

Ways to Enhance Students' Learning Activities in the Context of Higher Education

Liza Naviy^{1, #,*}, Gulmira M. Rakisheva^{2, #}, Nina M. Stukalenko^{3, #}, Saule A. Murzina^{4, #}, Assem T. Duisenbina^{1, #}, Marash T. Koshanova^{1, #} and Guldana N. Kazhatova^{1, #}

¹*Sh. Ualikhanov Kokshetau State University, Kokshetau, Republic of Kazakhstan*

²*L.N. Gumilyov Eurasian National University, Nur-Sultan, Republic of Kazakhstan*

³*Institute of Professional Development of the Pedagogical Workers in Akmola Region, Branch of JSC "National Center for Professional Development "Orleu"", Kokshetau, Republic of Kazakhstan*

⁴*Academy of Public Administration under the President of the Republic of Kazakhstan, Kokshetau, Republic of Kazakhstan*

Abstract: The article aims to study scientific and methodological features of the ways to enhance students' learning activities in the context of higher education. The study's theoretical significance is derived from the in-depth analysis of the development of students' learning activity. The study offers the framework of characteristics for the concept of "students' learning (cognitive) activity". The main used methods were: analysis, peer-assessment, self-assessment. The interview method was used to make a cognitive profile of the participants, taking into account their psychological characteristics. The authors developed and scientifically tested educational model based on module curricula and interactive teaching methods to enhance students' learning activity. The authors also reflected the dynamic of the learning activity of the students with disabilities participating in the experiment. The results proved the effectiveness of the developed model of enhancing students' learning activity by using interactive teaching methods. It was concluded that the module curricular and active teaching methods help enhance students with disabilities' learning activity and make them more responsible in respect to the results of their study.

Keywords: Professional training, cognitive interest, pedagogical technologies, cognitive activity, active teaching methods.

INTRODUCTION

Modern higher education sets the development and enhancement of students' learning activity as a priority. Universities strive to prepare students for future challenges, teach them to build professional careers, and navigate the challenges of the fast-changing job market. Only the transition to active learning methods in the context of higher education can achieve those tasks. Many experts in the field of education [1-3] emphasized the need for an active learning environment based on structured professional competences. This is especially important for the education of students with disabilities. Higher education should develop a proactive ability in future specialists to study independently, navigate rapidly, think critically, and make responsible decisions [4-9].

As an individual ability, learning activity develops out of the learning interest and aims at the acquisition of knowledge and experience by applying different learning methods, manifested in perception, cognition, and creation. The cognitive activity is driven by the

enthusiasm for knowledge and interest in performing various and complex tasks. Learning objectives encourage the students to focus on the learning activity outcomes in the forms of practical and theoretical results [10-12].

Both educators and theoreticians are interested in the concept of students' cognitive activity and ways to manage and enhance it. Many researchers explored how learning interest shapes learners' desire to actively gain knowledge, skills, and competencies [13-15]. Such a pedagogical position is of great importance for higher professional education because it strives to provide students with high-quality education and training to meet the job market's requirements and contribute to the country's development. In the situation of information overload, one of the requirements towards the students is to develop skills to manage and acquire the knowledge necessary for professional activities. The future specialists have to have a proactive personality, high competence in the chosen field, to be professionally mobile and independent. It means that students have to take an active role in the educational process and assume responsibility for their education.

*Address correspondence to this author at the Sh. Ualikhanov Kokshetau State University, Kokshetau, Republic of Kazakhstan; Tel: +73162225583; E-mail: naviy3745-1@kpi.com.de

#These authors are equally contributed.

It is important to note that the development of the cognitive activity of students with disabilities should be

approached with particular care. Since students have different degrees of severity of a defect in mental activity, a different structure of the psyche, individual characteristics, and interests, they sometimes need more time to perceive the material. It is difficult for such children to single out the main thing and establish internal connections. Some adolescents with disabilities are characterized by persistent violations of all mental activity, especially in the field of cognitive processes. It is difficult for them to accept, comprehend, save, and process information independently. It must be kept in mind that in such students, subject-effective and visual-figurative thinking dominates verbal-logical.

At the same time, it was proved that the mentality of mentally retarded students is developing, and the formation of mental activity contributes to the advancement of such children in the overall development and thereby creates a real basis for the social and labor adaptation of graduates. Thus, a teacher working with this category of children should consider the specific characteristics of the students' psyche and not adapt to them, but be able to choose rational methods of effective influence to improve the quality of learning processes. Education should correspond to the development of adolescents, not exceeding, but not underestimating their educational opportunities [16-18]. Thus, the development of a proactive learning attitude will allow future specialists to fulfill their potential, improve professional skills, develop creatively, and build professional careers.

