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THE POSSIBILITIES OF DEVELOPMENT OF THE CHILD'S CREATIVITY AND ENTREPRENEURSHIP IN A PRE-SCHOOL

Rita Andrejeva[1], Svetlana Usca[2]
[1,2] Rezekne Academy o Technologies, Latvia

Abstract. *Today's rapidly changing era and the resulting demands bring into focus aspects related to children's education already from preschool, as this is the age when the basic qualities are formed and the foundations are laid for skills that are important for future development and self-fulfillment. The creativity and entrepreneurship of a preschool child is the ability to create new ideas and look for alternative solutions for their implementation, the readiness to act and finish what has been started, overcoming obstacles and showing initiative. The aim of the paper is to analyze the possibilities of development and assessment of the child's creativity and entrepreneurship in a preschool educational institution. The paper identifies the criteria and indicators for the assessment of the child's creativity and entrepreneurship, offers a model for the development of this skill in a preschool educational institution, and analyses the results of its approbation.*
Keywords: *child, creativity and entrepreneurship, preschool.*

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Introduction

Preschool age is particularly important for the development of an individual, as the significant characteristics and skills are being formed during this period of time that lay the foundation for future development and self-realization. Preschool education is one of the main factors that influence the lifepath and future direction, taking into the account that during this period a child demonstrates the highest level of learning capabilities (Sarıkaya & Coşkun, 2015). Regulations Regarding the State Guidelines for Preschool Education and the Model Preschool Education Programmes (Ministru kabinets, 2018) underline that the content of preschool education represents the values and virtues, the knowledge, understanding, and basic skills in seven study domains and six transversal skills, including creativity and entrepreneurial skills that can be successfully combined with other transversal skills. The OECD research (2020) notes the role of quality preschool education in the context of the child's future development - if a child is provided with a quality education programme from an early age, there is a greater chance that such an investment will create improved conditions for the child's future and better opportunities for growth and development as he/she grows. The trajectory of personality development has an impact on the potential of creativity – being more creative, children are more independent, have greater psychological resilience and are more capable of regulating their emotions. Therefore, it is important that the objectives chosen in the educational process and the strategies applied include aspects related to personality development and stimulation of creativity (Krumm, Lemos, & Richaud, 2018).

In line with the aim of implementing the content of preschool education, the focus is on the inquisitive, creative and joyful child who works actively and independently, learns with interest and joy, gaining experience about himself/herself, others, the surrounding world and mutual interaction in it (Ministru kabinets, 2018). The aim of the implementation of the educational content includes an essential knowledge about learning with joy and interest, which emphasizes the

importance of strengthening positive associations in a child about the learning process, as these associations have an impact on the child's future point of view; the transversal skills acquired during primary school form the basis for the child's learning habits in the future. Nowadays, learning is a lifelong journey, so it is necessary to stimulate this awareness in children and develop the transversal skills that are considered the cornerstone of preschool education and naturally complement each other; their development can take place through a diverse set of activities, and they must be skilfully integrated into the educational process.

Creativity and entrepreneurship are among the key transversal skills. They combine a set of several activities and characteristics and manifest themselves when a child invents several options how to perform regular activities, shows initiative, learns to be aware of himself/herself as an active and creative personality, wants to acquire new skills (Ministru kabinets, 2018). The competences also closely related to critical thinking, problem solving and self-directed learning. These competences continuously alternate with each other during the educational process, so it must be remembered that in order to develop creativity and entrepreneurship, other transversal skills must be improved as well.

The aim of the paper is to analyse the possibilities of development and assessment of the child's creativity and entrepreneurship in a pre-school educational institution.

Development and Assessment of the Child's Creativity and Entrepreneurship in Preschool

Creativity is a complex concept that can be viewed from the perspective of different fields. S. James et al. (2019) believe that creativity can be analysed in two ways: 1) as a social and communication dimension (thinking "outside the box", the ability to look at things from a different perspective, to be flexible in judgments, to see patterns and to do something new); 2) as an important element of mobility (social development, economic development); in the first case, it is also applicable to preschool and promotes personality development; in the second case, it is aimed at sustainability. Teachers can be the ones who recognize children's creativity (Vincent-Lancrin, González-Sancho et al., 2019).

