

NIYAZALIEVA A. D., GOLOVA V. P.

*KRSU n.a. B. Yeltsin, Bishkek*

НИЯЗАЛИЕВА А. Д., ГОЛОВА В. П.

*КРСУ им. Б. Ельцина, Бишкек*

[abelink.trout@gmail.com](mailto:abelink.trout@gmail.com)

[Valya.tyurina.2015@mail.ru](mailto:Valya.tyurina.2015@mail.ru)

## Experience and problems for implementation of profile teaching at schools of Kyrgyzstan

### ОПЫТ И ПРОБЛЕМЫ ВНЕДРЕНИЯ ПРОФИЛЬНОГО ОБУЧЕНИЯ В ШКОЛАХ КЫРГЫЗСТАНА

#### Кыргызстандын мектептерине профилдик окутуу тажрыйба маселесин киргизууну жузого ашыруу

*Annotation: the article explores the introduction of subject-matter instruction to improve the quality of education at schools across Kyrgyzstan. It shows piloting of subject-matter instruction, i.e. in-depth study of biology, chemistry, anatomy, and Latin for senior students of school-gymnasium No. 12. While reviewing the main problems faced by Kyrgyzstan's schools in introducing subject-matter instruction for senior students, the article discusses the solutions that can result from the integrated efforts of all educational institutions of the country. The authors emphasize that helping students make the right choice of school subjects will build the foundations for their further studies at universities and colleges.*

**Аннотация:** статья посвящена проблеме внедрения профильного направления для реализации повышения качества образования в школах Кыргызстана. В ней показан опыт внедрения организации профильного обучения на старшей ступени средней школы с углубленным изучением биологии, химии, анатомии, латинского языка на примере ШГ № 12. Отмечены основные проблемы, с которыми сейчас сталкиваются школы Кыргызстана при организации профильного обучения в старших классах, решение которых может быть найдено объединенными усилиями всех образовательных учреждений страны. Автором подчеркивается главная задача профилизации - помочь сделать правильный выбор профильного предмета в старших классах школ для дальнейшего обучения в высших учебных заведениях.

**Аннотация:** макалада Кыргызстандын мектептерине окуу сапатын жакшыртууну профилдик билим берүүнүн киргизүү менен маселени ишке ашыруунун негизги багыттары берилген. № 12-мектеп гимназиясынын тажыйырбасы боюнча профилдик окутууну ишке ашырууда: биология, химия, анатомия, латын тилин терең окутуунун улгусу багытталды. Жогорку класстардын профилдик багытты тандап окуунун негизги маселесин чеч ө дө, азыркы Кыргызстандын мектептеринин алдында турган көйгөйү, аны лкөнүн жогорку окуу жайларынын иш-аракети менен ишке ашуусу белгиленди. Кесиптик тандоо багытынын негизги максаты -

*профильдик сабыктарды туура тандап окууга жардам кылуу менен жогорку окуу жайыныя туура багытто.*

**Keywords:** *advanced placement (AP); modernization; profile training; vocational guidance; school-gymnasium; general education schools; electives.*

**Ключевые слова:** *профилизация; модернизация; профильное обучение; профориентация; школа-гимназия; общеобразовательные школы; факультативы.*

**Негизги свдвр:** *бвлуштуруу; жакшыртуу; атайын билим беруу; кесиптик-нускаочу кврствтмв; гимназия мектеби; орто мектептер; сабактар.*

The main task of modernizing the secondary schools in Kyrgyzstan nowadays is the introduction of a specialized subject-matter training for senior students in order to create conditions for them to obtain quality of subject-matter knowledge. As it was noted by President Atambaev, education reforms should be implemented for the sake of improving the quality of education in the country [1].

There is a tendency among young people to choose future careers as related in connection to the way of life and youth culture, which sees education only as a possibility to gain material benefits. Today, choice of a university on the principles of prestige and conformism to mainstream values regardless of one's own and state interests has become a critical challenge.

Schools today face a problem related to creating conditions for high school students in accordance with their interests and choice of subject-matters, cognitive abilities, and intentions by providing a minimum (basic) level of mastering state standards of general education.

The purpose of this article is to summarize and share the experience of the Kyrgyz-Russian Slavic University (KRSU) and some gymnasiums on the introduction of the principles of specialized subject-matter instruction at schools across the country.

Specialized subject-matter instruction presents a special form of differentiated and individualized education. This is a learning process for senior students that takes full account of their interests, aptitude and abilities, creates an environment conducive to maximizing their development according to their cognitive and professional intentions.

