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Active-Learning Pedagogies as a Reform Initiative: The Case of Kyrgyzstan



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INTRODUCTION

This study examines active-learning pedagogies¹ as a key aspect of educational reform in the Republic of Kyrgyzstan, following its independence from the Soviet Union in 1991. We first briefly describe Kyrgyzstan's geographical, cultural, political, and economic context, as well as provide an overview of its education system. Then we draw on a range of documents to examine the ways in which active-learning and student-centered approaches to instruction were promoted and furthered at the official level, through the Kyrgyz Ministry of Education. We also track a variety of approaches promoted by international NGOs, bilateral, and multilateral development agencies to initiating reforms in instructional practice, with particular emphasis on USAID's Basic Education Project, 2003-2007. Finally, we report the findings from our analysis of quantitative and qualitative data, illuminating challenges, opportunities, and outcomes of efforts to implement active-learning pedagogies in Kyrgyz schools.

GEOGRAPHICAL, CULTURAL, POLITICAL, AND ECONOMIC OVERVIEW

The Kyrgyz Republic lies at the heart of Central Asia, at the crossroads of one of the branches of the Silk Road. The country shares borders with Kazakhstan, Uzbekistan, Tajikistan, and China, and is primarily mountainous, with dry but fertile valleys and deep gorges. The population of the Kyrgyz Republic is approximately 5.2 million (CIA Factbook, 2007), and the country has an ethnically diverse population. According to the National Statistical Committee, in 1997 the ethnic breakdown was as follows: 61% Kyrgyz, 15% Russian, 14% Uzbek, and 10% a mix of Ukrainian, German, Kazakh, Tatar, Dungan, Tajik, Uigur, Korean, and others. Kyrgyzstan is a rural country, with most of the population (66%) living in rural areas, and only 34% living in urban areas (DHS, Demographic and Health Survey, 1997). The State Language is Kyrgyz, while the official language is Russian. The primary religion of the Republic is Sunni Islam (MOESYP, 2006).

The Kyrgyz belong anthropologically to the south Siberian group of the Mongolian race, and are believed to have emerged from various groups that settled in Central Asia over 2000 years ago. In the middle of the 19th century, Central Asia and its people were incorporated into the Russian Empire. In 1924, seven years after the 1917 Bolshevik Revolution, the Soviet Union established the Kara-Kyrgyz autonomous region, later renamed the Kyrgyz Autonomous Republic. In 1936, Kyrgyzstan's status was elevated to the Kyrgyz Soviet Socialist Republic of the USSR, one of 15 Soviet Republics.

¹ "Active-learning" (or what some have termed "progressive" or "student-centered") pedagogies constitute a model of teaching that highlights "minimal teacher lecturing or direct transmission of factual knowledge, multiple small group activities that engage students in discovery learning or problem solving, and frequent student questions and discussion" (Leu and Price-Rom 2006, p. 19). "Active-learning" pedagogies can be contrasted with "formal" or "direct instruction" approaches emphasizing teacher lecturing or direct transmission of factual knowledge (Cuban, 1984, p. 3; Spring, 2006, p. 6). There are two dimensions along which active-learning, student-centered pedagogies and teacher-centered, direct instruction pedagogies can be distinguished: behavioral and cognitive (see also Barrow et al., 2007; Ginsburg, 2006; Mayer, 2004). The behavioral dimension of active-learning pedagogies focuses on the degree to which instructional practices enable students to engage in verbal or physical behavior, learning by doing (a la John Dewey, but also Confucius, Socrates, and Pestalozzi), while the cognitive dimension highlights the degree to which teaching strategies enable students to engage in various forms/levels of thinking and construction of knowledge (a la Piaget and Vygotsky).

On August 31, 1991, after the collapse of the Soviet Union, the Kyrgyz Republic officially declared itself an independent state. Kyrgyzstan's new constitution was adopted in 1993, and through the leadership of President Askar Akaev, the Republic launched economic and political reforms that were to lead to a more open, democratic society. In 2005, the Akaev government was overthrown, due mainly to charges of corruption. Although the new government under Bakiev has maintained Akaev's democratic and reform-minded agenda, there is ongoing political turmoil and continued complaints of corruption within the government, and Kyrgyzstan's political future remains uncertain. Nevertheless, Kyrgyzstan may be considered the most politically reform-minded of the Central Asia republics (Dowling and Wignaraja, 2006).

The Kyrgyz Republic's economy is dominated by industry and agriculture. Following three years of declining production after the break-up of the Soviet Union, the Kyrgyz economy was in crisis, but showed its first signs of recovery in 1995, brought about by introduction of a new currency (the *som* in 1993), liberalization of trade, privatization of most industrial and trade enterprises, and dismantling state and collective farms (World Bank, 2004). Kyrgyzstan joined the World Trade Organization in 1998. The Kyrgyz Republic is currently shifting to a market economy based on equal development of different forms of ownership, encouragement of entrepreneurship, and privatization. Growth in the Kyrgyz economy averaged 5% in 2002–2004, and 7% in 2003–2004.

OVERVIEW OF THE KYRGYZ EDUCATION SYSTEM

Kyrgyzstan had no formal schooling system until Russian colonization in the 1860s. Schooling was organized at the community levels only, and local mullahs taught children how to read using the Arabic alphabet. Being able to read was a respected skill to which children of the rich and a few middle class families had access. Hence, during this time the literacy level among the Kyrgyz population was quite low.

The Soviet educational system was highly centralized in its administrative and financial structure, curriculum, and teacher training institutions. Through this system, the Soviets achieved impressive results in Kyrgyzstan and in the other Soviet Republics in terms of high literacy rates, and provided students with a large base of knowledge, especially in science, math, and Russian literature. After the Russian Revolution, the Soviets, in their drive to educate a largely (79%) illiterate population, achieved near universal literacy by 1956; moreover, between 1955 and 1975, school enrollment increased from 88% to 96% (Kaser, 1997). These results were achieved partly due to a unified and centrally administered Soviet education system. The ministries of education of the individual republics in the USSR were under close scrutiny from the USSR Ministry of Education in Moscow. The Soviet Union's Ministry of Education developed more than 80% of the content for curriculum, teaching and evaluation. In Kyrgyzstan, as in the other Soviet republics, teacher training encouraged instructional styles that were knowledge centered and teacher directed, and grounded in the pedagogy of Leontiev. The remaining 20% of curriculum and instruction was determined by the ministries of education of the various republics in close consultation with the USSR Ministry of Education. The system required updates to curriculum and teacher in-service training every five years. A separate institution under the Ministry of Education was tasked to carry out this effort.

During this period in Kyrgyzstan, an in-service teacher training component was implemented by the Institution of Education that was fully state funded. This was known as the teachers' retraining and qualification upgrading system, and required every teacher to go through specialized off-site courses at least once in 5 years, which usually lasted from 15 to 24 days.

In addition to this, continuing teacher professional development was organized by regional and provincial education administrations (*Raionnyi otдел narodnogo obrazovaniya, Oblastnoi otдел narodnogo obrazovaniya*). Systematic professionalization activities included the “best teacher of the year”² competition. It also was promoted via monthly discussions of teaching methods for each subject area in so-called methodological units at the rayon (district) level that include sharing best practices in schools and innovative teaching techniques as well as observing colleagues’ lessons. Kyrgyzstan had two teacher retraining institutes; one in Bishkek (until 1991, called Frunze) and the other in Osh.

After the break-up of the Soviet Union in 1991, many of the former Soviet republics retained high literacy rates. Kyrgyzstan, for instance, managed to maintain a post-Soviet literacy rate of 98.7%, with 99.3% for men and 98.1% for women (CIA Factbook, 2007). Furthermore, the percentage of the population with secondary and higher education (per 1,000 people age 10 and above) varies between 60-70%.

Today the Kyrgyz education system includes grades 1-4 (ages 6–9) and grades 5-9 (ages 10-14) and is mandatory for all children in the country (MOE, 2006). After they complete grade 9 students can choose either to go to a professional-technical school or stay in their own school to finish grades 10 and 11. Out of a population of 5.2 million, Kyrgyzstan has 1,080,100 school-age children attending 2,168 schools. Teachers in Kyrgyzstan total 72,097 (16,524 primary and 40,889 secondary) (National Statistics Committee, 2008).

