



INTERNATIONAL CONFERENCE ON BUSINESS & MANAGEMENT

Scientific Open Access Conference





MECHANISMS FOR THE MODIFICATIONAL IMPROVEMENT OF THE METHODOLOGICAL PREPAREDNESS OF FUTURE PRIMARY SCHOOL TEACHERS IN TEACHING STUDENTS TO DEVELOP READING LITERACY

Kayumova Shokhsanam Tulkin kizi

**Doctor of Philosophy in Educational Sciences (PhD), Associate
Professor, The doctoral student of Guliston state University(DSc)**

Postal code Guliston 120204, Uzbekistan

Email: shoxsanamkayumova0523@gmail.com

ORCID ID 0009-0007-8909-550X

Tel: +998943500523

<https://doi.org/10.5281/zenodo.17785669>

ARTICLE INFO

Received: 27th November 2025

Accepted: 28th November 2025

Online: 29th November 2025

KEYWORDS

*reading literacy, methodological
preparedness, modification,
cognitive strategies, PIRLS,
assessment literacy, primary
education.*

ABSTRACT

This article provides a scholarly and theoretical exposition of the mechanisms for the modificational improvement of future primary school teachers' methodological preparedness in teaching students to develop reading literacy. Based on an analysis of international assessment programmes (PIRLS, PISA) and modern pedagogical approaches (competency-based learning, cognitive strategies, evidence-based instruction, Learning Analytics, and differentiated education), effective strategies for enhancing prospective teachers' instructional readiness are proposed. The research outcomes substantiate the necessity of applying innovative mechanisms in preparing future teachers to cultivate reading literacy among primary-grade learners.

In today's era of globalization and rapid digital transformation, the development of reading literacy among primary school students has become one of the most critical priorities in early education systems worldwide. Reading literacy—encompassing the competencies of decoding, understanding, analysing, and applying written text—is widely recognized as a multidimensional construct that underpins students' overall cognitive development and long-term academic achievement (Snow, 2010; Duke & Cartwright, 2021). International research consistently demonstrates that early reading proficiency serves as a powerful predictor of later success across subject areas, influencing learners' motivation, problem-solving abilities, and capacity for independent learning.

The increasing complexity of information flows, the expansion of digital media, and heightened demands for critical thinking in the 21st century have further amplified the necessity of equipping learners with strong reading skills from the earliest grades. In this context, the role of the primary school teacher becomes particularly decisive. Teachers must not only possess a deep understanding of reading components and pedagogical strategies, but also be prepared to implement evidence-based instructional approaches that respond to diverse learner needs.

Recognizing this, the educational reforms undertaken in Uzbekistan underscore the strategic importance of improving teacher preparation. The Law of the Republic of Uzbekistan “On Education” and the national policy document *New Uzbekistan — Development Strategy 2022–2026* highlight the imperative of enhancing teachers’ methodological readiness and aligning teacher-education programmes with international standards. These reforms aim to ensure that prospective teachers are equipped with the skills necessary to foster students’ reading literacy in a systematic, integrated, and developmentally appropriate manner.

Moreover, global assessment programmes such as PIRLS and PISA have revealed significant differences in reading performance that are closely linked to the quality of teacher preparation, instructional design, and classroom assessment practices. As educational systems strive to raise learning outcomes, strengthening the methodological training of future primary school teachers emerges as a central priority requiring innovative, research-driven, and context-sensitive solutions.

Findings from the PIRLS international assessment (Mullis, Martin & Hooper, 2023) demonstrate that the reading literacy levels of primary school children are directly correlated with the pedagogical and methodological competence of their teachers. Therefore, enhancing the instructional preparedness of future teachers through modificational improvement represents a highly relevant and urgent task.