Creativity includes the ability to demonstrate flexibility, ease (fluency), originality and elaboration, where:

- flexibility refers to the ability to switch from one approach to conceptualizing ideas and thoughts to another,
- ease (fluency) describes the individual's ability to generate multiple ideas related to the given concept or idea,
- originality refers to the ability to create new, unprecedented ideas that can essentially be perceived as a creative process,
- elaboration means the ability to generate, add to and implement ideas, hence it is in line with entrepreneurial skills in the context of the competence approach (Tafuri & Saracho, 2003).

The qualities of a creative personality are self-confidence, courage, passion, motivation for self-expression and personal growth (focus on process rather than outcome) and tolerance for the unclear and complex. In childhood, the potential for creativity is observed and identified for everyone, but it is clear that cultural norms and the environment can promote or hinder the development of creative qualities. Therefore, it is essential in preschool education to identify and assess the factors that influence the development of children's creativity and to work actively to create a safe environment and stimulating conditions that encourage children to express their creativity in as many different ways as possible (Briška & Kalēja-Gasparoviča, 2020).

Creative activity is based on three components: 1) domain-relevant skills, 2) processes related to creativity, 3) intrinsic motivation. Domain-relevant skills refer to the set of potential answers of an individual, from which the new answer is (or will be) created, as well as the amount of information available to the individual against which the new answer will be evaluated. This amount of information represents facts, principles, opinions, knowledge of models, paradigms, technical skills, and other specific domain-relevant skills. The way this information is organised plays an important role in the creative process, i.e., knowledge that is categorised according to general principles is more useful and applicable in the creative process than specific facts with narrow application (Ruscio & Amabile, 1996).

There is an important insight that should be taken into account in the context of preschool education - the processes and creativity-related elements are influenced by training or experience in generating ideas; in the case of both mentioned components, there are hereditary aspects that have an influence, but the environment also plays a significant role; the aspects of environmental impact can be developed or applied, and they need be enhanced (Ruscio & Amabile, 1996).

Finally – intrinsic motivation, which is the most important component in a creative activity, because skills are not comparable to intrinsic motivation; skills alone may not be enough to perform a creative activity (Ruscio & Amabile, 1996).

Creativity is related to imagination, which is considered one of the key abilities that contribute to the effective use of creative potential. From an early age, it is necessary to use methods and techniques that trigger activities for the development of imagination (Jankowska & Karwowski, 2015). Imagination is the ability to think of things as they might be. It is a source of invention and innovation; the ability to enrich rational thinking; the ability to think about the possible and the possibilities - not so much about the existing. Imagination is equally important in both art and science related activities, and it should be integrated throughout the curriculum (Egan & Judson, 2016).

It is concluded that creativity in preschool is a child's ability to create new ideas based on imagination and experience, as well as interaction with the environment. This process involves the ability to look "outside the box", be flexible and keep an open mind. A creative personality is characterized by self-confidence, courage and motivation. Intrinsic motivation is particularly noteworthy because it cannot be replaced or compensated for by skills. The creative process is positively influenced by training in generating ideas: this is an aspect that preschool education can provide excellently. The role of the environment is significant, and a preschool teacher can create the right conditions for the development of creativity in a child through awareness and knowledge.

The development of entrepreneurial skills at preschool age is an essential stage in the educational process. As A. do Paco and M. João Palinhas (2011) conclude in their research, entrepreneurship programs and education help children develop qualities such as a sense of responsibility, creativity, increased awareness of themselves and their environment. K. Schmidt-Hönig and G. Pröbstl (2020) claim that the improvement of entrepreneurial skills in the educational process at an early age can stimulate and promote the child's development processes. M. Lackéus (2015) states that the integration of entrepreneurial aspects into the educational process and curricula is necessary from an early age. It is mentioned that the preferred stage of education at which it should be started is the preschool and primary school age. Empowerment of entrepreneurial abilities refers to the promotion of particular characteristics, skills and behaviour patterns in a child, for example, the ability to notice one's own potential, to communicate effectively, to regulate emotions, to be flexible when making decisions (Suzanti & Maesaroh, 2017). According to M. Lackéus (2015), every child can and should develop the ability and interest in creating added value for the benefit of other people, which is ultimately the central idea of

entrepreneurship. The ability to create added value is a competence that every person needs in today's society, regardless of the particular person's career path; starting a business is just one of the ways to create added value in society. L. Suzanti and S. Maesaroh (2017) mention several qualities that are considered relevant; some of them are listed below:

