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# PSYCHOLOGICAL AND METHODOLOGICAL FOUNDATIONS OF DEVELOPING STUDENTS’ LEARNING MOTIVATION IN DIGITAL EDUCATIONAL ENVIRONMENTS

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The digitalization of education is one of the priority directions of educational policy in Uzbekistan, and the Law “On Education” provides for the introduction of modern information technologies into the learning process [1]. However, digital tools do not motivate students by themselves: technology is effective only when it is combined with a well-designed methodology that takes learners’ psychological needs into account. A decline in learning motivation directly affects the quality of learning outcomes, which makes the topic relevant both theoretically and practically.

The literature offers several complementary perspectives. Vygotsky viewed cognitive activity as developing through social interaction and mediating tools [2]. According to self-determination theory, intrinsic motivation grows when three basic needs are satisfied: autonomy, competence, and relatedness [3]. Mayer showed that combining text and images supports learning, whereas redundant information increases cognitive load [4]. Research on gamification, defined as the use of game design elements in non-game contexts, has outlined its potential and its limits [5], and Black and Wiliam analysed the influence of formative feedback on learning outcomes [6]. These approaches, however, are usually discussed separately. Their integration into a single psychological and methodological framework, and its testing in local school conditions, remain insufficiently addressed.

The aim of the study is to develop the psychological and methodological foundations of learning motivation in digital environments and to define a procedure for assessing their effectiveness. The objectives are: to analyse the psychological factors of motivation; to identify methodological directions that address them; and to design an experimental procedure for evaluating the results.

The study is designed as a quasi-experimental investigation with an experimental and a control group. The experimental design was chosen because it allows the effect of the proposed methodology to be separated from other factors. The planned methods include literature analysis, pedagogical observation, questionnaires, and pre-test and post-test measurement. Learning motivation is to be measured with a self-regulation questionnaire based on self-determination theory [3], supplemented by indicators of classroom participation, independent task completion, and academic progress. Data will

be analysed by comparing pre-test and post-test results within groups and between groups using appropriate statistical tests. This article presents the theoretical framework and the design; empirical data collection is the next stage of the research.

Five directions linked to the three psychological needs are proposed. First, offering students a choice of task type, topic, or format of completion supports the need for autonomy. Second, visualizing material and presenting it interactively while avoiding unnecessary decoration reduces cognitive load [4]. Third, gamification elements such as points and step-by-step tasks strengthen the sense of achievement; they must serve the learning objective and must not create negative competition or anxiety [5]. Fourth, immediate feedback through online quizzes and differentiated tasks supports the need for competence [6]. Fifth, collaborative project work in small groups, including online, supports the need for relatedness.

The reviewed literature suggests that motivation is influenced less by the technology itself than by the way it is organized pedagogically. When digital tools give learners a degree of choice, provide timely feedback, and create opportunities for cooperation, they are more likely to support intrinsic motivation; when they are used only to deliver content or to reward and rank students, their effect is likely to be limited. This interpretation is a hypothesis to be tested in the planned experiment rather than a finding.

The development of learning motivation in digital environments requires a combination of pedagogical aims, psychological regularities, and technological possibilities. Recommendations for practice are: to develop teachers’ digital competence continuously; to use technology as a means rather than an end; to take students’ age and psychological characteristics into account; and to build cooperation with the school psychologist. The main limitation of this article is that it is conceptual: the proposed directions have not yet been tested empirically, so conclusions about their effectiveness require the planned experiment and further research with different subjects and age groups.

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