International scholarly literature identifies the core components of reading literacy as follows: phonemic awareness (Ehri, 2014), phonics (Castles, Rastle & Nation, 2018), fluency (Rasinski, 2012), vocabulary development (Beck, McKeown & Kucan, 2013), comprehension (Pressley & Afflerbach, 1995), and assessment (Paris, 2005). Deep methodological preparation in these components is a necessary prerequisite for establishing sustainable reading competencies in learners.

Analyses indicate (Darling-Hammond, 2017; Cochran-Smith, 2016) that existing teacher-education programmes embody a number of systemic shortcomings. First, these programmes tend to lack coherence; the components of reading literacy are frequently taught in isolation, without meaningful conceptual integration. Consequently, prospective teachers struggle to perceive reading as a unified, complex, and interrelated process. The absence of logical sequencing in curricula leads to fragmented and superficial knowledge acquisition.

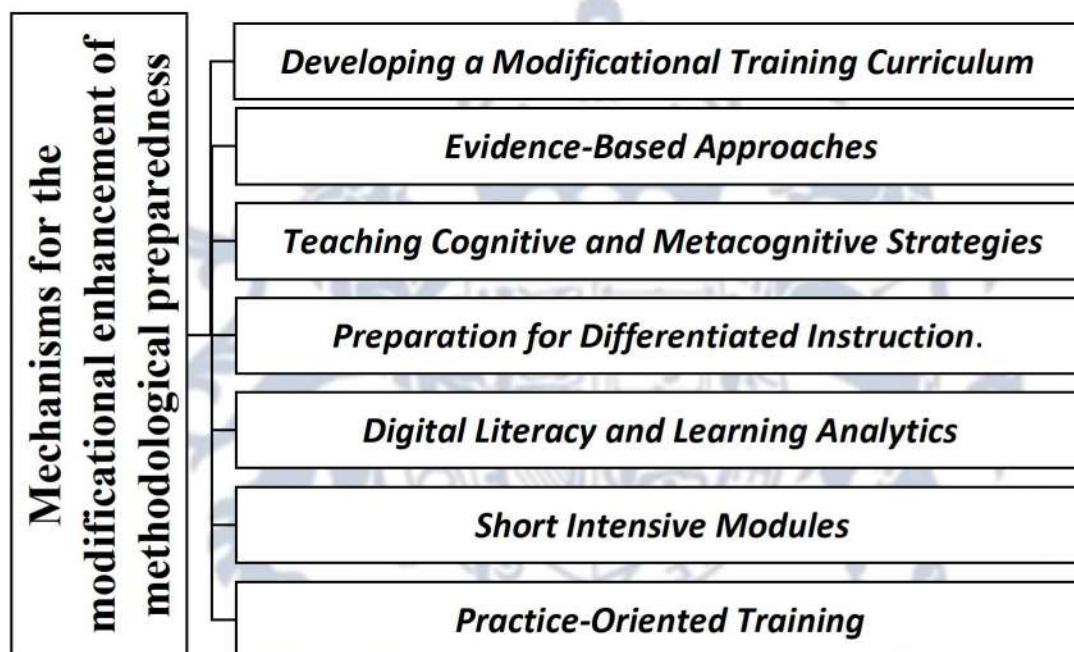
Second, as highlighted by researchers (Hudson, Lane & Pullen, 2005), methodological preparation in reading fluency and assessment remains insufficiently developed. Yet these two components, according to PIRLS findings, are among the strongest determinants of students’ reading achievement. Despite this, many teacher-training institutions provide limited practical experience in measuring fluency, cultivating expressive reading, and applying diagnostic or formative assessment tools.

A third critical issue concerns the weak integration of theory and practice. Although university students acquire theoretical knowledge about reading literacy, they often lack opportunities for practical engagement—such as micro-teaching, simulations, classroom observations, and structured mentoring—necessary for transferring theory into classroom practice. As a result, even theoretically well-prepared prospective teachers frequently exhibit low confidence during real instructional situations.