- the ability to take risks, accept challenges, show courage,
- being flexible – the ability not to give up in the face of difficulties, to find alternative ways to reach the goal,
- the ability to demonstrate creativity – thinking "outside the box", the ability to come up with a new and unprecedented solution, which differs from the existing one,
- innovation, creativity – the ability to use creativity to provide solutions to problems and create opportunities and improvements,
- communication skills – the ability to communicate actively, to be sociable, to fit into a group of people, to work together with others in the same group,
- action-oriented attitude – showing initiative, the ability to act even before an undesirable event occurs, the capacity to be proactive,
- willingness to put in the work – behaviour that demonstrates the individual's ability and willingness to finish what he/she has started, to overcome the obstacles encountered during the process.

Entrepreneurship is essentially about the implementation of creative ideas; it is the ability to create and achieve something new, different and unprecedented through the process of creative thinking and innovative actions (creativity) (Suzanti, Maesaroh, 2017); it is a competence that helps to create added value to the surrounding people (Lackéus, 2015).

The analysis of definitions shows that creativity and entrepreneurship are complex concepts and that by looking at them from different perspectives and from the findings of different researchers, it is possible to get an insight into how many processes, skills, personality qualities contribute to the development and expression of creativity and entrepreneurship.

Creativity and entrepreneurship as transversal skills should be viewed in a complex way, assessing the impact of individual components while working on promoting their interaction; in this way, creativity and entrepreneurship can be fully and effectively encouraged from the stage of preschool education, during which it is important to help children unlock their creative potential. In addition, it should be remembered that the development of transversal skills does not take place separately, on the contrary, they complement each other; by investing resources in developing one of transversal skills, improvements and benefits are expected in the use and demonstration of other transversal skills. The development of creativity and entrepreneurship as transversal skills is unthinkable without self-directed learning, because self-directed learning requires that the individual is aware of his/her abilities, interests, learning needs, is able to determine the direction in which learning should be directed (targeted activity), and demonstrates motivation that results from the awareness of his/her interests. Self-directed learning as a transversal skill is a support point for even more successful development of creativity and entrepreneurship.

Several factors influence the development of creativity and entrepreneurship: teachers' characteristics, opinions, beliefs and attitude; their education, professional competences and experience; the physical and socio-emotional environment in the preschool education institution; pedagogical process aimed to implement the educational curriculum as well as the selected methods and approaches. These factors are interrelated; however, a teacher is substantially contributing to the environment and has the decision-making power on selecting the appropriate and diverse methods and approaches that correspond to the learning needs of a child and supports the development of creativity and entrepreneurial skills.

Regarding the development of creativity and entrepreneurship and its implementation in the pedagogical process, it is necessary to select the approach that corresponds to the age group, taking into account that various age groups can manifest these skills differently. Therefore, it is essential to consider the key characteristics of the particular age group and evaluate the real situation among children. The pedagogical approaches that are applied in the modern preschool education process recognize the environment as a contributing factor and emphasize the importance of creating encouraging conditions for learning. A child-centred learning process is focusing on the needs and interests of a child, as well as acknowledging the environment factor and promoting child's active participation in the educational process. The aspects of the development of creativity and entrepreneurship are aligned with the child-centred learning process; however, developing creativity and entrepreneurship through play is a complex process that can be divided in three levels; each level is crucial in order to effectively develop creativity and entrepreneurship.

The child-centred learning process can be implemented through play, ensuring that a child is an active participant (Grava, 2018). It is based on the constructivism theories, which state that it is necessary to build upon the child's zone of proximal development and previous experience, ensuring a balance between a teacher-led and child-led learning, as well as providing the possibilities of active learning and problem-solving that will establish new constructs (Powell & Kalina, 2009; Gordon 2009; Grava, 2018). This is represented by the levels below.

