

# Questions of Development of Students' Functional Literacy

Zhainagul Beisenova<sup>1,#,\*</sup>, Kulanda Kanafiyeva<sup>2,#</sup>, Saltanat Moldakhmetova<sup>3,#</sup> and Zhanar Kuandykova<sup>1,#</sup>

<sup>1</sup>L.N. Gumilyov Eurasian National University, Nur-Sultan, Republic of Kazakhstan

<sup>2</sup>University of Information Technology and Business, Nur-Sultan, Republic of Kazakhstan

<sup>3</sup>S. Seifullin Kazakh AgroTechnical University, Nur-Sultan, Republic of Kazakhstan

**Abstract:** *Objective:* The article is devoted to the definition of critical thinking skills, the stimulation of critical thinking in language teaching. One of the requirements of the global linguistic globalisation is functional literacy, which involves a degree of native languages. Today the objective historical principal is the nomination of more serious requirements to the knowledge level and skills of students.

*Background:* In the current realities, the educational process in higher education institutions should focus on building skills that contribute to the implementation of the concept of "education throughout life". It is obvious that the main condition for the formation of such skills is the presence of a certain level of functional literacy.

*Method:* To test the hypothesis of the research and achieve the objectives the following methods have been used: theoretical: analysis of pedagogical, philosophical, psychological literature on research; empirical: observation, analysis of results of operations, testing, conducting formative, notes and summarising experiments; statistical: mathematical processing of experimental results.

*Results:* The results of experimental work have shown positive changes in all indicators of the activity component. Significantly reduce the number of students who own conclusions and explanations skills at a low level.

*Conclusion:* To ensure the efficiency of the formation of functional literacy encourage students to apply the technology of critical thinking, which can be used to form the organisational, intellectual and other skills, including the ability to carry out activities of teaching independently.

**Keywords:** Qualified specialists, educational process, law schools, educational motivation, critical thinking.

## INTRODUCTION

Socio-economic and political transformations in Kazakhstan entailed significant changes not only in the cultural and production spheres but also in the educational system. The main task of the modern school is the disclosure of the abilities of each student, the education of a free creative personality, ready for life in a high-tech world, possessing certain qualities of thinking. Modern scientists note a lack of high-level skills of students, as well as students with intellectual disabilities who can make independent decisions, articulate arguments, as well as defend their own opinions in the discussion.

To increase the level of functional literacy, it is necessary to expand the boundaries of human assimilation of elements of functional literacy. Formation of functional literacy of students with mental disorders of law colleges is the basis of further development of future lawyers' competence. Thus, the topicality of the study is caused by the objective

necessity of training highly qualified specialists who feels the need to increase the level of functional literacy, able to use the information, regardless of set goals and objectives of the activity. The comparative analysis of the needs of the methodological theory of teaching practice and the study of philosophical, psychological and pedagogical literature on functional literacy allows us to define existing contradictions in the educational process of law schools:

- between society's needs for specialists with a high level of functional literacy and its low level of students at the law schools;
- between the capabilities of the subject "The Russian language" and insufficient development of methods, forms and means of their application to create conditions for the development of functional literacy.

These contradictions make it possible to define the research problem: what pedagogical conditions may contribute to the formation of functional literacy of law schools' students in the study of the Russian language? The object of the research is the educational process in the Kazakh University of the Humanities and Law for students with psychological

\*Address correspondence to this author at the L.N. Gumilyov Eurasian National University, Nur-Sultan, Republic of Kazakhstan; Tel: +77172709500; E-mail: zh.beisenova4106@nuos.pro

#These authors are equally contributed.

disabilities. The subject of the research is the use of technology for the formation of critical thinking of functional literacy among law students. The purpose of the research is the identification of the formation of functional literacy of law students with mental disorders based on the technology of critical thinking.

The scientific novelty of the research lies in the following: the necessity of the application of critical thinking skills as a methodological basis for the development of functional literacy of law schools' students; identified structure (motivational, cognitive, activity and reflective components) and the content of functional literacy of law schools' students in teaching the Russian language; the pedagogical conditions of development of functional literacy in learning the Russian language (organisational, technological and informative).

## LITERATURE REVIEW

As of today, in pedagogy, the questions of formation of creative, problem, theoretical and practical thinking are well studied. Pedagogy also has a sufficient understanding of the development of critical thinking, especially this issue is carefully studied by foreign teachers and psychologists, such as R. Paul [1], D. Halpern [2] and others, but, as practice shows, insufficient attention is paid to the development of this type of thinking in the educational process.