Fourth, as noted by Subban (2006), competence in differentiated instruction is not adequately cultivated. Today's classrooms are characterised by learners who differ widely in reading levels, needs, interests, and cognitive development. Hence, differentiation is a mandatory methodological competence for teachers. However, most preparation programmes do not provide sufficiently deep and sustained training in this area.

Fifth, Hoadley (2018) emphasizes that many instructional models remain poorly adapted to local contexts. Teacher-education programmes often rely on Western-developed frameworks or methodologies that are transferred directly without alignment to local language structures, cultural norms, learner profiles, or available resources. This mismatch substantially reduces the effectiveness of such methods in practical classroom settings.

Overall, these deficiencies constrain the readiness of future teachers for real instructional practice. As a result, they encounter difficulties in applying evidence-based strategies to develop students' reading literacy, struggle to diagnose and address reading challenges, and face obstacles in responding to learners' individual needs.



Picture 1. Mechanisms for the modification enhancement of methodological preparedness

Developing a Modificational Training Curriculum. Based on the recommendations of the *National Reading Panel* (2000), the following elements are proposed: teaching all components of reading in an integrated manner; implementing a theory–practice–reflection cycle; developing minimum professional standards. **Evidence-Based Approaches.** As Fletcher & Vaughn (2009) emphasize, instructional methods must be grounded in scientific evidence. Therefore, teacher-preparation curricula should include: selection of effective instructional methods based on meta-analyses; integration of strategies supported by PIRLS results. **Teaching Cognitive and Metacognitive Strategies.** Drawing on the frameworks of Zimmerman (2002) and Duffy (2009), the following are recommended: instruction in prediction, questioning, inferencing, and monitoring strategies; modelling these strategies within authentic classroom settings. **Preparation for Differentiated Instruction.** Following

Tomlinson's (2017) model, prospective teachers should master: small-group instructional technologies; differentiated and adaptive tasks; tools for identifying learners' needs. **Digital Literacy and Learning Analytics.** In line with Learning Analytics approaches (Grossman, 2010), training should incorporate: real-time monitoring of students' reading processes; data-informed instructional adaptation. **Short Intensive Modules.** Based on findings by Binks-Cantrell et al. (2012), training may include: 9–12-hour specialised modules; rapid preparation in phonics, fluency, and assessment. **Practice-Oriented Training.** Following Grossman (2010), teacher preparation should emphasize: collaboration with mentor teachers; video analysis of classroom instruction; reflective writing practices. **Expected Outcomes of Applying Modificational Mechanisms.** When these modificational mechanisms are implemented: methodological competencies significantly increase; the teaching of reading literacy components becomes more effective; reading difficulties are diagnosed early; students' reading performance improves.

Overall, modificational enhancement of the methodological preparedness of future primary school teachers is a fundamental requirement of modern education. Teaching reading literacy components in an integrated, evidence-based, and practice-oriented manner transforms the prospective teacher into a highly qualified specialist. The proposed mechanisms contribute substantially to improving the quality of primary education.

References:

1. Beck, I. L., McKeown, M. G., & Kucan, L. (2013). Bringing words to life: Robust vocabulary instruction (2nd ed.). Guilford Press.
2. Binks-Cantrell, E. S., Joshi, R. M., & Washburn, E. K. (2012). Predicting preservice teachers' knowledge of basic language constructs. *Journal of Learning Disabilities*, 45(5), 461–472. <https://doi.org/10.1177/0022219411431247>
3. Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5–51. <https://doi.org/10.1177/1529100618772271>
4. Cochran-Smith, M. (2016). Not just a pipeline problem: Teacher preparation and the research–policy gap. Harvard Education Press.
5. Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from high-performing systems? *European Journal of Teacher Education*, 40(3), 291–309. <https://doi.org/10.1080/02619768.2017.1315399>
6. Duffy, G. G. (2009). Explaining reading: A resource for teaching concepts, skills, and strategies (2nd ed.). Guilford Press.
7. Duke, N. K., & Cartwright, K. B. (2021). The science of reading progresses: Communicating advances beyond the simple view of reading. *Reading Research Quarterly*, 56(S1), S25–S44.
8. Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading*, 18(1), 5–21.
9. Qayumova, S. (2022). БЎЛАЖАК БОСШЛАНҒИЧ СИНФ ЎҚИТУВЧИЛАРИНИ ТИМСС ХАЛҚАРО БАҲОЛАШ ДАСТУРИ АСОСИДА МЕТОДИК ТАЙЁРГАРЛИГИНИ РИВОЖЛАНТИРИШДА МУЛТИМЕДИЯ ВОСИТАЛАРИНИНГ ЎРНИ. *Science and innovation*, 1(B4), 159-162.