For the first time, specialized subject-matter instruction for senior school students was piloted at the #12 gymnasium, following the # 266, 2002 Order of the Education Department under Bishkek Mayor's Office on "The Opening of Specialized Medical Class in Gymnasium # 12".

Since 2005, specialized subject-matter classes have been opened in schools # 4, 24, 29, 62, 67. The introduction of a specialized subject-matter

training at schools does not conflict with general secondary education standards, as schools continue teaching core disciplines mandated by State Education Standards to their full extent. This makes it possible to maintain consistency throughout the educational process without causing difficulties for students when transitioning from class to class or school to school. Also, specialized subject-matter education is implemented within sanitary and hygienic parameters approved in the Kyrgyz Republic and complies the requirements of the Republic-wide Test.

Since 2005 up to date, Bishkek schools # 4 and 12 continue practicing specialized subject-matter education by diving senior classes on the principle of in-depth instruction of particular subjects. Students are trained at KRSU by teachers of medical and other departments in academic disciplines required not only required for entrance exams, but also in academic subjects of the chosen profession. For example, these are Anatomy and Latin in medical classes. The main task of career guidance is to help students make the right choice of career-track subjects in senior classes to further continue their education in higher educational institutions. When choosing academic disciplines, senior students receive assistance ranging from tracking their subject-matter achievements in each quarter to interviews, tests and surveys. Also, schools determine each student's level and aptitudes for college-track subjects, and explore their personalities, their aptitudes and interests in Humanities and Technical sciences.

School # 12 has more than 10 years of experience and a system of dividing students according to specialized academic disciplines that match specialties offered in medical, international, economic, architectural and technical departments of KRSU. KRSU's medical school's professors teaching Biology and Chemistry in grades 10-11 highlight the system of specialized subject-matter instruction established in School 12. For several years now, School # 12 has been implementing a specialized subject-matter education by including these academic disciplines into the foundational curriculum and implementing them throughout the academic year. This work concerns the following areas:






- curriculum development that contributes to the development of students' learning capacities and professional interests;
- creation of conditions for students' learning and educational motivation through providing them with opportunities to choose extra-curricular courses by taking into account their individual educational interests;
- creation of conditions for teachers to master new methods and technologies that promote the development of professional self-

- realization of students (using smartboards, multimedia presentations);
- determining forms and methods for monitoring the achievements of the program implementation;
  - introduction of new methods and technologies into educational process with a view to help students to successfully select their further education and the professional self-determination.

School #12 has set the following mode of work with students: from Grade 8 - one month of summer training on the selected subject; from Grade 9 - twice a week trainings with a transition exam to Grade 10 with a focus on the selected subject; from Grade 10 – dividing into specialized classes according to selected profession; in Grade 11 - completion of the specialization selection and formation of competencies (for the successful pass of Republic-wide General Test and entrance examinations to KRSU and other universities of Kyrgyzstan and Russia) in selected subjects necessary for continuing education in the relevant field of professional education.

KRSU and School #12 have found identification and selection of specialized subjects for entrance to KRSU’s departments as the main direction of professional guidance for further education in higher education institutions. See Table 1.

**Table 1.** Basic structure of career-track education at School # 12 in Bishkek under KRSU

				
Economics	Science and Technology	Medicine	International Relations	Architecture and Design
AP classes at 10-11 grade				
Mathematics	Mathematics	Biology	English	Drawing
Geography	Physics	Chemistry	Geography	World Art Studies
	Computer Science	Latin		
		Anatomy		

All students take, apart from selected academic disciplines, foundational subjects, including Kyrgyz, the Kyrgyz Literature, History, Mathematics, Literature, Russian, Foreign Language, Physical training, Social Sciences, Chemistry, Physics, Geography.

This mode of organizing specialized subject-matter education in senior grades has not been widely followed in the schools across our country. But schools are keenly aware that all Bishkek schools must introduce a learner-centered learning into the educational process. The Ministry of Education of the Kyrgyz Republic has defined this direction as one of the most significant directions in reforming the modern education

system in the country, which can give, if properly implemented, hope for full compliance with the target of modern school education.

Every year more and more students from Schools #12, 29 and 67 enter universities to further study within their selected professions. A steady number of students from these schools enter the Kyrgyz State Medical Academy (KSMA) and the medical department of KRSU. For example, most of 2010, 2011, 2012 graduates of specialized classes from these schools have earned state-funded places in the medical department of KRSU and KSMA in specialties "curative care", "pediatrics" and "dentistry". Today, having graduated from these two leading medical schools of the country, they are engaged as clinical staff, clinical residents, postgraduate students, assistants, and are entitled to practice general medicine.

