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PROBLEMS IN FORMING STUDENTS' COMPETENCE IN TEACHING PHYSICS

In recent years, global challenges have brought about significant changes in the field of education. While some of these changes have positively impacted the learning process, others have had negative consequences. On the positive side, the introduction of innovative technologies and digital learning tools has enhanced the quality of education and improved learning outcomes. However, the negative aspects of globalization, such as increased distractions and the loss of traditional learning values, have led to a decrease in students' motivation to study.

This article aims to identify the factors that hinder the development of subject competence in physics among students in the current educational landscape. To achieve the goals and objectives of the study, a survey was conducted involving 53 teachers with varying years of experience teaching physics in Kazakh-medium classes. These teachers provided valuable insights into the challenges they face in fostering subject competence among their students.

The results of the survey revealed that the vast majority of teachers believe the primary obstacle to the formation of students' competence in physics is the lack of didactic materials aligned with the updated curriculum. The absence of well-structured resources that reflect the changes in the curriculum has made it difficult for teachers to effectively engage students and reinforce key concepts in physics. Furthermore, the study found that the inadequate provision of teaching aids, particularly in remote rural areas, further exacerbates the issue. Many schools in these areas lack the necessary equipment and resources to provide students with hands-on learning experiences.

In addition to material challenges, the survey highlighted the decline in students' motivation to acquire knowledge. This drop in motivation is attributed to several factors, including the increasing influence of digital distractions and a growing disconnect between students' daily lives and academic learning. The lack of motivation, combined with the scarcity of modern educational tools and resources, poses a significant barrier to the effective teaching of physics.

In conclusion, the study underscores the urgent need to address these challenges in order to improve the teaching of physics and foster better student competence in the subject. This will require not only updating didactic materials to align with new curricula but also ensuring that all schools, especially those in rural areas, are equipped with the necessary teaching aids. Additionally, strategies to enhance student motivation and engagement must be prioritized to create a more conducive learning environment.

Key words: physics, subject competence, globalization process, Bologna process, updated educational program.

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Физиканы оқытуда студенттердің құзыреттілігін қалыптастыру мәселелері

Соңғы жылдары жаһандық мәселелер білім беру жүйесіне айтарлықтай өзгерістер енгізді. Бұл өзгерістердің кейбірі оқу процесіне оң әсерін тигізсе, кейбірі теріс ықпал етті. Мысалы, инновациялық технологиялар мен цифрлық оқыту құралдарын енгізу оқу нәтижелерін жақсартты. Алайда, жаһандану салдарынан пайда болған теріс әсерлер, мысалы, оқушылардың назарын басқа жаққа аударуға және дәстүрлі оқу құндылықтарының жоғалуына әкеліп, олардың оқу мотивациясының төмендеуіне себеп болды.

Осы мақаланың мақсаты – қазіргі жағдайларда физиканы оқыту кезінде оқушылардың пәндік құзыреттіліктерін қалыптастыруға кедергі келтіретін факторларды анықтау. Зерттеу барысында қазақ сыныптарында физиканы әр түрлі жылдар бойы оқытқан 53 мұғалім арасында сауалнама жүргізілді. Сауалнама мұғалімдердің оқушылардың құзыреттілігін қалыптастыру кезіндегі кездесетін қиындықтарын анықтауға бағытталды.

Сауалнама нәтижелері бойынша мұғалімдердің басым көпшілігі оқушылардың пәндік құзыреттілігін қалыптастыруға негізгі кедергі ретінде жаңартылған білім беру бағдарламасына сәйкес әзірленген дидактикалық материалдардың жетіспеушілігін атады. Мұндай ресурстардың болмауы физиканың негізгі ұғымдарын оқытуда айтарлықтай қиындық туғызады және оқушылардың қызығушылығын төмендетеді. Сонымен қатар, зерттеу нәтижелері көрсеткендей, әсіресе шалғай ауылдық аймақтардағы мектептерде оқу құралдарымен және жабдықтармен толық қамтамасыз етілмеуі де оқытудың сапасына едәуір кедергі келтіреді.

Сондай-ақ мұғалімдер оқушылардың оқуға деген ынтасының төмендеуін атап өтті, бұл бірнеше факторлармен байланысты. Атап айтқанда, сандық құралдармен алаңдау және күнделікті өмір мен оқу процесі арасындағы алшақтық оқуға деген ынтаға айтарлықтай әсер етеді. Оқу мотивациясының төмендеуі, сондай-ақ оқу ресурстарының жетіспеушілігі физика пәнінде құзыреттілікті қалыптастыруға үлкен кедергі келтіреді.

