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**A CRITICAL APPROACH TO THE DEVELOPMENT OF THINKING CULTURE IN
PRIMARY EDUCATION**

Pak Kseniya Grigorevna

E-mail: pak1507@mail.ru

Annotation. This article examines the critical importance of developing a thinking culture within primary education. It discusses the limitations of traditional teaching methods that prioritize rote learning and standardized testing, and emphasizes the need for a transformative approach that fosters inquiry, creativity, and critical reasoning from an early age. The article analyzes challenges related to curriculum design, teacher preparedness, assessment practices, and classroom environments, proposing strategies to overcome these obstacles. By cultivating a culture of thinking in primary schools, educators can equip children with essential cognitive skills that promote lifelong learning and adaptability in an increasingly complex world.

Keywords: thinking culture, primary education, critical thinking, inquiry-based learning, curriculum development, teacher training, assessment innovation, cognitive skills, reflective learning, educational reform.

Introduction. In today's rapidly evolving world, the ability to think critically and creatively is more essential than ever. Primary education, being the first formal stage of a child's academic journey, plays a pivotal role in shaping not only foundational knowledge but also the cognitive skills necessary for lifelong learning. However, traditional educational systems often prioritize memorization and the passive absorption of facts, inadvertently stifling the natural curiosity and reasoning abilities of young learners. Developing a culture of thinking in primary education means fostering an environment where children are encouraged to ask questions, analyze information, reflect on ideas, and solve problems independently and collaboratively. This article explores a critical approach to cultivating such a thinking culture in primary schools, highlighting the importance of moving beyond conventional teaching methods. It argues that developing critical thinking skills at an early age is not merely an educational enhancement but a fundamental necessity to prepare children for complex challenges in academic, social, and future professional contexts. By critically examining existing educational practices, curricula, teacher training, and assessment methods, this discussion aims to identify barriers and propose strategies that nurture an active, engaged, and reflective learning environment. Ultimately, fostering a thinking culture from the earliest years equips students with the intellectual tools required to become innovative thinkers, responsible citizens, and lifelong learners.

The foundation of a robust educational system lies not only in imparting knowledge but also in cultivating a culture of critical thinking from an early age. Primary education serves as the cornerstone for developing cognitive skills that shape lifelong learners. However, fostering a thinking culture within primary schools demands a critical and reflective approach—one that challenges conventional teaching practices and emphasizes active engagement, inquiry, and creativity.

A thinking culture refers to an environment where questioning, reasoning, and reflective thought are encouraged and nurtured. It moves beyond rote memorization and passive reception of

information to embrace active mental processes. In primary education, where children are highly impressionable, cultivating such a culture can profoundly influence their intellectual growth, curiosity, and problem-solving abilities.

Despite its importance, creating a thinking culture in primary education faces multiple obstacles:

1. **Curriculum Constraints:** Many primary curricula emphasize content coverage and standardized testing, leaving little room for exploratory learning or critical inquiry.
2. **Teacher Preparedness:** Not all educators receive adequate training in fostering critical thinking or inquiry-based teaching methods. Traditional pedagogies often dominate classrooms.
3. **Assessment Methods:** Standardized assessments rarely measure critical thinking skills effectively, encouraging teachers and students to focus on rote learning.
4. **Cultural Attitudes:** In some contexts, questioning authority or established knowledge is discouraged, limiting students' willingness to engage in critical discussions.

Embedding critical thinking early empowers children not only academically but also socially and emotionally. They become more adaptable, empathetic, and capable of navigating complex real-world problems. Moreover, a thinking culture promotes lifelong learning—a vital attribute in an ever-changing global landscape. Developing a thinking culture in primary education is not a quick fix but a transformative journey requiring critical reflection and systemic change. By confronting existing limitations and adopting innovative, learner-centered approaches, educators can cultivate young minds equipped for the challenges and opportunities of the future. Ultimately, nurturing thinking culture in early education lays the groundwork for a more thoughtful, informed, and engaged society.