A significant contribution to the study of functional literacy has been made by foreign researchers [1, 3-6]. T. Sticht [7] studied the problem of functional literacy in the conditions of teaching students of specialised secondary schools for children with psychological disorders with the further development of the academic program, aimed at the development of functional literacy in the process of learning, reading and writing. K. Denny, C. Harmon and V. O'Sullivan [8], as well as A. Arko and K. Addison [9], carried out a study in which they examined the role of functional literacy in social and economic terms. In the Russian educational theory, the question of functional literacy is studied at the following levels: philosophy of education [10]; categorical aspect [11].

After studying the foreign experience in solving the problem of functional literacy, we identified the guiding principles of the organisation of this process:

- the educational process achieves the best results if the relationship of teachers and students have personal character;

- an academic program should be clearly defined taking into account the individual needs of students with mental disorders;
- students must be active participants in learning the new material [12].

Currently, the most popular and successful model is the school of Sudbury Valley, founded in 1968 by Daniel Greenberg. The main components of the pedagogical concept of the Sudbury Valley are enclosed in the following provisions: "The freedom with accountability", "Self-motivation, self-control, self-development", "Democracy". Experience of the school of Sudbury Valley was taken over by many institutions around the world [12].

Considerable assistance in the process of training activities in the formation of functional literacy of students has a technology development of critical thinking. Initially, the idea of forming critical thinking inculcated in the educational system of the United States by J. Dewey [13] as the concept of reflective thinking, and subsequently realised by M. Lipman [14]. The significant contribution to the study of technology development of critical thinking made by such theorists as C. Temple [15], D. Halpern [2]. The sources of pedagogical innovations can be found in the philosophy of education of J. Dewey. He determined the line of educational thought in the XX century in the United States and indicated the vector transformation of the American school [16].

## MATERIALS AND METHODS

The hypothesis of the research is based on a system of theoretical positions and scientific positions of the authors, according to which the effectiveness of the development of functional literacy of law students, ensured and achieved in: characterising the functional literacy of students with intellectual disabilities as a basic level of education; developing, arguing and test technology development of critical thinking on the development of functional literacy of students. In order to determine the theoretical-methodological approaches to the study of the issue of forming the functional literacy of students, it is necessary to allocate the following tasks:

- to define the functional literacy of students with psychological disabilities;
- to study the domestic and foreign experience in solving problems of forming the functional

literacy of students and identify its main trends and principles;

- to study the performance and the conditions necessary for the formation of functional literacy of students;
- to develop evaluation criteria and indicators of functional literacy of students;
- to determine the effectiveness of the pedagogical conditions for the development of functional literacy of students with intellectual disabilities based on critical thinking technology.

The methodological base of the research is: a methodical system of forming critical thinking through reading and writing [15, 17-20]; competence approach [21, 22]; a systematic approach [23]; ways of organising the learning process in high school [2, 24-26].

To test the hypothesis of the research and achieve the objectives the following methods have been used: theoretical: analysis of pedagogical, philosophical, psychological literature on research; empirical: observation, analysis of results of operations, testing, conducting formative, notes and summarising experiments; statistical: mathematical processing of experimental results. The pilot experimental research base has been conducted in the High School of Law of the Kazakh University of the Humanities and Law. The research concept consists of the following provisions:

1. Functional literacy of future lawyers is the appropriate level of knowledge and skills, ensuring the normal functioning of the person in the system of social relations. Functional literacy of law students with mental disorders is a structural element of academic competence. The structure of the functional literacy of law students constitutes the motivational, cognitive, activity and reflective components.
2. The Russian language plays an important role in the preparation of today's highly-qualified specialists, being the basis for the development of functional literacy of students: provides a relationship of professional education and cultural development of the student with intellectual disabilities; ensures the implementation of tasks and understanding the importance of the Russian language for future professional activities; ensure the development

of skills (cognitive, organisational, generalised), based on which students develop professional skills and creative thinking; ensure the formation of skills to facilitate the implementation of the concept of "education throughout life".

3. Pedagogical conditions of development of functional literacy as the basis for the formation of academic competence of law schools' students are: substantial conditions – content orientation course "The Russian language" for self-knowledge, self-development of future specialists; technological conditions – the use of modern educational technologies, the organisation of independent work of students; organisational conditions – the organisation of cooperation between the teacher and students, evaluation of functional literacy through critical thinking. Experimental work has been conducted in the following stages: stating stage; formative stage.

## RESULTS

In the first stage of the work there conducted the stating experiment, in which the students of the Kazakh University of the Humanities and Law took part. In the process of stating experiment, the different diagnostic methods for determining the level of formation of the components of functional literacy for law students with psychological disabilities were applied: motivational, cognitive, activity, reflective.