Қорытындылай келе, физиканы оқыту сапасын жақсарту және оқушылардың құзыреттіліктерін арттыру үшін бірнеше негізгі мәселелерді шешу қажет. Жаңартылған бағдарламаларға сәйкес дидактикалық материалдарды жаңарту маңызды, сондай-ақ ауылдық аймақтардағы мектептерді қажетті ресурстармен және жабдықтармен қамтамасыз ету керек. Оқушылардың мотивациясын арттыру және оларды оқу процесіне белсенді қатыстыруға бағытталған стратегияларды әзірлеу қосымша оқу жетістіктерін арттыруға мүмкіндік береді.

Түйін сөздер: физика, пәндік құзыреттілік, жаһандану, Болон процесі, жаңартылған білім беру бағдарламасы.

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Проблемы формирования предметной компетентности учащихся при обучении физике

В последние годы глобальные проблемы привели к значительным изменениям в системе образования. Некоторые из этих изменений оказали положительное влияние на учебный процесс, тогда как другие имели негативные последствия. Например, внедрение инновационных технологий и цифровых образовательных инструментов улучшило результаты обучения. Однако негативные последствия глобализации, такие как увеличение отвлекающих факторов и утрата традиционных образовательных ценностей, привели к снижению мотивации учащихся к обучению.

Цель данной статьи — выявить факторы, препятствующие формированию предметной компетентности учащихся при обучении физике в современных условиях. В рамках исследования был проведен опрос 53 учителей с различным стажем преподавания физики в казахских классах. Опрос был направлен на выявление мнений преподавателей о проблемах, с которыми они сталкиваются при формировании компетенций у учащихся.

Результаты опроса показали, что подавляющее большинство учителей считают основной преградой для формирования предметной компетентности недостаток дидактических материалов, разработанных в соответствии с обновлённой образовательной программой. Отсутствие таких ресурсов значительно затрудняет преподавание ключевых понятий физики и снижает вовлечённость учащихся. Кроме того, было выявлено, что школы, особенно в отдалённых сельских районах, недостаточно обеспечены учебными пособиями и оборудованием, что также препятствует качественному обучению.

Также учителя отметили снижение мотивации учащихся к обучению, что связано с несколькими факторами. В частности, цифровые отвлекающие факторы и разрыв между повседневной жизнью и учебным процессом оказывают значительное влияние на учебную мотивацию. Недостаточная мотивация, наряду с нехваткой учебных ресурсов, представляет собой серьёзный барьер для формирования предметной компетентности по физике.

В заключение можно отметить, что для улучшения преподавания физики и повышения уровня компетентности учащихся необходимо решить несколько ключевых проблем. Важно обновить дидактические материалы в соответствии с новой программой, а также обеспечить школы, особенно в сельской местности, необходимыми ресурсами и оборудованием. Дополнительно следует разрабатывать стратегии, направленные на повышение мотивации и вовлечённости учащихся, что создаст более благоприятные условия для успешного освоения физики.

Ключевые слова: физика, предметная компетентность, процесс глобализации, Болонский процесс, обновлённая образовательная программа.

Introduction

At present, the number of scientific studies being carried out to improve the quality of education is constantly increasing. In particular, teachers are looking for effective ways to improve students' competence. This situation directly depends on the changes in the labor market that have appeared in recent years. The current market situation demands the personal qualities of a person, his knowledge, and his professional qualifications (Ivanov et al., 2020).

Globalization is the process of unifying the world's economy, politics, and culture. In order to improve the sustainable development of the world and the standard of living of the people, the process of globalization is being intensively implemented. Of course, this process does not bypass the sphere of education. Because knowledge is a common human value. It is an indicator of the level of development of society's civilization. At the same time, in order to raise the education system of our country to an international level, we are studying the best practices of countries with a high level of education, and as a result, educational institutions in our country are using a number of the best educational programs. In particular, our country joins the Bologna Process and implements education in higher educational institutions on the basis of credit education technology.

Kazakhstan officially joined the Bologna Process in March 2010 (Berg et al., 2023). This decision made it possible to bring the country's education system closer to European standards. In this regard, the triple model of bachelor, master, and PhD doctor was implemented in the country. Students in our country have the opportunity to study abroad in various specialties. Due to this, they were able to learn the best practices of other countries while improving their knowledge.

