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Tajikistan: Higher Education Sector Study

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Higher Education Sector Study

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List of Abbreviations

ANQA	Armenian National Center for Professional Education Quality Assurance
APQN	Asia Pacific Quality Network
AVN	African Virtual University
CANQA	Central Asian Network of Quality Assurance
CDE	Centre of Distance Education
CHEA	Council for Higher Education Accreditation
CPS	Country Partnership Strategy
DE	Distance Education
ECA	Europe and Central Asia
ECTS	European Credit Transfer and Accumulation System
EHEA	European Higher Education Area
EKKA	Estonian Higher Education Quality Agency
ENQA	European Network of Quality Assurance
EQA	External Quality Assurance
EQAR	European Quality Assurance Register
ESG	Standards and Guidelines for Quality Assurance in the European Higher Education Area
ESW	Education Sector Work
GDP	Gross Domestic Product
GGP	Guidelines for Good Practice (INQAAHE)
GIZ	German Agency for International Cooperation
GPL	General Public License
HE	Higher Education
HEIs	Higher Education Institutions
HR	Human Resource
ICT	Information and Communication Technology
ICTD	Information and Communication Technology for Development
IGNOU	Indira Gandhi National Open University
INQAAHE	International Network of Quality Assurance Agencies in Higher Education
IQA	Internal Quality Assurance
ISP	Internet Service Provider
LAN	Local Area Network
LMS	Learning Management System
MIS	Management Information Systems
MOES	Ministry of Education and Science
MOOC	Massive Open Online Course
MTAP	Mid-Term Action Plan
NAA	National Accreditation Agency
NCPA	National Center for Public Accreditation
NQF	National Qualifications Framework
NREN	National Research and Education Network
NSED	National Strategy for Education Development
NVAO	Dutch-Flemish Accreditation Organization
OECD	The Organization for Economic Co-operation and Development
OER	Open Education Resources

OSI	Open Society Institute
QA	Quality Assurance
QAA	Quality Assurance Agency
R&D	Research and Development
RT	Republic of Tajikistan
SASSE	State Agency on Supervision in Sphere of Education
STR	Student Teacher Ratio
TARENA	Tajikistan National Research and Education Network
TE	Tertiary Education
TQM	Total Quality Management
UNESCO	United Nations Educational, Scientific and Cultural Organization

Executive Summary

1. The government has set a clear vision for the future of higher education as a tool for human capital formation to further economic growth in a rapidly changing world. The *National Strategy for Education Development Up To 2020* aims to modernize the existing contents of higher education towards more professionally-oriented skills to better meet labor market demand and to build Tajikistan's capacity. With a view to developing the higher education system and integrating into the European Higher Education Area, the government is currently focusing on joining the Bologna Declaration. Indeed, the government has started undertaking some of the necessary reforms such as the adoption of a three-tier education system and implementation of the European Credit Transfer and Accumulation System (ECTS) in 2007. Yet major reforms, such as the establishment of a credible quality assurance system and national qualifications framework, are yet to be developed, adopted and operationalized. Thus, a major overhaul of the higher education system, especially with regard to higher education governance, quality assurance, teaching, learning and student assessment, is to be undertaken as a matter of urgency.

2. **Why higher education?** The benefits of higher education are diverse regardless of the level of economic development. A recent rigorous literature review of the impact of tertiary education (university and colleges) on low- and lower-middle income countries found that tertiary education may provide greater impact on economic growth than lower levels of education and that tertiary education provides a range of broader, measurable benefits to graduates, relating to health, gender equality and democracy, among other areas. As for direct impact on economic growth, globally, there is an increasing demand for a workforce with "new economy skills" including the high level analytical and interpersonal skills and routine cognitive skills for growing industries that higher education can offer. Tajikistan is no exception. University and college-educated individuals are more likely to find a stable job in the formal sector, earn higher incomes, and are less likely to be unemployed or poor. At the same time, higher education is not the only sub-sector which requires reform. In primary and secondary school, the benefits of one extra year of schooling are maximized if children have a strong foundation in the early years of their education. In this regard, the government needs to continue investing in the entire education system from preschool to higher education, and even life-long learning. However, given the importance of higher education for individuals in obtaining higher-level skills and better job prospects, and for the country in reducing poverty, this study focuses on an analysis of the higher education sector, which finds itself in a dire situation following a long period of neglect.

3. **Overview and performance of the higher education system.** The sector expanded rapidly after the early 2000s and stabilized in the last few years. The tertiary (university and college) enrollment rate of 22 percent is lower than most Europe and Central Asian countries, but much higher than countries at a similar level of economic development. However, access to higher education is strikingly inequitable by gender, socio-economic status, and geographical location. Of the 35 higher education institutions (HEIs), 22 are located in Dushanbe and RRS where only 9.6 percent and 22.9 percent of the nation's total population live, respectively, and enroll 62 percent of students. Only just around 30 percent of higher education students are females. Students from the richest 40 percent consumption quintiles constitute 65 percent of higher education students, compared to only five percent from the poorest 20 percent or 16 percent from the poorest 40 percent. The quality of part-time correspondence education in which about 30 percent of students are enrolled is widely considered much weaker than that of full-time programs, pushing the MOES and HEIs to modernize the former as distance education. Tajik HEIs enroll a

relatively large number of students with a relatively high student-teacher ratio on average. In this sense, the system is quite efficient, but it may not be accompanied by quality. The teaching workforce is rapidly aging and increasingly less qualified, and the system is unable to attract and retain qualified young scholars to replace them as they gradually approach retirement. While university and college-educated individuals are more likely to find a stable job in the formal sector, earn higher incomes, and are less likely to be unemployed or poor in Tajikistan, many employers are unsatisfied with university graduates' skills level. Students themselves feel that they do not possess adequate qualifications and relevant skills required in the labor market. An increasing number of students are taking courses delivered in Tajik rather than Russian, which can adversely affect their chances of success in the job market. Tajik HEIs are not engaged in research since research has traditionally been conducted primarily by Academy of Sciences, with little linkage with the former. Finally, in addition to generally low levels of quality, the 11-year general education system is unable to adequately prepare most students for higher education.

4. **Governance.** The separation between governance that deals with approval of strategy and policies, performance appraisal, and overall supervision on the one hand, and management that occurs inside the institution and deals with operational matters on the other, is essential for successful higher education institutions. It has been widely agreed that a greater degree of autonomy (when coupled with accountability) typically correlates with higher performing systems and institutions, though the capacity to lead and manage a complex academic enterprise must be present before autonomy is granted. In contrast to international trends, Tajikistan's current higher education governance framework is characterized by direct and highly centralized governance, exercised by multiple layers of government bodies. This takes governance and management of HEIs up to the operational level, leaving little space for HEIs to exercise autonomy and accountability. Essentially, HEIs—ruled by a government-appointed rector without an effective collegial decision-making body—remain implementing bodies of government's directives and regulations. As a result, HEIs generally lack the capacity and incentives to develop and implement an institutional strategy. Stakeholder involvement by students and employers in the governance of Tajik HEIs is passive, often depending on the approaches and initiatives of individual rectors. Even the Rectors' Council's role is limited to promotion and implementation of the regulatory and normative acts, rather than driving change and setting strategic lines for development. The public sector overwhelmingly dominates the sector and the private sector—both private HEIs and private enterprises—is almost absent due to the uninviting regulatory framework, and government's general unfavorable attitudes towards private entries.

5. **Quality assurance.** The massification and diversification of higher education globally has led to a pressing need for relevant and reliable quality assurance and accreditation processes to assure the public that the courses, programs and degrees offered by HEIs meet acceptable academic and professional standards. To keep up with global trends, the government of Tajikistan has undertaken higher education reforms aimed at transformation and integration into the international arena. Tangible results are yet to be seen, however. The country also needs to develop reliable qualifications recognition tools and description of qualifications per degree and level based on knowledge, competencies and skills to facilitate educational and labor mobility.

6. At the system level, Tajikistan's current quality assurance model follows the practices common to those promoted by the ministries in post-Soviet systems and is not in line with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), which the government aims to comply with. Under this model, the State Agency for Supervision in the Sphere of Education (SASSE), which is in charge of the external quality assurance under the Ministry of Education and Science, aims to assure quality primarily by setting state educational standards and requiring HEIs to be in

compliance with the standards through licensing, state attestation and accreditation. However, the model does not clearly define the concepts of quality and quality assurance, or the nature of quality enhancement or quality assurance system and tools. The SASSE does not have sufficient exposure to the ESGs and lacks the capacity to improve the national QA system. Also, as a result of conflicts of interest—the MOES is both the founder and regulator of state HEIs—the majority of HEIs remain open whether or not they meet the standards. Strengthening the capacity of SASSE and aligning the existing model with the ESGs would help improve the quality of higher education.

7. At the institutional level, most HEIs are yet to clearly set a mission and vision for their institutions. HEIs undertake multiple activities to ensure quality, but often in a fragmented, inefficient and ineffective manner, without a holistic system of internal quality assurance. They are guided by control-oriented standards to manage quality, which does not motivate them to improve. The flip side of limited autonomy is extremely weak accountability at the institutional level. Key stakeholders (student, faculty members, and employers) are not involved in quality assurance processes. HEIs typically develop study programs without involving key stakeholders, and without setting a review process for ongoing revision to ensure their continued relevance. HEIs exercise quality assurance to a very limited extent by reducing it to purely control mechanisms and collection of fragmented quantitative data. Inquiry into the teaching and learning processes and in-depth self-evaluations are not undertaken, which significantly limits their capacity to learn and promote quality enhancement. Most HEIs still lack understanding of self-assessment. Even in this generally weak environment, there are a few examples of good practice to be disseminated, where Tajik HEIs have established an effective internal quality assurance mechanism and conducted an in-depth self-assessment as well undergoing external evaluations based on the self-assessment.

8. **Financing.** Strong economic growth in recent years has helped increase public funding for education in general, and for higher education. Primarily due to low higher education enrollment rates relative to wealthier countries, higher education's share of the overall education budget is lower than that of wealthier countries, but similar to that of neighboring countries. The current higher education financing model is very simple. The government finances "budget" seats in state HEIs on a merit basis (about 40 percent of the total students), a small number of Presidential quotas (about 3.5 percent of the total students) and other targeted programs for disadvantaged students, and capital budget for HEIs (15-20 percent of the total higher education budget). While the Law on Higher Education defines that research is integral to an institution's accreditation, research at HEIs is typically under-financed primarily because research is conducted by the Academy of Sciences, which are separate institutions. Given unfavorable tax regulations and government's unwelcoming attitude towards private HEIs, private investment in higher education is limited: there are only one private HEI and three fully self-financed state (*de facto* private) HEIs.