However impressive the quantitative indicators might be, the quality of education has been steadily declining, in particular in the area of primary education. Major reasons for the deterioration of primary school pupils’ performance include poor socioeconomic family conditions, poor school preparation due to the declining number of kindergartens, poor financing of schools, inadequate school infrastructure, and the low professional level of teachers. Without the resources of the former Soviet Union, Kyrgyzstan has had insufficient funds to maintain buildings, pay teachers, run extracurricular programs, and adapt the system to effectively prepare young people for the workforce in the context of globalization and the information and technology revolution of the 21st century.

A REVIEW OF OFFICIAL DISCOURSE ON ACTIVE LEARNING METHODOLOGIES

We divide our discussion of official discourses into two time periods: 1992-2005 and 2005-2008. As will be shown below, 2005 represents an important turning point in educational rhetoric and action in Kyrgyzstan.

Post-Soviet Educational Reform Discourses, 1992-2005

It is against this backdrop that the Kyrgyz have sought to restructure their schooling system. The law “On Education” in Kyrgyzstan was passed in 1992 and amended in 1997. It provided for a free basic education for all and made education a national priority for the Kyrgyz Republic (Bekbolotov, 1999). In accordance with Article 3 of the 1997 law, the main principles of education in Kyrgyzstan are:

² This is an annual competition among teachers of each subject, where teachers demonstrate their mastery in conducting lessons, using various teaching methods, writing articles, etc. Teachers first compete with colleagues in their own school. The school winner then competes with other teachers at the regional level. The final stage is organized at the national level by the Ministry, which ends up awarding the winner “Best teacher of the year.”

- Equality of all citizens of the Kyrgyz Republic in receiving of education;
- Free of charge education in state educational institutions of all types within the norms of the state educational standard, and creation of conditions for the functioning of paid education;
- Humanistic character of education, priority of human values;
- System and continuity;
- Diversity of educational institutions by forms of education, directions of activity, forms of property;
- Accessibility of education, correspondence of educational system to levels and peculiarities of development and preparation of learners; and
- Creation of conditions for selection of talented learners and their creative development. (Bekbolotov, 1999, p. 5)

The main program for implementation of general education reforms in Kyrgyzstan is the National Education Program, *Bilim*, approved in 1996. This program defined development of the education sector until the year 2000, and aimed to satisfy the country's basic education needs. This early program sought mainly to revive schools that had suffered from the country's economic collapse. The program also was aimed to go far beyond basic necessities, such as basic skills (ability to read, write, count, and solve problems) and the main content of education (knowledge, value system, and views) necessary for citizens of Kyrgyzstan to survive, develop their intellectual abilities, for existence and work preserving human dignity, increasing their quality of life, decision making ability, and life-long learning. Importantly, even in these early programs, the concept of individualization in instruction began to emerge, along with a more democratic approach to classroom interaction. While the Soviet system of education did not distinguish among individuals in terms of their abilities or interests (Bereday, 1960), the new approach to learning in post-Soviet Kyrgyzstan began to recognize the individual student. The *Bilim* program stipulated that basic education is a necessary component in developing individuals and improving their social environment.

Thus, democratization of education in general, and specifically of teaching methods, became one of the main principles of the new educational policy in Kyrgyzstan. The Constitution of the Kyrgyz Republic, the law "On Education" and national educational programs like *Bilim* identified updating the content of educational and learning technologies as among the main principles and objectives to be achieved in the area of school reform. Specifically, the government called for more diversified educational programs, and for seeking new learning forms and instructional technologies. Moreover, many of these schools were given the flexibility to develop and adopt their own curriculum (with approval from the Ministry of Education). The Kyrgyz Education for All report cites the number of diverse schools and institutions that had begun to proliferate in Kyrgyzstan in the 1990s as one of the means of reaching the individual abilities of each child (Bekbolotov, 1999).

The increasingly diverse institutions fell within both the state and private sector, and included advanced institutions (gymnasiums, lyceums, experimental schools, etc.), mass schools, and schools for special populations. The transition to diversity for the entire system of schooling was intended to provide school-age children with opportunities not only to acquire the minimum of necessary basic knowledge, but also to develop in accordance with their personal aptitudes, abilities, and talents. The diversity approach was designed to address the Convention of the Rights of the Child by requiring that education and teaching consider the interests of the individual child, provide for active, thoughtful learning, and direct learners to solve problems on their own. Independent of school type, the main goal of basic education in Kyrgyzstan was

considered to be the formation of subject knowledge and skills, and building on this basis the components of individual activity.

The Global Forum on Education held in Dakar gave the Kyrgyz Republic a chance to assess its achievements in basic education, to identify the scope of its problems, and to consider ways of solving them toward implementing the six goals of the World Declaration on Education for All adopted in Jomtien, Thailand. After the Dakar Forum, a National Action Plan to Achieve the EFA Goals was developed and approved by Kyrgyz Government Resolution #504 dated, July 30, 2002 (FTI Grant Application, 2006).

Kyrgyz Educational Reform Discourses, 2005-Present

Nevertheless, by the middle of the first decade of the 21st century, concerns were being raised about the quality of education in Kyrgyzstan. For example, UNICEF's Monitoring Learning Achievement (MLA) for 2005 highlighted the ongoing decline in education in Kyrgyzstan, and the need for improvements in overall teaching practices as a means of improving learning outcomes. The MLA demonstrated that this decline was due mainly to falling standards at the primary level in literacy and mathematics, which form the foundation for all subsequent education. Between 2001 and 2005 the percentage of students passing the literacy test declined from 59.1% to only 44.0%, while the percentage passing the mathematics test dropped from 81.4% to 58.8%. The authors of the MLA study concluded that the literacy level of primary school pupils had declined due to "the fact that primary schools are not paying adequate attention to the development of individual pupils' work and are not practicing creative tasks enough" (UNICEF, 2006, p. 10). The report indicated that teachers pay too much attention to working with textbooks, promote the passive absorption of knowledge, and do not emphasize using practical skills. In mathematics, the predominance of repetitive assignments and teachers' limited knowledge about modern methodologies were the reasons cited for falling math scores (UNICEF, 2006).

Additionally, in 2006 Kyrgyzstan came in last among 57 countries in a study of 15-year-olds' performance in science, reading, and mathematics.³ The results from the Program for International Student Assessment (PISA) revealed that more than 80% of Kyrgyz students performed below the international average (86.4 % in science, 88.3 % in reading, and 89.4 % in math) and only a small percentage of Kyrgyz students scored at or above the international average (13.6% in science, 11.7% in reading, 11.8% in math). See results below comparing Kyrgyzstan with the countries that came in first: Finland in science and math and Korea in reading.⁴

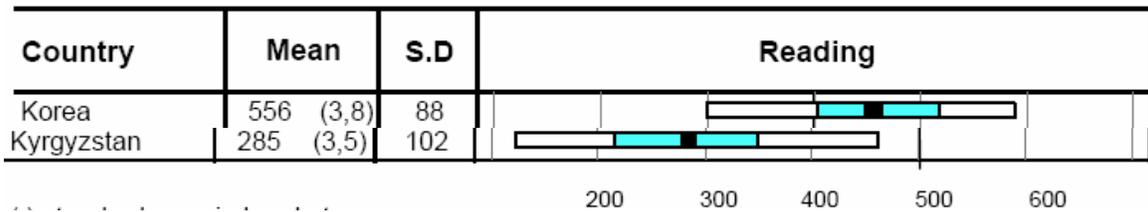
³ Other countries participating in PISA 2006 include Azerbaijan, Russia, Qatar, Tunisia, Uruguay and others.

⁴ Average score with standard deviation is given in parenthesis. Confidence intervals for the average score (two standard error in each direction) is shown as the darkest part of the bars. The Standard deviation is given in a separate column as a measure of the variance in the achievements. The distribution is also shown at the 5th, 25th, 75th and 95th percentiles are given in the bars (<http://www.pisa.no/pdf/Chapter1and11PISA2006.pdf>).