At the same time, our country participates in international studies aimed at monitoring the quality of student education. For example, International Computer and Information Literacy Study (ICILS), Programme for International Student Assessment (PISA), Teaching and Learning International Survey (TALIS), etc. The purpose of these studies is to determine the problems in the education system and their causes. This, in turn, will be useful for improving the quality of education. As a result of comprehensive research in the field of education, our country has gradually introduced the updated educational program to schools since 2016. It was introduced to

1st grades in 2016, to 2nd, 5th, and 7th grades in 2017, to 3rd, 6th, 8th, and 10th grades in 2018, and to other grades in 2019. In 2020, the implementation of the 12-year updated educational program in schools was completed (Shuinshina et al., 2019)

Literature review

The main goal of updated education is to create an educational environment suitable for the harmonious development of the student and to educate a person with developed creative thinking skills and a high level of creativity. The transition from traditional education to a modern education program is a very extensive process (Abylkassymova et al., 2023). The first step in its implementation began with the mastery of the content of the updated educational program by teachers. Further, to increase the professional qualifications of teachers, to improve their skills in using information and communication technologies, etc., work was carried out in sequence. In addition, the contents of textbooks and educational programs have been updated.

We cannot say that the education sector of our country has become one of the leading countries in the world. For example, according to the results of the 2018 PISA international study, Kazakhstan ranked in the last ten out of 77 countries that participated in the study (Habdulkhobar Zh., 2019) [5]. Therefore, the education system in our country still needs a lot of research. Only real, systematic pedagogical research will allow us to organize and improve this field.

Currently, in order to identify the problems that have arisen in the course of education in the country and find their solution, it is necessary to distinguish between the individual problems of each subject in the course of education and the problems common to all subjects. For example, a systematic lack of textbooks according to the updated educational program, a lack of opportunities to use ICT during lessons in remote rural areas, etc. are common problems for all disciplines. Apart from this, there are separate problems that arise during the formation of the student's competence in each subject.

In this research, it was determined what difficulties or obstacles exist in the formation of students' competence in physics. That is, this study was based on the principle that, in order to solve a problem, first of all, it is necessary to determine its cause. This study is considered a pilot study to determine the effective methods of forming the competence of

students in the subject of physics in the schools of our country.

Research materials and methods

In the course of the research, the works of domestic and foreign scientists who researched the features of teaching physics and methods of forming students' competences in physics were studied. The regulatory and legal documents in the field of education of the country, the "Law on Education" of the Republic of Kazakhstan, and the programs and projects implemented in order to improve the quality of education were studied. Interviews were held with the most experienced research teachers, and the difficulties encountered during the teaching of physics and the ways to solve them were discussed. Based on their suggestions, a questionnaire was prepared. 53 subject teachers with different years of experience who teach physics in schools of different levels (general education secondary school, gymnasium, lyceum, specialized lyceum, and NIS) in the country participated in the research. A survey was conducted for them in order to determine the main difficulties encountered in the formation of competence in the subject of physics among schoolchildren studying in the Kazakh language in the country at the present time. For a complete study of the topic, a review of the works of foreign scientists was made in order to identify and solve this problem. The progress and results of their research were analyzed. The educational experience and achievements of the leading countries in the quality of education were studied. In the course of the research, comparing the regional, national, and economic differences and similarities between other countries and our country, the peculiarities of the education sector of our country were determined.

Subject competence is a leading factor that determines the quality of the student's educational activities, covering all subjects at each level of education. The main goal of education is to form a competent student who constantly improves and develops himself (Smorodinova, 2011). Therefore, it is important to develop the subject competence of the student in any subject he studies, regardless of what grade he studies. Each subject has different learning objectives and skills, as well as expected results. Therefore, the competence that is formed in a student in each subject is different.

In physics lessons, students usually study theoretical material, solve problems offered by a textbook or problem book, and very rarely devi-

ate from this pattern, which often occurs due to the small amount of time in the curriculum. The reduction in the number of practice-oriented tasks and the lack of use of modern technologies that penetrate the lives of every student lead to a decrease in the motivation and cognitive interest of the student in the subject of physics (Gorokhova & Nikitin, 2020).

A student who has developed subject competence while studying physics should have the following skills:

1. Can describe physical phenomena using theoretical knowledge;
2. Can make calculations using formulas;
3. Can make correct measurements in laboratory work and process the results.

