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## INFLUENCE OF FUNCTIONAL LITERACY ON EDUCATION

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**Annotation.** Following article raises a question of importance of functional literacy skills of students. Functional illiteracy is the inability to read or write well enough to perform everyday tasks in modern society is practical analphabetism. According to Programme for International Student Assessment (PISA), level of functional literacy of students of Kazakhstan is average. The article investigates this problem on the example of education system of Nazarbayev Intellectual Schools. Therefore, search was conducted in NIS Aktobe. As a result, study showed that functional illiteracy effects on education and there are many factors which hinders students to improve their functional literacy skills.

**Keywords:** functional literacy, functional illiteracy, education, academic performance, school.

## ВЛИЯНИЕ ФУНКЦИОНАЛЬНОЙ ГРАМОТНОСТИ НА ОБРАЗОВАНИЕ

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**Аннотация.** Данная статья поднимает вопрос о важности функциональной грамотности учащихся. Функциональная неграмотность – это неспособность читать или писать достаточно хорошо, чтобы выполнять повседневные задачи в современном обществе, практически неграмотность. По данным международной программы по оценке образовательных достижений учащихся, уровень функциональной грамотности студентов Казахстана является средним. В статье данная проблема исследуется на примере системы

образования Назарбаев Интеллектуальных школ. Следовательно, исследование проводилось в Назарбаев Интеллектуальной школе г. Актобе. Результаты исследования показали, что функциональная неграмотность влияет на образование, и существует множество факторов, которые мешают учащимся улучшить свои навыки функциональной грамотности.

**Ключевые слова:** функциональная грамотность, функциональная неграмотность, образование, успеваемость, школа.

## **Introduction**

In the 90-s of the XX century appeared a concept of functional illiteracy. Functional illiteracy is the inability to read or write well enough to perform everyday tasks in modern society is practical analphabetism. It is distinct from mere analphabetism, which is the inability to read or write at all. Functional analphabets may have a simple ability to read and write but cannot perform more complex tasks such as running a machine, completing a job application or completing a tax form. This issue one of the common problems in developing countries. Kazakhstan is also on this list of countries.

Low level of functional literacy is a root of other educational and social problems. One of them is an educational performance of the Kazakhstani students. It is known that students in Kazakhstan scored lower than the Organisation for Economic Co-operation and Development (OECD) average in skills such as reading, mathematics and science. There are several reasons why it is important develop functional literacy rate:

- Being functionally literate would help them overcome any problem they face.
- Functional literacy provides an opportunity for progress in individuals, families, cultures and the country.
- Being functionally literate would improve their productivity on their various assignments on daily activities.

Zhuldyz Smagulova, Professor of the Kazakhstan Institute of management, Economics and forecasting (KIMEP), Dean of the KIMEP Language Centre, claims that many people come to the tax office and cannot fill out reporting forms. It is also functional illiteracy. Some people cannot withdraw money from the card, because they do not know how to approach this device. Majority of the people take a loan, sign a contract even they do not understand its meaning. This is a basic level. And there is literacy that is required for academic success. Students need the completely different competencies [1]. One of the main ones among them is that student can read the text, find the main idea or argument, determine the discursive structure of the text (for example, distinguish a narrative from a classification).

Nowadays, functional illiteracy is one of the pressing issues in Kazakhstan. Based on statistics of PISA, reading literacy level decreased from 2015. Students gained 427 scores out of 1000 in 2015, while in 2018 scores are equal to 387. This is much lower than results of 2009. Although, in mathematics testing in 2018 students gained 423, which is less high in position in comparison with results of 2012 (432) and 2015 (460), but higher then result of 2009 (390). However, functional illiteracy is not only Kazakhstan's problem, most of the developing countries suffering from this issue. According to UNESCO investigation, 85 per cent of the world's adult population is literate, meaning that 757 million people are uneducated [2].

Kazakhstan has a lot of opportunities to improve functional literacy of the students. Nowadays, in some studies such as Global Competitiveness Report (GCR) Russia and Kazakhstan are the only countries to crack the top tier in the Commonwealth of Independent States (CIS) which means that Kazakhstan has high competitiveness index. It shows ability of the country to provide high level of prosperity.

### **Methods**

Following scientific paper had several different methods. Information and data that was collected both primary and secondary sources. Functional illiteracy is one of the common issues in developing countries. Therefore, secondary sources such as

general data about literacy rate of the students of Kazakhstan was available. However, to avoid disinformation and investigate without wrong data there was used only credible sources such as PISA testing results. Although, in this research work were used other reliable sources which were checked by RAVEN, the criteria for identifying credibility of sources.

To investigate this topic deeply there was chosen mixed research design. Mixed research design contains methods of qualitative and quantitative research designs. Qualitative research is a method of analysis that improves understanding on human and social sciences, to find the way people perceive information and feel, while quantitative is a method that is used to generate numerical data and facts, by usage of statistical, logical and mathematical technique. Reasons why this type of method was chosen:

- To consider all factors, which are impacting on the functional literacy rate of students.
- For the general overview and better understanding of the problem general statistics about literacy level was needed. For example, PISA results.
- There were used statistics of results of testing in which a focus group was participated.
- Testing that was prepared based on analysis of people's perception.

As was mentioned above, there was needed a focus group to develop research work. Participants of this focus group are 11 graders, because they are higher graders and majority of them passed PISA testing in 2018. As previously stated, results of PISA 2018 are one of the lowest results that Kazakhstan had. Although, 11 graders are studying some of the subjects in English language. On the authority of Sophie Edwards, one of the factors which hinder developing functional literacy is teaching students in another nonlocal language [3]. So, we decided to choose 10 participants, who studying in-depth different subjects for this focus group and give them basic functional reading test, which was created for preparation for PISA testing. Although, We added one question, which will test students' functional literacy level. In overall,

there was 10 questions. Aim of the question that We added is to know how many students perceive instructions correctly. Although, it would check their attentiveness skills. Testing was conducted in formal atmosphere on the purpose of not disturbing students, so they can focus on instruction and questions.

