



# INTEGRATIVE EDUCATIONAL METHODOLOGY FOR FORMING INTERNAL DISCIPLINE AND CONSCIOUS RESPONSIBILITY IN PRIMARY SCHOOL STUDENTS

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## ABSTRACT

*This study explores the pedagogical conditions required to shift the management of primary school students' behavior from external administrative control to internal mechanisms of conscious self-regulation. Using the 4th-grade "Tarbiya" (Upbringing/Ethics) course as a case study, the article outlines an author-developed integrative methodology based on synthesizing the functional engineering elements of STEAM technologies with the emotional-psychological capabilities of the KR-BT (Reading-Reflection-Bibliotherapy) interactive model. The paper analyzes the results of experimental monitoring conducted between 2022 and 2025, which involved 712 students from schools across the Surxondaryo, Xorazm, and Sirdaryo regions. The findings demonstrate that lessons organized with the aid of digital platforms and practical design modules led to a significant dynamic increase, with students in the experimental groups outperforming those in traditional classrooms by an average of 23–25% in targeted time management and reflexive analysis indicators. The conclusions of the research offer a comprehensive set of practical recommendations for integrating the primary school curriculum both interdisciplinarily and emotionally-ethically.*

## 1.introduction

In the context of the modern educational paradigm, the priority task is to form students' ability to make independent and responsible decisions in daily life, rather than merely developing the skill of mechanically memorizing rules and social norms. In particular, making effective use of the didactic potential of the "Tarbiya" course, which has been introduced for primary school graduates (4th grade), is one of the urgent pedagogical issues. However, in practice, reproductive (memorization-based) and monological methods still dominate the teaching of this subject. As a result, internal conscious discipline and horizontal cooperation skills, which should form without external pressure, remain insufficiently developed in students [1, p. 128].

To eliminate this problem, it is necessary to shift the lesson process to practical design activities, i.e., to link humanitarian ideas with technological and engineering solutions. Any constructive task performed within the STEAM approach requires accuracy, adherence to time, and team agreement from the student [3, p. 12]. If this process is combined with emotional-ethical analysis (bibliotherapy) of literary texts, the student perceives moral values not as an abstraction, but as a success factor for their project [10, p. 146]. This article presents the effectiveness indicators of a new integrative educational methodology tested within a large-scale regional experiment based on the synthesis of STEAM and KR-BT models.

## **2. pedagogical monitoring and methodological foundations**

The issue of forming a system of conscious responsibility in the personality of students implies a radical integration of educational content. International studies emphasize that the "Arts" component within the STEAM model serves to humanize technical directions and give them social and ethical meaning [5, p. 32]. Our local pedagogical scholars have also scientifically proven the effectiveness of transforming the learner into an active subject of the process and structuring lessons on a project basis [2, p. 215]. In order to apply these theoretical approaches in practice, a KR-BT reflexive chain was developed for primary grades within our research scope. This system consists of four consecutive psychological stages:

**Identification (Emotional Adaptation):** In the process of reading a text with a problematic situation, the student puts themselves in the character's shoes [10, p. 150].

**Catharsis (Emotional Purification):** The student arrives at a moral conclusion by discussing the character's behavior and its consequences [6, p. 42].

**Insight (Internal Awareness):** The student understands the vital necessity of order and discipline [11, p. 66].

**Reflection (Practical Application):** The internalized conclusions are reflected in a specific engineering-creative project [4, p. 116].

## **3. Organizational infrastructure of experimental work**

To verify the objectivity of the methodology, a comprehensive pedagogical experiment was organized between 2022 and 2025. A total of 712 4th-grade students from schools in the Surxondaryo, Xorazm, and Sirdaryo regions participated in it. The sample groups were distributed as follows:

**Experimental Groups (EG):** 360 students — lessons were conducted based on the author's proprietary software and integrative educational modules.