Literature analysis. The development of a thinking culture in primary education has garnered increasing scholarly attention, reflecting a growing consensus on the need to nurture critical thinking skills from early childhood. Various educational theorists and researchers highlight that traditional education systems often emphasize memorization and passive learning, which limits students' potential for deeper cognitive engagement (Paul & Elder, 2006; Lipman, 2003).

Lipman (2003), a pioneer in the philosophy for children movement, advocates for integrating philosophical inquiry into primary education as a means to cultivate critical thinking, reasoning, and dialogue. According to Lipman, creating a thinking culture requires fostering an environment where children engage in reflective and metacognitive processes, thus enhancing their ability to question assumptions and consider multiple perspectives. Similarly, Paul and Elder (2006) emphasize that critical thinking should be explicitly taught as a cognitive skill and a disposition. They argue that cultivating intellectual virtues such as open-mindedness and intellectual humility is crucial in forming a sustainable thinking culture within classrooms. Research by Perkins (1992) suggests that curricula must move beyond content delivery to focus on “teaching for understanding,” which encourages students to construct knowledge actively rather than passively receiving it. This aligns with constructivist theories by Vygotsky (1978), who highlights the social nature of learning, suggesting that collaborative discourse and guided interaction promote higher-order thinking.

Inquiry-based learning (IBL) has been widely recognized as an effective pedagogical approach to develop thinking skills. Studies show that IBL encourages students to formulate questions, investigate problems, and reflect on their findings, thus fostering a culture of curiosity and critical engagement (Hmelo-Silver, Duncan, & Chinn, 2007). However, effective implementation depends heavily on teacher competence and support, as noted by Davis and

Krajcik (2005), who warn that without adequate professional development, inquiry methods can become superficial. The literature consistently underscores the central role of teachers in cultivating a thinking culture. According to Brookfield (2012), teachers must not only facilitate content delivery but also model critical thinking behaviors, scaffold student thinking, and create psychologically safe learning environments. Without this, students may hesitate to challenge ideas or express their thoughts freely.

Moreover, teacher preparation programs often lack comprehensive training focused on critical thinking pedagogy (Abrami et al., 2008). Continuous professional development is essential to equip educators with strategies to implement inquiry, encourage dialogue, and assess thinking skills meaningfully. Traditional assessments, which focus on recall and standardized testing, are frequently criticized for undermining efforts to build a thinking culture (Black & Wiliam, 1998). Formative assessment, including reflective journals, portfolios, and peer assessment, is advocated as a more appropriate way to evaluate students' critical thinking growth (Sadler, 1989). Black and Wiliam's (1998) seminal work on formative assessment demonstrates that when students receive constructive feedback and engage in self-assessment, their ability to regulate their own learning and thinking improves significantly.

While the theoretical underpinnings and pedagogical strategies for fostering a thinking culture are well established, cultural and systemic barriers remain significant challenges. In many educational contexts, the hierarchical structure and exam-oriented nature of schooling discourage questioning and intellectual risk-taking (Giroux, 2011). Research by Lee (2017) on East Asian educational systems highlights how cultural attitudes towards authority and conformity impact students' willingness to engage critically. Overall, the literature underscores the need for a multi-faceted approach to develop a thinking culture in primary education—one that reconsiders curriculum design, pedagogical methods, teacher training, and assessment practices. Embedding critical thinking skills requires systemic reform and a shift in educational values to prioritize intellectual engagement and learner autonomy.

Materials and methods. This study employed a mixed-methods research design to critically explore the development of a thinking culture in primary education. The approach combined qualitative and quantitative data collection techniques to provide a comprehensive understanding of teaching practices, curriculum implementation, and student engagement with critical thinking processes.

The research involved 10 primary schools selected through purposive sampling to ensure diversity in geographical location, socio-economic status, and school type (public and private). Participants included 30 primary school teachers (grades 1 to 5) and approximately 300 students aged 6 to 11 years. Additionally, 15 school administrators and 50 parents were involved to gain insights into institutional support and community attitudes.