There are many domestic and foreign research studies on the formation of subject competences in students. One of them can be considered the article "Problems of Competence Formation" by Klebleev. The article is devoted to the analysis of the problem of competence in the national education system in the Russian Federation. Modern scientists pay attention to research that allows them to achieve the highest efficiency in the formation of competence. This article analyzes the principles of successful modernization of the education system at that time. In addition, it tries to reveal the main reasons for the success of the methods proposed for the current education system in the formation of competence (Klebleev, 2018).

Zhussipbekova Sh., Alimbekova G., Rystygulova V., Shadinova K., and Adilbekova A. studied the peculiarities of teaching the subject "Electroenergetics and Electronics Fundamentals" to students studying pharmacy. As a result, the readiness of students for lessons and the activity of performing practical tasks in this subject were low, and accordingly, their test scores were low (Zhussipbekova, et al., 2023). Therefore, if the student is not interested in the subject during the school period, he will not be motivated to study even when he receives higher education.

Veronika & Inga article entitled "Development of students' competences in mathematics and science subjects in Latvia" examines the problems of students' competence formation in the mentioned subjects in that country. According to the results of this research, it was observed that Latvia has a unified system of methodological materials developed in four subject areas and provides for the formation of entrepreneurial competences in students. However, it found that significant improvements are still

needed regarding the teaching process (Veronika & Inga, 2013) .

Erofeeva et al., in their article ‘‘Physics: Problems of Education’’, considered the problem of decreasing interest among schoolchildren in studying physics. The authors are of the opinion that, due to this problem, it will be difficult to train students studying physics at universities in the future and to prepare qualified specialists from them (Erofeeva et al., 2013) . The competence of today’s student is the competence of tomorrow’s specialist. Erofeeva & Giryakova gave such a high assessment to the student’s competence and emphasized the leading role of the competences formed in the school walls for the future specialists to be qualified (Erofeeva & Giryakova, 2012) .

Zimnya defined knowledge-based, intellectual, and experiential knowledge of human social and professional life as ‘‘competence’’. In addition, he gave the opposite definition of competence as ‘‘hidden potential a reserve that cannot be ‘‘used (Zimnya, 2003) . The author considers competence as a set of knowledge and interprets actually acquired skills and competence as passive elements. The subject of physics is taught in grades 7 and above. At this stage, students are 13–14 years old. At each stage of a child’s development, his psychological and physical features are more obvious than those of adults. At this age, their previous values and attitudes towards adults change. There are frequent disagreements with parents and teachers. In addition, students of this age often pay attention to new things and are eager to create ‘‘new experiences’’ for themselves. Any problem arising in the course of education requires study from a pedagogical and psychological point of view. Therefore, pedagogy and psychological sciences are closely related. K. A. Khasabova clearly indicated the direction, structure, and tasks of providing support to students of this age in her work entitled ‘‘Psychological-Pedagogical Support of High School Students.’’ Also, the author emphasized that the student’s relationship with others, self-awareness, assessment, and academic progress can be improved through psychological and pedagogical support (Khasabova, 2022) .

Now let’s look at the experience of the leading countries in the field of education. Since 2000, the PISA international study has been carried out in order to monitor the education sector of the world’s countries in a standard way. 15-year-old students from each country participate in the study once every three years. PISA tasks are aimed at determining students’ mathematical, reading, science,

and computer literacy. According to the results of the study until 2015, the countries of Finland, Singapore, Estonia, Switzerland, China, South Korea, and Japan showed the best results. Our country also participates in these studies, but the results are not satisfactory. In the last study conducted in 2018, our country was ranked 69th in reading and science literacy. A total of 77 countries participated in the study (Habdulkhabar, 2019) . Science literacy includes test tasks in the subject of physics. These tasks are designed to assess the student’s ability to apply his knowledge in real life.