- 10.Shohsanam, K. (2023). THEORETICAL IMPORTANCE OF ARTIFICIAL INTELLIGENCE. Science and innovation, 2(Special Issue 3), 159-162.
- 11.Kayumova, S. T. qizi, Sharipov, S. R., Abdullayev, K. A. ugli, & Nurmatov, I. S. (2023). THE THEORETICAL FOUNDATIONS OF IMPROVING STUDENTS' READING PROFICIENCY BASED ON MODERN TRENDS. RESEARCH AND EDUCATION, 2(12), 57-61.
- 12.To'lqin qizi Kayumova, S., Sharipov, S. R., ugli Abdullayev, K. A., & Nurmatov, I. S. (2023). THE THEORETICAL FOUNDATIONS OF IMPROVING STUDENTS'READING PROFICIENCY BASED ON MODERN TRENDS. RESEARCH AND EDUCATION, 2(12), 57-61.
- 13.Kayumova, S. T. K. (2022). DIFFERENCES BETWEEN PISA AND TIMSS INTERNATIONAL ASSESSMENT PROGRAM. Academic research in educational sciences, 3(NUU Conference 2), 753-757.
- 14.Sh. Kayumova (2023). DIDACTIC PRINCIPLES FOR DEVELOPING NATIVE LANGUAGE AND READING LITERACY OF FUTURE PRIMARY SCHOOL TEACHERS. Science and innovation, 2 (B9), 57-60. doi: 10.5281/zenodo.8348958
- 15.Sh. Kayumova (2023). DEVELOPMENT OF STUDENTS' READING LITERACY THROUGH TRIZ PEDAGOGY. Science and innovation, 2 (B10), 157-160. doi: 10.5281/zenodo.8433398
- 16.Qayumova, S. (2022). БЎЛАЖАК БОСШЛАНҒИЧ СИНФ ЎҚИТУВЧИЛАРИНИ TIMSS ХАЛҚАРО БАҲОЛАШ ДАСТУРИ АСОСИДА МЕТОДИК ТАЙЁРГАРЛИГИНИ РИВОЖЛАНТИРИШДА МУЛТИМЕДИЯ ВОСИТАЛАРИНИНГ ЎРНИ. Science and innovation, 1(B4), 159-162.
- 17.Urol o'gli, M. M. (2024, April). ENHANCING READING LITERACY THROUGH TECHNOLOGY INTEGRATION. In International conference on multidisciplinary science (Vol. 2, No. 4, pp. 229-233).
- 18.To'lqin qizi Kayumova, S., ugli Abdullayev, K. A., ugli Khujamurodov, O. M., & Markabayev, F. T. (2024). THE THEORETICAL IMPORTANCE OF THE STEAM PROGRAM IN THE DEVELOPMENT OF THE QUALITY OF EDUCATION. RESEARCH AND EDUCATION, 3(1), 29-33.
- 19.Qizi, Q. S. T. L. (2024). ENHANCING THE READING LITERACY OF ELEMENTARY SCHOOL STUDENTS THROUGH MODERN TRENDS. Science and innovation, 3(Special Issue 18), 190-193.