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THE SIGNIFICANCE OF CROWDSOURCING TECHNOLOGY IN DEVELOPING ACTIVE CITIZENSHIP COMPETENCE AMONG UNIVERSITY STUDENTS

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Abstract: *This article analyzes the pedagogical potential of crowdsourcing technology in developing active citizenship competence among university students. In the context of the modern digital learning environment, crowdsourcing technology is presented as an important factor in fostering young people's social engagement, collaborative working skills, ability to solve problems collectively, and civic responsibility.*

Keywords: *active citizenship competence, crowdsourcing technology, digital pedagogy, university students, innovative education, social engagement, collaboration, educational technologies.*

ЗНАЧЕНИЕ ТЕХНОЛОГИИ КРАУДСОРСИНГА В ФОРМИРОВАНИИ КОМПЕТЕНЦИИ АКТИВНОЙ ГРАЖДАНСТВЕННОСТИ У СТУДЕНТОВ ВЫСШИХ УЧЕБНЫХ ЗАВЕДЕНИЙ

Аннотация: *В данной статье анализируется педагогический потенциал технологии краудсорсинга в формировании компетенции активной гражданственности у студентов высших учебных заведений. В условиях современной цифровой образовательной среды технология краудсорсинга рассматривается как важный фактор развития социальной активности молодежи, навыков совместной деятельности, способности к коллективному решению проблем и гражданской ответственности.*

Ключевые слова: *компетенция активной гражданственности, технология краудсорсинга, цифровая педагогика, студенты высших учебных заведений, инновационное образование, социальная активность, сотрудничество, образовательные технологии.*

OLIY TA'LIM TALABALARIDA FAOL FUQAROLIK KOMPETENSIYASINI RIVOJLANTIRISHDA KRAUDSORSING TEXNOLOGIYASINING AHAMIYATI

Annotatsiya: *Mazkur maqolada oliy ta'lim talabalarida faol fuqarolik kompetensiyasini rivojlantirishda kraudsorsing texnologiyasining pedagogik imkoniyatlari tahlil qilingan. Zamonaviy raqamli ta'lim muhiti sharoitida kraudsorsing texnologiyasi yoshlarning ijtimoiy faolligini oshirish, hamkorlikda ishlash ko' nikmalarini rivojlantirish, muammolarni jamoaviy ravishda hal qilish qobiliyatini shakllantirish hamda fuqarolik mas'uliyatini kuchaytirishning muhim omili sifatida yoritilgan.*

Kalit so' zlar: *faol fuqarolik kompetensiyasi, kraudsorsing texnologiyasi, raqamli pedagogika, oliy ta'lim talabalari, innovatsion ta'lim, ijtimoiy faollik, hamkorlik, ta'lim texnologiyalari.*

INTRODUCTION.

The rapid development of digital technologies and the transformation of contemporary society have significantly changed the requirements placed on higher education. Universities are increasingly expected not only to provide students with professional knowledge and skills but also to prepare socially responsible, initiative-driven, critically thinking, and civically engaged individuals. In this context, the development of active citizenship competence among university students has become an important component of modern higher education. Such competence enables young people to understand social processes, participate consciously in community life, express and justify their positions, cooperate with others, and contribute to solving socially significant problems.

Active citizenship competence can be regarded as an integrated combination of civic knowledge, social responsibility, critical thinking, communication and collaboration skills, initiative, participation, and readiness to contribute to public life. Its development requires educational approaches that move beyond the traditional transmission of theoretical knowledge and create opportunities for students to participate directly in decision-making, problem-solving,

discussion, project activities, and socially oriented initiatives. Therefore, the introduction of interactive and digitally supported educational technologies is becoming increasingly important in contemporary university education.

One of the promising approaches in this regard is crowdsourcing technology. Crowdsourcing generally involves engaging a large group of people in generating ideas, collecting information, evaluating proposals, solving problems, or jointly creating socially valuable outcomes through open and collaborative participation. In an educational environment, crowdsourcing can be transformed into an effective pedagogical mechanism through which students participate in identifying problems, proposing solutions, discussing alternative viewpoints, evaluating initiatives, and collectively developing projects.

The pedagogical value of crowdsourcing lies in its participatory nature. Unlike educational models in which students mainly act as recipients of information, crowdsourcing creates conditions for them to become active contributors to the learning process. Students are encouraged to express their opinions, present arguments, respond to the ideas of others, make collective decisions, and take responsibility for the outcomes of collaborative activities. These processes are directly related to the cognitive, communicative, social, and value-oriented components of active citizenship competence.