- 1st level consists of creativity, entrepreneurship and self-directed learning – these are the skills, competences and knowledge that help a child to establish positive habits and thinking patterns; as a child becomes the adult, the set of these skills and competences will allow the individual to apply them as the situation requires (Ho & Lim, 2020). The level of creativity, entrepreneurship and self-directed learning can differ among children; it should be taken into account when planning play activities and ensuring child-centred learning process (Grava, 2018).
- 2nd level consists of:
    - preconditions (child's curiosity, internal motivation, readiness to participate) that are closely related to the skill development level as defined in the 1st level,
    - methods and approaches selected by a teacher, based on the characteristics of the particular age group, child's interests, aspects of the preschool education process, existing preconditions,
    - assessment – a clear and understandable feedback that complies with the principles of assessment in preschool education (Skola2030, 2020) and provides an objective information that will help a child in the further learning process.
- 3rd level encompasses the physical environment (interior, the availability and diversity of materials) and the socio-emotional environment (peers, teacher's role and the quality of the teacher's performance).

The proposed model reflects cyclicality: a child gains new experience with every acquired skill in relation to entrepreneurship, creativity and self-directed learning due to the fact that a teacher has prepared the environment with new materials and selected new methods and approaches. By providing the assessment and ensuring the child's active participation, a new, objective information in a form of a feedback continues the child's journey of development, exploration and expression.

Methodology

During the approbation of the model, the pedagogical activity was purposefully implemented by organizing play-based activities in line with the curriculum following R. Gagne's 9 learning events (Gagne, 1970) for the development of creativity and entrepreneurship. Depending on the progress and results of the learning process, a teacher can conclude what has been successful, what could be added and make corrections and improvements in the next month's plan and/or within another topic to promote transfer.

In order to evaluate the effectiveness of the model and based on the findings of the literature review (Vincent-Lancrin et al., 2019; Suzanti & Maesaroh, 2017; Briška & Kalēja-Gasparoviča, 2020; James et al., 2019), a form for the assessment of children's creativity and entrepreneurship was developed according to the established criteria:

- creativity (indicators characterizing the criterion – imagination, "thinking outside the box", flexibility, fluency, originality),
- self-directed learning (indicators characterizing the criterion – awareness of individual capabilities and interests, determination, intrinsic motivation, independent action),
- entrepreneurship (indicators characterizing the criterion – acceptance of challenges, generation of innovative solutions, the ability to act, the ability to finish a task, presentation skills).

The development of creativity and entrepreneurship is based on the child's activity level during various play-based activities manifesting innovation, initiative, independence etc. The activity level is described by its intensity (Ušča & Ļubkina, 2012), and it indicates the level of the development of creativity and entrepreneurship. The following levels are identified:

1. activity is not observed,
2. passive activity: activity is expressed rarely; a continuous encouragement or help from an adult figure is needed to initiate activity,
3. fragmentary activity: an encouragement or help from an adult figure is needed occasionally,
4. regular activity in familiar situations: can be observed regularly in familiar situations; an encouragement or help is needed occasionally in new situations,
5. continuous activity: expressed regularly in various situations.

13 children aged 5 to 6 years and two preschool teachers who carried out the assessment participated in this research. The assessment took place at the beginning and at the end of the approbation. The data obtained were coded and processed in the SPSS software.

Results

The results of the Kendall correlation test demonstrate a strong correlation ($r > .7$) between the criteria (creativity, self-directed learning, entrepreneurship). These criteria are interrelated; if indicators of one criterion are improved, the others will improve as well. Self-directed learning skills are enhanced in almost any research area. Indeed, creativity might not always be in the centre of attention, however, by improving self-directed learning skills in, for example, math, the development of creativity is also supported, which is indicated by the strong correlation ($r=.770$). The strongest correlation is between creativity and entrepreneurship ($r=.901$). The results conclude that the criteria are selected correctly and are appropriate to assess the development of creativity and entrepreneurship among five and six-year-old children.