MATERIALS AND METHODS

The pedagogical experiment was conducted in conjunction with the course "Modern Pedagogical Technologies" taught to the students majoring in Pedagogy. The total number of participants was 140 people (78 men, 62 women). The average age of participants was 20 years. The pedagogical experiment was conducted at the Sh. Ualikhanov Kokshetau State University. The composite authors undertook the present study jointly, having created a vast experimental ground on the basis of Sh. Ualikhanov Kokshetau State University. The results of the conducted research were discussed during the meetings of those departments, the scientific seminar "Actual problems of psychological and pedagogic science and modern education" and on the international scientific and practical conferences: "Valikhanov's readings" (Kokshetau), "Introducing new educational technologies and principles of educational

process organization" (Singapore), "Modern education: problems and solutions" (Thailand), "Education and Science without Borders" (Germany), "Current problems of science and education" (Russia). The generalized results of the conducted study are being published for the first time.

The students' levels of learning activity were measured and monitored consistently. The researchers used questionnaires and a scale. They also employed the following evaluation techniques and methods: questions about the level of students learning activity and the level of interest; analysis; peer-assessment; self-assessment; rating the most effective teaching methods and forms; the interview method to make a cognitive profile of the participants, taking into account their psychological characteristics, their inclination for learning and self-study; the method of observation to assess the level of learning activity. Special assignments and tests measured the level of students' learning activity. The experiment yielded substantial data for further analysis and evaluation.

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The study was approved by the National Ethics Commission of the Ministry of Health of the Republic of Kazakhstan on November 19, 2019, No O-9875-6.

RESULTS

The authors suggest a model for developing the learning activity of students with disabilities, consisting of the following components (Figure 1):

- 1) The goals mean the objectives of the educational process. The primary goal is to develop students learning productive activities and encourage continued education and development.
- 2) Motivation means a stable desire to engage in a learning activity. It encourages students to continuously improve their professional knowledge, skills, and competencies after graduation. In the process of professional development, the problem of motivation as a strategy of adaptation and integration of a person with disabilities in society is especially relevant, because new educational standards are oriented, first of all, to a competency-based

approach, where flexible adaptation in transforming conditions of social reality becomes the most important parameters for assessing the level of professionalism, independence of thinking, sociability, independence of knowledge of new knowledge.

- 3) The information means the study material: knowledge, skills, and competencies. The higher education context includes a system of professional preparation, developing their creative thinking, and cognitive interest.
- 4) The activity includes teacher's and students' interactions and activities, various methods, forms, and means of teaching and learning, including special methods adapted for teaching students with different types of disabilities.
- 5) The learning outcomes are measured by the results obtained in the process of learning. The goal is to develop professional competence and confidence, to train highly qualified professionals in the field.
- 6) The evaluation includes an analysis of the results, troubleshooting, and adjustment of the learning process if necessary. It includes final testing and grading, feedback from the students on the course.

The last two components (outcomes and evaluation) measure the success or failure of the learning process. The above-defined components of the active learning model compose a logical and integrated system with interconnecting parts.

The goal of the pedagogical experiment was to study the learning activity of university students majoring in Pedagogy and to offer ways to enhance it. The participants enrolled in the course "Modern Pedagogical Technologies" designed with using module structure. The instructors of the course employed the many active teaching methods to enhance students learning activity. Students had to

read, prepare, and learn the topic before the class on their own or in the study groups. For example, the topic "Education as an Object of Educational Psychology" was assigned as the group project and later discussed in small groups. The topic "The Teaching-Learning Educational Process" was discussed as a mock roundtable. The debate was organized on "Multidimensional Education" and "The Main Trends in Modern Education". Students actively participated in brainstorming the topic "Learning Activities", "Pedagogical Functions and Competencies", "Innovative Pedagogical Technologies". The instructors organized a seminar on the topic "Developing Educational System" and offered some practical exercises on the topic "Types of Interactions in Education" and role-playing games on "Solving Difficulties in Pedagogical Communication", "Developing Cooperation in the Classroom", and other.

The division into reproductive, heuristic and creative approaches allows students with disabilities to describe and reflect on their learning activity dynamics during the pedagogical experiment. Based on the criteria, three levels of learning activity were determined: low (reproductive), medium (heuristic), and high (creative). The level of students learning was measured according to the test results: high – with 100-81% correct answers; average – with 80-61% correct answers; low – 60% or less correct answers. During the experiment, the researchers noticed the favorable dynamics of students learning activity reflected in Table 1.

