SECTION 1.

EDUCATION

POSSIBILITIES FOR SENIOR PRESCHOOLERS' TEAM BUILDING THROUGH PROJECT-BASED ACTIVITY

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DOI: 10.24234/miopap.v12i2.100

Abstract

The article discusses the possibilities for senior preschoolers' team-building through project-based activity. Various approaches to team building, their psychological and pedagogical characteristics, possibilities for forming preschoolers' teams are analyzed, and discussed. The **goal** of the article is to identify the possibilities for effective organization of senior preschoolers' team-building (ages 5–6) through project-based activity. **Methodology**: *the study involves an analysis of professional literature related to the topic, as well as observations, surveys, and an experiment organized through project- based activities. At each stage of the project, senior preschoolers' team-working skills were assessed.* ***Results****: The findings indicate that project-based activity contribute not only to the effective implementation of team building but also to the development of the child's personality, the formation of responsibility and collaboration skills, decision-making abilities, and the awareness of a shared goal.* ***Keywords****: senior preschoolers, team building, project-based activity, collaboration, common goal awareness.*

INTRODUCTION

In today's world, the success of institutions and organizations depends on team building, the quality of their work, the functions they perform, the goals they set, and the awareness of a common purpose. The success of institutions is the result of effective interaction among team members and their unification around a common goal. Working in a well-organized team also contributes to the professional and personal growth of each member, the development of their skills, increased self-confidence, and advancement.

According to studies, however, the issue of team building remains largely unresolved, resulting in a number of problems. Improper team building can disrupt collaboration and, consequently, lead to

undesirable outcomes (Kozlowski & Ilgen, 2006), low levels of trust and cohesion (Mathieu, et al 2019), and the neglect of deep-level differences among team members (such as values and attitudes), which negatively affect team interaction (Harrison, et. al., 2002).

In recent years, considerable attention has been given to the question of how to create an environment that fosters psychological safety and reduces the phenomenon of "social loafing", which occurs when some group members feel that their efforts are undervalued and begin to withhold effort (Salas, et. al., 2018).

These circumstances indicate that, within groups, individual goals are often prioritized over the team's common goal. In practice, individuals fulfill their assigned responsibilities, but these efforts are not necessarily directed toward the overall objective of the institution or organization. Moreover, both objective and subjective factors can hinder team formation (such as predispositions, subjective perceptions, lack of willingness to engage in teamwork, etc.).

However, for team building, it is essential to create conditions for self-development, self-organization, and self-expression, where the "I," while preserving its individuality, is oriented toward engaging in the "We" structure — pursuing the goals of the "We," yet at the same time not neglecting individual goals, which can serve as a source of intrinsic motivation.

LITERARURE REVIEW

Team building (from English: the combination of words "team" and "building" – construction, creation) is defined as a system of interventions and activities aimed at uniting the team, enhancing interaction, and promoting effective collaboration (Salas et al., 1999).

The idea of team building originated in the field of sports, where both group and individual successes depend on effective interaction within the team (Carron & Hausenblas, 1998). Later, the spread of the team-building concept was driven by the socio-economic development and management needs of industrial society. In the 1940s, targeted experiments were conducted in the USA and Western Europe aimed at improving collaboration among employees and enhancing work efficiency within organizations (Mills, 2007).

In the post-war period, the role of the workforce in economic recovery was emphasized, leading to the realization that productivity can be stimulated not only through technical means but also through socio-psychological factors and by building effective interaction among members of the organization. This idea was theoretically substantiated in Kurt Lewin's field theory, which explains the mechanisms of group dynamics, interaction, and behavior formation. It was established that the behavior of group members can be predicted and shaped by creating an appropriate social and psychological environment, as human behavior (B) is the result of the interaction between the individual (P) and their environment (E): B = f(P, E) (Lewin K., 1936).

According to this approach, team was viewed as a self-regulating social system, with role distribution, norms of interaction, and internal driving forces that directly affect the outcomes of group activities (Burnes B. & Cooke B., 2013).

Later, theoretical approaches were proposed by Karl Rohnke under the name "Outdoor Ropes Course", which took the practical methodology of team building to a new level. His approach was based on the principle of experiential learning, according to which knowledge is best acquired through interaction, experience, and joint activities, fostering trust, communication, and collaboration skills among group members (Rohnke, 1989). This, in turn, contributes to strengthening team identity, increasing the effectiveness of the activities carried out, and reducing potential conflicts.