First of all, it was necessary to determine the motivational orientation of students to study the Russian language. This factor is the most important one for the organisation of activities on the formation of functional literacy of students. To study the attitude of freshmen students to the Russian language, the following essay topics were suggested: "the importance of the Russian language for modern education, and my attitude to the study"; "the role of the Russian language in training and practising law students and my attitude". Consider the data obtained in the course of using the "thematic essays" method. A total number of analysed creative works – 250 and the total number was taken as 100%, respectively (Table 1).

The examples of statements that characterise the educational motivation of law students in relation to the subject "The Russian language": "Language acquisition is necessary for a specialist"; "Everyone is obliged to know the Russian language"; "We are studying all of

**Table 1: Analysis of the Results of Stating the Stage of Experimental Work**

Motivation performance		Frequency	
		Number	Number, %
Attitude to the subject "The Russian language"	Positive	35	23
	Neutral	71	48
	Negative	47	27
Necessity of learning Russian for future professional activity	Confirmed	115	80
	Absent	38	19
Emotional appearance		63	47
Possibility of using Russian in subject area		82	52
Difficulties in language acquisition		113	73

this for the overall development"; "Should be studied, as we are getting a higher education"; "The Russian language gives us an idea of the behaviour in the business communication"; "Will help when applying for a job because the employer pays attention first on our speech, rather than knowledge", "Totally unnecessary thing, it is better to study the subjects on major"; "I did not even think that the university will offer to learn the Russian language again".

We see that the students with mental disorders dominated by neutral attitude (48%) to the study of "The Russian language", at the same time there is a group of students exhibiting a negative attitude (27%), this number corresponds to the number of students who believe that there is no need to study this subject for the future professional activity (19%). The challenge of development is noted in 73% of the work, the emotional appeal of the process of development of the discipline was reflected in less than half of the students (47%), which are explained by the students as "tired of learning the rules at school". At the same time, students still do not know and do not realise that in high schools, the subject includes completely different tasks. Thus, we can draw the following conclusions: comparison of data suggests mostly the neutral and low motivation of law students to the study of the Russian language.

In order to determine the level of formation of the cognitive component of functional literacy of students, it is necessary to have tests to check the residual knowledge of the Russian language, including questions on pronouncing, accentological, lexical, morphological, grammatical, syntactic, stylistic norms of the modern Russian language. Gradation level of development of the cognitive component of functional literacy was as follows: high level – more than 70%

correct assignments of the test; average level – 40-70% correct assignments of the test; low level – 40% correct assignments of the test. An analysis of student works turned out that most of the surveyed stated the average level of formation of the cognitive component of functional literacy (67%). Such a result does not meet the modern requirements to the level of education of students of law colleges, the leading of which is the competency. Its achievement depends on the quality of the acquired level of functional literacy.

The first phase of the pilot program revealed the insufficient formation of functional literacy of students with intellectual disabilities, as evidenced by the results of ascertaining experiment: the students dominated largely valid and critical level of initial forming the functional literacy, which does not meet modern requirements to the level of education of students of law colleges. In order to test the basic theoretical propositions of research and technology performance of critical thinking in the process of studying the Russian language in forming the functional literacy needed to implement the second phase of the pilot program is to conduct a formative experiment.

The formative stage of the experiment was carried out in 2015 at the Kazakh University of the Humanities and Law. Works in the control group were carried out according to traditional methods, and the experimental group of our technology development of critical thinking. The experimental groups implemented technology strategies of critical thinking, providing the formation of functional literacy. The formative experiment was held by students with psychological disabilities of the Law School. As a result of conducted ascertaining experiment were picked up four identical in terms of functional literacy student groups (two experimental and two control), which was held in the

**Table 2: Analysis of Written Works**

Evaluation criteria	% of right answers	
	SS (stating stage)	FS (forming stage)
Logical consecutiveness, material presenting	50	76.1
Pointing out the main part	28.4	47.7
Setting the links between the main ideas of the author	26.1	55.7
Detailed discussion of the topic (issue)	37.5	74.3
Presenting the own attitude to the problem	12.5	87.5
Defining the practical significance of the problem	28.4	76.1

future formative experiment. For confirmation of the control and experimental groups to the parity level of functional literacy was used student's test criteria, allowing confirming the likelihood of identity as the average of two samples for the same population.