The researchers observed and classified different levels of students with disabilities learning activities during the course "Modern pedagogical technologies":

- low learning activity, not characterized by the student's desire to understand, remember and reproduce material, to master the way of their application;
- the average level of learning activity, characterized by the student's desire to identify the meaning of the content;

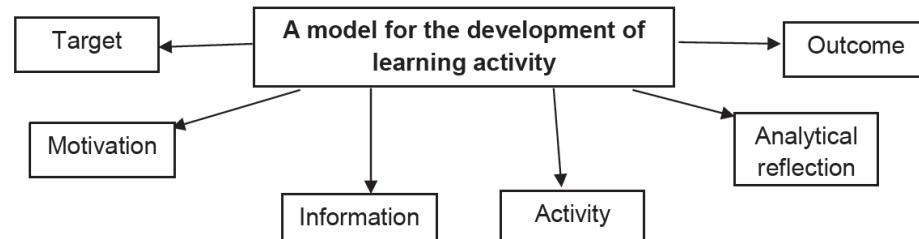


Figure 1: A model for the development of the learning activity of students with disabilities.

Table 1: The Dynamics of Learning Activity during the Experiment

Name groups Level	KG (%)			EG (%)		
	1	2	3	1	2	3
Ascertaining experiment						
Low	41.25	52.5	52.5	38.75	50	50
Average	43.75	35	32.5	45	35	32.5
High	15	12.5	15	16.25	15	17.5
Forming experiment						
Low	42	50	44.5	8.75	21.25	23.1
Average	43.2	34.5	41.1	51.25	43.55	42.5
High	14.8	15.5	14.4	40	35.2	34.4

- a high level of learning activity, which is characterized by interest to the material and searches for new solutions.

The data reflects the dynamic of the learning activity of the students with disabilities participating in the experiment. The data indicate that the level of learning activity in the experimental group is significantly higher than the control group. The results prove the effectiveness of the developed model of enhancing students' learning activity by using interactive teaching methods.

DISCUSSION

The study of students' learning activity involved all types of classroom activities. The enhanced learning activity is described as an intellectual and analytical activity, which contributes to the acquisition of learning material. Innovative, interactive teaching methods can increase interest in the subject. It is also essential to create a positive emotional environment to sustain a high level of motivation, self-management, and interaction among students and instructors [19, 20]. In the course of the pedagogical experiment, the authors designed a curriculum for the course "Modern Pedagogical Technologies" based on the module principle. The module principle is based on the idea that a substantial amount of the material is assigned to the student for self-study. The instructor's role is to manage the educational process through motivation, organization, encouragement, management, advice, and supervision. Module educational technology, in combination with active teaching methods, enhances students learning activity, and encourages the students to assume more responsibility.

The students with disabilities learning activity varied depending on the level of material acquisition:

perception, interpretation, repetition, reproduction, and production. It looks like the current perception of the material is driven by the desire to understand, remember, and reproduce the material. The next stage of the learning activity is the interpretation and repetition of the material and understanding of its practical application. Even when faced with difficulties, students did not give up but searched for solutions to the problem. The successful outcome of the learning activity is the transformation of the learned material into the experience. It can have three versions: low (reproducing level), medium (interpretive level), and high (creative level).

The researchers did not differentiate between teaching and learning activities performed by students since both are aimed mostly at learning. The researchers determined the following characteristics of students' learning activity:

- reproductive, when students follow the instruction to imitate;
- heuristic, when students seek new solutions according to instructions;
- creative, when students create without instructions.

The pedagogical experiment included diagnostics, testing, and evaluation of the results. The pedagogical experiment tested, measured, and rated efficiency of the ways and methods to enhance students' learning activity. During the experiment, the participants had to measure their learning activity by a designed scale depending on the teaching methods, classroom activities, study material used in and outside the class. It was found that students responded with different levels of learning activity depending on the teaching methods and forms of classroom activities used.

CONCLUSIONS

Analysis of the study results leads to the following conclusion: there is a clear correlation between the students' learning activity and active teaching methods. Such association should be taken into account during the development of programs, curricula, and methodological recommendations, especially in the context of higher education. Thus, based on the results of the pedagogical experiment, we proved that the module curricular and active teaching methods help enhance students with disabilities' learning activity and make them more responsible with respect to the results of their study. To enhance students' learning activity in the context of higher education, we recommend using module curricula designed with a substantial proportion of materials for self-study in combination with interactive teaching methods that encourage active participation: such as individual and small group work, individual and group projects, debates, seminars, mock conferences, role-playing.

The authors offer recommendations aimed to enhance students' learning activities and suggest a model for the development of the learning activity of students with disabilities. Therefore, the study has practical significance because it developed an educational and methodical set of active teaching methods in the context of higher education.

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