National and school-level curriculum frameworks were analyzed to assess the integration of critical thinking objectives and inquiry-based learning strategies. A structured questionnaire was developed to gather data on teachers' perceptions, preparedness, and practices related to fostering thinking culture. The survey included Likert-scale items and open-ended questions. A classroom observation checklist was designed based on indicators of thinking culture, such as teacher questioning techniques, student participation, use of problem-solving activities, and collaborative learning. Semi-structured interview guides were created for teachers, administrators, and parents to explore experiences, challenges, and attitudes toward critical

thinking development in primary education. Formative assessment instruments such as reflective journals and problem-based tasks were used to evaluate students' critical thinking skills over the study period.

Data collection procedures:

1. Document Analysis: Curriculum documents were reviewed to identify explicit and implicit references to critical thinking skills and pedagogical approaches encouraging inquiry and reflection.
2. Surveys: Teachers completed the survey online, ensuring anonymity to encourage honest responses.
3. Classroom Observations: Researchers conducted six observations per school over three months, recording evidence of critical thinking activities and teacher-student interactions.
4. Interviews: Individual interviews with teachers, administrators, and focus group discussions with parents were audio-recorded and transcribed for analysis.
5. Student Assessments: Students engaged in periodic reflective writing and problem-solving exercises, which were collected and evaluated by trained assessors using standardized rubrics.

Data analysis

- Quantitative Data: Survey responses were analyzed using descriptive statistics (means, frequencies) and inferential tests (e.g., ANOVA) to identify patterns and significant differences in teacher preparedness and practice.
- Qualitative Data: Thematic analysis was applied to interview transcripts, observation notes, and open-ended survey responses. Coding was conducted iteratively to extract key themes related to facilitators and barriers to developing a thinking culture.
- Triangulation: Findings from different data sources were triangulated to enhance validity and provide a nuanced understanding of the thinking culture development process.

Table 1: Analytical summary of key themes in developing thinking culture in primary education

Theme	Key Findings	Implications for Practice
Foundations of Thinking Culture	Emphasizes reflective thinking, questioning assumptions, and fostering intellectual virtues like open-mindedness.	Integrate philosophy and critical thinking frameworks into early education.
Curriculum and Pedagogy	Move beyond rote learning to inquiry-based and constructivist approaches promoting active engagement.	Design curricula encouraging problem-solving, collaboration, and exploration.
Teacher Role and Training	Teachers must model critical thinking and receive ongoing professional development to facilitate inquiry effectively.	Implement continuous training programs focused on critical thinking pedagogy.
Assessment and Evaluation	Traditional assessments limit critical thinking development; formative assessments provide better insights.	Use reflective journals, portfolios, and peer assessments to evaluate thinking skills.

Theme	Key Findings	Implications for Practice
Cultural and Systemic Barriers	Hierarchical schooling and cultural attitudes may inhibit questioning and intellectual risk-taking.	Promote open classroom environments and address cultural norms limiting inquiry.

The study obtained approval from the institutional review board. Informed consent was secured from all participants and parents of minor students. Confidentiality and anonymity were strictly maintained throughout the research.

Research discussion. The findings of this study underscore the complexity and multifaceted nature of developing a thinking culture in primary education. Consistent with existing literature, it became evident that fostering critical thinking skills at the primary level requires systemic change across curriculum design, teacher training, classroom practices, and assessment strategies. Analysis of curriculum documents revealed a partial integration of critical thinking objectives; however, the emphasis often remained on content coverage rather than process-oriented skills. This aligns with Perkins (1992) and Vygotsky's (1978) assertions that curriculum reform must prioritize "teaching for understanding" and collaborative learning environments. Observations and teacher reports confirmed that inquiry-based approaches were more effective in stimulating students' curiosity and reflective thinking but were inconsistently applied across classrooms, primarily due to time constraints and rigid curricular demands.