Unfortunately, it is regrettable that for some reasons some schools (#24, 29, 62, 67) have suspended specialized subject-matter education. But in other schools, including School # 66, they work in different modes. They offer extra-curricular activities on such specialized disciplines such as Chemistry, Biology, Mathematics, Russian, Foreign Languages (Chinese, Arabic, Korean), History. The schools engage experienced teachers, and high-level specialists from universities are actively involved as well. Schools that do not yet have specialized career-track classes can be advised to focus on the study of academic disciplines in the form of group work, electives by engaging specialists, and seek opportunities for introducing additional extracurricular education.

At Schools #4 and 12, KRSU professors introduced programs for in-depth study of "Biology" and "Chemistry", and prepared examination and test questions. They also prepared a training manual for subject-matter teachers and students of specialized classes under a specialized education program on Medical Biology. The manual was written by professor Kobzar V.N. in co-authorship with associate professor Niyazalieva A. D. The title of the manual is "Biology Tutor (for specialized medical classes)". The manual is written for senior students of specialized schools as well as students entering medical colleges and universities. The manual's structure includes theoretical foundations of modern Biology. Each section of the training manual is followed by basic material on the main sections of the course, test questions, tasks, questions for the refresher resources. The task of the Biology course is to help students develop analytical thinking in the study of course materials. The manual contains the medical specialization program, and provides illustrations, diagrams and comparative tables that allow to improve the knowledge of School Biology course in a comprehensible, easy-to-understand and vivid manner, and independently prepare for examinations [2].

Presently in Bishkek schools, the main amount of teaching workload in specialized classes could be conducted by their current teaching staff. In this regard, teachers who desire to work with specialized career-track classes

need to have special training or refreshment courses in special educational institutions to acquire necessary level of professional training needed for transition to a specialized academic program. As with any other specialty programs, refreshment courses for teachers in their own specialty depend on the content of the topics of a particular program. The forms of such work can be as follows:

- training on the application of the interactive whiteboard for quizzes, assessment analysis;
- a training on the use of modern electronic multimedia presentations in the implementation of educational programs;
- providing opportunities for teacher self-education in computer literacy;
- refreshment courses of varying duration conducted in departments and institutions;
- lectures, seminars, master classes, group trainings conducted in special departments of universities;
- substantive training programs for in-depth study of concrete disciplines (followed by exams, a test or defence of topic papers, and granting certificates to those who successfully complete trainings).

It must be noted that today specialized career-track education in our schools is hindered by insufficient theoretical and practical training of teachers, unwillingness of teachers and school leaders to engage in this work, weak infrastructure, and lack of access to Internet. Below are main problems that presently schools in Kyrgyzstan face when choosing specialized career-track education in senior classes:

- there are still few or no schools, especially in the regions of Kyrgyzstan with specialized classes. There is no effective division between the mandatory and optional subjects, poor extra-curricular activities in selected subjects;
- the lack of qualified personnel able to implement the specialized subject-matter education programs. Most students at the age of 15-17 are not ready to choose subject for specialization. Senior students have no desire for self-knowledge. Most parents do not guide their children in their choice of profession. School teachers are focused only on assessments of overall performance. These are problems occur at the primary stage of vocational guidance, and make it difficult to work with school graduates when choosing future profession and higher or special education specialty.

These shortcomings indicate that the problems of specialized subject-matter education must be solved by joint efforts of higher, secondary and secondary special educational institutions of the country. It is the task of schools and universities to provide senior students with insight on professions, on where

they can learn professions, help them choose the most "suitable" profession, and give them special knowledge as related to their future profession. It is important for universities to develop a system of sponsored schools to proceed to preparing future cadres for the country from the middle school stage.

At present, the solution of this problem is left in the hands of schools and departments of public education of cities, regions, and districts. According to educational standards, each school can choose their own specialized academic disciplines due to their own possibilities and teacher potential. At present, Kyrgyzstan is developing a project which will provide for teaching a certain subject to students completing Grade 9 by using the potential available at school. As a result, students will receive a guidance on a certain specialty [3].

Thus, the interaction of schools and universities to introduce specialized career-track educational standards will solve the main task -preparation of school graduates to social and economic realities of modern society. Specialized career-track education will undertake compensatory function to remediate the content of secondary education to match the requirements and rational professional choice of young people. It will retain some academic conditionality reflected in teaching programs that include a standardized set of subjects [4]. The experience that KRSU had in specialized schools for several years has proved itself well, as school graduates started receiving vocational guidance on a new theoretical level. Thanks to such training, they often make informed decisions to apply for universities and gain state-sponsored placements as they are better prepared for entrance examinations than their peers [5].

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