In the team-building process, the "7C" model has also been proposed, which encompasses the key components of effective team performance: 1. capability (the knowledge, skills, and experience of team members necessary to achieve the goals), 2. cooperation (the willingness of team members to work together and complement one another; 3. coordination (the proper organization of actions and resources within the team), 4. communication (the exchange of ideas and discussion of problems among team members), 5. cognition (understanding of common tasks by team members, their abilities to analyze situations), 6. coaching (leadership that supports team development and problem-solving), 7. conditions (the contribution of the environment, resources, and other external factors that ensure team effectiveness (Tannenbaum & Salas, 2020).

With the evolving demands of the modern era, "virtual" teams are emerging alongside traditional, co-located teams. In the context of remote work, the process of team formation acquires new dimensions: the establishment of virtual teams emphasizes the development of mechanisms for building trust within digital environments and ensuring transparent communication (Bell & Kozlowski, 2008). Furthermore, contemporary international organizations are increasingly forming multinational and multicultural teams, where the process of team formation necessitates the acquisition and application of intercultural communication skills.

The issue of team building has also been examined in the field of pedagogy (Markova & Taysever, 2005; Russell, 2015), where the main emphasis is placed on educators' communicative and collaborative skills, adherence to the ethics of pedagogical communication, ensuring teacher–child interaction, and fostering a collaborative atmosphere in the educational process.

In the history of pedagogical thought, the concepts of "collective", "children's group" are also emphasized (Makarenko, 1984; Sukhomlinsky, 1971). It was noted that the effectiveness of children's upbringing and moral development largely depends on their involvement in group activities, which contribute to the formation of their collaborative and social skills.

Nevertheless, in the classical approaches presented, the process of team building as a systematic and goal-oriented activity was not yet emphasized. The main focus was placed on the teacher's personal

skills, the creation of a general atmosphere for forming a group, and the organization of group activities and children's participation in them—rather than on processes and mechanisms that facilitate team building, foster understanding of common goals, enhance individual responsibility for achieving those goals, and coordinate group dynamics. The aforementioned approaches highlight the terms "collective" and "children's group" whereas the concept of a "team" is fundamentally different. Let us examine these differences. The terms "collective" and "group" are understood as an aggregation of individuals united in space and time, where cooperation is often limited and situational in nature (Cartwright & Zander, 1968).

In groups, members may act side by side while pursuing their individual goals, which sometimes leads to conflicts of interest, mutual distrust, and the emergence of disputes. A "team" by contrast, is defined as an organized social unit whose activities are directed toward the achievement of a clearly formulated common goal. Team interaction involves shared responsibility for results, mutual support, and the distribution of roles, which ensures coordination (Katzenbach & Smith, 1993). Conflict within a team is not seen as an obstacle but as an opportunity for growth and innovative solutions, while communication is organized in an open and constructive manner, encouraging the generation and acceptance of new ideas.

Therefore, the team-building process is a multi-layered, integrated process that combines psychological, managerial, and technological factors. It serves not only as a means of enhancing the motivation of team members but also as a strategic resource for the organization, contributing to the improvement of its competitiveness.

Hence, team-building is aimed at:

- formulating the team's overall goal and uniting team members around it,
- increasing the level of mutual trust and collaboration among team members,
- improving the psychological climate within the team and reducing tension,
- encouraging creative and non-standard solutions, and fostering openness to innovations.

Thus, a team is a group of people working towards a common goal. Team building involves the process of enabling the group of people to reach their goals. It consists of steps like goal achievement; facing the identified challenges and enabling the achievement of the goals (Ada-Mac Ozigbo, et. al., 2020).

It should be noted that the issue of team-building has not yet been subjected to comprehensive and purposeful analysis in the field of preschool education. It is generally discussed in the approaches of various authors, for example, it is mentioned that the stages of team development proposed by psychologist Bruce Tuckman (forming, storming, norming, performing, adjourning) are also applicable

DOI: 10.24234/miopap.v12i2

among older preschoolers (Tuckman, 1965). In addition, it can be noted that L. S. Vygotsky's theory of the "zone of proximal development" also relates to the concept of team-building among preschoolers, as it emphasizes that children's social interactions promote their ability to focus on common goals and make joint decisions (Vygotsky, 1978).