One of the key questions of the empirical part was to determine if the application of the proposed model in the practical pedagogical activity was effective. The Wilcoxon test was used for this purpose (Table 1).

Table 1 ***The assessment of creativity and entrepreneurship criteria and indicator development***

Criterion	p	Indicator	p
Creativity	.000	Imagination ("thinking outside the box")	.000
		Flexibility	.000
		Fluency	.000
		Originality	.000
Self-directed learning	.000	Awareness of individual capabilities and interests	.000
		Determination	.000
		Intrinsic motivation	.000
		Independent action	.000
Entrepreneurship	.000	Acceptance of challenges	.000
		Generation of innovative solutions	.000
		Ability to act	.000
		Ability to finish a task	.000
		Presentation skills	.003

All criteria and indicators (with the exception of *presentation skills*) have value p=.000, which indicate statistically very significant improvement. The indicator *presentation skills* (p=.003) has statistically significant improvement. The results show a positive rank: the criteria *creativity* and *entrepreneurship* show a positive rank in all 26 cases, while the criterion *self-directed learning* shows a positive rank in 25 cases. To sum up, the proposed model, including the author's developed methodological material, supports the development of creativity and entrepreneurship.

The average values of the indicators (Frequency test) at the beginning and at the end of research also show positive dynamics.

The average value has increased more for *acceptance of challenges* (from 3.08 to 3.96) and *fluency* (from 2.69 to 3.81), which proves that regular change of different techniques and methods, in which a child is the main participant, contributes to the development of the aforementioned indicators. For children, taking on challenges becomes a daily routine, and prior knowledge and skills help them to complete tasks more easily. The average value of *presentation skills* and *ability to finish a task* has not grown so fast. The progress of some indicators takes longer for the average value to grow significantly. Considering that the duration of research was one month, the results of the frequency test could increase over a longer period of time.

The results of the Kendall correlation test (Table 2) demonstrate that the relationship between all indicators is moderate (,4 < r < ,7) or strong (r < ,7), for example, *fluency* improves more rapidly in comparison to *acceptance of challenges* (r=,776) *awareness of individual capabilities and interests* (r=,692) and other indicators, which demonstrate that the development of creativity and entrepreneurial skills is a complex and ongoing process: the improvement of one indicator will cause increase in other indicators as well (Table 2).

Table 2 ***The results of the Kendall correlation test - indicators***

	Imagination	Flexibility	Fluency	Originality	Awareness of capabilities/ interests	Determination	Intrinsic motivation	Independent action	Acceptance of challenges	Generation of innovative solutions	Ability to act	Ability to finish a task
Flexibility	.623											
Fluency	.550	.757										
Originality	.748	.672	.552									
Awareness of individual capabilities and interests	.657	.692	.659	.694								
Determination	.558	.619	.671	.718	.790							
Intrinsic motivation	.657	.692	.659	.652	.731	.767						
Independent action	.714	.583	.571	.689	.821	.809	.767					
Acceptance of challenges	.576	.807	.776	.585	.710	.621	.614	.617				
Generation of innovative solutions	.815	.526	.525	.845	.695	.679	.690	.785	.523			
Ability to act	.678	.852	.655	.805	.780	.644	.714	.644	.675	.665		
Ability to finish a task	.597	.460	.605	.629	.606	.745	.706	.735	.530	.710	.513	
Presentation skills	.661	.636	.518	.838	.694	.707	.690	.661	.543	.683	.783	.690

The Mann-Whitney U test was used to find out whether the child's gender and age affect the results and whether there are differences in the assessments of children's creativity and entrepreneurship if two teachers conduct the assessment separately. The test was applied to analyse the results obtained both at the beginning and at the end of research.

At the beginning of research, the Mann-Whitney U test was conducted, and the statistically significant differences identified are summarized in Table 3.

