picture Books about Ecology. *Journal of STEM Arts, Crafts, and Constructions*, 4(1), 83–120.
- Pap, T., Šarić, Lj., Lončar, I. i Domac, J. (2012). Odgoj djece predškolske dobi za održivi razvoj i racionalno korištenje energije: priručnik. Grad Zagreb, Gradski ured za energetiku, zaštitu okoliša i održivi razvoj.
- Pejić-Papak, P. (2008). Igrom razmišljamo i djelujemo ekološki. U: Uzelac, V., Vujičić, L. i Boneta, Ž. (ur.), *Cjeloživotno učenje za održivi razvoj* (str. 111–114). Rijeka, Učiteljski fakultet Sveučilišta u Rijeci, 3.
- Simsar, A. (2021). Young Children's Ecological Footprint Awareness and Environmental Attitudes in Turkey. *Child Indicators Research*, Springer, *The International Society of Child Indicators (ISCI)*, 14(4), 1387–1413.
- Smolak, I. i Kemeter, D. (2017). Ekološka svijest građana Republike Hrvatske. *Zbornik radova Međimurskog veleučilišta u Čakovcu*, 8(2), 73–81.
- Tomić, R. I. i Jakovljević, M. J. (2020). Čimbenici odgoja i obrazovanja mladih za ekološki održivi razvoj. *Putokazi*, 8(2), 229–246.