9. State HEIs primarily rely on two sources for financing: (i) the state budget for budget-seats; and (ii) tuition fees. Recently, the government started counting revenues raised by HEIs as part of the state budget for higher education; about 56 percent of the higher education budget is actually raised by HEIs themselves. Budget seats have been allocated to HEIs and programs according to historical allocations without strategically reflecting the changing labor market demand. Until this year, each HEI conducted entrance examinations at institutional level and allocated budget seats based on the criteria stipulated in the Rules for student enrollment to HEIs annually approved by the Board of the Ministry of Education and Science and registered by the Ministry of Justice. As the government introduces the unified university entrance examinations this year, it is expected that the allocation of budget seats will become more transparent and truly merit-based. It is generally perceived that the Presidential quotas are

awarded in an inconsistent manner as well, but the results of the unified entrance examinations are yet to be applied to their allocation.

10. Relative to the level of economic development, per student spending on higher education is not low in Tajikistan. However, this is not to say that higher education is well financed in Tajikistan. Higher education is essentially an international commodity that requires expensive goods and services such as computers, libraries, laboratories, internet, and equipment which are often influenced by international pricing, and higher salaries to attract qualified faculty. The limited state budget for higher education is not effectively spent. About 30 percent of the state budget is provided as stipends for state-funded students without an effective targeting mechanism.

11. **Information Communication and Technologies (ICT) for higher education.** Demand for ICT specialists and ICT literacy in general is growing both in private and public sectors. Indeed, HEIs have been increasingly using computers and Internet not only for ICT-related courses, but also for other classes. HEIs have enough equipment to initiate the creation and delivery of online courses. Most HEIs have adequate access to Internet through broadband Internet except for those in rural areas, and the majority of HEIs have a Local Area Network (LAN) on campus. Tajikistan National Research and Education Network (TARENA) provides various ICT-related services for Tajikistan's HEIs and research institutions based in Dushanbe and connects them between themselves and with those outside the country.

12. The MOES has instructed HEIs to discontinue existing correspondence programs and switch to distance education programs as part of the strategy to modernize education content, support and develop innovation in professional education and technologies, increase students' self-learning time, change the role of teachers from knowledge providers to learning process organizers, and migrate to the new standards of pedagogy built on a competency-based approach and module-based program with involvement from the required employers. As of early 2014, three universities have implemented distance education, led by a number of champions who have demonstrated their capacity and potential to lead the transition and the development and delivery of online learning courses.

13. Despite these initiatives, the sector faces some physical and technical challenges if it is to fully take advantage of ICT to provide high quality and relevant ICT education. Power shortages are one of the biggest challenges for ICT development in education. While the majority of HEIs meet the minimum bandwidth requirement of 1Mbps to offer and use online courses, students still feel the speed of Internet is not fast enough. TARENA has just doubled its global link to 156 Mbps in March 2014 and can provide HEIs with faster bandwidth, but the service will be limited only to Dushanbe. More access points are needed for students. The sector lacks localized software in Tajik language, ICT experts, guidance on how to use ICT, public funding, and cost optimization models for ICT investment. The use of Internet for research purposes is limited.

14. Four ICT-based solution models were piloted to explore potential solutions for challenges that Tajikistan's higher education sector faces. The pilot project witnessed that there is potential to use ICT more effectively to improve access, quality and relevance of higher education in Tajikistan. It also identified reforms required to realize this potential. In order to ensure accessibility of quality information resources and other materials used for distance education, the MOES and HEIs need to work together to develop a comprehensive regulatory framework for distance education in consultation with stakeholders. This includes setting up a quality assurance mechanism for distance education to assure that its quality equal to that of traditional face-to-face education. In addition, the development of

good quality local content available in Tajik or Russian language is essential to expanding distance education.

15. **Policy recommendations.** A number of important policy reforms have been identified as below.

Recommendation 1: Quality and Relevance Enhancement

- **Develop mechanisms to enhance a culture of quality at system and institutional levels.** The existing licensing, attestation and accreditation system is a quality control tool, which does not promote a culture of quality. Considering the HE context and culture in Tajikistan, quality enhancement at institutional level can succeed only if there is a robust external quality assurance system and internal support from the top and middle management, which encourages the development of an internal quality assurance system to drive positive outcomes. It is therefore of the utmost importance to revise the national quality assurance framework and tools and to streamline the existing quality assurance system and align it with the ESGs. It would be ideal to establish an independent national quality assurance agency, but if that is not feasible, it may be possible to strengthen the capacity of the existing State Agency on Supervision in the Sphere of Education under the MOES and transform its function in alignment with the ESGs.
- **Deregulate educational standards to allow HEIs to involve employers and stakeholders in developing programs which better respond to labor market demands.** Employers are willing and eager to collaborate with HEIs to improve the relevance of the higher education curriculum to meet their own needs. Liberalization and modernization of education standards to allow participation of employers and stakeholders in curriculum development is essential and likely to result in an immediate impact on the relevance of higher education and therefore the employability of higher education graduates.
- **Create incentives to attract young scholars.** The teaching workforce is rapidly aging and increasingly less qualified. HEIs are facing difficulties in attracting younger generations. HEIs should be allowed to create more flexible, performance-based salary scales to attract competent professionals. State funding for professional development opportunities could be an option to attract younger generations.

Recommendation 2: Governance

- **Revise the current approach to higher education governance to introduce a collegial approach through involvement of key stakeholders.** This could be done through introducing a governance model with a Governing Board at the apex of decision taking.
- **Build the capacity of administrators.** Build on the capacity of the top-level administrators to introduce strategic management linked to financial management and quality assurance.
- **Build the capacity of institutions.** Provide intensive capacity building at the level of departments, chairs and faculty members to ensure the study programs are constantly updated and are relevant to the market needs.
- **Introduce a robust incentive mechanism to ensure the faculty and administrative staff members feel they have stakes in system development and enhancement.** This could be done through introducing a differentiated approach to financial rewards as well as introducing reward and sanction mechanisms.
- **Involve stakeholders at different levels of higher education governance to promote the relevance of higher education to meet labor market needs.** The role of the Rectors' Council should be revised to lead system development and enhancement at the policy-making level and

set strategies for development. It is essential to involve and strengthen the capacity of various stakeholders, including Rectors' Council, National Student Association (to be established), employers, professional associations, and employers to ensure what is expected of each player.

- **Create a favorable regulatory framework for the private sector to collaborate with the state HEIs.** Increased private sector participation is likely to enhance competition and diversity, and also reduce burden on public funding for further expansion and quality improvement of the sector.

Recommendation 3: Access and Equity

- **Design effective student aid instruments to assist under-represented students with both living and tuition expenses and monitor instrument effectiveness.** In addition to the small number of Presidential quotas and targeted programs for disadvantaged students, the government could develop student aid instrument targeting under-represented students such as girls, the poor, and rural students.
- **Develop targeting criteria to provide stipends to the needy.** Stipends take up 30 percent of the state budget for higher education in total, which is no small amount. However, about 40 percent of higher education students come from the richest 20 percent consumption quintile, a group which is less likely to need stipends to support their living costs. Stipends should be targeted only at those who are in need of financial support.
- **Designing academic and social support mechanisms to address possible inadequate academic preparation and assist students with the transition to higher education.** The support mechanisms should provide various types of support because under-represented students are often less prepared not only for accessing higher education, but also completing higher education.
- **Enhance access to quality education for disadvantaged students by improving the quality of distance education.** About 30 percent of higher education students are enrolled in part-time correspondence programs, which tend to serve disadvantaged students in rural areas, working adults, and females. There already are successful distance education models introduced by a few HEIs. To support this reform and improve the quality of correspondence/distance education, the government and HEIs, in collaboration with stakeholders, need to create a comprehensive regulatory framework. Involvement of the private sector to improve curriculum and connectivity is essential. Providing course contents through TV is also one way to reach disadvantaged students in rural areas as they have access to TV.

Recommendation 4: Funding enhancement

- **Strategize the allocation of budget-seats to better respond to changing labor market demands.** Budget-seats have been distributed to HEIs and programs more or less according to historical allocations. The state funding should be spent more effectively to respond to state priorities and labor market demands.
- **Consider increasing the overall public funding for higher education, particularly for quality enhancement activities.** At present, most of public funding is spent on salaries and some other recurrent costs and there is little room to invest in quality.
- **Provide research funding for HEIs to foster research in HEIs.** Most HEIs are not engaged in research at all primarily due to a historical division where HEIs were teaching institutions and the Academy of Sciences were research institutions. However, modern HEIs cannot function

well without doing research. In particular, industrial research would benefit both HEIs and industries.

- **Review the tax policy on HEIs.** Currently, state HEIs are taxed 10 percent on their revenues, while private ones are taxed more. There is a need to review the tax policy to encourage HEIs to increase and diversify their revenues and encourage the private sector to invest in the sector.

16. **Outline.** The Introduction provides the background on higher education reforms in Tajikistan and the rationale for this study. Chapter 1 presents an overview of the higher education system. Chapter 2 outlines the system-wide governance framework for Tajikistan's higher education. It examines the regulatory framework governing higher education, system-level and institutional-level governance, stakeholders' participation, and corruption. Chapter 3 reviews international trends in quality assurance as a benchmark for Tajikistan and examines Tajikistan's existing quality assurance system. Chapter 4 analyzes the higher education financing model in Tajikistan. Chapter 5 assesses the feasibility of using Information and Communication Technologies to improve access, quality, and relevance of higher education in Tajikistan. It also presents the results of an innovative pilot project to apply ICT-based solutions for higher education challenges. Chapter 6 concludes with a summary of findings and policy recommendations.

