

**INTEGRATED APPROACH TO DEVELOPING WASTE-SORTING SKILLS IN
PRESCHOOL CHILDREN**

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Annotation: This article analyzes an integrative approach to developing waste-sorting skills in preschool children within the process of forming ecological culture. It scientifically highlights how the integration of various activity types contributes to the development of competencies such as classification, observation, practical skills, responsibility, and care for nature in young children.

Keywords: environmental education, integrative approach, waste sorting, preschool education, competence, ecological culture.

Аннотация: В данной статье анализируется интегративный подход к формированию у дошкольников навыков раздельного сбора отходов в процессе развития экологической культуры. На научной основе раскрывается, как интеграция различных видов деятельности способствует развитию у детей таких компетенций, как классификация, наблюдательность, практические умения, ответственность и бережное отношение к природе.

Ключевые слова: экологическое образование, интегративный подход, раздельный сбор отходов, дошкольное образование, компетенция, экологическая культура.

In the Republic of Uzbekistan, a targeted policy is being pursued to ensure environmental safety, protect the environment, and use natural resources rationally. Measures are being implemented to improve the waste management system and reduce its negative impact on the ecological situation, as stated in the Presidential Decree of the Republic of Uzbekistan “*On measures to reform the system of waste-related activities in the country, improve the quality of sanitary cleaning services, and actively involve business entities in the collection and removal of household waste*” [1]. In this regard, efforts are being made to develop waste-sorting skills starting from preschool-aged children.

In accordance with modern requirements, issues of environmental education in the preschool system are becoming increasingly important. Waste sorting is a form of practical activity that must be developed in children not only as ecological knowledge but also as a daily life skill. The experience of developed countries shows that educating children about waste sorting from an early age contributes to raising the overall ecological culture of society. Therefore, it is advisable to organize the development of this skill in preschool children based on an integrative approach. Preschool age is considered the most critical period when children acquire the initial foundation of ecological culture. Today, one of the simplest and most practical forms of environmental protection is waste sorting. Developing this skill at an early age fosters a responsible attitude toward preserving the environment in the future. The integrative approach plays a special role in effectively organizing education on waste sorting, as it simultaneously combines several subjects, games, and practical activities.

The integrative approach is the process of combining several educational areas (language, mathematics, visual arts, STEAM, physical education) around a single theme. This approach ensures a holistic perception of knowledge, allows the reinforcement of a topic through various activities, increases children’s interest, and helps bring acquired skills closer to real-life situations. The process of waste sorting is a highly convenient topic for the integrative approach,

as it develops children's abilities in classification, comparison, observation, color recognition, understanding of quantity, and creative thinking.

For preschool children, the main types of waste are as follows, and children learn to recognize them through color-coded bins:

Plastic — bottles, containers, caps; Yellow — plastic

Paper — newspapers, cardboard, notebook scraps; Blue — paper

Glass — jars, bottles; Green — glass

Organic waste — fruit peels, dried leaves; Brown — organic waste

Methods Based on the Integrative Approach

1. Integration with Speech (Language) Development

- Question-and-answer activities: *“What type of waste is this?”*, *“Why do we throw it into this bin?”*
- Creating a fairy tale: *“The Journey of a Little Plastic Bottle.”*
- Composing a story about a city protected from waste.

2. Integration with Mathematics

- Counting how many pieces of waste are in each bin;
- Comparing waste items by size and shape;
- Reinforcing the concept of “more-less.”

3. Integration with Visual Arts

- ✚ Creating a collage or appliqué using recycled materials;
- ✚ Coloring waste bin symbols according to their designated colors;
- ✚ Making a model: *“Eco-city.”*

4. STEAM Approach

- ❖ Building a mini-project: *“Sorting Box”*;
- ❖ Conducting an experiment: plastic floats in water, paper absorbs water, glass sinks;
- ❖ Creating a simple mechanism: a device that transports waste.

5. Integration with Physical Education

- Relay game: *“Find and Throw!”*
- Movement game: *“Clean Field”*;
- Games focused on delivering waste items to the correct bins.

6. Game-Based Learning Technologies

- ✓ Didactic game: *“Which Waste Goes Where?”*
- ✓ Role-playing game: *“Waste Collectors.”*
- ✓ Constructive play: creating waste-sorting bins.

The preschool education administrator organizes the educational process related to environmental education, including waste management, directly within the institution for children aged 3–5. This educational and upbringing process is conducted in each group's “Ecology Corner,” which is equipped with models and simulations created for didactic games about waste, as well as various media resources. The educational process on waste in the outdoor area of preschool institutions is carried out in ecological pathways, specifically in designated areas where five different colored containers are installed under the theme *“Waste Is Useful for Us Too!”*

The preschool education administrator provides children aged 5–7 with access to specially organized “Nature Centers” in each district, city, or township, equipped with the most modern didactic materials. Visits to these centers are scheduled once a month. Several kindergartens in Finland operate under the “Green Flag” initiative, placing strong emphasis on environmental education. Educators there frequently take children on forest walks, build birdhouses, and create various toys from recycled materials. Preschool directors in Finland develop educational

programs based on local conditions, aimed at introducing children to nature, guiding them through nature centers, and teaching them to collect and sort waste properly[7]. The waste-sorting station in Helsinki offers impactful educational programs for different groups of the population, including young children. The main themes of this course significantly contribute to promoting sustainable consumption and shaping environmentally responsible and active attitudes toward the environment among citizens.

In Germany, an environmental education concept was adopted in connection with the restructuring of the waste sorting and recycling system. The new environmental education concept helped develop public ecological awareness and culture through the education system, various educational programs, advertisements, and mass media. Although there is no specific program designed exclusively for preschool institutions, special lessons, campaigns, ecological games, and programs such as “*Live Without Waste*” and “*We and the World Around Us*” are implemented for children based on local conditions and adapted to their age.

In conclusion, the integrative approach effectively develops waste-sorting skills in children. This approach helps cultivate ecological culture from an early age, strengthens practical abilities, and fosters ecological responsibility in everyday life. Activities integrated with various types of learning increase children’s interest and make it easier for them to retain the topic. Developing waste-sorting skills during the preschool years is an essential factor in nurturing ecological awareness in children. The integrative approach makes this process engaging, effective, and a practical life skill. Activities that combine play, experimentation, mathematics, visual arts, and physical education significantly enhance the effectiveness of the educational process.

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