Volume 4, Issue 6 June 2026 **ISSN (E):** 2938-3757

DEVELOPING INFORMATION ANALYSIS SKILLS IN PRIMARY SCHOOL STUDENTS

Masturakhon Djamoldinovna Kadirova
Instructor, Department of Preschool, Primary, and Special Education Methodologies
Namangan Regional Center for Pedagogical Excellence
Email: dja.mastura1212@gmail.com

Abstract
This paper explores the pedagogical and methodological foundations for fostering and advancing information analysis skills among primary school students. Special emphasis is placed on developing learners' capacities to seek, comprehend, compare, and synthesize data from diverse sources, distinguish between core and secondary details, identify evidentiary support, and draw logical conclusions. Furthermore, the article reveals opportunities to enhance students' critical and logical thinking competencies within the instructional process through interactive methods, inquiry-based tasks, and exercises aligned with PIRLS assessment benchmarks.

Keywords: Primary education, information, information analysis, analytical skills, critical thinking, logical thinking, information literacy, reading literacy, PIRLS, interactive teaching methods, educational competence, analytical activity.

Introduction

In today's information-rich educational landscape, cultivating the ability of primary school learners to accurately comprehend, process, and analyze information obtained from multiple sources represents one of the most critical pedagogical priorities. Information analysis encompasses a comprehensive spectrum of student abilities, including locating information, grasping its deeper meaning, differentiating between primary and secondary information, comparing diverse data sets, identifying underlying relationships, discovering verifiable evidence, drawing reasoned conclusions, and articulating substantiated viewpoints.

In contemporary primary education, cultivating these core analytical skills is organically linked with reading literacy, critical thinking, digital literacy, media literacy, problem-based learning, and competency-oriented pedagogy. In particular, guiding young learners to analyze not merely narrative text, but also tables, diagrams, illustrations, maps, infographics, and other multi-modal representations substantially broadens their cognitive information-processing capacity.

By employing instructional tasks aligned with the cognitive domains of the Progress in International Reading Literacy Study (PIRLS), educators can systematically advance students' competencies in retrieving explicitly stated information, drawing direct inferences, interpreting and integrating ideas, and evaluating textual content and elements. Moreover, designing activities that prompt students to compare information sources in digital environments, evaluate

Web of Technology: Multidimensional Research Journal
webofjournals.com/index.php/4

source credibility, and synthesize heterogeneous data sets serves to modernize primary instructional methodologies significantly.

2. Contemporary and Scientific Innovations of the Study

This research introduces key innovative perspectives and methodological approaches to modernizing information analysis instruction in the primary grades:

2.1. Multi-Format Information Analysis: Students are trained to analyze multi-modal content beyond conventional text, incorporating illustrations, statistical tables, charts, geographic maps, and infographics.

2.2. Differentiating Fact from Opinion: Engaging, age-appropriate logical tasks enable students to distinguish objective facts from assumptions, hypotheses, and authorial viewpoints.

2.3. Comparative Information Analysis: Learners cultivate the skill to cross-examine two or more information sets on a given topic, identifying similarities, contrasts, and formulating generalized deductions.

2.4. Critical Source Evaluation: Inquiry-guided questions—such as "Where did this information originate?", "Who published or stated it?", and "What proof is presented?"—develop students' conscious, critical approach to data sources.

2.5. Digital Information Analysis: In an evolving digital learning sphere, equipping pupils to comprehend, filter, cross-verify, and purposefully utilize digital data is treated as an essential instructional vector.

2.6. Alignment with PIRLS Cognitive Domains: Analytical tasks are structured around the four fundamental PIRLS cognitive domains:

- Focusing on and retrieving explicitly stated information;
- Making straightforward inferences;
- Interpreting and integrating ideas and information;
- Evaluating and critiquing content and textual elements.

2.7. Evidence-Based Reasoning and Conclusion Formulation: Learners move beyond unsubstantiated statements like "I just think so" toward structured arguments such as "I reached this conclusion because the text explicitly states...", cultivating substantiated discourse.

3. The Proposed "5A" Pedagogical Model

To theoretically structure and scientifically substantiate the analytical process for primary learners, we propose the innovative "5A Model". This model provides a sequential, five-stage framework tailored to cognitive stages of young learners:

Web of Technology: Multidimensional Research Journal
webofjournals.com/index.php/4

Identify (Aniqlash) ➔ Isolate (Ajratish) ➔ Interconnect (Aloqalash) ➔ Analyze (Analiz qilish) ➔ Argue (Asoslash)

Stage (5A)	Core Process	Methodological Description & Classroom Application
1.Identify (Aniqlash)	**Grasping theme, purpose, and central problem**	The learner comprehends what the text or data is about and discovers answers to foundational questions such as: 'What is this information discussing?' and 'What specific problem is being addressed?' This establishes the baseline semantic grounding for subsequent analytical inquiry.
2.Isolate (Ajratish)	**Distinguishing primary vs. secondary information**	The learner discriminates between essential facts and subordinate background details, identifying the core concept and distinguishing it from supplementary explanations. This helps eliminate cognitive overload and prioritizes key facts.
3. Interconnect (Aloqalash)	**Establishing logical linkages and cause-effect**	The student identifies logical, temporal, sequential, and causal interrelations between disparate ideas, facts, and narrative events. Through noting cause-and-effect, contrasts, and affinities, the learner constructs a coherent holistic understanding of the material.
4.Analyze (Analiz qilish)	**Deconstructive inquiry and comparative interpretation**	The learner systematically breaks down information into constituent components, compares diverse facets, examines mutual relationships, unpacks causes and consequences, and contextualizes meaning. Instead of passive reception, the student actively interprets content to form independent judgment.
5.Argue / Substantiate (Asoslash)	**Evidence-based justification and conclusion**	The student articulates derived conclusions, perspectives, or evaluations by anchoring them firmly in specific textual evidence, empirical facts, or illustrative examples. This develops logical argumentation, rational justification, and authentic independent cognitive autonomy.