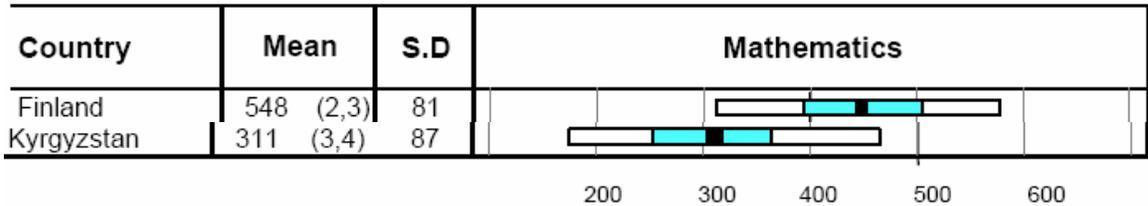
Results in science:



Results in reading:



Results in math:



The results of the MLA and, in particular, the PISA exam were interpreted as calling for the modernization of the Kyrgyz system of education. This translated into the need for more modern teaching methods, including the ability to teach critical-thinking and problem-solving skills. For example, the MLA report recommended a variety of measures to improve the situation, including improving teaching methods and training primary school teachers in the use of new, up-to-date approaches to instruction. The report called for strengthening teaching, promoting modern humanistic theory in pre-service training, and introducing “oral and interactive forms of teaching into the training and professional upgrading of teachers” (UNICEF, 2006, p. 13). The MLA report further recommended reducing the emphasis on textbooks and teaching manuals as well as lessons aimed at rote memorization. Instead, teachers should implement what the UNICEF report termed “interactive” forms of instruction.

In the wake of the MLA and PISA reports, the Kyrgyz Ministry of Education developed its Education Strategy for 2007-2010, which calls specifically for reforming teacher education and modernizing the curriculum. The Education Strategy states that a national curriculum needs to be in “line with modern educational aims,” oriented toward “a competence-based approach and effectiveness of education,” and complemented by the use of “innovative teaching methods.” The Strategy further seeks to raise the status and professionalism of teachers and administrative staff by improving salaries, retraining and capacity building, and bringing the “system of training and continuous education of teachers in line with the requirements of the new curriculum and a competency-based approach” (MOESYP 2006, p. 19).

Note that Education Strategy, 2007-2010 does not explicitly address the topic of learner-centered or active-learning pedagogy, but speaks in more general terms of “modernization of the curriculum” and use of “innovative” methods of instruction. The current situation analysis for Kyrgyzstan’s Education Strategy for 2011-2020 makes more explicit mention of using active learning pedagogies in the document’s overview, but does not directly mention active-learning pedagogies in its actual reform recommendations. In terms of instruction, the report stipulates that “knowledge transmitted and methods applied in instruction reflect a competency-based approach to education.”⁵ This approach pursues active learning and fosters communication competencies as well as analytical and problem solving skills and critical thinking” (MOESYP, 2008, p. 2). The document also speaks to the need to raise the quality of education; to provide relevant education for Kyrgyzstan’s social, political, and economic development; and to ensure equal access to high-quality education. What is apparent is that increasingly democratic, student-centered practices, such as individualization of instruction, inclusive education, and bilingual education have taken hold. The document calls for “systematic implementation of inclusive education in pre-school, during the school preparation year and in basic education. It also seeks to promote cultural and linguistic diversity and to introduce bilingual education by using the communicative method of instruction – an active, student-centered approach to the teaching of language – measures that may presume the use of more active-learning, student-centered instruction” (MOESYP, 2008, p. 16).

Policy documents, which set directions in education for the future, acknowledge the active-learning methodology more directly. One of the main policy documents, which is called “the state doctrine of education” (MOESYP, 2007), proclaims education development as the priority in democratization of the country and sets long-term strategy for 2025 where education is organized for the interest of socially active, professionally nurtured graduates. “Government education standards” (KAE, 2007) stress that the graduates should be assessed based on whether they are able to use acquired knowledge in their everyday lives. It further acknowledges the individualized approach in teaching each student as the cornerstone to child development. As for the specific methods of teaching, the document underlines such techniques as experimental research and simulating in classrooms various processes occurring outside of school.

INTERNATIONAL ORGANIZATION SUPPORT FOR KYRGYZSTAN’S REFORMS

The Kyrgyz government joined the Education for All movement and drew on EFA ideas as a foundation for its educational policy. And as it sought to implement reforms, a variety of foundations as well as multilateral and bilateral international agencies supported Kyrgyzstan. Donor-funded projects included Monitoring Pupils’ Achievements (UNESCO, UNICEF), Global Education (UNICEF), Education Sector Development (ADB), Rural Education (World Bank), National Testing Initiative and Participation Education and Knowledge Strengthening (USAID), and the educational programs of the Soros-Kyrgyzstan Foundation.

A key objective of international organization-supported teacher education reform projects in Kyrgyzstan has been to provide capacity building and funding for the state-run in-service teacher training system as well as to organize project-based in-service teacher training. Much of the project-based training and state-run training influenced by the project involved the introduction of “modern” teaching methods, including a more active-learning, student-centered form of pedagogy designed to foster inquiry, application, initiative, and teamwork, and encourage citizens to play a

⁵ Another important document – National Curriculum Framework (OSI, 2008), which is under development, sets its foremost priority to transform the Kyrgyz education to “education oriented to the result,” i.e., to transform education from knowledge-based to competency-based paradigm.

more active role in improving their own personal and family situations, as well as their larger environment. USAID, Asian Development Bank, and the World Bank have provided long-term technical assistance in the development of pilot school-based in-service teacher training centers.

The Soros Open Society Institute (OSI) has been active in Kyrgyzstan since 1993. As with its activities elsewhere in the former Soviet Union, OSI has developed a series of standard programs for primary school teachers (Step-by-Step) and secondary school teachers and teacher educators (Reading and Writing for Critical Thinking) that are designed to be adapted to each country's context. In Kyrgyzstan, Step-by-Step has operated at both the preschool and primary levels, and has involved developing educational materials, procuring child-size furniture and, above all, training teachers and parents in interactive methods of instruction, focusing on multi-disciplinary topics, and involving cooperative learning. The Reading and Writing for Critical Thinking project provides training in active-learning, student-centered methods (including cooperative learning) for secondary-level teachers that can be applied to subjects across the curriculum:

The fundamental premise of Reading and Writing for Critical Thinking (RWCT) is that democratic practices in education play an important role in the transition to open societies, and that creating methodologies and curricula to encourage active learning is an effective use of educational resources. RWCT helps teachers change classroom practices at all grade levels and in most school subjects, to promote active inquiry, student-initiated learning, opinion formation, problem-solving, and cooperative learning. (USAID, 2007, p.15)

Other projects that specifically targeted teacher training in the area of active-learning, student-centered pedagogy include UNICEF's Global Education program (2002–2005). The objective of this initiative was to develop active and responsive citizenship through the implementation of interactive and participatory methodologies of instruction and by including subject themes not traditionally part of the state-mandated curriculum (e.g., democratic citizenship, environment, health, multiculturalism, peace, the rights of children) (Steiner-Khamsi, 2008). The project developed 21 teacher manuals based on student-centered methods, and delivered 10 of them to all schools in Kyrgyzstan, in addition to providing teachers with training in Global Education methodology.

Save the Children's Inclusive Education project (1999-2007) also targeted teacher training in active-learning methodologies, and in particular those designed to create an inclusive environment for vulnerable children and children with disabilities.⁶ Targeting Naryn, Osh, and Bishkek, the project provided in-service training workshops to teachers, parents, community members, and children, and provided funding for mini-projects for school-based children's clubs. The pilot schools that participated in the project through the USAID-funded "Participation, Education and Knowledge Strengthening" project (PEAKS, 2003-2007) developed an index for inclusion that was integrated into the schools' strategic plans. An evaluation of the Inclusive Education project pilot schools reported changes in teaching practices and attitudes of teachers:

Specifically, respondents noted that teachers began using more interactive methods of teaching, became more attentive to the needs of children, and allowed a freer and more open expression of children's views. Respondents estimated

⁶ The Inclusive Education project was initiated by Save the Children, UK in 1999, and then incorporated into the USAID-funded "Participation, Education and Knowledge Strengthening" (PEAKS) project beginning in 2003.

that 70 percent of teachers trained in the Inclusive Education project now regularly use better methods of interactive teaching. (USAID, 2007, p. 19)

It is interesting to note that although Save the Children's Inclusive Education project began as a pilot in Naryn province in the late 1990s, the current Education Sector Strategy (2010-2020) outlined above now supports Inclusive Education as one of its key national strategies.