Ustun U., a scientist of the Faculty of Education of Ankara Middle East Technical University, made an analysis in his article ‘‘Comparison of Finnish and Turkish Curriculums in Physics,’’ comparing the physics curricula of the two countries. He tried to determine why Finland is a leader in the field of education. In Finland, the subject of physics is taught as part of the subject ‘‘Environment and Natural Science’’ in the first four years of basic education. Students study the subject ‘‘Physics and Chemistry’’ in the 5th and 6th grades. Physics is taught as a separate subject only in the 7th grade. For example, between the 7th and 9th grades, students study the main content of the physics course: motion and force, vibration and wave motion, heat, and electricity. Each class is divided into two groups: mandatory and specialized. The required course covers the concepts of matter and the universe, energy, force, and motion in general terms, while specialised courses cover the laws of motion, gravity, waves, heat, electricity, electromagnetism, and radiation in detail. In addition, the core curriculum in Finland was updated in 1970, 1985, 1994, and 2004. In the following years, he conducted special studies to make changes to the current curriculum. (Ustun, 2010) . Also, the author noticed that In Finland, it is necessary to organise effective in-service training training so that physics teachers can acquire basic knowledge and principles in new curricula. Teachers should be encouraged to pursue continuous professional development. Any revision to the education system without the support of teachers, who have key responsibilities in practice, will not create significant and long term changes.

The main purpose of teaching physics is to develop a student’s conceptual understanding of physical phenomena, the ability to solve physical problems and the ability to apply the knowledge gained in life. Therefore, it is more difficult to master the subject of physics than other subjects. There are many researchers of effective ways of teaching physics. In

particular, Gita & Martha have shown that context-based learning is more effective than traditional teaching in physics (Gita & Martha, 2008) .

It is known that a lot of research is being conducted to improve the quality of education. Despite this, improving the quality and results of education is still one of the relevant topics. This situation shows the lack of connection between pedagogical research and pedagogical practice. Improving any area requires research. But it is very important to apply the research results in practice to improve (Jorg et al., 2007) .

Results

Improving the quality of education is a process that requires constant and continuous research. Reforms in this field are based on the results of special scientific research. Depending on the individual social, economic, and political situation of each country, its educational system will also have peculiarities. Practices that are recognized as best in other countries must now undergo special pedagogical research in one country. Therefore, pedagogy is one of the social sciences. This research was conducted based on the opinions of teachers who play a leading role in the field of education. To be more specific, since the purpose of the research work was to identify the problems that caused difficulties in the formation of students' subject competences in the physics class, only physics teachers participated in the research. A total of 53 subject teachers participated in the research. Among them, 30 teachers have more than seven years of teaching experience, and 23 teachers have less than seven years of teaching experience. Since 2016, an updated training program has been introduced in our country. The teachers who participated in the study with more than seven years of experience are considered to be experienced in teaching traditional and modern formats, and they are familiar with the features of both curricula. These teachers make up 56.6% of the total participants (Fig.1).

43 of the respondents teach physics in the Kazakh language in general secondary schools, 2 in gymnasiums, and the rest in lyceums or NIS schools (Fig. 2).

45.3% of teachers said that they have difficulty forming the subject competences of students in physics class, and 35.8% said that they have difficulty only in some subjects. Therefore, according to

the results of the research, it can be seen that 81% of teachers encounter obstacles in the formation of the subject competence of students in physics class (Fig. 3).

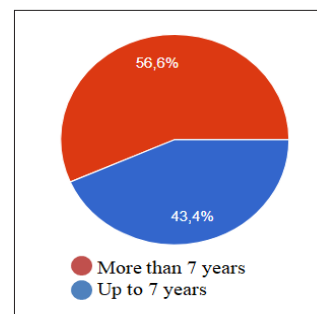


Figure 1 – the comparative index of the respondents according to their work experience

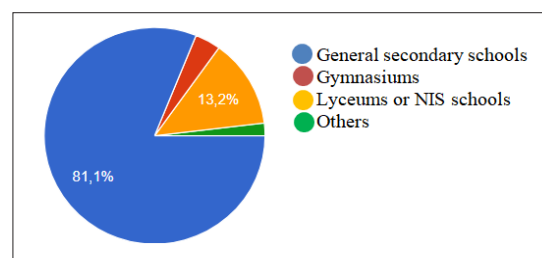


Figure 2 – the relative index of respondents by workplace

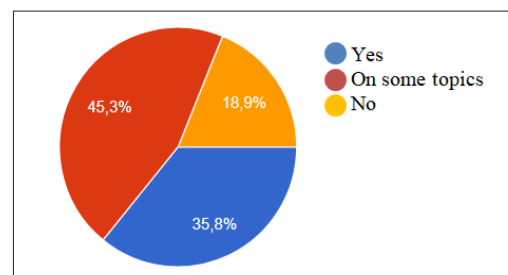


Figure 3 – a comparative index of teachers' responses to determine whether there are obstacles in the formation of students' subject competences

Based on the results of the research, 9.4% of teachers teach 7th grade students, 5.7% – 8th grade, 15.1% – 9th grade, 58.5% – 10th grade, 37.7% are of the opinion that it is difficult for students of the 11th grade to learn physics. They showed that it is difficult for students to master physics sections of optics, electricity and magnetism, atomic and nuclear physics (Fig.4).