In our view, the team-building process, as a systematic, unified, and comprehensive process, which includes defining a common goal, planning strategies and actions to achieve educational content and expected outcomes, assigning roles, and organizing interaction among team members, can be effectively implemented among preschoolers through project-based activity. This is supported by the fact that, on the one hand, project-based activity involves clearly identifying objectives, planning actions, assigning roles, collaboration, and analysis, on the other hand, children aged 5–6 already possess developed social skills, cooperate with one another, follow established rules (Slavin, 2015; Veraksa et al., 2015), form small play groups by taking on various roles, and participate in group activities while attempting to solve assigned tasks (Fisher et al., 2011; Utyumova et al., 2020, Sypchenko, 2017). Therefore, project-based activities can provide an effective opportunity for the formation of teams among senior preschoolers and the development of team-working skills.

METHODOLOGY

To investigate 5-6 years old preschoolers' teamwork skills, an experiment was conducted involving 30 preschoolers. During the study, project-based activity was implemented, and the children were organized into three subgroups, each comprising 10 preschoolers. It is noteworthy that the formation of subgroups within the team further reinforces the team-building process, as each subgroup, while completing its assigned tasks, engages in collaborative interactions both within the subgroup and across the entire team, collectively working toward the attainment of the common goal.

The project-based activity was carried out in stages:

The first phase: "Topic Selection"

Together with the children, we discussed and selected the following topic: "Maintaining the cleanliness of the environment." Subsequently, for each subgroup, we assigned one specific question and suggested that they gather information related to their respective questions: 1) Who pollutes the environment? 2) What are the consequences of environmental pollution for humans? 3) How should we maintain environmental cleanliness? In addition, since the team was also tasked with creating a model of their ideal playground, we organized role assignments for each subgroup: the "Designers' Team" (responsible for designing the playground model), the "Builders' Team" (responsible for constructing various structures using LEGO, such as the playground, benches, and swings), and the "Decorators' Team" (responsible for supporting the other two subgroups in choosing colors, models, and shaping the

DOI: 10.24234/miopap.v12i2

constructions).

The second phase: "Implementation of the Action Plan"

In this phase of the project-based activity, the children carried out the tasks assigned to them. They collaboratively discussed the work to be performed, collected information related to their designated questions, and exchanged ideas. It should be noted that, in order to answer the questions, the children engaged in discussions not only within their own subgroups but also with other subgroups, including consultations with their parents.

For the creation of the playground model, the subgroups also collaborated with each other. The "Designers' Team" designed the playground, discussed their ideas collectively, and presented them to the "Builders' Team". After these discussions, the "Builders" began constructing the structures with LEGO, consulting with the "Decorators' Team," who provided support regarding the selection of models and colors. This type of collaborative activity not only promoted teamwork within each subgroup but also fostered intergroup collaboration, encouraging discussion, problem-solving, and joint decision-making, thereby facilitating the planning of subsequent steps.

The third phase: "Presentation of the Results"

In this phase, the children finalized and presented their work. The outputs of the three subgroups were combined, and each subgroup presented and explained the tasks they had completed. This approach helped the children recognize that each of their contributions played a role in achieving the overall outcome and fulfilling the common goal. Additionally, the children presented the information they had gathered during the project.

The fourth phase: "Reflection"

During the reflection phase, we discussed children's achievements with them, the difficulties encountered during the activity, and the strengths and weaknesses of their work. The children enthusiastically shared their feelings and impressions, which contributed to strengthening team spirit.

DISCUSSION

To examine the development of teamwork skills among children during the project-based activity conducted with the experimental group, a diagnostic and assessment table was created, aligned with the phases of the project-based activity. For each phase, specific teamwork skills of the children were defined and evaluated on a 1–3 scale, corresponding to low, medium, and high levels (Table 1).

It should be noted that the selected skills were derived from approaches presented in the theoretical analysis of team-building.

DOI: 10.24234/miopap.v12i2

Table 1.
Assessment of 5–6-Year-Old Children's Teamwork Skills According to the Phases of Project-Based Activity

Phases	Teamwork Skills	Assessment
	Expression of ideas, discussion	
Topic Selection	Reaching a common agreement	
	Awareness of a common goal	
Implementation of the Action Plan	Awareness of one's role	
	Carrying out coordinated actions	
	Problem solving, mutual support, involvement	
Presentation of the results	Demonstration of creative approaches	
	Combination of ideas	
	Mutual respect, ability to listen to each other	
Reflection	Assessment of own and a peer's skills	
	Mutual evaluation within the team and between subgroups	
	Identifying the positive and negative aspects of the work	

Using the table presented above, we assessed each child's teamwork skills both before the implementation of the project-based activity - through questions and observation of various forms of children's activities (such as games, creative tasks) to obtain initial results - and at the end of each phase of the project-based activity to obtain final results. The obtained results are presented in the table below (Table 2).