Table 3 ***Results of the Mann–Whitney U test at the beginning of research***

Indicator	**Differences depending on the:**					
	Child's gender		**Child's age**		**Surveyor**	
	At the beginning	At the end	At the beginning	At the end	At the beginning	At the end
Flexibility	-	-	-	.020	.008	.024
Fluency	.034	-	.040	.045	-	-
Intrinsic motivation	-	.034	.046	-	-	-
Acceptance of challenges	-	.037	-	-	.006	-
Ability to finish a task	.042	-	-	-	-	.008

In contrast to the beginning of research, no statistically significant differences depending on the child's gender were found (p>.05) in the assessment of the indicators *fluency* and *ability to finish a task*, but they were found in two other indicators:

- *determination* (p=.034): the results show that girls are rated as more determined (Mean Rank 9.85) than boys (Mean Rank 15.78),
- *intrinsic motivation* (p=.037) is higher in girls (Mean Rank 15.75) than in boys (Mean Rank 9.90).

Girls are more creative; they like beautiful results, so they are more determined and motivated to achieve beautiful results. Boys are typically interested in specific areas, and they prefer activities with competitive elements, so a teacher may ask them not only to build a ship, but also a ship with the largest sail possible or one on which a bigger number of riders can be put. In this way, boys will be more motivated and determined to achieve results.

As at the beginning of research, statistically significant differences depending on the child's age were found in the assessment of the indicator *fluency* at the end of research, moreover, they became more significant. As before, 6-year-olds are rated higher (Mean Rank 15.33) than 5-year-olds (Mean Rank 9.38). Rapid development occurs at this age. Although children are from the same age group, 6-year-old children are still able to perceive information more easily and quickly. 5-year-old children are not yet able to perceive tasks quickly enough, there is confusion at the beginning of an activity, and their reaction is slower.

At the end of research, statistically significant differences depending on the child's age had disappeared in the assessment of the indicator *intrinsic motivation*, but they were found in the assessment of another indicator - *flexibility* (p=.020), which was not observed at the beginning of research. It is possible that at the beginning of research, surveyors thought that 5-year-old children were able to be flexible enough, but this indicator is related to fluency, therefore, when different methods and techniques for the development of creativity and entrepreneurship actively change, it is more difficult for younger children to change their way of doing things. Also, the assessment of the indicator *fluency* shows a higher rating for 6-year-old (Mean Rank 15.72) than for 5-year-old (Mean Rank 8.50) children.

Both at the beginning and at the end of research, there are statistically significant differences depending on the surveyor in the assessment of two indicators, which shows that any assessment is subjective. Although teachers work in the same group and implement the content according to the same plan, their view of the child's development is different. The results allow us to assume that the teacher's personality, competence and assessment play a significant role in the development of the child's creativity and entrepreneurship.

Conclusions

1. Creativity and entrepreneurship of a child of the preschool age can be defined as the ability to generate new ideas and look for alternative solutions to implement them, the willingness to act and finish what has been started, overcoming obstacles and showing initiative.
2. The following criteria and the indicators characterizing them can be used to assess the creativity and entrepreneurship of 5-6-year-old children: creativity (indicators – imagination, thinking "outside the box", flexibility, fluency, originality), self-directed learning (indicators – awareness of individual capabilities and interests, determination, intrinsic motivation, independent action) and entrepreneurship (indicators – acceptance of challenges, generation of innovative solutions, the ability to act, the ability to finish a task, presentation skills).
3. The basis of the development of creativity and entrepreneurship is the child's activity in various play-based activities. The intensity of the activity indicates the level of development of creativity and entrepreneurship; five levels can be applied to assess it: 1) activity is not observed, 2) passive activity, 3) fragmentary activity; 4) regular activity in familiar situations. 5) constant activity. The more often a child is active, the higher is the level of development of the child's creativity and entrepreneurship.
4. The analysis of the approbation results of the model for the development of children's creativity and entrepreneurship shows that the established criteria (creativity, entrepreneurship, self-

directed learning) and the indicators characterizing them are closely correlated, which indicates that the development of creativity and entrepreneurship takes place in a complex and continuous way, as the improvement of one component (criterion or indicator) contributes to the increase of other components.

5. The approbation results of the model for the development of children's creativity and entrepreneurship indicate positive development dynamics (the Wilcoxon test results show $p<.05$ for all criteria and indicators), which proves its effectiveness and possibilities of use in preschool education.

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