Crowdsourcing technology also contributes to the development of critical and analytical thinking. When students are exposed to multiple ideas and different interpretations of the same social problem, they need to compare information, assess the reliability and relevance of arguments, distinguish well-grounded proposals from weak ones, and formulate their own positions. Consequently, crowdsourcing-based activities can create an educational environment in which civic participation is closely connected with evidence-based reasoning and responsible decision-making.

LITERATURE REVIEW AND METHODOLOGY

The processes of globalization and digital transformation are creating new challenges for the education system. In particular, developing active citizenship competence among university students is one of the pressing pedagogical issues of our time. Active citizenship competence refers to an individual's ability to participate consciously in social life, demonstrate social responsibility, respect democratic values, and engage effectively in collective activities.

The development of information and communication technologies has led to the widespread use of innovative approaches in education. One such approach is crowdsourcing technology, which enables problems to be solved through collective thinking and broad-based collaboration. In the pedagogical process, crowdsourcing is emerging as an effective means of developing students' independent thinking, initiative, and civic responsibility.

Today, higher education institutions increasingly need to employ interactive methods in order to develop university students into socially active and responsible individuals. From this perspective, examining the role and potential of crowdsourcing technology in education is of both scientific and practical significance.

The term crowdsourcing (from the English words "crowd" and "sourcing," meaning the use of resources) refers to solving problems and creating new brands by drawing on the creativity, experience, and knowledge of ordinary people. Crowdsourcing technology makes it possible to use human resources to find solutions to business, social, and political problems. In 2003, Luis von Ahn and his team first put into practice, through the concept of crowdsourcing, the idea of "human computation," demonstrating that tasks that computers cannot perform can be completed collectively, easily, and quickly [1, p. 115]. However, the term was introduced into academic discourse by Jeff Howe in 2006. Jeff Howe, a contributor to Wired magazine, defines the concept in his work "The Rise of Crowdsourcing" as follows: "...smart companies ... the latent talents of the crowd. The labor is not always free, but it costs a lot less than paying traditional employees. It's not outsourcing; it's crowdsourcing" [2, p. 133]. The phenomenon was initially introduced as a corporate concept. Another Western scholar, Brabham, explains crowdsourcing as follows: "A company presents a problem. A large audience then begins proposing solutions to that problem. The company is able to select the solutions it considers most appropriate. This method is called crowdsourcing" [3, p. 394]. Based on the definitions above, crowdsourcing can be divided into two categories. It can be applied in real-life domains (business, social life, and politics) and in education as a problem-solving process (understanding a problem, putting it to a community vote, searching for solutions, collecting information and opinions, and providing support services).

Based on the definitions of crowdsourcing presented above, it is appropriate to clarify the meaning and essence of the term "crowdsourcing pedagogical technology."

RESULTS AND DISCUSSION

Crowdsourcing pedagogical technology is a modern teaching method based on using the knowledge, ideas, and experience of a broad community (students, teachers, specialists, or internet users) in the educational process [4, p. 82]. Crowdsourcing pedagogical technology is also an important direction in modern education, promoting collaboration, openness, and innovative thinking. It is particularly effective in digital learning environments. The essence of this

pedagogical technology is that the opinions and knowledge of a large number of participants are engaged in solving problems, developing projects, or generating new ideas during the learning process.

In the education system, crowdsourcing pedagogical technology provides the following opportunities:

1.Develops students' collective thinking skills;

2.Develops the ability to solve problems collaboratively;

3.Supports students' social initiatives;

4.Creates an environment for democratic dialogue;

5.Encourages students to participate actively in social projects.

In learning activities organized on the basis of crowdsourcing technology, students develop proposals concerning specific social problems, engage in discussion, and make collective decisions. This strengthens their active civic position. The application of crowdsourcing pedagogical technology in higher education contributes to the development of students' independent thinking, creative approaches, teamwork, competence in solving problem situations, and digital skills.

The following table presents a methodology for applying crowdsourcing pedagogical technology to develop active citizenship competence among university students:

Components	Content
Purpose of the methodology	To increase students' engagement in the learning process, create knowledge collaboratively, develop innovative thinking, and build digital competencies;
Key objectives	1. Develop students' teamwork skills; 2. Teach students to find creative solutions to problem situations; 3. Organize collaboration through digital platforms; 4. Strengthen independent learning activities;
Principles	Scientific validity, systematicity, interactivity, collaboration, openness, innovation, student-centeredness, continuity;
Participants	Professors and teachers, students, academic groups, research teams;
Pedagogical conditions	Availability of a digital learning environment, access to and ability to work with internet platforms, a motivating environment, and collaborative learning;
Methods	Brainstorming, project method, case study, problem-based learning, debate, group discussion, peer learning, gamification;
Tools	Moodle, Google Classroom, Padlet, Trello, Mentimeter, Zoom, Telegram groups, Google Docs;
Forms of learning	Individual work, group work, online collaboration, blended learning, seminars and training sessions;
Expected outcomes	Students' creative thinking is developed, communicative competence is formed, digital literacy is enhanced, and the ability to solve problems collaboratively is strengthened;