Introduction

1. While at the lowest level of economic development in the Europe and Central Asia region, Tajikistan's economy grew steadily throughout the last decade, considerably reducing poverty. GDP per capita grew by 6 percent on average during 2000-2011, reaching USD 935 in 2013. Growth was accompanied by a significant reduction in poverty and good performance in terms of shared prosperity. The absolute poverty rate dropped from 81 percent in 1999 to 47 percent in 2009, whereas the extreme poverty rate declined even more rapidly from 73 percent to 14 percent (Figure 1). The benefits of economic growth were widely shared by the population. The real consumption growth of all households and that of the bottom 40 percent—a measurement of shared prosperity adopted by the World Bank—were almost identical (Figure 2). Despite these remarkable achievements, growth was not accompanied by adequate job creation, reduced vulnerability, or a reduced urban-rural poverty gap. Today, poverty still remains very high, and its reduction, along with improved living standards, is Tajikistan's utmost important goal, as stated in the *National Development Strategy up to 2015*.¹

Figure 1: Poverty rates have continued dropping since the late 1990s in Tajikistan, 1999-2009

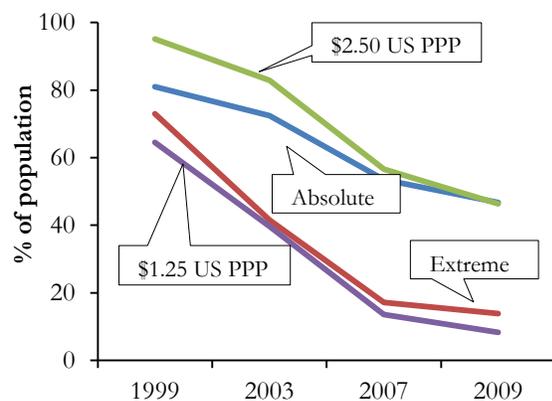
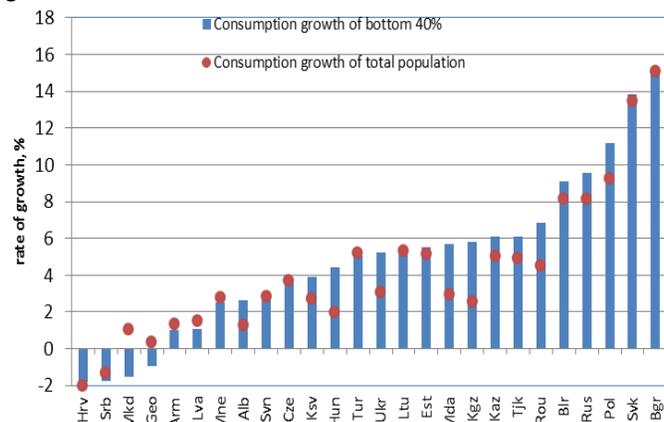


Figure 2: Tajikistan has equitably shared the benefits of economic growth in the last decade.



Sources: Agency on Statistics under the President of the Republic of Tajikistan and World Bank Staff calculation based on ECAPOV; World Bank, *Tajikistan Creating Opportunity: Country Partnership Framework FY15-18, Concept Note*, October 23, 2013, PowerPoint presentation.

2. The government has a clear vision for the future of higher education as a tool for human capital formation to boost economic growth in a changing world. To date, the government has focused on the development of basic education to provide universal access to good quality basic education. While basic and secondary general education reforms remain important, the government has also begun reforming higher education in parallel, which is essential to strengthening human capital for further economic development. In the *National Strategy for Education Development Up To 2020*, approved in July 2012, the government identified modernization and restructuring of the education system to ensure access to quality education for citizens as a priority goal. For higher and vocational education, the Strategy aims to modernize the existing contents towards more professionally-oriented skills to better meet labor market demand and to build Tajikistan's capacity. It also aims to reform educational standards based on a competency-based approach, with active participation of employers, thus modernizing curricula through modularization. The

¹ The World Bank Group – Tajikistan Partnership Program Snapshot, October 2013.

government is committed to facilitating the process which requires close collaboration with employers and other stakeholders. The Strategy also aims to use information and communication technology to increase access to and improve the quality of learning materials. In this model, the role of teachers will be changed from transmitting knowledge to guiding educational activities. Hence, the government has a clear vision for the future of higher education as a tool for human capital formation to boost economic growth in a changing world.

3. With a view to developing the higher education system and integrating into the European Higher Education Area, the government is currently focusing on joining the Bologna Declaration. Tajikistan aims to join the European Higher Education Area (EHEA), which was launched alongside the Bologna Process' 10-year anniversary in March 2010, in order to identify synergies among higher education in Europe and to ensure more comparable, compatible and coherent systems. Tajikistan's neighboring country, Kazakhstan, is the latest member of the EHEA. To join the EHEA, Tajikistan has to implement measures leading to recognition of qualifications, and tripartite systems and guidelines including the European Credit Transfer and Accumulation System (ECTS).² While the government began undertaking some of these reforms, such as adoption of a three-tier education system and implementation of the ECTS in 2007, major reforms such as an establishment of a credible quality assurance system and national qualifications framework, are yet to be developed, adopted and operationalized. Thus, a major overhaul of the higher education system, especially with regard to higher education governance, quality assurance, teaching, learning and student assessment, is still to be undertaken. This study, among other things, has identified a number of reform needs as follows:

- Establishing a new **legal framework**, balancing **university autonomy** and **accountability**;
- Developing a **culture of quality**, including **internal and external quality assurance mechanisms**;
- Ensuring **equitable access** to higher education;
- Ensuring the necessary **resources** for quality education provision;
- Fighting **corruption**, which has exacerbated by poor **governance** and **management** approaches to higher education;
- Building the **capacity of higher education institutions (HEIs)** in
 - o institutional management
 - o internal quality assurance mechanisms
 - o relevance of academic programs to labor market demand (e.g. modernization of curricula, an approaches to teaching based on learning outcomes, learning and student assessment, alternative methods of education such as distance learning, and offering joint and double diplomas)
 - o professional development and evaluation of faculty; and
- Enriching **international relations**.

² The European Quality Assurance Register for Higher Education (EQAR) is just a register and does not have either guidelines or standards. If an agency undergoes external evaluation against the European Standards and Guidelines, then it can be considered for inclusion into EQAR.

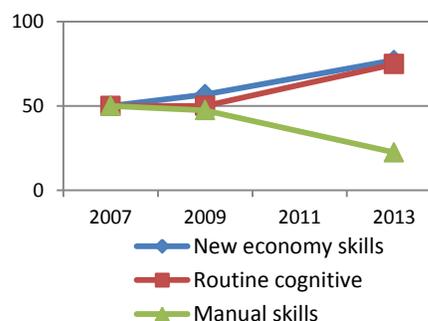
Why Higher Education Reforms in Tajikistan?³

4. The benefits of higher education are diverse regardless of the level of economic development. A recent rigorous literature review of the impact of tertiary education (TE) (university and colleges) on low- and lower-middle income countries found that: (i) "the returns to TE have been underestimated.... TE may provide greater impact on economic growth than lower levels of education. However, all levels of education are interdependent and must be addressed holistically"; and (ii) TE provides a range of broader, measurable benefits to graduates, relating to health, gender equality and democracy, among other areas. In addition, it contributes to the strengthening of institutions, and the forming of professionals in key areas, such as education and healthcare. The diverse functions of the university, in addition to its direct impact on economic growth, should be acknowledged and supported."⁴

5. **Globally, there is an increasing demand for a workforce with "new economy skills"; Tajikistan is no exception.** Rapid developments in technology, business organization, and trade have led to significant changes in the key competencies needed in dynamic labor markets worldwide. Figure 3, illustrating the changes in skills intensity of jobs between 2007 and 2013, suggests that this global trend for increasing demand for new economic skills is observed in Tajikistan as well.

Particularly after 2009, the demand for new economy skills such as a high degree of analytical and interpersonal skills and routine cognitive skills (often in manufacturing and service jobs) has increased, while the demand for routine manual skills (often in low productivity agriculture and retail services) has declined. In the modern sector (*i.e.* industry and services) where an increasing number of jobs are available in Tajikistan, the probability of employment becomes significantly higher for individuals with better cognitive and non-cognitive skill sets.

Figure 3: Evolution of skill intensity in Tajikistan reveals an increase in "new economy" skills, 2007-2013



Source: World Bank, 2014, *The Skills Road: Jobs and Skills in Tajikistan* (draft).

6. **The majority of over- and under-qualifications across different education levels is a result of acute job mismatching due to limited job market information, as well as skills shortages.** In Tajikistan, 33 percent of university-graduates and 25 percent of college-graduates find themselves over-qualified, in that their qualifications are a level higher than those required for the job. This proportion is higher than in all but two EU-27 countries, but lower than the Kyrgyz Republic and Uzbekistan. However, this does not mean that Tajikistan does not need more highly educated and skilled workers. For instance, 7 percent of college-graduates and 16 percent of general secondary graduates find themselves under-qualified for their jobs. Also, the overwhelming majority of survey respondents face difficulties demonstrating their qualifications to an employer (81 percent) or feel that they do not possess adequate qualifications in the first place (77

³ Data in this section are primarily drawn from World Bank, 2014, *The Skills Road: Job and Skills in Tajikistan* (draft). The study presents findings based on an innovative household survey on skills and employment conducted by World Bank/GIZ in 2013. It investigates whether the education system is building the skills needed in the labor market by looking into basic labor market outcomes, qualification mismatches in the labor market, job search methods, the evolution of the labor market demand for skills, the returns to education, the importance of cognitive and non-cognitive skills for labor market outcomes, and the use of skills in jobs.

⁴ Oketch, M., McCowan, T., & Schendel, R., 2014, *The Impact of Tertiary Education on Development: A Rigorous Literature Review*. Department for International Development.

percent). Indeed, one third (34 percent) of all firms in Tajikistan identifies an inadequately educated workforce as a major constraint.⁵

7. **University and college-educated individuals are more likely to find a stable job in the formal sector, earn higher incomes, and are less likely to be unemployed or poor.** The Jobs and Skills Report also shows that labor market outcomes for university and college graduates have improved in the last ten years, compared to those less educated. The more educated individuals are, the more likely they are to find a job in the public sector or a large private firm with better job security and various social protection benefits. The study found that numeracy and memory scores (cognitive skills) are associated with higher probability of being employed in a formal sector and that there is a correlation between educational attainment and skills level. From employees' point of view, whereas 67 percent of university graduates find their education "very useful" for their jobs, only 48 percent of college graduates (secondary technical and special), 14 percent of general secondary graduates (grade 11) and 9 percent of individuals with less than secondary education find their education "very useful". Lower levels of education alone are clearly insufficient for many jobs.