**Control Groups (CG):** 352 students — taught according to traditional textbooks and standard methodology.

During the lesson, students performed special assignments in micro-teams [7, p. 108]. For instance, on the topic of "The Value of Time," following a literary analysis, students relied on the rules of mathematics and mechanics to create engineering models (Smart-timers or project maps) that visualized their daily routines. The management and evaluation of the process were carried out through a specially developed electronic interactive program [8, p. 74].

## **4. Empirical lesson dynamics and indicator analysis**

The results obtained at the end of the experiment confirmed significant intergroup differences in the competency growth of students. The reliability of the data was checked

through mathematical-statistical processing using Student's t-test and Pearson's chi-squared ( $\chi^2$ ) test [12, p. 148].

**Table 1**

*Comparative scenario of the growth of students' personal-reflexive and systemic-practical skills (N = 712)*

Indicator Code	Evaluated Personal and Structural Quality Criteria	Experimental Sample (%)	Control Sample (%)	Net Variation Difference ( $\Delta$ )
IND-01	Correct time planning, independent task completion, and level of conscious discipline	86%	61%	+25%
IND-02	Ability to analyze moral problems and propose practical-technological solutions	79%	56%	+23%
IND-03	Creative thinking and literary-emotional reflection formed on the basis of the author's KR-BT model	82%	58%	+24%
IND-04	Feeling collective responsibility in group projects and communicative activity	84%	60%	+24%

As seen from the table analysis, the IND-01 (conscious discipline) indicator rose up to 86% in the experimental environment, while this indicator did not exceed the 61% level in traditional classrooms [9, p. 54]. Students' skill in finding practical-technical solutions to problematic moral situations (IND-02) was also resolved with a significant difference (+23%) in favor of the EG [9, p. 60]. As a direct result of the KR-BT model's influence, students' level of reflexive thinking (IND-03) reached 82% [10, p. 152]. The skill of mutually equal distribution of responsibility in team projects (IND-04) recorded an efficiency of 84% in the experimental classes [4, p. 118].

### 5. Scientific discussion

The materials collected during the study show that in order to develop behavioral autonomy in primary school students, it is necessary to take the "Tarbiya" subject out of the format of just reading text or memorizing rules. When a student enters the process of building an engineering or technological model with their own hands, seconds and precise dimensions

are required from them. This forms a natural need in the student for internal conscious discipline and time management [11, p. 68].

The introduction of the KR-BT model into the system ensures that technical elements do not remain dry [14, p. 4]. A student who is moved by the mistake of a literary character strives not to repeat that mistake when executing a practical project. The use of software-modeling tools increases digital literacy among students and allows for a transparent and fair evaluation of team work [8, p. 80]. According to the conclusions of experts and observing teachers, the proposed integrative methodology is the most optimal didactic system that harmonizes the intellectual and spiritual development of primary school students [13, p. 208].

## **6. Conclusion and practical recommendations**

### **6.1. Conclusions**

Applying STEAM projects to the "Tarbiya" subject serves to develop students' logical, critical, and engineering thinking within an environment of spiritual values [3, p. 15].

The author's KR-BT reflexive model improves students' literary and emotional literacy and helps them gain a deeper understanding of ethical concepts [10, p. 155].

Interactive educational software and digital modules visualize the learning process and sustainably maintain students' motivation during lessons [8, p. 83].

The proposed integrative educational methodology has a 20–24% higher efficiency compared to traditional approaches in forming 21st-century competencies in students.

### **6.2. Methodological Recommendations**

In teaching the "Tarbiya" subject in primary grades of general education schools, it is recommended to abandon the dry memorization method and systematically utilize practical-constructive projects [6, p. 44].

In order to influence the emotional world of students during lessons, the analysis of problematic literary texts must be inherently linked with engineering tasks [10, p. 156].

To improve the quality of education and correctly evaluate students' activities, it is necessary to wider implement interactive digital platforms and educational programs into the lesson processes [8, p. 85].

To prepare and support primary school teachers, a package of model lesson plans that ensure interdisciplinary integration should be included in methodological manuals [1, p. 132]. In order to strengthen school-family cooperation, a system of displaying students' integrative classroom projects in the form of open exhibitions with the participation of parents should be established [15, p. 115].

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