Multilateral organizations like the World Bank and Asia Development Bank provided in-service teacher training through their Rural Education Project and Second Education Project, respectively. Here the focus tended to be on developing curriculum and assessment systems, distributing teaching and learning materials, and providing incentives for newly trained teachers to teach in rural schools. In addition to re-printing old materials, these projects supported the development of new curriculum and teacher training modules. ADB's First Education Project in the Education Sector Development Program from 1997–2004 helped to organize training of 7,027 teachers and administrators in 32 modular programs, while a 10-day methodology workshop was conducted for 3700 teachers and administrators. The current Asia Development Bank Second Education Project trained teachers in curriculum and assessment, monitoring of new teachers and performance management. The World Bank's current Rural Education Project (2005–2010) is similarly focused on modernizing curriculum and assessment, including funding Kyrgyzstan's participation in the 2006 PISA assessment.

Both the Asia Development Bank and World Bank supported projects, and the 2007-2008 Fast Track Initiative has supported teacher training that is focused on student-centered methodology. The World Bank's Rural Education Project proposal (2004) cites outdated teaching methods as one of the rationales for its reform package. It notes that Kyrgyz pedagogy, like that of other Soviet republics, stressed the memorization of facts, rather than the application of concepts. Students were not encouraged to ask questions and to use teamwork. The proposal points out that this "passive approach to teaching and learning encouraged a passive role of citizens in their society" (World Bank, 2004, p. 4), thereby reinforcing the notion that it is the government's responsibility to improve people's lives. The proposal goes on to point out that a key objective of education reform in the Kyrgyz Republic was to "institute a more active, student-centered form of pedagogy which encourages inquiry, application, initiative, and teamwork, and encourages citizens to play a more active role in improving their own personal and family situation, as well as their larger environment—their community and their country" (World Bank, 2004, p. 4). The phrase "play a more active role in improving their own personal lives" is a key phrase that appears in donor and government documents alike. Thus, to the Kyrgyz government and the donors who supported them, active, student-centered learning in the classroom was conceived as preparation for active citizenship and decision making, while passive, teacher directed learning echoed both the old Soviet classroom and the larger context of its authoritarian regime.

In its Second Education project proposal (2005), the Asia Development Bank's rhetoric echoes the Kyrgyz Ministry of Education's call for a general education system responsive to the needs of a modern market-oriented economy. Thus the ADB proposal promotes active-learning, student-centered pedagogy as better preparing students for active participation in a newly emerging market economy through development of critical-thinking and problem-solving skills. The project proposed to support the Kyrgyz MOES and KAE, and is focused on developing a new curriculum and in modernizing the country's assessment system. The project's curriculum subcomponent proposed developing "a curriculum that would support improving students' higher-order cognitive and problem-solving skills through a student-centered learning process" (ADB, 2005, p.9).

The Fast Track Initiative in Kyrgyzstan was intended to support and accelerate the achievement of the six EFA goals through improving pre-school development; improving the national curriculum through creating and distributing textbooks, teaching material and equipment; improving school infrastructure, and supporting the development of human resources within the education system. Part of the strategy for improving primary education includes providing in-service training to primary level teachers designed to improve teaching methods, work more effectively with the community, and implement inclusive education. The training was to be drawn from programs active at the time in Kyrgyzstan, including PEAKS and OSI's Reading and Writing for Critical Thinking (RWCT), Inclusive Education, Step-by-Step, and others (MOESYP, FTI Grant Application, 2006).

Overview of the USAID PEAKS Project

The USAID-funded Participation, Education and Knowledge Strengthening (PEAKS) project (2003-2005, extended to 2007) was conducted by a consortium led by the Academy for Educational Development (AED) and involving the Open Society Institute/Soros Foundation of Kyrgyzstan, Save the Children (UK and US), and Abt Associates. PEAKS was designed to fulfill the USAID strategy for updating teaching methods as part of its strategic objective 3.4, "Improved Quality of and Access to Basic Education in Target Areas." In-service training of teachers proved particularly crucial in Kyrgyzstan, where in-service teacher training institutes had lost much of their capacity and funding after the collapse of the former Soviet Union.

The project's strategy relied on a variety of approaches to in-service teacher education to promote active-learning, student-centered instruction. The consortium partner responsible for the in-service teacher training component of PEAKS was the Open Society Institute (OSI). Thus PEAKS drew on OSI's methodologies for primary education (Step-by-Step) and secondary education (Reading and Writing for Critical Thinking). The Step-by-Step training involved 24 hours over the course of three days per topic at the professional development schools⁷ (16 hours/3days in cluster schools) Training topics included the Philosophy of Step-by-Step, Creating a Child-Centered Learning Environment, Individualization and Family and Community in the Classroom. A total of 845 primary level teachers were trained in this methodology. The Reading and Writing for Critical Thinking program provided two training sessions of 24 hours each over the course of 3 days, interspersed with intersession meetings, practice, and mentoring support. The trainings involved 1,281 teachers and focused on the basics of critical skills development, principles of cooperative learning, and subject-based discussion.

The PEAKS project also incorporated Save the Children's Inclusive Education program in Kyrgyzstan. These professional development activities, organized for 1,110 teachers, focused on the use of child-centered pedagogy with the specific aim of including vulnerable and marginalized children in the "mainstream" classroom, who had hitherto been segregated in special schools or left at home. As part of PEAKS, Save the Children staff also developed two new modules on inclusive education, which were used to train 120 teachers in the PEAKS professional development schools.

The PEAKS project also developed the Interactive Teaching and Learning Methodology, a series of digital modules that were designed to be easily adapted and modified by teacher trainers. The modules were available in printed form as well, for teachers in remote regions where access to the appropriate technology might be limited. All of these modules included background materials

⁷ Schools designed to function as resource centers to the teachers of neighboring cluster schools, of which there were approximately 10 to each PDS.

detailing learning theories of Vygotsky, Piaget, Johnson and Johnson, and Gardner. By the completion of the project, the modules had been posted on the Global Learning Portal (GLP) to provide access to teacher educators, teachers, and the general public. The GLP is a multilingual knowledge network for educators worldwide, representing a global alliance composed of multilateral and bilateral intergovernmental organizations, such as UNESCO and USAID, private sector entities, and NGOs. The GLP has 5,500 members worldwide in over 130 countries (www.glp.net/home).

The primary aim of the project's in-service teacher training initiative was to address EFA goals and the Convention on the Rights of the Child for a more humanized, individualized, and interactive approach to educating children, with an emphasis on promoting students' critical thinking. The project used a somewhat traditional cascade model in which teachers at 13 high-capacity "professional development schools" were trained in interactive methods, and subsequently trained teachers at 10-20 near-by cluster schools, for a total of 127 cluster schools. Training was reinforced through mentoring, whereby master trainers visited cluster schools to observe teachers in practice and provide feedback, as well as guidance and support, on their implementation of the new teaching methods. The teacher training itself was highly interactive and involved teachers seated in groups working cooperatively to develop concepts, respond to questions posed, and identify ways to apply new instructional practices to their own classrooms. Trainers thus used discussion rather than lecture, thereby modeling more interactive, student-directed behaviors.

USAID's current project in Kyrgyzstan, the "Quality Learning Project," also emphasizes active-learning methodologies, but the focus is on implementing the methods in different subject areas (Kyrgyz language and math at the secondary level, math and arts in primary grades) and in pre-service in addition to in-service teacher education. The project seeks to expand access to student-centered teaching methods by reaching beyond the PEAKS pilot schools, to enable students to demonstrate a substantially increased level of higher-order thinking skills. The project also seeks to secure state certification of newly developed teacher training courses and modules and to make the student-centered approach a part of the standard pre-service and in-service curriculum at teacher training institutes.

USAID's Support for Teacher Professional Development

National coordination of teacher training is the responsibility of the National Institute for Raising the Qualifications of Teachers and Teacher Training (NTTI) under the Kyrgyz Academy of Education. At the local, provincial level, in-service teacher training is handled by a network of seven teacher training institutes (TTIs).