8. **While schooling helps improve skills, and hence employment prospects, the correlation between educational attainment and cognitive and non-cognitive skills level is weaker in Tajikistan, compared to more developed countries.** Skills are formed throughout life, but the optimal timing for skills acquisition varies for different types of skills. While technical skills can be acquired at later stages of life, cognitive skills (e.g. logical and creative thinking, problem solving ability, numeracy and literacy) and non-cognitive skills (e.g. inter-personal skills, openness, conscientiousness, and decision-making) are mostly formed at earlier stages. There are strong indications that the foundations of an individual's intelligence are well established by ages 8-10 (Heckman and Cunha, 2010; Heckman 1996, 2004). While the authors of the Jobs and Skills Report point to the possibility of measurement errors for the weak correlation between educational attainment and skills level in Tajikistan, the report may suggest two important policy implications. First, Tajik children have limited access to early childhood development and preschool education, with the preschool enrollment rate at around 9 percent for 3-6 year olds. Many young students who have missed the opportunity to build a strong skill foundation at early stages of their lives may not be able to learn as much as they would have throughout later schooling, compared with those who have built stronger foundations at earlier stages. Second, due to the generally weak general education system, value added through each year of schooling might be limited, resulting in a weaker signaling function of educational qualifications for actual skills. Also, the considerable heterogeneity in cognitive ability within each education level in Tajikistan seems to suggest that schooling alone is not the primary factor for skills formation.

9. **Given the importance of higher education for individuals in obtaining higher-level skills and hence better job prospects, and for the country in growing the economy and reducing poverty, this study focuses on an analysis of the higher education sector, which finds itself in a dire situation following a long period of neglect.** Skills formation occurs throughout ones' life-cycle. Consequently, for Tajikistan to continue building human capital, growing and reducing poverty, the government must continue investing in the entire education system from preschool to higher education and beyond. The role of schooling is to provide students with opportunities to acquire skills that are demanded in the rapidly changing labor market. In this regard, higher education is not the only sub-sector which requires reform. However, as the Jobs and Skills Report suggests, higher education gives higher-level technical skills, and hence, better job prospects and living conditions. A highly skilled workforce would also contribute to economic growth. Hence, this study focuses on analyzing higher education reform needs in Tajikistan.

⁵ Original data (only for the employer's opinions) from World Bank Enterprise Survey, 2008.

Objectives

10. **This Economic and Sector Work's (ESW) objective is to analyze efficiency, equity, and effectiveness of higher education in Tajikistan and to identify priority policy reform areas to enhance the quality and relevance of higher education for labor market demands.** It is aligned with the objectives of the recently approved Country Partnership Strategy's (CPS) FY15-18 that support three broad areas of engagement or pillars: (i) private sector-led growth; (ii) social inclusion; and (iii) regional connectivity. First, the ESW addresses inequity in access to higher education, which is an essential investment for economic growth and poverty reduction, and discusses potential interventions to improve access to higher education, particularly among the poor and disadvantaged. Second, it explores the feasibility of using information and communication technologies to connect Tajikistan's higher education institutions to the world and to enable young people and higher education institutions to acquire global information and knowledge. Third, it examines the potential and interest among the private sector to collaborate with higher education institutions to improve the relevance of education and training. Fourth, the ESW analyzes the existing frameworks for higher education governance and quality assurance, and identifies priority reform areas to improve its governance for better performance.

Key Messages

11. Higher education reforms in Tajikistan are still nascent and the challenges are enormous. However, the study observed a group of committed reformers in higher education institutions, stakeholders in education, learning communities as well as employers. Demand for improved quality and relevance of higher education is high. Top-down and bottom-up reforms need to take place simultaneously. In a society where the government has been the central authority in setting education policies and guiding the implementation of policies and regulations, bottom-up initiatives alone cannot change the system. The government needs to lead the reforms. At the same time, it is ultimately higher education institutions which need to be accountable for their services, and society and employers who need to demand high quality services from the former. This study suggests priority reforms for the government's consideration.

Methodology

12. A mixed method approach to data collection, involving qualitative and quantitative aspects of the system, has been applied to get a better insight on the forces extant in the system. Slightly different methods were used for different chapters.

13. Chapter 1 on the Overview of performance of the higher education sector and Chapter 4 on Financing were analyzed primarily based on quantitative data and document reviews.

14. Chapter 2 on Governance and Chapter 3 on Quality Assurance used additional methods, including:

- Questionnaire to 20 representative HEIs which looks at the overall profile of HEIs with regard to admission policies, human resource management, governance, quality assurance and relevance, internationalization, research and student involvement; financial management and ICT;
- Interviews with officials of the Ministry of Education and Science, Ministry of Economy, Development and Trade, with the director of the State Agency on Supervision in Sphere of Education, external experts conducting quality assurance measures at HEIs, students, employers

and respective international organizations that deal with enhancement of QA–Open Society Institute (OSI);

- Focus groups with HEIs quality assurance officers;
- Meetings and discussions with HEIs to further discuss potentials for establishment of quality practices.

15. All the interviews, focus groups, discussions and meetings have been transcribed for further analysis. The transcripts of the meetings are available upon request. As for the language, all official documents had non-official translations. Most of them were not available either in English or in Russian, and the team relied on a member of the team with country expertise to identify relevant sections of essential documents for translation. Undoubtedly, the non-availability of the majority of documents in English or Russian caused extra barriers in the exploration process and took extra efforts to better understand the context. However, similarities in the educational systems that former socialist countries have were of utmost use in interpreting most of the approaches. All the meetings, focus groups, interviews and discussions were conducted in Russian; however, the transcripts were produced in English. A background paper on Quality Assurance is attached as Attachment 1.

16. For Chapter 5 on Using ICT to Improve Access, Quality, and Relevance of Higher Education, a series of workshops and hands-on support were provided to higher education institutions (HEIs) and ICT-related non-governmental organizations who voluntarily participated in an innovative pilot project to test proposed ICT-based solutions to tackle issues that the higher education sector faces. In addition, a small-scale survey of students, teachers, HEIs and the private sector was conducted as a part of the pilot project. A background paper is attached as Attachment 2.

Outline

17. The Introduction provides background on higher education reforms in Tajikistan and the rationale for this study. Chapter 1 presents an overview of the higher education system. Chapter 2 outlines the system-wide governance framework for Tajikistan’s higher education system. It examines the regulatory framework governing higher education, system-level and institutional-level governance, stakeholders’ participation, and corruption. Chapter 3 reviews international trends in quality assurance as a benchmark for Tajikistan and examines Tajikistan’s existing quality assurance system. Chapter 4 analyzes the higher education financing model in Tajikistan. Chapter 5 assesses the feasibility of using Information and Communication Technologies to improve access, quality, and relevance of higher education in Tajikistan. It also presents the results of an innovative pilot project to apply ICT-based solutions for higher education challenges. Chapter 6 concludes with a summary of findings and policy recommendations.

Chapter 1: Overview and performance of the higher education system

1.1 Education system

18. More than two million students - a quarter of Tajikistan's eight million population - are enrolled in Tajikistan's education system (Table 1). Compulsory basic education constitutes four years of primary and five years of lower secondary. For post-basic education, students may enroll in two years of general secondary education, 1-3 years of primary vocational education, or 1-4 years of secondary vocational education. After general secondary education, students may proceed to university or secondary vocational education (colleges) (Figure 4). Although the pathways from primary and secondary vocational education to higher education are not completely closed, in reality, once students are tracked into vocational education, few students continue onto higher education.

Table 1: Education system in Tajikistan, 2012-2013^{1/}

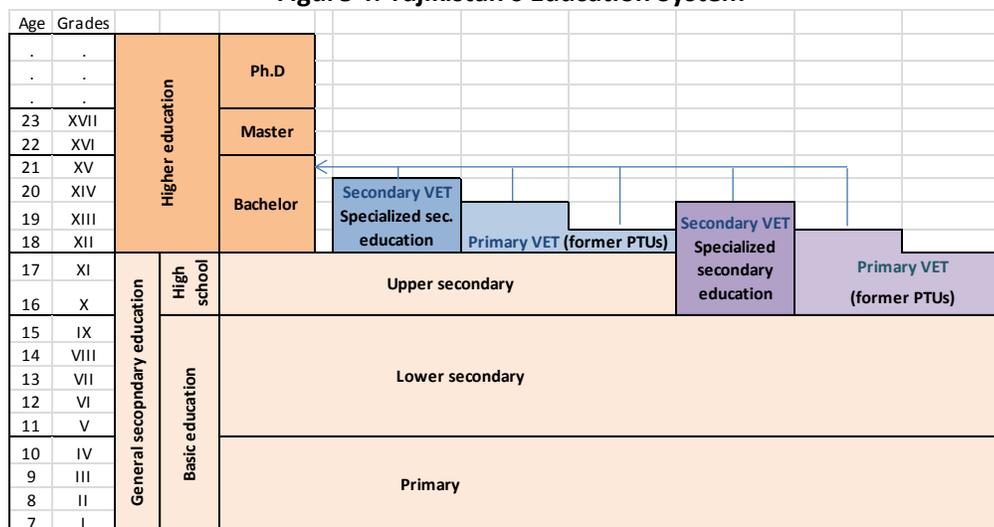
Education level	No. of students	%	No. of schools
Preschool (3-6 year olds)			
Kindergartens	74,500	4	508
Early learning centers	14,860	1	707
General education	1,712,900	85	3,813 ^{2/}
Professional technical educational institutions	23,238	1	67
Secondary professional	42,800	2	50
Higher education	150,100	7	34
Total	2,002,229	100.0	5,144

Sources: The Statistical Agency under President of the Republic of Tajikistan (<http://www.stat.tj/english/home.htm>); and the Ministry of Education for ELC (for 2012-2013).

Notes: ^{1/} The table includes private schools which consist of only around one percent of general as well as primary and secondary professional education. There is only one private university.

^{2/} It consists of 528 primary schools (grades 1-4), 682 basic schools (grades 1-9), 2,584 complete secondary school (grades 1-11), and 19 special needs and evening schools. These are not shown above because the types of school and grade level of students do not match with each other.