Another method that We chose to get information about this topic is an interview. Interview was designed to gather reliable opinion of NIS teacher. From the experience of 11 graders, students that study in-depth biology are suffering from functional reading more. We came to a conclusion that We should interview biology teacher Miss A. Interview lasted for 5 minutes, because We asked a teacher only important questions concerning my topic. There were 5 open-ended questions in order to get extended answers about her point of view towards this problem:

- How can the lack of functional literacy skill affect education?
- What hinders students to improve functional literacy (Why is it hard)?
- What is the level of functional literacy of NIS students (high school)?
- How often do you face this problem?
- How functional literacy skill of the students can be improved?

Interview was also conducted in a formal atmosphere, to allow interviewee concentrate on these questions, so she can give complete answers. The conversation was recorded by interviewee's approving and she signed the agreement.

## **Results**

Considering all the information that has been gathered from secondary sources, interview and testing with focus group, it is clearly identified that the average level of functional literacy skills of NIS students impacts on their academic performance. For instance, 41,6% of the group with 12 students have high functional literacy skills.

From the interview with biology teacher Miss A, it has been collected information about what teachers think about impacts of functional literacy on education. Miss A said that average level of functional literacy seemed by students' results of exams such as Summative Assessment for the Unit (SAU) and Summative Assessment for the Term (SAT). From perspective of the teacher functional literacy

is one of the necessary skills, which students should have, because the way how they read questions and perceive information is depends on literacy skills. For example, if there will be one key word in the task and student will not pay attention to this, they will complete exercise incorrectly. As previously stated, education in nonlocal language can effect on lack of understanding of the key words [4]. According to her own experience, usage of smartphones and social media much of the time, unjustifiable haste hinders students to think functionally. Unjustifiable haste is one of the repeatable mistakes, because in a hurry they can misunderstand some tasks. Teachers often face this issue, at least 2-3 times in month, because in one-month students pass their exams for 3 times. Also, Miss A suggests read more books and spend less time on social medias to improve that skill, because it is one of the simplest ways. It is known that one of the ways to reduce functional illiteracy is to carefully use technologies [4]. So, perspective of the teacher and information from the secondary source are add up.

Another way that was chosen to collect data was testing with a focus group. 10 students from 11 grade participated in the focus group, so there were 5 male students and 5 females. As was mentioned before, they were chosen, because they are studying in-depth different subjects. We decided to have equal number of females and males for better results. Although, testing was anonymous.

At the beginning of this testing We provided students with instruction, which says that student should read all questions before the answering. Only 1 student out of 10 students followed instructions and read all questions before noting, while others did not pay attention to it. Last task is about to not answer these questions, that is why the only 1 student passed this testing and only 1 student noticed task №10 after answering 50 % of the questions, which shows that students read tasks not carefully. As mentioned before teacher of biology Miss A stated that there is a problem of how students do not pay attention to some key points of the given task. However, results of this testing can be not accurate, because testing was conducted after all lessons of participants, so factors such as fatigue and disinterest or indifference may affect

overall result. During my observation students asked me some questions concerning to the structure of this exercise. For instance:

- Is that necessary to read all these questions?
- Why questions are not logical?
- I do not even understand the meaning of questions.

It seems that they were too tired to read all the tasks, according to the first question of the student. Some of them were too confused because of the questions such as “if all the cups are white, then the white teapot is also cup”. They focused more on the meaning of this exercises instead of instructions. It can be explained by the education system of Nazarbayev Schools. For example, SAU examinations, which requires students to complete a lot of tasks in short period of time. Furthermore, students try to answer more quickly. As Miss A mentioned during the interview, being in hurry influence on how students think functionally.

### **Conclusion**

According to each of the research question it is possible to make the following conclusions.

- What is the level of functional literacy of NIS students (high school)?

By research that has been carried out it is clearly seen that the level of functional literacy is average. Testification such as PISA and examinations at school shows that students at NIS are functionally literate, but not enough.

- What hinders students to improve functional literacy (Why is it hard)?

Education system, which requires students of high grades (11-12 graders) to pass exams on English language, while studies states that to achieve high level of functional literacy, education should be on mother language. Although, education system necessitates students to complete a lot of tasks in a short period of time strongly impacts. Nowadays, majority of NIS students focused more on how to pass exams more quickly rather than a quality of the answers.

- How can the lack of functional literacy skill affect education?

There is literacy that is required for academic success. They need completely different competencies. Among them, one of the main ones is that you can read the text, find the main idea or argument, determine the discursive structure of the text (for example, distinguish a narrative from a classification). If student know how the text is structured, they can easily understand its organization – where is the introduction, middle, conclusion, where are the repetitions, etc. Student can integrate, correlate the text with other texts. Express read ideas in their own words, argue with them, etc. All these are necessary skills to learn successfully and to be a successful citizen of the state. If students are not literate enough, they will be able to decode text, but they will not understand and analyse it. Although, they would not be able to find the main idea in the text or determine the main argument, are not able to distinguish opinion from fact, are not familiar with the structure of the argument, do not distinguish between logical errors, etc. [5].

- How functional literacy can be improved?

It is believed that careful usage of technologies, education on mother language, reading more books and helps to develop these skills. However, there is no guarantee that it will help to achieve this goal, because it depends on attitudes of students towards this problem. And there is a still problem of functional illiteracy even in developed countries.

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