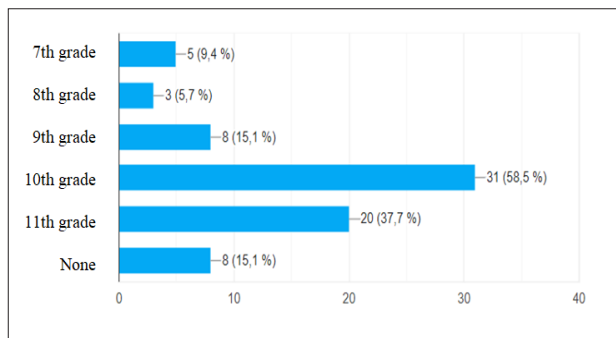


Figure 4 – Comparative index of teachers who have difficulty in forming the subject competence of students in these classes

The following questions of the survey were aimed at determining the opinion of teachers about the causes of these problems. As a result of preliminary discussions with teacher-researchers, objective and subjective factors causing these problems were identified. Objective factors that hinder the formation of subject competences of students in the teaching of physics:

1. Lack of didactic materials according to the updated program in the Kazakh language used for lesson planning;
2. Some topics in Kazakh language textbooks are unclear for the student;
3. Absence of workbooks according to the updated program in the Kazakh language, necessary for independent preparation of students;
4. Lack of material resources necessary for teaching in schools (interactive board, laboratory equipment, etc.);
5. Reduction of hourly load of physics subject in gymnasium and general education schools.

Respondents were asked to determine the most important obstacle among these factors, taking into account the recent changes in the field of education of the country, the economic situation of the country, changes in the behavior of students, as well as the social situation of the society.

According to the results of the research, 50.9% of the teachers indicated that the lack of didactic materials according to the updated program in the Kazakh language, which is used for lesson planning, is an obstacle to the effectiveness of the lesson. In addition, it was found that the lack of material resources necessary for teaching in schools (interactive board, laboratory equipment, etc.) prevents the lessons from being held at their level (Fig. 5).

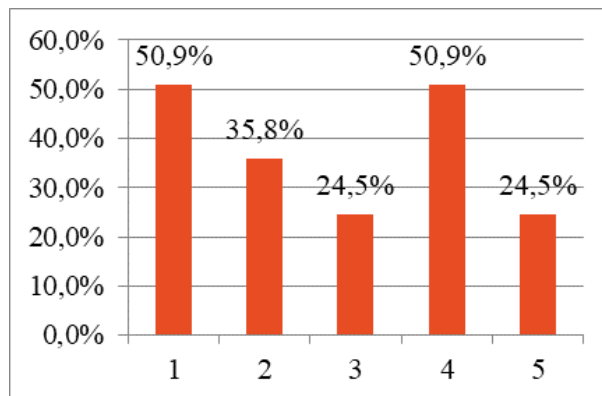


Figure 5 – Comparative index of responses of teachers participating in the study

Subjective factors that hinder the formation of students' subject competences in the teaching of physics:

1. Student's lack of enthusiasm for lessons;
2. Low teacher competence;
3. Lack of supervision and support from parents;
4. Systematic lack of education organization work of the school administration;
5. Systematic lack of education organization work of education departments;
6. Systematic lack of education organization work of the Ministry of Education.

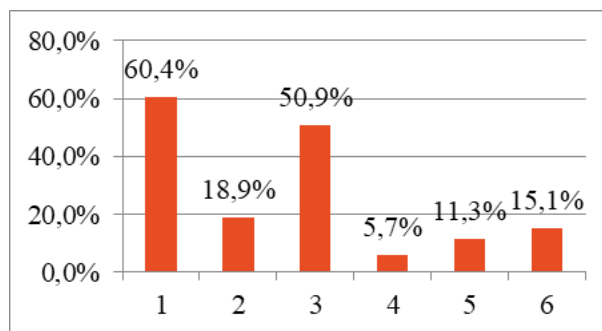


Figure 6 – Comparative index of responses of teachers participating in the study

The main subjective factor hindering the effectiveness of the physics lesson is the low motivation of the student to study the lesson (60.4%). Also, it was found that the responsibility of parents and the qualifications of teachers are one of the important factors that directly affect this situation (Fig. 6).

