

SYNERGY BETWEEN EMOTIONAL REGULATION AND PROBLEM-SOLVING SKILLS IN PRESCHOOL AGE

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Abstract: This paper analyses contemporary theoretical perspectives, empirical findings, and key concepts in pedagogical and psychological literature concerning early childhood development. It argues that three interrelated systems—motivation, emotional regulation, and problem-solving skills—function in a dynamic synergy that determines the quality of children’s behavior, social adaptation, and cognitive development. Preschool age is a critical developmental period in which the foundations of self-regulation, emotional competence, and cognitive flexibility are established. Research shows that children’s behavior is largely guided by situational emotions, while stable motivational structures gradually emerge. Emotional regulation and executive functions (working memory, cognitive flexibility, and inhibitory control) develop intensively between the ages of 3 and 7 and are essential for adaptive functioning. The paper emphasizes that problem situations in preschool education serve as pedagogical tools that stimulate cognitive, emotional, and social development. These situations require children to regulate emotions, sustain motivation, and apply problem-solving strategies in meaningful contexts. The role of the teacher is crucial in creating a supportive learning environment, facilitating reflection, and guiding children’s self-regulatory processes. Pedagogical approaches such as role play, problem-based learning, and guided interaction are highlighted as effective tools for fostering this synergy. The integration of motivational, emotional, and cognitive processes is presented as a foundation for successful early childhood development.

Keywords: preschool education, emotional regulation, problem-solving skills, motivation, executive functions

Field: Social Sciences

1. INTRODUCTION

Preschool age is a critical developmental period during which the foundations of self-regulation, emotional competence, and cognitive flexibility are established. These abilities have long-term significance for children’s social adaptation and overall functioning. This stage is characterized by intensive personal development, during which children gradually acquire the capacity to regulate behavior, manage emotions and engage effectively in social interaction.

Research shows that young children’s behavior is often guided by situational desires and immediate emotional reactions, while more stable motives develop progressively over time. This early developmental dynamic plays a decisive role in the child’s ability to regulate emotions, cope with challenges, and develop initial problem-solving strategies.

Social-emotional learning includes the development of emotional awareness and regulation, empathy, cooperation, and constructive conflict resolution. These competencies are closely linked to motivation and children’s readiness to engage in educational activities. In preschool age, they are most effectively developed through play, role-based interactions, situations that allow children to experience, reflect on and regulate their emotions.

At the same time, executive functions - including working memory, cognitive flexibility and inhibitory control - develop rapidly between the ages of three and seven. These functions support planning, attention control, impulse regulation and strategic problem solving. Research consistently identifies well-developed executive functions as strong predictors of successful adaptation in both educational and social contexts.

The relevance of this topic is further emphasized by the need to integrate social-emotional learning and executive function development as interconnected processes in pedagogical practice. Their synergy supports more effective coping with challenges, the development of intrinsic motivation and stable self-regulatory patterns.

In this context, the teacher plays a decisive role by structuring the learning environment, encouraging reflection, supporting emotional stability and fostering cognitive strategies that children will continue to use throughout life.

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2. THEORETICAL FRAMEWORK

This paper is based on theoretical analysis, comparative review and synthesis of contemporary pedagogical and psychological literature related to preschool motivation, emotional regulation, executive functions and problem-solving skills. Classical and recent scientific sources were examined in order to identify major developmental patterns and pedagogical implications.

3. RESULTS

3.1. PROBLEM SITUATIONS IN THE KINDERGARTEN CONTEXT

In pedagogical terms, a problem situation refers to a learning or play-based moment in which a child encounters a challenge for which no ready-made solution is available. Such situations disrupt routine activity, generate cognitive or emotional tension and require the activation of thinking, imagination and self-regulation.

A problem situation should not be understood as a difficulty in a negative sense, but rather as a pedagogically constructed opportunity for development. It encourages children to explore alternative strategies, compare solutions, experiment, ask questions, and reflect on the consequences of their actions. In this sense, it functions as a driver of cognitive development and a natural context for the formation of executive functions.

In preschool settings, problem situations most often emerge during play, social interaction, or exploration and constructive tasks. They may arise from:

- conflicts of interest or opinions among children
- mismatches between expectations and outcomes
- changes in familiar conditions
- lack of sufficient information or resources

Problem situations are inherently social phenomena. Within group interactions, they often lead to negotiation, argumentation, reflective listening, and cooperation. These processes foster empathy, decentration and the ability to consider multiple perspectives.

The teacher's role is to design, recognize and guide problem situations so that they remain accessible yet sufficiently challenging-stimulating cognitive engagement without causing emotional overload. Educators support children through questioning, scaffolding, modeling strategies and establishing an environment in which mistakes are understood as part of learning.

Problem situations thus represent a key mechanism through which the synergy between motivation, emotional regulation and problem-solving skills becomes visible - three systems that underpin cognitive and personal development in preschool age.