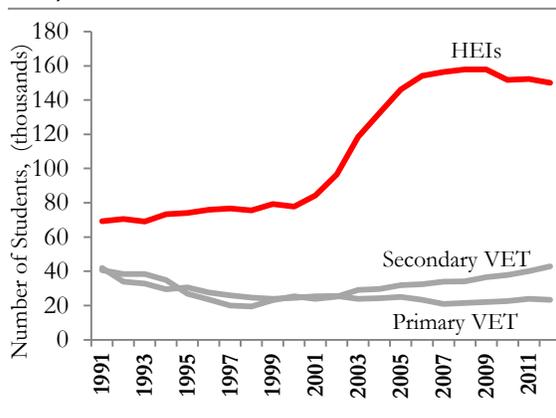
Figure 4: Tajikistan's Education System



Source: World Bank, 2013, *Tajikistan Policy Notes on Public Expenditures, Policy Note No. 3, Review of Public Expenditures on Education*.

1.2 Access to Higher Education

Figure 5: Number of students at primary VET level and above, 2000-2012



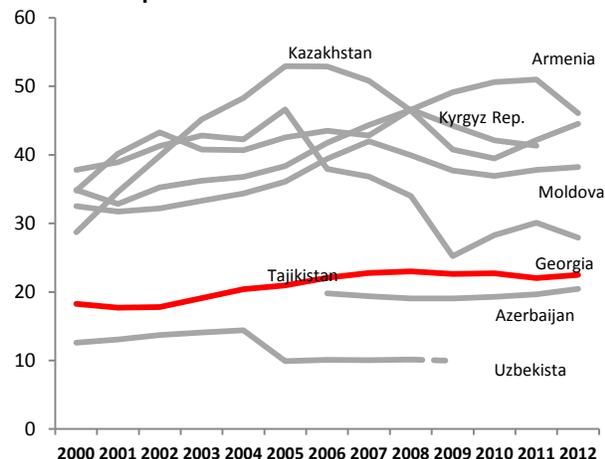
Source: TajStat, <http://www.stat.tj/en/database/socio-demographic-sector> (extracted March 1, 2014).

primary vocational education has gradually lost its popularity, while enrollments in secondary vocational education have been steadily increasing.

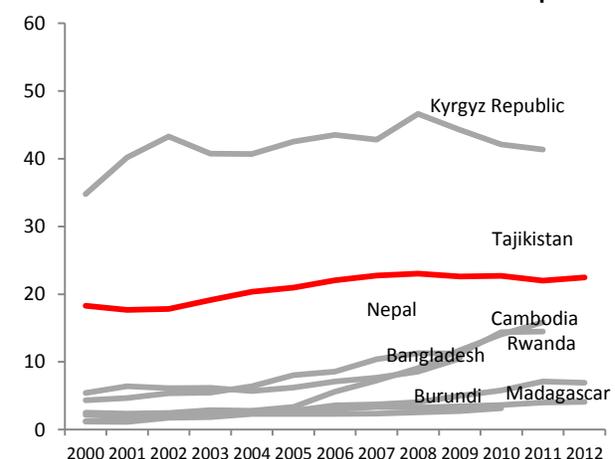
20. While Tajikistan's tertiary enrollment rate (including university and college education) of 22 percent (Figure 6) ranks among the lowest in education systems in Europe and Central Asia (ECA), it is higher than countries at a similar level of economic development.

Figure 6: Gross enrollment rates for tertiary education (ISCED 5 and 6), 2000-2012

a. ECA comparator countries



b. Countries at similar level of economic development

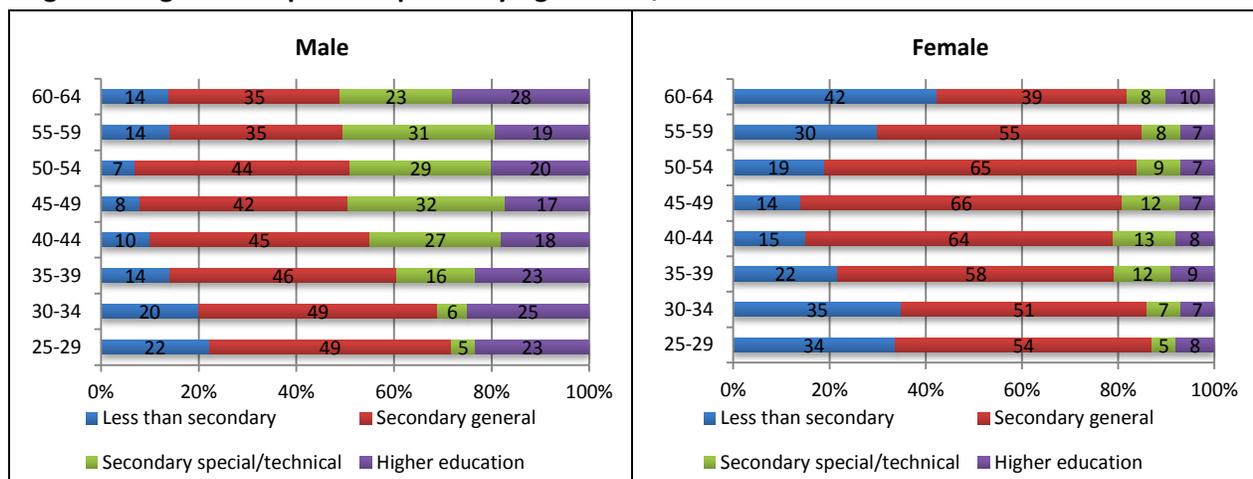


Source: World Bank, Edstats.

⁶ TAJSTAT.

21. **It is alarming that a lower proportion of young people have attained post-secondary education than in previous generations.** Figure 7 illustrates the highest completed diploma by age cohort and gender. The statistics are alarming. Compared to older generations, a slightly higher proportion of younger males and about the same proportion of younger females have attained higher education, but a significantly lower proportion of young people—both males and females—have attained college-level education (secondary technical and special education). In other words, a much higher proportion of young people - both males and females - below 34 years have attained only general secondary or basic education. Part of this deterioration is explained by growing international labor migration right after basic or general secondary: more than one in three men aged 20-39 in Tajik households are currently abroad, while this share is considerably lower among women.⁷

Figure 7: Highest Completed Diploma by Age Cohort, 2013



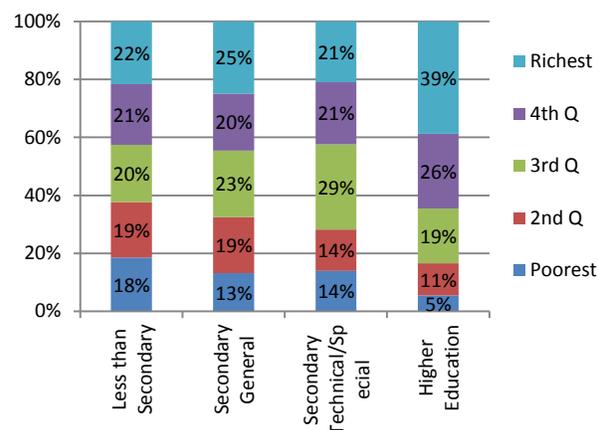
Source: World Bank, 2014, *The Skills Road: Skills for Employability in Tajikistan* (Decision Draft).

1.3 Equity

22. **Equal access to education is guaranteed under the Constitution and Law on Education, but in reality, access to quality education varies between urban and rural areas.** A recent survey of 2,000 households found that satisfaction with the quality of education is very low in general, but significantly lower in rural areas: only 19 percent of households were satisfied or fully satisfied with the quality in rural areas, compared to roughly 33 percent of urban peers.⁸

23. **Access to higher levels of education is inequitable between different income levels: the poor have limited access to higher education.** Access to basic education is more or less equitable with some variations between different income

Figure 8: Distribution of enrolled students across consumption quintiles, by education level



Source: World Bank, 2014, *The Skills Road: Skills for Employability in Tajikistan* (Decision Draft).

⁷ World Bank, 2014, *The Skills Road: Skills for Employability in Tajikistan* (Decision Draft).

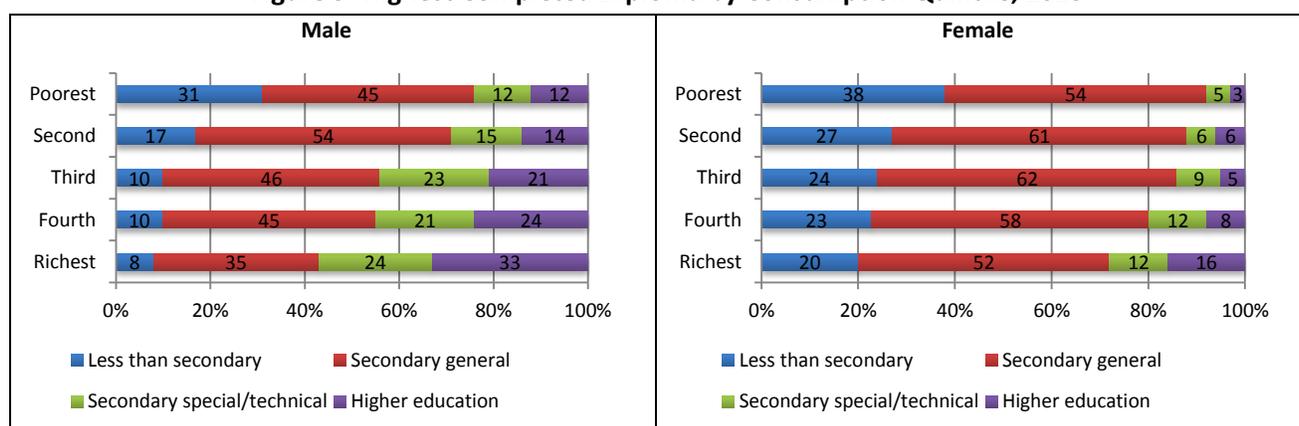
⁸ Tajikistan 2012 Development Forum, Presentation by Development Coordination Council (DCC), December, 2012

levels. Inequity in access widens for higher levels of education, particularly higher education (Figure 8). Whereas two-thirds (65 percent) of higher education students come from the top 40 percent of households, only 16 are from the bottom 40 percent.