The Ministry of Education of the Kyrgyz Republic signed a memorandum of understanding in 2003 with USAID's PEAKS initiative to implement new instructional strategies through school-based teacher professional development. The MOU does not specifically mention student-centered or active-learning pedagogies, but instead refers to "new teaching methods" and "classroom innovation" in more general terms:

The PEAKS project will contribute to the improvement of educational outcomes for school age children (grades 1 – 9) in Kyrgyzstan through the introduction of *new methods of teaching* and approaches to learning, assist related curriculum reforms, mobilize community participation in schools, strengthen educational management to aid *classroom innovation* and improve the physical infrastructure in targeted schools. (USAID, 2003, Annex 3, p. 41; emphasis added)

The MOU described intermediary results for the project, including Intermediary Result 2, which ensured that that a “curriculum emphasizing learning skills” would be made more available by supporting “teachers in pilot schools to enhance the curriculum to make it more locally relevant;” and integrate “critical thinking into school examinations at the end of primary and secondary stages” (USAID, 2003, Annex 3).

In addition to the MOU signed by the Ministry of Education, another MOU was signed by the Kyrgyz Academy of Education (KAE), a unit of the Ministry of Education which is responsible for developing the curriculum, textbooks, and learning materials in all curriculum subjects, at all grades, in the four approved languages of instruction; generating authors’ manuscripts; and approving textbooks and learning materials. This MOU between KAE and the Association of Independent Providers of NOVEL SCHOOL, signed on June 30, 2004, was developed to ensure collaboration in the area of in-service teacher training and to provide for a formal, legal relationship between governmental and non-governmental organizations involved in teacher training. Since all organizations that represent PEAKS-targeted methodologies are members of the Association of Independent Providers of NOVEL SCHOOL, the MOU provided legitimacy to the targeted in-service teacher training methodologies included in PEAKS (USAID Quarterly Report 6, 2004). Ultimately, the PEAKS project schools, in their capacity as providers of non-governmental, in-service teacher training, became NGOs licensed by the government to provide teacher training. Thus the MOU provided legitimacy to the targeted, student-centered teacher training methodologies that were integral to the PEAKS project, and indirectly incorporated them into the formal, government-sponsored in-service system. At the close of the project, the professional development schools were officially licensed as “Centers for Innovation in Educational Technology.” The agreement called for upgrading the professional level of teachers “in the area of new methods of teaching and development of critical thinking” (USAID, 2004).

STUDYING THE IMPLEMENTATION OF ACTIVE-LEARNING METHODOLOGY IN KYRGYZ SCHOOLS

Different analytical papers and briefings state that general reform initiatives in the Kyrgyz Republic promote active-learning pedagogies. However, relatively little is known in the outside world about how this pedagogical approach is framed in the context of professional development activities for teachers, how teachers implement it in classrooms, and what constraints are faced in implementation efforts. Therefore, this study seeks to describe how active learning methodology is utilized in the Kyrgyz classrooms. Although the case reviews existing documentary and statistical data for the elements of active learning pedagogy, it also uses focus group and other interview findings to create a picture of the status of this methodology in classrooms.

Research Methodology

Both qualitative and quantitative data were collected and analyzed for this study. With respect to qualitative data, focus groups and individual interviews were conducted in all seven provinces of the Kyrgyz Republic. In each province this included three categories of USAID PEAKS project schools: Professional Development Schools (PDSs), urban or suburban cluster schools, and rural cluster schools. As a control group, two categories of schools close in distance to PEAKS project schools were sampled: urban or suburban regular schools and rural regular schools. Control schools were carefully selected from among the schools that had not been well exposed to active learning methodologies.

Two focus group discussions took place in each province. The first rounds of focus group discussions were conducted with the representatives of PDS and cluster schools. The second-round focus groups included representatives of regular schools. Each focus group discussion was attended by three categories of teachers: primary school, science, and humanities track (secondary) teachers. Overall, 105 teachers attended the focus group discussions in seven provinces (9 from each of the PEAKS schools and 6 from each of the control group schools). Teachers' views were collected in the following information areas:

- Influence of professional development on the implementation of active-learning pedagogies;
- Features of professional development that constrained and enabled the implementation of active-learning, student-centered pedagogies; and
- Social/policy factors that constrained or enabled implementation of active-learning, student-centered pedagogies.

(Please see Appendix A for a copy of the focus group discussion question form.)

In addition to the focus group interviews, we conducted individual interviews in each participating school with school directors (principals) and deputy directors, who are in charge of educational matters. In total, 70 school administrators were interviewed nationally. Along with the main research questions described above, school administrators were asked whether they consider themselves promoters of active-learning methodology in their school and to what extent teachers get "mentoring" from these individuals in order to incorporate active-learning pedagogies in their classroom.

Moreover, in each school we asked a randomly selected sample of teachers to complete a questionnaire (see Appendix B for a copy of the questionnaire). Questionnaires were collected from 530 teachers in seven oblasts (provinces). Also, observations took place in two classrooms in each oblast in order to explore how teachers were engaged in implementing student-centered methodology in their daily practice.

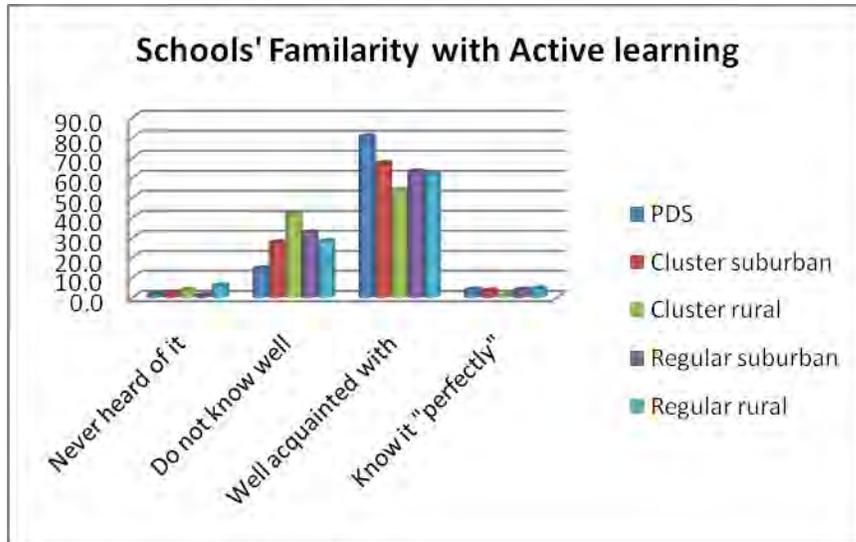
To implement the field research four teams of technical specialists were recruited. Each team included three people: two individuals to conduct focus groups, individual interviews, and lesson observations, and one to take care of the administrative part and conduct the teacher survey. Hands-on system training was provided to technical specialists before their deployment to the field.

Upon completion of the field research, qualitative data were entered by two local consultants, then entered into SPSS.