4. Conclusion

In conclusion, cultivating the information analysis competencies of primary school students is a pivotal priority within contemporary primary education. In an era characterized by an ever-expanding volume of available information, education can no longer focus solely on passive absorption of facts; it must empower students to comprehend, filter, compare, correlate, critically evaluate, and deduce reasoned conclusions supported by authentic evidence.

The "5A Model" proposed in this research—Identify (Aniqlash) ➔ Isolate (Ajratish) ➔ Interconnect (Aloqalash) ➔ Analyze (Analiz qilish) ➔ Argue/Substantiate (Asoslash)—offers

Web of Technology: Multidimensional Research Journal
webofjournals.com/index.php/4

an organized, step-by-step instructional system for orchestrating primary students' analytical activity. Each progressive phase addresses a defined cognitive task: recognizing initial thematic scope, isolating pivotal details from periphery information, mapping underlying connections, thoroughly dissecting data, and substantiating conclusions through verifiable facts.

This methodology is adaptable across diverse subjects within the primary curriculum, including Native Language and Reading Literacy, Natural Sciences, and Mathematics. Incorporating multi-modal learning tasks based on tables, diagrams, visual imagery, maps, and infographics enriches pupils' information processing proficiencies. Concurrently, synchronizing instructional design with PIRLS assessment benchmarks advances students' reading literacy and higher-order thinking faculties.

Consequently, systemic development of analytical capacities fosters independent critical thinking, evidence-based reasoning, problem-solving, and sound deductive judgment in young learners. Instruction structured around the "5A Model" transforms the elementary school student from a passive consumer of information into an active, discerning investigator and reflective thinker capable of generating meaningful intellectual insights.

References

1. President of the Republic of Uzbekistan. (2019). Decree of the President of the Republic of Uzbekistan No. UP-5712 of April 29, 2019, 'On approval of the Concept of development of the public education system of the Republic of Uzbekistan until 2030'. Tashkent, 2019. Electronic document, Lex.uz.
2. President of the Republic of Uzbekistan. (2022). Decree of the President of the Republic of Uzbekistan No. UP-134 of May 11, 2022, 'On approval of the National Program for the Development of School Education in 2022–2026'. Tashkent, 2022. Electronic document, Lex.uz.
3. President of the Republic of Uzbekistan. (2022). Resolution 'On additional measures for the development of public education', May 11, 2022. Tashkent, 2022. Electronic document.
4. Republic of Uzbekistan. (2020). Law of the Republic of Uzbekistan 'On Education'. No. ZRU-637, September 23, 2020. Tashkent, 2020. Electronic document, Lex.uz.
5. Mullis, I. V. S., & Martin, M. O. (2019). PIRLS 2021 Assessment Frameworks. Chestnut Hill, MA: Boston College, 224 p.
6. Mullis, I. V. S., & Martin, M. O. (2021). PIRLS 2021 Assessment Frameworks. International Association for the Evaluation of Educational Achievement (IEA), 224 p.
7. von Davier, M., Mullis, I. V. S., Fishbein, B., & Foy, P. (2023). Methods and Procedures: PIRLS 2021 Technical Report. Chestnut Hill, MA: Boston College, 400 p.
8. Aydarova, U. B., & Azizova, N. K. (2023). Reading Literacy: Textbook for 4th Grade of Secondary General Schools (Part IV). Tashkent: Novda Edutainment, 80 p.
9. Aydarova, A. B., Azizova, N. K., & Toirova, M. E. (2023). Reading Literacy: Textbook for Grade 4. Tashkent: Novda, 79 p.
10. Mavlonova, K., Quronov, S., Tursun Shokir, Hakimova, N., & Bakhtiyorova, H. (2022). Native Language and Reading Literacy: Methodological Guide for 3rd Grade Teachers. Tashkent: Republican Education Center, 160 p.
11. Husanboyeva, Q., & Hazratqulov, M. (2020). Methodology of Teaching Literature in Primary Grades. Tashkent: Innovatsiya-Ziyo, 375 p.

12. Jabborova, O. M., Umarova, Z. A., & Babakhodjayeva, L. G. (2021). Primary Education Pedagogy, Innovation and Integration. Tashkent: Malik Print Co.
13. Hamroyev, A. (2020). Methodology of Teaching Native Language in Primary Grades. Bukhara, 216 p.
14. Abduqudusov, O. A. (2011). Modern Pedagogical and Information Technologies. Tashkent.
15. Adizov, B. R. (2003). Theoretical Foundations of Creative Organization of Primary Education. Doctoral dissertation in pedagogical sciences. Tashkent, 2003.
16. UNESCO. (2023). Information Literacy. Paris: UNESCO. Electronic resource.
17. Khodjayeva, M. (2023). The importance of international assessment programs in enhancing reading and literacy skills of primary school students. Bulletin of Kokand University, 1, 372–376.

Web of Technology: Multidimensional Research Journal
webofjournals.com/index.php/4