

THE PSYCHOLOGICAL IMPACT OF CRITERION-REFERENCED AND FORMATIVE ASSESSMENT ON STUDENTS' INTRINSIC MOTIVATION AND SELF-REGULATION

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Abstract

This article analyzes the psychological impact of criterion-referenced and formative assessment systems on students' intrinsic motivation and self-regulation abilities. Unlike traditional assessment, it is highlighted that criterion-referenced and formative approaches reduce students' fear of failure and anxiety levels, thereby fostering a "growth mindset." The article reveals the psychological mechanisms through which these assessment types enable students to independently analyze their learning effectiveness, develop metacognitive skills, and transition from external incentives to intrinsic motivation.

Keywords

criterion-referenced assessment, formative assessment, intrinsic motivation, self-regulation, psychological impact, growth mindset, metacognition.

In the modern educational paradigm, alongside the intellectual development of the student, the formation of their independent thinking, subjective agency, and intrinsic need for lifelong learning has become a primary objective. The approach in the traditional education system, which is focused solely on recording the final result (a numerical grade), often reinforces a "studying for grades" reflex in students – that is, extrinsic motivation – leading to an increased fear of failure and higher levels of anxiety. In educational psychology, assessment is considered not merely a tool for control but a psychological driver that dynamically manages both the quality of education and the student's personal development.

Therefore, implementing criterion-referenced and formative assessment in the educational process holds subjective significance in activating students' intrinsic motivation (the sense of enjoyment and satisfaction derived from the activity itself) and self-regulation mechanisms (the independent planning and management of one's own learning activities). From the perspective of Self-Determination Theory in psychology (E. Deci, R. Ryan), an individual's intrinsic motivation is enhanced

when their needs for autonomy, competence, and relatedness are met. While criterion-referenced assessment enhances a student's sense of competence by allowing them to see their strengths and weaknesses against transparent criteria, formative assessment, through continuous feedback during the lesson, eliminates the fear of failure and cultivates the "growth mindset" emphasized by C. Dweck [1].

A student's self-regulation is directly linked to metacognitive skills—that is, the ability to understand and manage one's own cognitive processes. In a formative assessment environment, the student is not merely a passive object but becomes an active subject who evaluates their own learning. This facilitates the proper development of volitional qualities and psychological self-esteem (adequate self-assessment) in adolescents and primary school-aged students.

In the context of laying the foundation for the Third Renaissance in the Republic of Uzbekistan, the fundamental reform of the education system and its alignment with international standards has been designated as a top priority of state policy. In the strategic documents adopted by the head of our state, alongside transforming the content of education, special emphasis is placed on creating transparent and objective systems for assessing student knowledge.

Specifically, the mechanisms for reforming the assessment system are clearly outlined in the Development Strategy of the New Uzbekistan and in the decrees and resolutions of the President of the Republic of Uzbekistan aimed at improving the quality of education. These include tasks such as elevating the general secondary education system to a new level and implementing the new National Curriculum. These documents mandate a complete departure from the mechanism of rote memorization (reproductive thinking) in favor of developing students' critical thinking, creativity, collaboration (teamwork), and independent decision-making abilities—the so-called 21st-century skills.

As stipulated in presidential decrees, quality control in schools must be integrated with the requirements of international assessment programs (PISA, TIMSS, PIRLS). Central to this integration is the methodology of criterion-referenced and formative assessment. Within the "Public Education Development Program" initiated by the state leadership, teachers are now required not merely to assign a punitive or rewarding grade, but to monitor each student's individual developmental trajectory.

From this standpoint, studying the psychological components of the formative and summative assessment systems being introduced into school practice, and scientifically analyzing the positive impact of these reforms on students' inner aspirations and psychological well-being, is an urgent and pressing issue of our time.

The primary objective of this study is to provide a scientific and theoretical basis for, and to empirically identify, the psychological mechanisms through which criterion-referenced and formative assessment approaches impact the internal motivation systems and the development of self-regulation skills in students at general secondary education institutions.