Findings

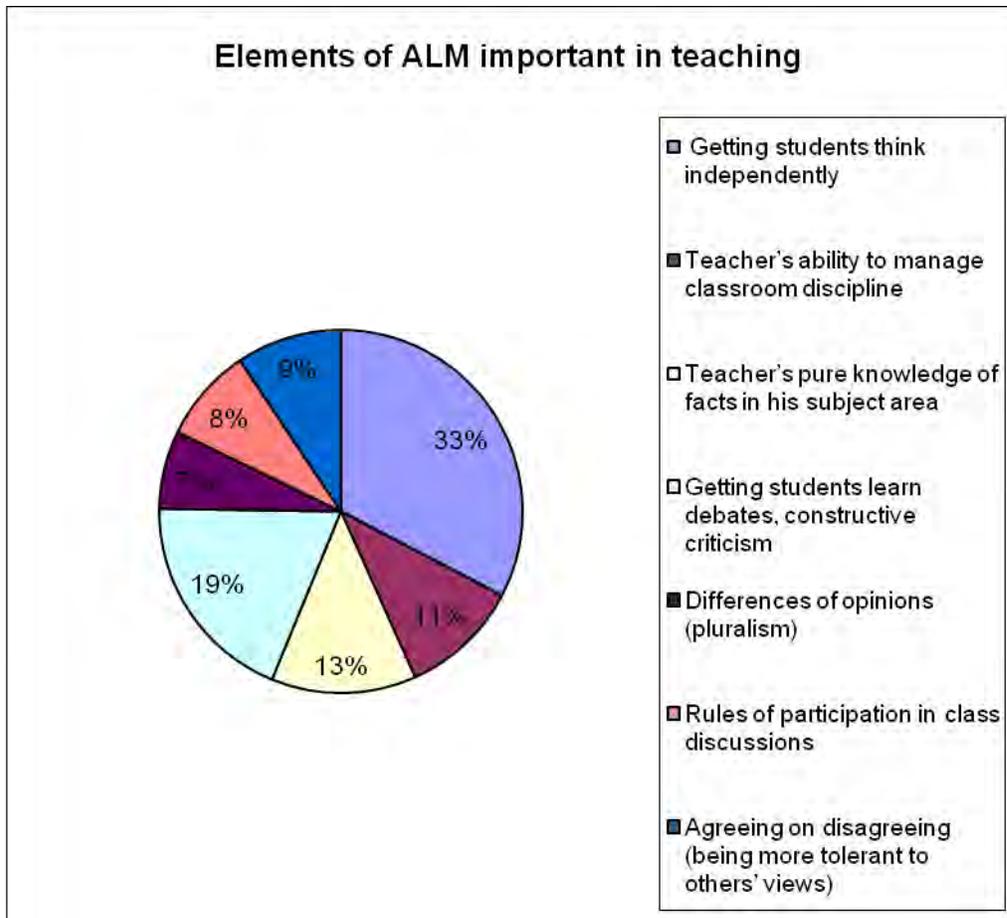
The 13 professional development schools affiliated with the PEAKS project were modeled after the PDS as conceived by US educator Linda Darling-Hammond (2005). The schools were designed to function as laboratory schools and resource centers for teachers in the region, and specifically for those teachers in the project's cluster schools, of which there were approximately 10 per PDS. A cadre of teachers in the PEAKS Professional Development Schools was trained as lead teacher trainers and mentors for area cluster schools. Thus, teachers in the PDS tended to be more knowledgeable about active-learning pedagogies. Rural schools, regardless of whether or not they are designated PDS or cluster schools, are isolated by distance, and in many cases by mountainous terrain. They represent a specific challenge for teacher professional development.

According to the survey findings, teachers in the project’s 13 professional development schools or from one of the 127 associated suburban and rural cluster schools were more likely than regular (non-project) suburban and rural schools to report they “knew perfectly” or “knew well” active-learning instructional methods (see Diagram 1).



Individual and focus group interviews also demonstrated that active-learning methods were used in project schools and non-project schools alike. Project schools were those that had primarily been trained to use PEAKS target methodologies such as Step-by-Step and RWCT. Other schools were most likely influenced by other donor-supported projects that emphasized active-learning pedagogies as described above. Even the teachers from regular schools exhibited an understanding of active-learning techniques. For instance, a teacher from a regular rural school in Talas oblast says: “It is a method of teaching where the teacher and students engage into discussion interactively. Students becomes more active, tend to express their views eagerly.” A primary school teacher from a school in a remote area in Jalal-Abad oblast comments that “this methodology helps students work independently. They compare their views [and] work more in the team. During presentations the teacher discovers many examples of creative thinking, especially when they use drawings. It’s fun.” Another teacher from a cluster school in Talas approaches active-learning methodology carefully, stating that he does not always use this technique because it “does not fit in a lesson phase when you explain a new topic to students. They have to listen and take notes first. Absorbing the new knowledge individually gives more depth to class discussion later. This is what I found out after several years of using active-learning methods through participation to PEAKS.”

The study also reveals teachers generally focus more on getting students to think independently. Teachers have listed more than 15 different techniques that they associate with the concept of active-learning methodology. The top seven of these are given in the diagram below:



PDS teachers pay more attention to using differences of opinions in the classroom than do teachers in cluster and regular schools (see table below):

	PDS	Cluster Suburban	Cluster Rural	Regular Suburban	Regular Rural
Getting students to think independently	32.4	33.2	33.0	30.6	34.7
Teacher's ability to manage classroom discipline	6.8	12.8	14.1	11.3	9.8
Teacher's pure knowledge of facts in his/her subject area	9.7	12.3	15.0	13.9	15.6
Getting students learn debates, constructive criticism	21.7	15.3	18.0	19.0	19.7
Differences of opinions	9.7	7.7	4.2	6.5	6.4
Rules of participation in class discussions	8.4	9.4	7.8	9.4	6.9
Agreeing on disagreeing (being more tolerant to others' views)	11.5	9.4	7.8	9.4	6.9

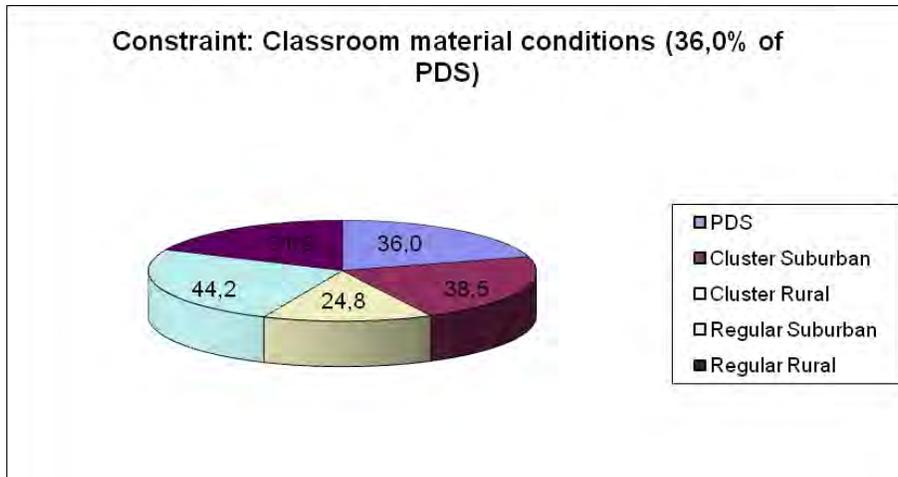
Along with positive observations, the research also revealed that teachers have varying interpretations of the rationale behind active-learning pedagogies. Some tend to think that active-learning methods are used to get students interested in studying and/or “identifying a leader in the group.” Some teachers claimed that active-learning methods are usually used for motivating

students to discuss a particular theme, teaching students to work in pairs and in groups, helping students learn to express their views, and encouraging students to listen to each other. They further commented that when they used active-learning methods, their students developed skills in asking questions, felt freer to express their opinions, and interacted with the teacher on a more equal basis. During the focus group in Osh oblast, for instance, teachers from PDS and cluster schools observed that “change occurs not only among students, but in teachers as well. Teachers themselves started to think more creatively. They critically assess colleague’s view to approaches in teaching. This helps to build a more welcoming environment in the classroom.” Another teacher from a suburban cluster school says “students, who are believed passive in other subjects too, started responding to discussions in the class. One could notice mutual respect.”

In answer to the question of why teachers started using active-learning methods in their classrooms, many respondents said that modern times call for a new methodology. However, other respondents made it clear that some teachers sought to utilize active-learning techniques, and cooperative learning in particular, because textbooks and the curriculum provide students with limited information on the subject. For instance, a teacher from Jalal-Abad Oblast expressed that “some students get information these days from alternative sources like, internet, TV, peers, etc. more and better rather than school textbooks.” In its turn this creates tension in the classroom when the teacher is limited to the textbook alone. Therefore, teachers use active-learning methods in order to “balance” knowledge in the classroom, get all children involved in lessons, and meet educational objectives. This is more the case in urban and suburban schools than in rural ones. A teacher from a PDS in Jalal-Abad added the following point: “If the teacher utilizes student-centered methodology well and comes to the class prepared for the lesson, this is a ‘golden opportunity’ to dig into students’ deeper thinking.”