24. **Girls’ access to higher education is significantly lower than boys’.** The *Global Gender Gap Report* indicates that the gender gap among those enrolled in higher education is closing, but remains significant. While there was virtually universal enrollment and near gender parity at the primary level in 2011, only 82 percent of girls attended secondary school compared to 94 percent of boys, and 16 of girls attended tertiary education, compared to 31 percent of boys. While a wide gender gap persists in tertiary attainment, the female-to-male gender gap has narrowed somewhat from 0.4 in 2010 to 0.52 in 2013, but is higher in rural areas.⁹ In addition, areas of study are severely gender-segregated, with most girls remaining in fields commonly associated with women’s traditional roles in society, such as education, health, and social services, with only a few entering scientific or technical faculties.¹⁰

25. **Access to higher education varies considerably by income level.** Figure 9 shows the highest completed diploma for the entire population by consumption quintile and gender. The completion rate for higher education is almost three times higher among men belonging to households in the highest per capita consumption quintile (33 percent), compared to men belonging to the lowest quintile (12 percent). The rates for women show a similarly wide gap, at much lower levels with 16 percent and 3 percent, respectively.

Figure 9: Highest Completed Diploma by Consumption Quintile, 2013



Source: World Bank, 2014, *The Skills Road: Skills for Employability in Tajikistan (Decision Draft)*.

1.4 Sector Performance

Trends in the Higher Education Sector

26. **There are three types of HEIs, universities, academies and institutes in Tajikistan.** Universities provide higher education in a wide range of specialties and carry out fundamental and applied research. Academies concentrate on a limited number of fields, in which they offer programs and conduct research. Institutes deliver education in one or several fields. Universities and academies offer Bachelors (workload of not less than four years), Masters (workload of not less than two years), and Specialist degrees (workload of

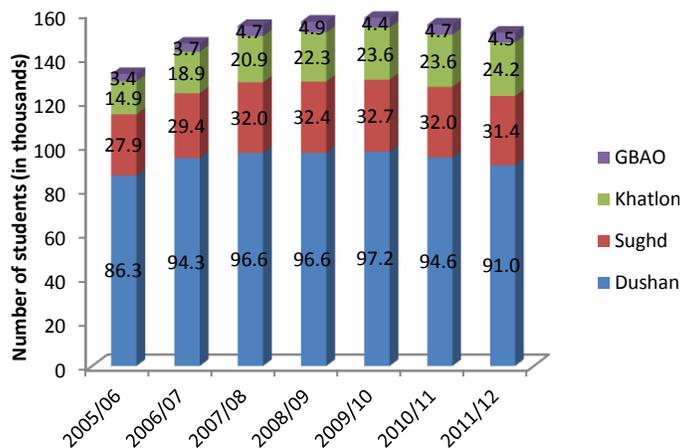
⁹ World Economic Forum, *Global Gender Gap Report, 2012*.

¹⁰ Information in this section draws from the draft World Bank/IFC Country Partnership Strategy, Tajikistan Country Partnership Strategy (FY 2015-2018), March 26, 2014

not less than five years), whereas institutes offer only Bachelor and Specialist degrees. Recently, alternative doctoral programs leading to the academic degree of Ph.D. have been introduced.¹¹ As of 2012/13, there are 35 HEIs in total, consisting of 13 universities, 12 institutes, 5 branches of universities (of which two are

branches of Russian HEIs), one conservatory, and four HEIs of law enforcement (military, police, internal affairs). Only one of the institutes is private.

Figure 10: Number of students by region, 2005/06-2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

27. The rapid growth of the higher education sector since the beginning of 2000s has stabilized in recent years.

Since 2005/06, the number of HEIs has stabilized at around 35, whereas the number of students peaked in 2009/10 and slightly declined in recent years (Figure 10). Dushanbe and RRS where 9.6 percent and 22.9 percent of the population, respectively, live¹² have attracted the largest student population of around 90,000-97,000 students (62 percent) and with a slight decline after 2009/10. Sughd is the second largest

region in terms of the number of students and has hosted around 30,000-33,000 students. Khatlon and GBAO enroll smaller numbers, but they have grown considerably since 2005/06.

28. The proportion of full-time students has been gradually increasing up to 68 percent in total, with wide variations between regions.

Not only in absolute terms, but also proportionally, the number full-time students has been gradually growing since 2005/06 (Figure 11). The trend is the opposite for part-time correspondence students. Between 2008/09 and 2011/12, the number of part-time students dropped by 22 percent, to the level of 2005/06. The proportion of full-time and part-time students varies widely between regions. In Dushanbe and GBAO, 72 percent and 74 percent of students are enrolled in full-time programs, respectively, while only 60 percent are in Khatlon (Figure 12).

¹¹ Until recently, higher education in Tajikistan did not offer postgraduate opportunities in Tajikistan, including candidate of science and doctor of science, and the defense took place at international HEIs, mostly in the Russian Federation. The latter was organized through *aspirantura* which offers a degree of Candidate of Science (*Kandidat Nauk*), followed by *doctorantura* which offers a doctoral degree leading to Doctor of Science (*Doctor Nauk*).

¹² TAJSTAT, Number of constant population, 1998-2012 (<http://www.stat.tj/en/database/socio-demographic-sector/>).

Figure 11: Distribution of full-time and part-time students, 2005/06-2011/12

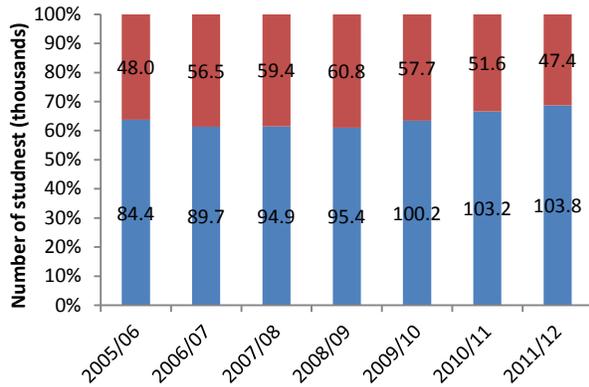
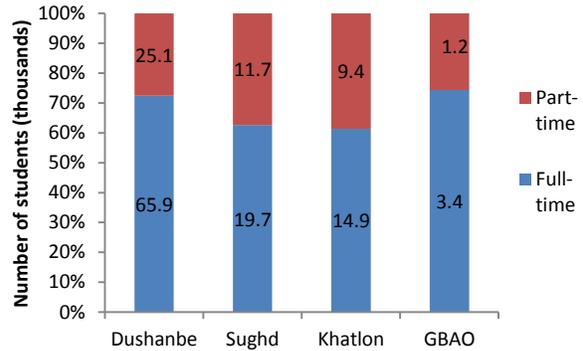
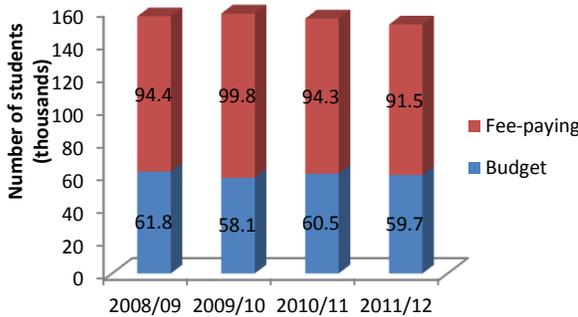


Figure 12: Distribution of full-time and part-time students by region, 2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Figure 13: Distribution of budget and fee-paying students (2005-2012)



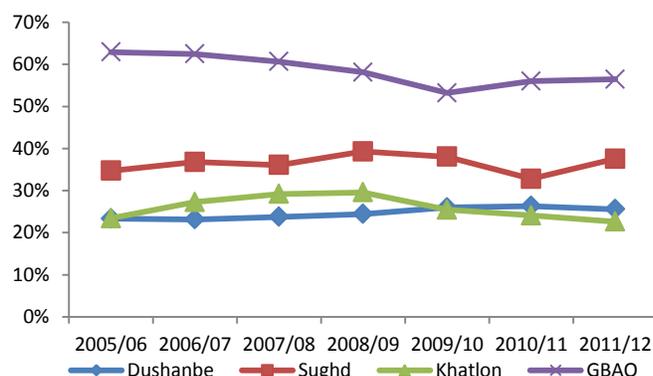
Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

29. In recent years, the government has financed about 40 percent of higher education students from its budget. After the early 2000s, the government could not keep up with the growing demand for higher education. As a result, the proportion of fee-paying students grew rapidly. Today, 60 percent of higher education students self-finance their education (Figure 13).

30. Females make up around 27-30 percent of higher education enrollments in the last several years; they are more likely to be part-time correspondence students and located outside Dushanbe. In 2011/12, females consisted of 23 percent of full-time students, while 41 percent of part-time students. In terms of

geographic locations, on average between 2005/06 and 2011/12, females consisted of 58 percent of the students in GBAO, 36 percent in Sughd, 26 percent in Khatlon, and 25 percent in Dushanbe (Figure 14).

Figure 14: Percentage of female students by region, 2005/06-2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Faculty

31. **The overall quality of faculty - in terms of qualifications - has been declining as fewer and fewer new teachers have advanced qualifications.** In 2005/06, 54 percent of teachers with a scientific degree were over 50 years old. By 2009/10, that proportion became 60 percent (Table 2). In addition, the average faculty age was 64 years in 2009/10.

Table 2: Age Distribution of higher education teachers with a scientific degree, 2005/06-2009/10

Ages	2005-06		2006-07		2007-08		2008-09		2009-10	
<30	94	3%	71	3%	61	3%	64	3%	66	3%
30-50	1,132	42%	854	38%	781	37%	839	37%	852	37%
50-70	1,197	44%	1,077	48%	1,067	50%	1,103	49%	1,132	49%
>70	281	10%	233	10%	226	11%	260	11%	266	11%
Total	2,704	100%	2,235	100%	2,135	100%	2,266	100%	2,316	100%

Source: Ministry of Education, 2010, *Statistical Collection of the Republic of Tajikistan 2009-2010*.

Higher Education Institutions

32. **Compared to overall trends in the higher education sector, there are wide variations across HEIs in terms of their size and enrollment patterns.** Table 3 shows a list of higher education institutions with enrollment data. Of the 35 HEIs, 22 (63 percent) are located in Dushanbe, only one in Gorno-Badakhshan Autonomous Region (GBAO), five in the Khatlon region, six in the Sughd region, and one in the Region of Republican Subordination (RRS).