3.2. MOTIVATION IN PRESCHOOL AGE AS A FOUNDATION OF SELF-REGULATION AND COGNITIVE ACTIVITY

Motivation in early childhood forms the basis of self-regulation and cognitive engagement. At this stage, it is primarily driven by immediate desires and emotional impulses, gradually becoming more stable, socially mediated, and goal oriented.

Vygotsky emphasized that motivation develops within the social situation of development, while Bozhovich defined it as the "core of personality." During preschool years, children transition from impulsive to more purposeful behavior and their motives become increasingly complex and socially structured.

Peer interaction leads to significant changes in the motivational sphere. While younger children may show limited awareness of others, by the age of four to five, peer approval becomes a powerful motivating factor. Elkonin highlighted the role of recognition in structuring social development.

Children increasingly seek acceptance from peers, influencing their behavior, role selection and participation in group activities. Motives of self-assertion also emerge, as children strive to be respected, heard, and noticed. The desire to assume leading roles in play is a typical manifestation of this tendency.

Preschool children often attribute exaggerated qualities to themselves, such as strength or bravery. This is a normal stage in the development of self-concept (Zaporozhets). However, self-assertion may also manifest in stubbornness or refusal to cooperate.

A positive emotional climate is therefore essential. It supports the development of values and personality structure, enhances confidence, reduces anxiety and facilitates socialization and school readiness.

3.3. MOTIVATION, EMOTIONAL REGULATION AND PLAY

These processes directly activate emotional regulation, as children must manage impulses, frustration and emotional arousal in order to sustain cognitive engagement. At the same time, motivation

is activated, as children need internal reasons to persist, retry or seek assistance.

Social motives function as emotional stabilizers, supporting engagement and regulating behavior in social contexts. Positive relationships with adults and peers create emotional security, reducing impulsivity and supporting rational thinking.

Cognitive motives are expressed through curiosity and questioning ("How?", "Why?"). Exploratory behavior, such as dismantling objects to understand their structure, reflects this motivational drive.

Competitive motives emerge later, typically around ages five to six, when children begin to compare their achievements with those of peers.

Play remains the central activity in preschool education, as it integrates emotional, cognitive, and social development. It provides a natural context in which motivation and self-regulation are closely intertwined.

Role play functions as an internal regulatory mechanism, requiring children to follow rules, inhibit impulses and sustain attention. It enables internalization of social roles and the development of behavioral control.

Thus, play serves as a natural training environment for motivation, emotional regulation and problem-solving skills. Within play, children experience emotions but must regulate them to remain within role boundaries, thereby developing self-control, attention and frustration tolerance.

3.4. EMOTIONAL REGULATION AS A PREDICTOR OF EFFECTIVE PROBLEM SOLVING

Emotions act as regulators of behavior, influencing self-control, attentional stability and readiness to engage in learning. Emotional regulation is therefore central to sustaining attention, controlling impulses and selecting appropriate strategies in problem situations.

Children with stronger emotional regulation demonstrate better concentration, greater persistence and higher cognitive flexibility - key prerequisites for effective problem solving.

Problem-solving skills are a core component of self-regulation in preschool age. They include identifying a problem, formulating a goal, selecting a strategy and evaluating outcomes.

These processes emerge in contexts requiring integration of cognition, emotion, behavior and depend strongly on the quality of the educational environment.

Teachers facilitate this development by creating problem situations, guiding attention and supporting reflection, thereby transforming problem-oriented thinking into a foundation for self-regulation.

4. DISCUSSION

EDUCATIONAL TOOLS SUPPORTING SYNERGY

Teachers play a key role in creating conditions that integrate motivation, emotional regulation and cognitive problem-solving strategies. While children learn through experience, educators structure the environment, stimulate conceptual development and support knowledge transfer across contexts.

Teachers do not provide ready-made solutions, but design environments including stimuli, role-based interactions, problem situations and social contexts that foster emotional regulation and intrinsic motivation.

A positive emotional climate and an accessible learning environment are essential for effective pedagogical practice (Stoyanova, 2023).

Analytical frameworks help teachers identify cognitive patterns, emotional responses and motivational drivers, supporting targeted intervention for self-regulation development.

Practical methods include role play, problem-based tasks, guided questioning, modeling, group work, and multimedia integration.

Concept mapping supports the structuring of children's cognitive representations and may be co-constructed to enhance active learning.

Diagnostic-predictive approaches enable evaluation of pedagogical impact and anticipation of effects on motivation, emotional stability and cognitive development.

Empathy-eliciting strategies involve cognitive conflict and uncertainty to stimulate reflection and engagement.

Multimedia tools further enhance attention, emotional involvement, and reflective processes, especially in older preschool groups.

Reflection - understood as awareness of one's cognitive and emotional states - plays a central role in learning and development.

5. CONCLUSION

The synergy between motivation, emotional regulation and problem-solving skills is fundamental to cognitive, social and personal development in preschool age. Understanding this interrelationship enables educators to design environments that foster intrinsic motivation, self-regulation and active learning.

Psychological and pedagogical theories demonstrate that child development occurs through active participation in meaningful activity. By enriching the structure and content of educational experiences, conditions are created that support holistic development.

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