This research aims to reveal, from the perspective of psychological determination, how a student's personal motivational sphere transforms during the transition from a traditional to a criterion-referenced assessment system, and to what extent it reduces anxiety levels and ensures subjective engagement in the educational process.

To achieve the set goal and verify the research hypothesis, the following systematic scientific and practical tasks are planned:

1. Theoretical and methodological analysis: To systematically analyze and synthesize scientific approaches from pedagogical and psychological literature, as well as contemporary international practices, concerning the impact of criterion-referenced and formative assessment on the student's personality and their emotional and cognitive domains.

2. Studying the psychological impact of criterion-referenced assessment: To identify the psychological factors (e.g., self-confidence, motivation for success) through which the principles of transparency, fairness, and pre-determination in criterion-referenced assessment activate students' skills in objective self-assessment and self-correction.

3. Investigating the link between formative assessment and intrinsic motivation: To study, using empirical methods, the degree of influence of regular and constructive feedback during the formative assessment process on a student's intrinsic motivation (e.g., curiosity, the need for independent problem-solving).

4. Analyzing the dynamics of anxiety and emotional state: To conduct a differential analysis (taking into account age and gender characteristics) of the new assessment system's role in students' psychological well-being, particularly in reducing the fear of failure common in traditional assessment and lowering situational anxiety in the classroom.

5. Developing practical recommendations: Based on the research findings, to develop practical psychological recommendations and a draft methodological guide for general education school teachers, public education methodologists, and school psychologists on the effective use of criterion-referenced and formative assessment to enhance students' intrinsic motivation and self-regulation.

The traditional five-point grading approach, which dominated the education system for many years, disregarded the dynamics of a student's personal

development, focusing instead on comparing their level of reproductive knowledge at a specific point in time with that of others. This model, known as norm-referenced assessment in pedagogical psychology, creates an unhealthy competitive environment in the classroom, leading to student stratification and a decline in their psychological self-esteem. The system of criterion-referenced and formative assessment fundamentally changes this paradigm, transforming the punitive function of assessment into one of development and support. In the criterion-referenced approach, a student's achievements are compared not with the results of their classmates, but against criteria that are transparent, pre-determined, and understandable to all. Formative assessment, as an integral part of the educational process, serves as a psychological driver that enables students to continuously monitor their learning trajectory and work independently on their mistakes.

The core essence of this transformation can be understood more deeply through the "Mindset Theory" of the renowned psychologist Carol Dweck. Whereas traditional numerical grading tends to foster a "fixed mindset" in students—the belief that intellectual abilities are immutable and innate—criterion-referenced and formative approaches cultivate a "growth mindset." In such an environment, students begin to perceive any mistake or failure not as a personal intellectual weakness, but as a natural, necessary, and correctable stage of the learning process. This, in turn, fosters a positive psychological attitude in the student towards science and learning activities [2].

During this process, significant qualitative changes also occur within the student's internal motivation system. According to Edward Deci and Richard Ryan's "Self-Determination Theory," an individual's internal drive and engagement reach their peak when fundamental psychological needs—such as autonomy, competence, and relatedness (connecting with others)—are met [3]. In a criterion-based assessment system, the public announcement of criteria in advance fosters a sense of autonomy in the student; knowing the exact requirements placed upon them, they understand that the final result depends not on the teacher's subjective mood, but on their own individual effort, which strengthens their "internal locus of control." Furthermore, the regular and constructive feedback provided within the framework of formative assessment supports the student's need for competence. When a teacher not only points out an error but also acknowledges the student's achievements and indicates areas for future growth, it boosts the student's self-confidence. This facilitates a shift from external motivation, such as "studying for a grade," to internal motivation, such as enjoying the learning process itself [4].

At the same time, formative assessment activates metacognitive mechanisms of self-regulation in students, namely self-monitoring and self-management. According to Barry Zimmerman's model of self-regulated learning, the educational process consists of planning, performance, and reflection phases, with formative assessment acting as a catalyst at every stage of this cycle. The practices of self-assessment and peer-assessment, which are integral components of this system, transform the student from a passive object of instruction into an active subject. By comparing their own work against established criteria, students develop the skills to observe, analyze, and critically evaluate their cognitive processes from an objective standpoint. Peer assessment, in turn, creates a classroom environment of collaboration and social learning, allowing students to learn from each other's intellectual strategies and make objective corrections to their own work [5].