Discussion

Nowadays, complex pedagogical problems often arise in the education systems of the world. Rapid changes in any field in the world are considered to be the main factors in the emergence of these problems. Many social changes, scientific and technical progress, increased competition in the labor market, etc., forced each country to improve its education. If the economy of the country directly depends on scientific and technical innovations in that country, on the contrary, quality education depends on the economy of that country. These issues in the field of education have not bypassed our country either. Despite the fact that many projects and research studies are being conducted in order to improve the field of national education, our country is still unable to achieve satisfactory results in this field.

School education is the first and most important part of education. Physics is one of the most difficult subjects for high school students. In order to learn this subject, the student needs to have well-developed understanding, application, and analysis skills. In this work, the factors hindering the formation of students' subject competences in the physics lesson were determined.

Even in previous studies, teachers agreed that the physics curriculum was challenging. (Spall et al., 2004). Because of this, students will be less interested in learning physics. Angell et al.'s study found that physics is interesting for students but difficult and requires a lot of work. In addition, teachers believe that it is difficult to study physics if students have weak mathematical abilities, but students do not agree with this opinion. (Angell et al., 2004)

One of the hindering factors is the lack of didactic materials in accordance with the content of the updated program in the Kazakh language. Since 2016, the schools in our country have started providing education according to the updated program (Shuinshina et al., 2019). According to this program, textbooks in the Kazakh language were compiled. But in order to systematically plan the lesson, the teacher needs comprehensive preparation. And with the help of only one textbook, it is impossible to explain complex subjects like physics. And it can be said that there are no educational materials for the subject of physics according to the content of the updated program in the Kazakh language. The use of materials in foreign languages hinders the effective use of the teacher's time. If there were more resources for teachers in the Kazakh language, the

teacher would be able to choose and use the necessary versions from among them.

Zhumgalbekov and Efilti's study revealed that the level of learning of secondary school students in general is at a high level. It turned out that the level of effective learning among secondary school students varies significantly depending on where they live. The average score of schoolchildren living in the city was higher than that of schoolchildren living in districts and villages. In other words, we can say that urban schoolchildren know better ways of learning than students from districts and villages (Zhumgalbekov & Efilti, 2021).

In addition, remote rural areas in the country are not fully covered by Internet networks, so teaching materials in foreign languages are not available for teachers there. As a result of this situation, there is a difference in the educational opportunities of students in urban and rural schools. In addition, the schools there are not fully equipped with equipment for using interactive methods in physics classes (interactive whiteboards, laboratory equipment, etc.). That is, although the updated curriculum has been introduced in the country, it can be seen that teaching according to it has not yet been fully implemented. The reason is that the education sector is not fully funded due to the country's economic situation.

The market situation and the rapid development of technologies in recent years have had an impact on the psychological condition of students. Parents spend a lot of time trying to earn money. Apart from that, nowadays more people are engaged in mental work than physical work. Therefore, most parents do not have the opportunity to devote time to their child's upbringing and education. They only provide for the material needs of their children. Especially in the city, many children spend most of their time on mobile phones without parental supervision. Unnecessary information on the mobile phone and a lack of sleep and rest time lead to a decrease in the student's interest in the lesson.

Conclusion

In conclusion, the formation of subject competence in physics lessons is influenced not only by the complexity of the subject matter but also by several social factors. To address these challenges, it is crucial to update and expand the Kazakh-language teaching materials in line with the revised curriculum, ensuring that both teachers and students have the necessary resources. Additionally, enhancing

teacher qualifications, improving parental involvement in children's education, and fostering student motivation are essential steps. The success of education depends not only on the efforts of students and teachers but also on the active support of parents and society.

The ultimate goal of teaching any subject is to develop the student's competence in accordance with the content of that subject. A nation's prosperity is a testament to its development, and a key

prerequisite for such development is the education and literacy of its people. Today's students are tomorrow's specialists. Therefore, teachers must not only provide education but also work to identify and address challenges in the education system, offering effective solutions. Continuous reforms in the education sector are vital to keeping pace with societal advancements. Only by doing so can a nation aspire to join the ranks of leading countries in education and development.

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