For the rural schools, National Testing – the project funded and initiated by USAID which aims to provide secondary school graduates with free admission to universities – is one of the reasons teachers use active-learning pedagogies. Teachers state that because the National Testing techniques require that students demonstrate the ability to solve problems and use creative thinking rather than rote memorization, there is an increasing demand from students for teachers to teach “differently.” According to a teacher from a regular school, some “smart” students, who come from low-income families, are quite “ambitious to get admitted to the university without having to pay any money,” and want to develop their creative thinking and problem-solving skills to score well on the test.

Teachers also consider poor conditions in regular schools to be a factor pushing teachers to use active-learning methods. For example, when textbooks are in short supply, teachers feel the need to use small group discussions so that students get a chance to acquire the same level of knowledge. A lack of textbooks in classrooms also requires students to relate concepts to outside, real-life examples. This is because the teacher, who often has only one textbook for the class, explains the concept first to students, then asks students to work in small groups or engages the whole class in a discussion to give their views of how they understand the specific concept. Then students relate the concept to examples they see outside of the classroom.



The research respondents identified a range of constraints that prevented teachers from using active learning methods, including the following:

1. *Resources:* Teachers refer to low supply of methodological guidebooks for teachers, supply of stationery to teachers, and classroom layout (furniture). One teacher from a regular suburban school in Chui Oblast during the focus group commented that “if the morning shift uses active or cooperative learning, in the afternoon another teacher has to put tables back to adjust classroom layout to traditional methods of teaching.” Respondents explained that because methodological guidebooks are not specific enough to integrate active-learning methods into subject levels, in most cases science and math teachers find it difficult to implement such methods. Analysis of data from international projects implemented in the Kyrgyz Republic demonstrates that humanities and social science subjects have received more attention from various international donors after the break-up of the Soviet Union (USAID, 2007). Therefore, there is sufficient integration and advancement of active-learning pedagogy in these subjects. Nevertheless, the majority of schools are lacking such methodological guidance. Deputy directors interviewed frequently referred to the lack of textbooks and highlighted the fact that there is “no link between the textbook and educational programs (curriculum).” A director from Batken regular suburban school said: “Teachers are not able to use their creativity in teaching so that students understand and learn the program, because the educational program is quite instructive about what teachers should do and use and what not.” The view that classroom resources are one of the constraints for teachers in utilizing student-centered methodology is generally similar among PDS, cluster, and regular schools. The chart (above) shows that 36% of teachers from PDSs, 24-38% of cluster schools, and 31-44% of regular school teachers believe that this is a constraint.
2. *School Administration:* The teachers said that it was challenging to implement active-learning methods if school administrators did not favor such instructional approaches. A crosscheck of results in individual interviews with school administrators, focus groups with teachers, and lesson observations demonstrates that in schools where active learning is promoted by school administrators, application of active learning and the understanding of its basic philosophy is much more advanced than in those schools where the school administrator is less

ambitious about introducing innovative teaching methodologies. For instance, in one of the focus groups, teachers gave an example in the town of Tokmok, where the school administrator banned the use of active-learning methods in his school. According to this school administrator, critical thinking strategies and problem-solving skills reduce students' respect for what teachers say and do. As a result, teachers and schools lose control over students' behavior. It is also obvious that roll-out of active-learning methods should be accompanied by an educational campaign among school administrators. When the school principal and deputy director know and understand the basic philosophy and techniques of active learning, it seems much easier to implement in classrooms. For example, the director of a suburban cluster school from Chui oblast said: "at the beginning we could not comprehend and it was hard to accept 'not finished' class (she is talking about Step-By-Step program techniques in primary school). Class was kind of a free-flow. Students could go around the classroom freely. One class could have elements of all subjects students learn. I was terrified to see the situation when kids are going around, there is no signal of one subject. It did not look like a math class, nor was it reading. Everything was mixed. However, when PEAKS came to our school and ran a workshop I understood everything. I did not know that this can be done at school."

3. *Regional Administration:* Respondents noted that during their supervisory visits to classrooms, regional administrators may contradict teachers' efforts to implement active-learning methods. According to a math teacher from Chui oblast cluster school: "Student copybooks are ... corrected using the old standards. [In classrooms where teachers are using] active-learning methods, students are encouraged to write anything they like in their copybooks. However, when specialists from the regional education administration look at what students have written, they are often highly critical. These administrators expect student notebooks to include only [formal writing]. In order to escape these kinds of situations, teachers ask students to keep a separate folder for classes in which active-learning methods are used." One teacher pointed out the faulty system, saying "We do teaching for the assessment by the regional education administration, not for students' learning." These responses also show that there is a lack of knowledge of new teaching techniques, when administering innovations in teaching in schools on regional education levels. Obviously, when the methodology specialists on the regional level are not familiar with new techniques utilized at schools, they use their administrative power to make schools and teachers follow old procedures, with which the regional methodology specialists are comfortable. The director of a school in Talas said that "support from the regional education administration is much expected at schools. What methodology specialist and the head of methodology department are doing is wrong. They must be on top of all teachers when it comes to innovations in teaching. They must be the ones to lead teachers, provide mentorship to teachers to utilize student-centered pedagogy. In fact what they do is they are here to command-and-control as if they are inspectors."
4. *Crisis of the Pedagogical Cadre:* Because of low salaries and high administrative demand, many teachers have already left their jobs in Kyrgyzstan. Official statistics show that the country needs 4,000 teachers annually, but many experts suspect that in reality this number is at least 20% higher. A school director from a regular suburban school in Talas oblast says: "Only six chemistry teachers are

working on schools of Talas oblast, which has 94 schools.” New teachers, who graduate from universities, often end up not going to schools. Dramatic shortages of teachers put a lot of pressure to school administrations to increase the teaching load on the remaining teachers at schools to teach additional classes. Discussions with regional education administrations in two regions revealed that more than half of teachers teach two loads. According to one teacher: “Sometimes teachers do not have even time for preparation and lesson planning, let alone thinking through methods of teaching or searching materials for new techniques.” Moreover, many young teachers study part-time at a university while working. “Such teachers lack knowledge in their own specialty, let alone teaching methodology.” Academic preparation for such teachers is broken down to two sessions in a year: two-three weeks of study in winter, and three-four weeks of study in summer. Some experts argue that this format is not enough to prepare a teacher for the school. As a result, such teachers end up in the classroom with shallow knowledge in their subjects, and insufficient skills in teaching. When it comes to utilizing such complex techniques of teaching as active learning methods, these teachers struggle a lot and at the end go back to traditional ways of teaching, which is not difficult in terms of classroom management and methodology application.

Training course theme	Training session provider
Tolerance education	Soros Kyrgyzstan
Professional upgrade course for school administrators	Osh oblast Institute for Teachers Professional Upgrading
Training course for the teachers of Russian language and literature	Osh oblast Institute for Teachers Professional Upgrading
Innovative methods of teaching	Osh oblast Institute for Teachers Professional Upgrading

Government teacher in-service courses are run with old techniques and information. Innovative teaching methods are not integrated into such in-service teacher training courses. Two teachers from the Uzbek language school of Jalal-Abad oblast commented that they had been to the in-service teacher training provided by the ITTI located in Osh oblast. They said that the course content for math teachers was the same as it was five years ago, when they attended previously. As one of them expressed: “Not even lectures were modified. I showed the instructor my notebook, which was filled out last time I attended the same course. Words, sentences were exactly the same.” Sometimes, in-service teacher training courses present only the theoretical part of active learning. It gets quite difficult to implement that theory in the classroom environment. According to one teacher, this is the reason: “Many teachers prefer to attend trainings provided by the PEAKS project rather than in-service trainings provided by the Kyrgyz Academy of Education.” However, for the teachers in remote area schools the choice to go to professional development courses is limited to government-provided in-service teacher training courses only. Information

acquired from almost all teachers from regular schools, who participated in the research, confirms this. The table on the right shows the results of the questionnaire where teachers were asked to fill in in-service teacher training courses they attended in the last five years in the Uzgen rayon of Osh oblast. All of these courses, except one, are provided by the regional teacher training institute. Only one project, which had as its objective to work on interethnic tolerance education, provided training to these teachers.