Focusing on the emotional-volitional component of the issue, the role of criterion-referenced and formative assessment in reducing the level of academic anxiety is invaluable. In a traditional, punitive control environment, high stress activates the amygdala, the brain's emotional center, which in turn blocks the activity of the prefrontal cortex, the area responsible for logical thinking and memory. In a formative assessment environment, however, psychological safety is ensured because mistakes are not punished; on the contrary, they are considered the basis of learning. The reduction of academic anxiety allows students to think freely and creatively without emotional pressure, awakens their inner aspirations, and guarantees they feel psychologically comfortable in the school environment.

Conclusion: Research findings indicate that the widespread implementation of criterion-referenced and formative assessment methodologies in the education system is not merely a change in pedagogical control tools, but a profound psychological transformation aimed at nurturing and developing the motivational, cognitive, and emotional spheres of a student's personality. The transition from a traditional, punitive assessment model focused solely on a final numerical score to an approach based on transparent criteria that supports the learning process itself marks a significant turning point in student development. This change, first and foremost, significantly reduces academic anxiety, fear of failure, and stress—the most common issues in a school setting—thereby ensuring a genuinely psychologically safe environment during lessons. The student develops within a "growth mindset" environment, where making a mistake is not seen as a fault but is instead perceived as an opportunity for intellectual growth and a stage of development.

An analysis of the psychological mechanisms reveals that the prior transparency and clarity of assessment criteria, along with constructive feedback

from the teacher, fully satisfy students' fundamental psychological needs for autonomy and competence. Consequently, external motivational drivers, such as pressure to get high grades or studying merely to show off to classmates, diminish. Their place is taken by a genuine interest in the subject, the enjoyment of solving problems independently, and a system of internal aspirations. At the same time, the practices of self-assessment and peer assessment, which are integral components of this system, activate students' metacognitive skills and self-regulation abilities. The student is transformed from a passive object who simply receives information in the educational process into an active subject capable of independently planning their actions, objectively analyzing intermediate results, and adapting their learning strategies according to the situation.

The systematic and consistent implementation of the criterion-referenced and formative assessment model into the practice of general education schools fully aligns with the core idea of the large-scale educational reforms currently underway in our country. This approach serves as the foundation for cultivating a well-rounded individual who thinks independently and critically, can objectively evaluate their own strengths and weaknesses, and possesses the skills for lifelong independent learning. To further enhance the practical effectiveness of the system, it is essential to strengthen the collaboration between school psychologists and educators, train teachers on the psychological principles of providing constructive feedback, and regularly enrich methodological guides aimed at fostering a culture of adequate self-assessment among students.

REFERENCES:

1. O'zbekiston Respublikasi Prezidentining 2022-yil 11-maydagi "2022-2026-yillarda xalq ta'limini rivojlantirish bo'yicha milliy dasturni tasdiqlash to'g'risida"gi PF-134-son Farmoni.
2. O'zbekiston Respublikasi Prezidentining 2020-yil 6-noyabrdagi "O'zbekistonning yangi taraqqiyot davrida ta'lim-tarbiya va ilm-fan sohalarini rivojlantirish chora-tadbirlari to'g'risida"gi PF-6108-son Farmoni.
3. G'oziyev E.G'. Pedagogik psixologiya. – Toshkent: "O'qituvchi", 2011. – 224 b.
4. Sharipov Sh.S. O'quvchilar bilish faolligini va mustaqilligini rivojlantirishda shakllantiruvchi baholashning o'рни // Zamonaviy ta'lim. – Toshkent, 2022. – № 5. – B. 12-18.
5. Подласый И.П. Педагогика: 100 вопросов - 100 ответов: учеб. пособие для вузов. – Москва: ВЛАДОС-пресс, 2004. – 365 с.