Crowdsourcing pedagogical technology for developing active citizenship competence among university students can be implemented through the following stages:

Stages	Content	Teacher's activity	Student's activity
Stage 1: Diagnostic preparation	Identify students' needs and competencies	Conducts diagnostics and identifies problems	Assesses their own capabilities
Stage 2: Planning	Design crowdsourcing activities	Selects the platform and tasks	Accepts the assigned tasks

Stage 3: Collaboration process	Organize group and collective activities	Acts as a moderator	Develops ideas and solutions
Stage 4: Analysis and synthesis	Select and discuss the results	Identifies the most effective proposals	Presents the results
Stage 5: Evaluation	Determine the effectiveness of the activities	Conducts monitoring and evaluation	Conducts self-assessment
Stage 6: Reflection	Analyze the experience gained	Provides a final conclusion	Provides feedback

Crowdsourcing pedagogical technology is one of the effective pedagogical tools for developing active citizenship competence among university students. This technology enhances students' social engagement, teamwork, and civic initiative, while a learning process organized on the basis of crowdsourcing helps create an environment of democratic dialogue and collaboration. Students' digital competencies are also developed, increasing their adaptability to contemporary society. The use of crowdsourcing technology in higher education contributes to the development of civil society. In the future, it would also be advisable to develop new pedagogical mechanisms by integrating crowdsourcing pedagogical technology with artificial intelligence and adaptive learning platforms.

The analysis of crowdsourcing technology in the context of higher education demonstrates that it can serve as an effective pedagogical mechanism for developing active citizenship competence among university students. Its significance lies primarily in transforming students from passive recipients of educational information into active participants who generate ideas, discuss socially relevant issues, evaluate alternative solutions, collaborate with others, and take part in collective decision-making.

Active citizenship competence is multidimensional and includes civic knowledge, social responsibility, critical thinking, communication, collaboration, initiative, digital literacy, and readiness for participation in community life. Crowdsourcing creates favorable conditions for the integrated development of these components because students encounter real or simulated social problems and are required to contribute to their solution through individual and collective intellectual activity.

A particularly important advantage of crowdsourcing is its ability to connect theoretical learning with practical civic experience. Participation in crowdsourcing-based projects enables students to identify problems, gather and analyze information, formulate proposals, defend their viewpoints, assess the ideas of peers, and participate in selecting appropriate solutions. As a result, civic competence develops not merely as theoretical knowledge about citizenship but as a practical ability to participate responsibly and constructively in social processes.

Crowdsourcing technology also strengthens the communicative and collaborative dimensions of citizenship. Through collective discussion and problem-solving, students learn to listen to others, respect different perspectives, provide evidence-based arguments, negotiate, resolve disagreements constructively, and achieve shared objectives. These abilities are essential for meaningful participation in democratic and socially responsible environments.

CONCLUSION.

In addition, crowdsourcing is particularly relevant to the development of digital citizenship. As civic interaction increasingly occurs through online platforms and digital communication channels, students need experience in responsible digital participation. Crowdsourcing activities can help develop skills related to online collaboration, information verification, digital ethics, constructive communication, and responsible engagement with public issues.

However, the pedagogical effectiveness of crowdsourcing depends on purposeful instructional design. Teachers should establish clear objectives and participation criteria, ensure equal opportunities for involvement, encourage evidence-based discussion, provide constructive feedback, and organize reflection on both the process and outcomes of collaborative activities. Attention should also be paid to possible challenges such as unequal participation, superficial contributions, misinformation, digital exclusion, and the dominance of more active participants.

Therefore, crowdsourcing should not be understood simply as a technological instrument. In higher education, it should be viewed as a pedagogically structured model of participatory learning that combines digital technology, collaboration, problem-solving, and civic engagement. When integrated systematically into educational practice, it can contribute to creating a learning environment in which students develop both professional competencies and the capacity to act as responsible members of society.

In conclusion, the integration of crowdsourcing technology into university education has significant potential for strengthening active citizenship competence. By promoting initiative, critical reflection, collective intelligence, social responsibility, and meaningful participation, crowdsourcing can support the preparation of university graduates who are capable not only of adapting to social change but also of contributing actively and responsibly to the development of their communities and society.

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