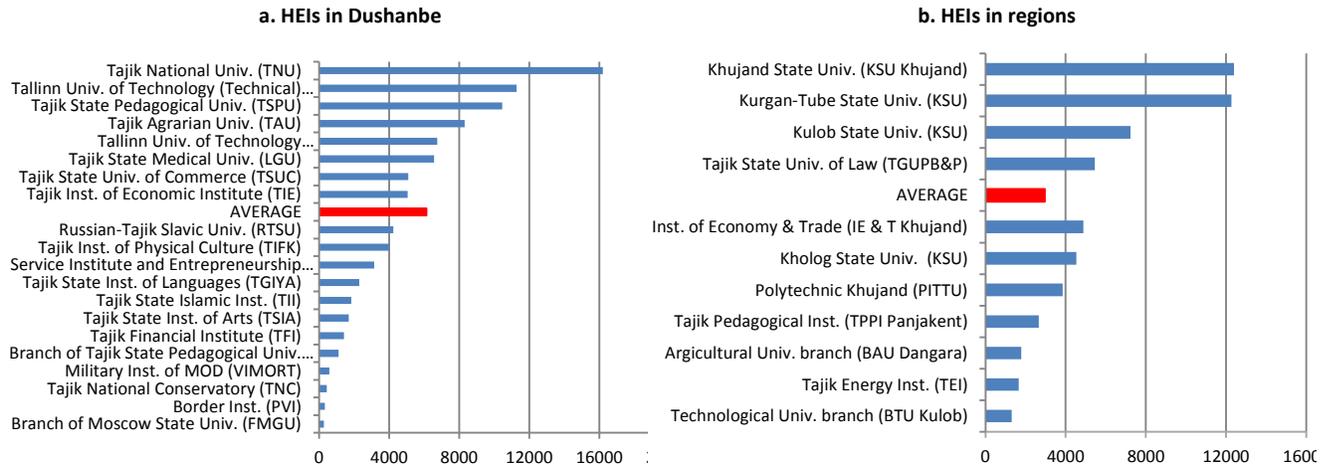
Table 3: A list of higher education institutions

Dushanbe	Abbre	Enrollment
Tajik National Conservatory	(TNC)	423
Tajik State Inst. of Arts	(TSIA)	1,690
Military Inst. of MOD	(VIMORT)	572
Branch of Moscow State Univ.	(FMGU)	264
Tajik State Medical Univ.	(LGU)	6,562
Tajik Financial Institute	(TFI)	1,406
Tajik Agrarian Univ.	(TAU)	8,302
Tajik State Inst. of Languages	(TGIYA)	2,293
Russian-Tajik Slavic Univ.	(RTSU)	4,223
Tajik National Univ.	(TNU)	16,195
Tajik State Islamic Inst.	(TII)	1,833
Border Inst.	(PVI)	324
Service Institute and Entrepreneurship	(ISP)	3,134
Tajik State Univ. of Commerce	(TSUC)	5,077
Tallinn Univ. of Technology (Technical)	(TTU)	11,270
Tajik Inst. of Physical Culture	(TIFK)	4,000
Tajik State Pedagogical Univ.	(TSPU)	10,441
Branch of Tajik State Pedagogical Univ.	(FTGPU)	1,109
Tajik Inst. of Economic Institute	(TIE)	5,039
Tallinn Univ. of Technology (Technological)	(TUT)	6730
Regions		
Khatlon		
Technological Univ. branch	(BTU Kulob)	1,310
Agricultural Univ. branch	(BAU Dangara)	1,781
Tajik Energy Inst.	(TEI)	1,663
Kulob State Univ.	(KSU)	7,225
Kurgan-Tube State Univ.	(KSU)	12,269
Sughd		
Khujand State Univ.	(KSU Khujand)	12,394
Tajik State Univ. of Law	(TGUPB&P)	5,447
Tajik Pedagogical Inst.	(TPPI Panjakent)	2,656
Inst. of Economy & Trade	(IE & T Khujand)	4,880
Polytechnic Khujand	(PITTU)	3,854
GBAO		
Kholog State Univ.	(KSU)	4,528

Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

33. **Tajik HEIs are not generally small.** Five HEIs - three in Dushanbe and two in regions - enroll more than 10,000 students, with an average enrollment of 5,600 in Dushanbe and 5,300 in regions. Smaller ones are generally specialized institutes and branches of universities (Figure 15).

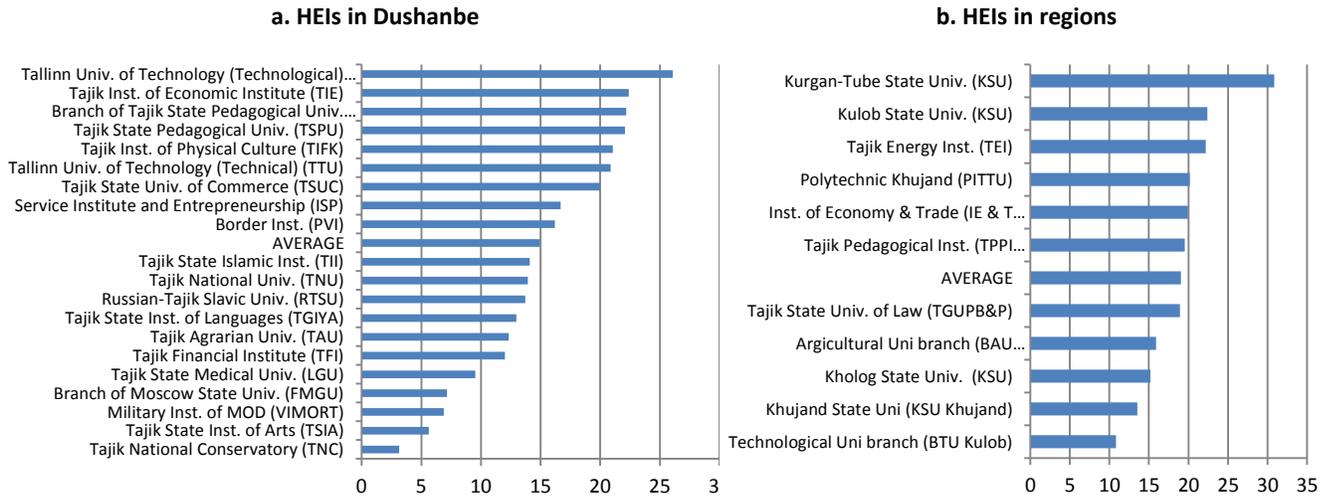
Figure 15: Number of students per HEI in Dushanbe and regions, 2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

34. **The student teacher ratio is relatively high, compared to international standards.** As seen from the Figure 16, the student teacher ratio (STR) is on average 15 in Dushanbe and 19 in regions. However, the ratio varies widely within each group: it ranges from 3.1 for the Tajik National Conservatory to 26.1 for the Tajik Technological University in Dushanbe; and in regions, from 10.8 for the Kulyab State University in Khatlon to 30.8 for the Khurgan-Tube State University in Khatlon. More specifically, specialized institutes and branches of universities tend to have smaller STRs, while typical universities have higher STRs with many above 20, which is much higher than the OECD average of 15.7.¹³

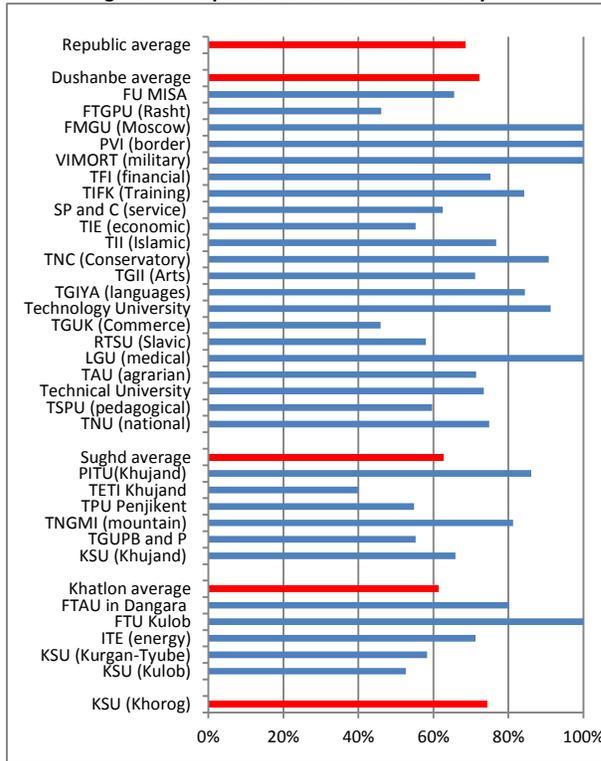
Figure 16: Student Teacher Ratio by HEI



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

¹³ For tertiary type-A and advanced research programs (Source: OECD, Education At a Glance, 2013, Table D2.2).

Figure 17: Proportion of full-time students by HEI



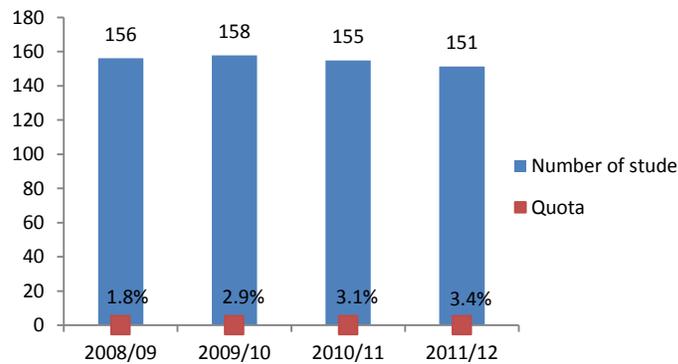
Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

35. **On average, 69 percent of students are enrolled in full-time day programs.** While almost all HEIs offer both full-time and part-time programs, the proportion varies between HEIs. In terms of regions, 74 percent of students in GBAO are enrolled in full-time programs, 72 percent in Dushanbe, 63 percent in Sughd, and 61 percent in Khatlon. The proportion further widens between HEIs. In three HEIs, the majority is enrolled in part-time programs (Figure 17).

36. **Out of 28,038 new graduates from full-time programs in 2011/12, 88 percent received a specialist diploma and 12 percent a bachelor's degree, while 99 percent of graduates from correspondence programs received a specialist diploma and only one percent a bachelor's degree.** In Tajikistan, Bachelor's degrees are awarded to graduates of a 4-year full-time program in compliance with the Bologna requirements, while Specialist diplomas are awarded to graduates of a 5-year full-time program (or a 6-year part-time program) that have not transitioned to BA

programs in line with the Bologna requirements.¹⁴ This suggests that the system is still in a transition from a former 5-year specialist diploma education to a three-tier education program based on BA, MA and PhD if there is a compliance with the Bologna guidelines. Specialist diplomas are common among technical, technological and medical fields of study and specializations.