Table 2.
Level of Development of 5–6-Year-Old Children's Teamwork Skills.

Results/Levels	Low level		Medium level		High level	
	n	%	n	%	n	%
Initial results	10	33	14	47	6	20
Final results	8	27	12	40	10	33

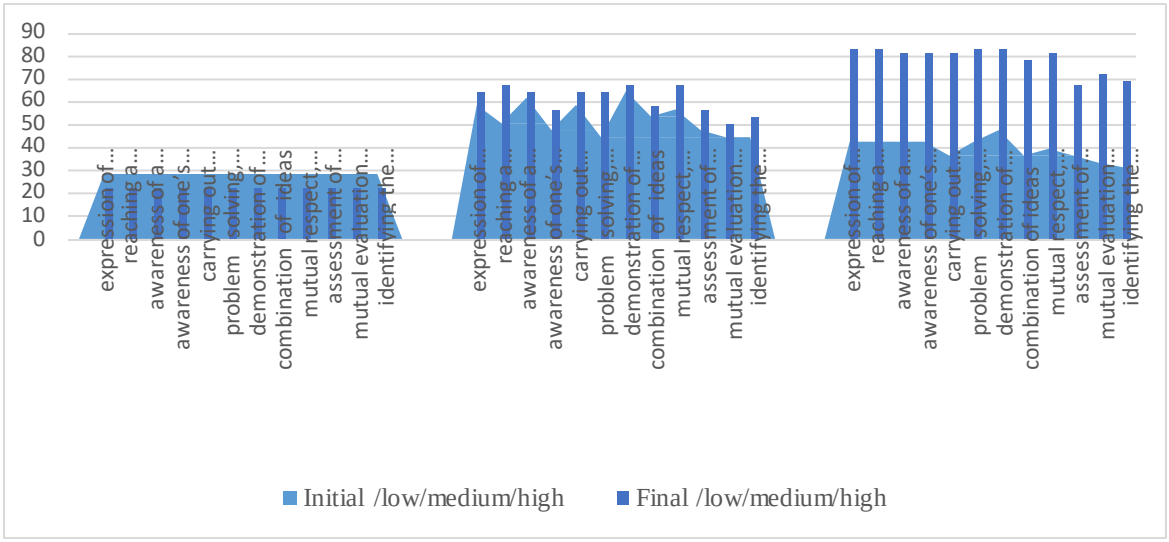
vol. 12 No. 2 (2025)
DOI: 10.24234/miopap.v12i2

The table clearly demonstrates changes in the results between the initial and final phases. In the initial phase, the low level accounted for 33% (10 children), the medium level for 47% (14 children), and the high level for 20% (6 children). In the final phase, the proportion of children at the low level decreased to 27% (8 children), the medium level increased to 40% (12 children), and the high level rose to 33% (10 children).

The correlation analysis revealed that project-based activity is positively associated with the teamwork skills of 5–6-year-old children ($r = 0.55$, Pearson correlation coefficient). This result indicates a significant and positive relationship between the variables. The correlation is moderately high, suggesting that when children are actively engaged in project-based activity, their teamwork skills also improve. The dynamics of the development of children's teamwork skills are presented in Diagram 1, where positive shifts across low, medium, and high levels are clearly visible (Chart 1).

Chart 1.

The dynamics of the development of senior preschoolers' teamwork skills.



CONCLUSIONS

Based on our research, we can assert that:

- the team-building process is a complex task, as it involves a range of conditions and factors, with an emphasis on the principle of working together. A team is based on common goals, mutual trust, and collaborative relationships,

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DOI: 10.24234/miopap.v12i2

- the results obtained from the experiment justify the effective potential for team-building among senior preschoolers through project-based activities, which contributes to children's understanding of the common goal,
- project-based activity plays a crucial role in fostering children's teamwork skills, as it creates authentic opportunities for collaboration, shared problem-solving, and mutual responsibility,
- the subgroups within the team during project-based activity promote the development of both team-level and subgroup-level collaboration. Through engaging in meaningful tasks, children not only practice working together but also develop communication, negotiation, and decision- making skills that are essential for effective teamwork.

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