5. *Parents attitude to schooling.* Research findings point out that parents are not closely involved in the “school’s life.” Instead, parents in villages prevent their children from going to school during the harvest season. Respondents from two remote areas (Naryn and Batken) said that in the villages parents expect their children to help them – in particular, “in fall and spring there is a lot to do in rural areas.” A school director in a cluster suburban school said: “Parents only think about better results their kids achieve, but do not pay much attention to teaching methodologies in which the teachers are trained.” The point is that parents should share (with educators) the responsibility for educating their children.

CONCLUSION

This study of active-learning demonstrates that since the collapse of the Soviet Union, the Kyrgyz government’s rhetoric has increasingly acknowledged the importance of active-learning pedagogies for education reform in Central Asia. Participation in the EFA movement helped align Kyrgyz education policy with international trends that called for a more humanistic approach to educating children that would provide “Education for All” in a child-friendly, individualized, and active learning environment, thereby adhering to the International Convention of the Rights of the Child. In 2005 and 2006, government policy reached a turning point with the results of UNICEF’s MLA study (2005) and the PISA assessment (2006). Here government policy appeared to undergo a shift in understanding of the importance of active-learning pedagogy for developing basic competencies, as well as critical thinking and problem solving skills that would allow students to apply learning to daily life. Practical application of knowledge was seen as key to preparing young people for active, participatory citizenship and for participation in a market economy. International donors and NGOs supported and often influenced teacher professional development policies. International donor-funded projects were frequently designed to spread active-learning pedagogies to teachers through school-based training that was meant to supplement and even replace the government’s declining teacher in-service training programs.

In this study, the survey, interviews, and focus groups with teachers and administrators demonstrate that although Kyrgyz government policy condones active-learning pedagogies, a variety of constraints have prevented its large-scale adoption. School inspectors and directors who have not been trained to evaluate active-learning pedagogy at the regional level can prevent its implementation. Some administrators who have not been trained to use active-learning pedagogy may, as some respondents indicated, be initially shocked at the idea of integrating academic disciplines, allowing students to work in groups or move freely around the classroom. Finally, teachers themselves may be reluctant to use active-learning methodologies if they do not appear to promote learning in their particular subject area, and particularly in the areas of math and science. Constraints in the shape of scarce classroom materials may encourage the use of active-learning pedagogy, or may hinder its use. Teachers in the study commented that group and

pair work allowed students to share scarce materials, and draw upon other sources of knowledge, such as the Internet. Other teachers, however, said that there were not enough methodological materials available to help them use those scarce textbooks in more interactive ways. Although the Kyrgyz government and international donors have made great strides in introducing active-learning pedagogies on the policy level, and many teachers use active learning in their daily practice, there is still much work to be done in the training of teachers and administrators in active-learning pedagogy and its theoretical underpinnings and rationale, as well as techniques for mentoring and evaluating teachers when they implement the methodology in practice.

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APPENDIX A

Research on active learning methodology in teacher professional development training programs: Focus group interview form

Location of focus group: _____

Date of focus group: _____

Facilitator: _____

Note taker: _____

Start time: _____

Questions:

- How do you understand the term “active-learning methodology”? What are its main features and principles? What is the philosophy of active learning methodology?
- In what form was this methodology used in schools before the Independence?
- What methods and approaches did you learn over the last 10 years?
- Why do you like or dislike active learning methodology? In what ways does your view of ALM differ from that of OTHERS?
 - A. Teacher colleagues
 - B. School administrators, Education administration specialists, other ministry or government officials
 - C. In-service training program staff
- What kind of things did you do in an active learning classroom? Why did you think that those activities were needed in active learning methodology? What were the difficulties?
- Did training staff, school administrators (director, deputy director, etc.), or education administration inspectors observe your efforts to implement active-learning pedagogy in your classroom after you completed the training program? If yes, what sort of feedback did you receive? Was it useful? If yes, in what ways?

- From your perspective, what changes have taken place in your classroom since you participated in professional development activities which focused on active learning methodology?

Students' behaviors in general (individually, in groups)	Students' cognitive activities	Students' affective domain

- What have been the most important successes since you began using active learning methodology in your classroom? What areas still need to be developed further?
- What *factors* (e.g., in-service program content/processes, supervisory guidance/support from school administration or Raion education administration, classroom physical and material conditions, curriculum/examination policies, textbooks, lesson observation criteria, assessment mechanisms, and cultural beliefs/values) are perceived to have *encouraged* teachers to implement active-learning pedagogies? Why?
- What *factors* are perceived to have *constrained* teachers to implement active-learning pedagogies? Why?
- What are the key factors to further the development of active learning methodology in Kyrgyzstan?

APPENDIX B

Teacher Questionnaire

Age	Gender	Year of graduation from University	University name	Academic background / specialization

Overall teaching experience	
From which:	
In a rural school	
In a semi-urban school	
In an urban school	

Do you hold any position other than teaching? If yes, please name your position and years you're holding this position:

Position _____

Years in this position: _____

Questions

1. List the active learning methodology techniques that you use in your classroom, if any:

_____	_____
_____	_____
_____	_____
_____	_____

2. How familiar are you with active learning methodology? (Please circle the number where appropriate)

1. Not at all
2. Not so well
3. Good
4. Very good

3. What are the main elements of active learning methodology in a classroom? (Please circle the number where appropriate)

1. Getting students think independently
2. Teacher's ability to manage classroom discipline
3. Teacher's pure knowledge of facts in his subject area
4. Getting students learn debates, constructive criticism
5. Differences of opinions (pluralism)
6. Rules of participation in class discussions
7. Agreeing on disagreeing (being more tolerant to others' views)

8. Other (please specify)

9. Other (please specify)

10. Other (please specify)

4. To what extent you incorporate active learning methodology into your classroom activities? (Please circle the number where appropriate)

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

5. What are the sources for you to get information about active learning methodology? (Please circle the number where appropriate)

1. Teachers' newspaper. Please, specify name of the newspaper: _____

2. School administration

A. Director B. Deputy Director

3. Teacher colleague

4. Rayon education administration

5. Program materials produced by organizations that provide trainings on ALM. Please, specify name of the organization:

6. Other. Please, specify:

6. What *factors* are perceived to have *encouraged* teachers to implement active-learning methodology? (Please circle the number where appropriate)

1	In-service program content	10	Assessment criteria used for classroom observation
2	In-service program methodology	11	Student assessment mechanisms used in the school system
3	In-service program system i.e. requirement that teacher should go through in-service training every five years	12	Curriculum
4	Teachers monthly section work	13	The way how textbooks designed
5	Supervisory guidance/support from Raion education administration	14	Daily lesson plans
6	Supervisory guidance, policy setting from school director	15	Classroom material conditions
7	Supervisory support from school deputy director	16	Classroom physical conditions
8	Examination policy/ requirements	17	Other, please specify
9	Attending colleagues' lessons	18	Other, please specify

7. What *factors* are perceived to have *constrained* teachers to implement active-learning methodology? (Please circle the number where appropriate, and write why you think so)

1	In-service program content	Why?
2	In-service program methodology	
3	In-service program system i.e. requirement that teacher should go through in-service training every five years	
4	Teachers monthly section work	
5	Supervisory guidance/support from Raion education administration	
6	Supervisory guidance, policy setting from school director	
7	Supervisory support from school deputy director	
8	Examination policy/ requirements	
9	Assessment criteria used for classroom observation	
10	Student assessment mechanisms used in the school system	
11	Curriculum	
12	The way how textbooks designed	
13	Daily lesson plans	
14	Classroom material conditions	
15	Classroom physical conditions	
16	Other, please specify	

8. In what ways did the “trainers” use active-learning methodology during the training programs you attended? (Please circle the number where appropriate)

- a. Actively involved participants into discussion
- b. Use problem solving exercises
- c. Encouraged independent thinking
- d. Managed classroom discipline
- e. Encouraged constructive criticism
- f. Respected that at the end of discussion everyone stayed in his/her own opinion
- g. Was open to differences of opinions (pluralism)
- h. Other (please specify)

i. Other (please specify) _____

j. Other (please specify) _____

9. What were the strengths of the in-service professional development activities you participated in with respect to helping you understand and be able to use active-learning methodology?

10. What would you recommend be done differently in the future?

11. What are the key factors to further development of active learning methodology in Kyrgyzstan?