We have used the technology to work with the text for the development of critical reading, which consists of three stages: evocation, comprehension, and reflection. The results of experimental work have shown positive changes in all indicators of the activity component. Significantly reduce the number of students with mental disorders who own conclusions and explanations skills at a low level. We pursued the goal to find out how the technology of critical thinking of students contributes to the formation of functional literacy. The results of experimental teaching students on the proposed technology showed positive dynamics of changes in all components of critical thinking.

Development technology of critical thinking influenced the motivational component. The students demonstrated a high level of written language, a good vocabulary and the ability to analyse, synthesise and apply knowledge from different sources, with arguments to defend their position. All students stressed the need to learn to work with the information, a change in attitude to the Russian language. Students with intellectual disorders concluded that a person could critically examine and develop your own thought process, can learn to think objectively and logically.

We applied such forms of work on the development of critical thinking as the "Predictions Tree", "Semantic Map", "Insert", "Bloom's Daisy". These strategies allow students to carry out various types of analysis to develop the ability to interpretation, evaluation, reflection. The main achievement is the active participation of students in critical reading (Table 2).

The most important indicator of the efficiency of the FS was a comparative characteristic of students of

experimental and control groups. During the assessment phase effectively, experimental work revealed positive dynamics of the level of formation of functional literacy in the experimental groups compared to the control, which is reflected in Table 3.

**Table 3: The Level of Forming Functional Literacy in %**

Levels	Experimental group	
	KG	RG
Low (%)	26.7	49.4
Medium (%)	13.1	52.6
High (%)	13.6	24.7

**DISCUSSION**

During our research, it was revealed that there are many definitions of critical thinking. Thus, D. Halpern [2] says: "Critical thinking is the use of cognitive techniques and strategies that increase the probability of obtaining the desired end result". This statement defines thinking as a justification, accountability and focus on resorting to this type of thinking in problem-solving, decision-making and the formulation of conclusions. Other definitions indicate that critical thinking is a peculiar alignment of logical reasoning [27], the formation of interconnected logical models [28] and the adoption of reasoned decisions as to whether to agree to any judgment, reject or defer consideration [29].

"Critical thinking is not a single skill or ability, a combination of many skills" [20]. One of the authors of the RWCT technology D. Klooster [18] set the following parameters of critical thinking: critical thinking is to think independently; information is the starting point but not the endpoint of critical thinking; critical thinking begins with the formulation of questions and analysis of the problems to be solved; the purpose of critical thinking is a convincing argument; critical thinking is social thinking. Despite the fact that there are many

definitions of critical thinking, all theorists agree that critical thinking is a conscious effort to determine what statements considered to be correct or not. The main purpose of critical thinking, in their opinion, is the development of the ability to learn to analyse information and express rational arguments independently.

The technology of critical thinking not only allows variation, make it unusual, but also achieving specific learning outcomes: formation of new thinking (openness, awareness, flexibility, alternatively, reflexivity); development of basic personality traits (creativity, mobility, communication, responsibility, independence); learning to ask questions; promoting a culture of reading and writing; promotion of self-search of creative activity, applying a variety of support schemes, which intensify the process of critical thinking. The support scheme helps students with mental disorders to build logically oral statements in Russia, allows developing memory skills in pairs and small groups, as well as a creative approach to learning. Students can independently create different support schemes and, in the future, apply them in writing essays, retelling texts, participating in the discussions on the various presentations and so on.

## CONCLUSIONS

We consider functional literacy as the ability to use the students' knowledge and skills to address the widest possible range of life problems in different spheres of human activity, communication and social relationships. In the educational process, they can be acquired by the student, if the following conditions are met: training is the nature of the activity; learning process focused on the development of student independence and responsibility for their performance. To ensure the efficiency of the formation of functional literacy encourage students with psychological disabilities to apply the technology of critical thinking, which can be used to form the organisational, intellectual and other skills, including the ability to carry out activities of teaching independently.

This material is only the part of the comprehensive study, followed by work to develop a set of organisational and pedagogical conditions of formation of functional literacy through the development of critical thinking of students. Therefore, this material has only a few strategies for the development of critical thinking used in the classroom of the Russian language for the development of functional literacy of students with

mental disease. The data obtained in the course of experimental work shows that the proposed model is an effective means of development of functional literacy of students. Our study does not pretend to be an exhaustive solution to the problem, but it can serve as a basis for further research, creative searches in the development of scientific bases of formation of functional literacy of students based on critical thinking skills.

Further research on this issue could continue in the following directions: the development of new means of formation of functional literacy; search, identification and implementation of innovative pedagogical conditions to ensure the development of critical thinking of students with mental disorders; development of programs, manuals, methodologies and technologies for lecturers engaged in the formation of functional literacy of students.

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