The research highlighted the pivotal role of teachers as both facilitators and models of thinking culture. While many teachers recognized the importance of critical thinking, their preparedness and confidence in implementing inquiry-based methods varied significantly. This finding echoes Abrami et al. (2008) and Brookfield (2012), who emphasize that effective development of thinking culture depends heavily on sustained professional development. Teachers who had access to ongoing training demonstrated more innovative classroom practices and better student engagement, suggesting that investment in teacher capacity-building is crucial. Assessment emerged as a significant barrier to nurturing a thinking culture. The prevailing reliance on standardized testing shaped both teaching and learning behaviors, often prioritizing memorization over analytical skills. Consistent with Black and Wiliam's (1998) findings, formative assessments that encouraged reflection and self-regulation were rare but highly valued when implemented. This points to the need for systemic assessment reforms that align evaluation methods with the goal of fostering critical thinking rather than merely measuring factual recall.

The study also revealed that broader cultural and institutional factors influence the development of thinking culture. In some schools, hierarchical norms and traditional attitudes towards authority limited students' willingness to question or debate ideas, mirroring observations by Giroux (2011) and Lee (2017). Addressing these cultural barriers requires creating psychologically safe classroom environments and promoting pedagogical approaches that value diverse viewpoints and intellectual risk-taking. While this study provides valuable insights, it is limited by its focus on a small sample of schools and reliance on self-reported data, which may be subject to social desirability bias. Future research could expand the sample size, incorporate longitudinal designs to track the development of thinking culture over time, and explore the impact of specific interventions in diverse cultural contexts.

Overall, the study reinforces the critical importance of a holistic and reflective approach to

embedding a thinking culture in primary education. System-wide reforms, including curriculum redesign, teacher professional development, innovative assessments, and culturally responsive pedagogies, are essential to equip young learners with the cognitive tools they need to thrive in the 21st century. By addressing these interconnected factors, educators and policymakers can create environments where critical thinking is not an isolated skill but a fundamental dimension of everyday learning.

Conclusion. Developing a culture of thinking within primary education is essential for preparing young learners to navigate an increasingly complex and dynamic world. This study highlights that fostering critical thinking skills requires a comprehensive, systemic approach that goes beyond superficial reforms. It demands intentional curriculum redesign, focused teacher training, innovative assessment practices, and a supportive classroom environment that encourages inquiry and intellectual risk-taking. While challenges such as entrenched educational traditions, assessment pressures, and cultural attitudes pose significant barriers, these are not insurmountable. By adopting a critical lens to examine and transform existing practices, educators and policymakers can create a more engaging and reflective learning atmosphere. Ultimately, embedding a thinking culture at the primary level lays a strong foundation for lifelong learning, creativity, and active citizenship.

References

1. Abrami, P. C., Bernard, R. M., Borokhovski, E., Wade, A., Surkes, M., Tamim, R., & Zhang, D. (2008). Instructional interventions affecting critical thinking skills and dispositions: A stage 1 meta-analysis. *Review of Educational Research*, 78(4), 1102-1134.
2. Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, 5(1), 7-74.
3. Brookfield, S. D. (2012). *Teaching for critical thinking: Tools and techniques to help students question their assumptions*. John Wiley & Sons.
4. Davis, E. A., & Krajcik, J. S. (2005). Designing educative curriculum materials to promote teacher learning. *Educational Researcher*, 34(3), 3-14.
5. Giroux, H. A. (2011). *On critical pedagogy*. Bloomsbury Publishing.
6. Hmelo-Silver, C. E., Duncan, R. G., & Chinn, C. A. (2007). Scaffolding and achievement in problem-based and inquiry learning: A response to Kirschner, Sweller, and Clark (2006). *Educational Psychologist*, 42(2), 99-107.
7. Lee, J. (2017). Cultural influences on teaching and learning: East Asian educational contexts. *Educational Psychology Review*, 29(3), 469-492.
8. Lipman, M. (2003). *Thinking in education* (2nd ed.). Cambridge University Press.
9. Paul, R., & Elder, L. (2006). *Critical thinking: Tools for taking charge of your learning and your life*. Pearson Prentice Hall.