Figure 18: Number of Presidential quotas awarded, 2008/09-2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education:*

37. **Of the government-funded places, presidential quotas provide free places for students from disadvantaged families and those residing in remote mountain areas, as opposed to merit-based scholarships.** Presidential quotas are allocated to students from poor families and those residing in remote mountain areas to provide them with the opportunity to obtain higher education. Though it is still very small, the number of Presidential quotas since 2008/09 has been increasing and in 2011/12, 3.4 percent of students in HEIs of Tajikistan were awarded with the quotas (Figure 18).

¹⁴ According to the Government Decree No. 650 dated 2007.

Even though females are supposed to be given preference according to the program criteria,¹⁵ the gender distribution of the quotas is almost fifty-fifty with some annual variations (Figure 19). In terms of geographic distributions, students in the GBAO and Khatlon regions appear to be given preferences, relative to the total number of students (Figure 20).

Figure 19: Recipients of Presidential quotas by gender, 2008/09-2011/12

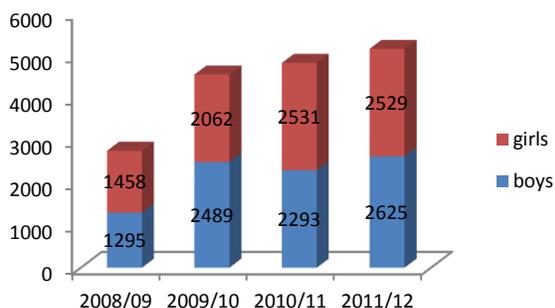
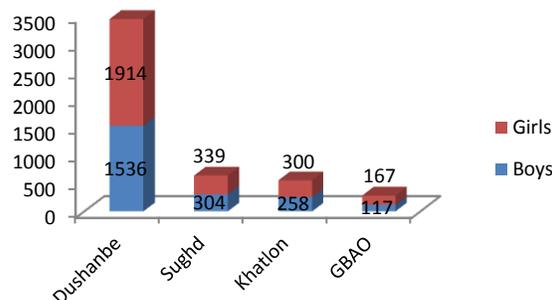


Figure 20: Recipients of Presidential quotas by location and gender, 2011/12

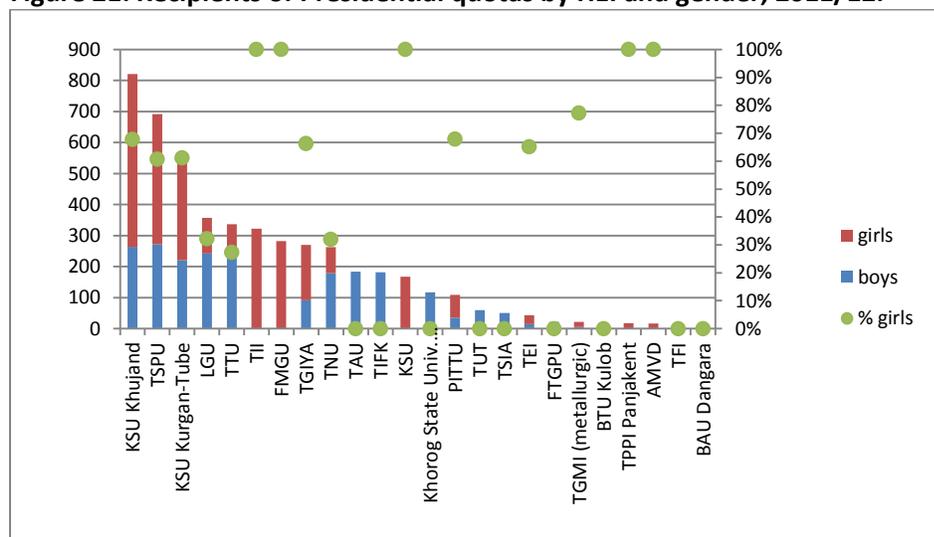


Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Note: There is some discrepancy between the sum of the breakdown in Figure 19 and the total of boys and girls for 2011/12 in Figure 20. The difference originates from the original source.

38. **While the gender distribution of the Presidential quotas is more or less even on average, it varies considerably between HEIs.** In 2011/12, students of 28 out of 35 HEIs received a Presidential quota. In total, 55 percent of the recipients were girls, and indeed, for 12 HEIs, the majority of recipients were girls (Figure 21); in some cases, 100 percent on the one hand (e.g. Tajik Islamic Institute (TII), Branch of Moscow State University (FMGU), and Kulyab State University (KSU)), and zero percent on the other (e.g. Tajik Agrarian University (TAU), Tajik Physical and Culture Institute (TIFK), and Khorog State University (KSU)).

Figure 21: Recipients of Presidential quotas by HEI and gender, 2011/12.



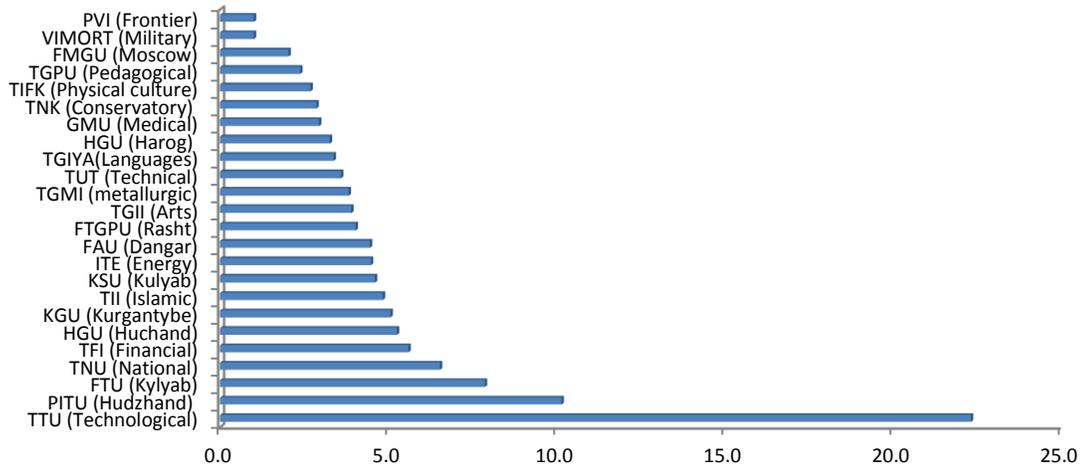
Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Note: The gender breakdown data matches with Figure 20, but not with Figure 19.

¹⁵ Decree of the Government of Republic of Tajikistan, #137, dated April 3, 2006 on the approval of rules of admission of students to the HEIs in accordance with the quota of the President of Tajikistan.

39. **Besides state-funded places, about 48 percent of students receive stipends (scholarships) from the state and other sources (e.g. stipend named after Academician Osimi, stipend from Academic council, and city stipend).** The proportion of stipend recipients varies between HEIs. As seen in Figure 22, more than one-fifth of the state-funded students of the Tajik Technological University in Dushanbe (TTU) and about 10 percent of those of the Polytechnic Institute of the Tajik Technical University receive stipends. On the other hand, the proportion is less than five percent for many other institutions. It is unclear what criteria are applied for stipends.

Figure 22: Percentage of students who receive stipends by HEI, 2011/12



Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

40. **Tajik is increasingly becoming the predominant language of instruction in HEIs in Tajikistan.** An increasing number of students are studying in Tajik, from 96,000 (73 percent) in 2005/06 to 122,000 (81 percent) in 2011/12 (Figure 23). In contrast, fewer students study in Russian, from 33,500 (25 percent) to 26,500 (18 percent) in the same years. Given the fact that many Tajik—regardless of the education level—go to Russia as labor migrants and that the Tajik economy is closely tied to Russia and other Russian-speaking neighboring countries, this trend is worrisome. If not as a language of instruction, Russian, in addition to English, needs to be strengthened as a subject area.

41. **About 40 percent of higher education students are studying education** (Figure 24). Forty percent of one cohort is about 14,000, and this many students graduate annually from HEIs with an education specialist diploma or a bachelor’s degree. Where the number of general education teachers is about 95,000 in total, it appears that the higher education system may be producing too many graduates with a specialization in education every year. The distribution between industry, construction, and economics switched between 2010/11 and 2011/12, but it is unclear if this implies a trend or a one-time event. Further analysis of specializations and their job prospects is needed to assess the relevance of higher education to the labor market.

Figure 23: The number and proportion of students by language of instruction, 2005/06-2011/12

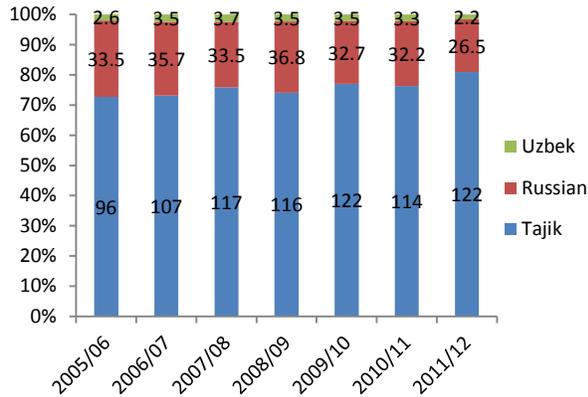
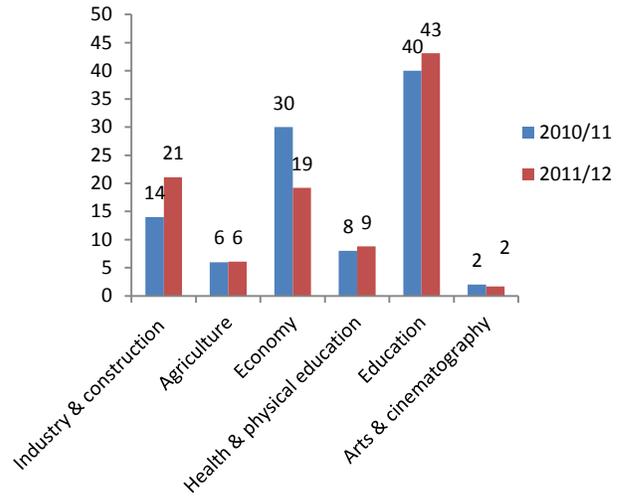


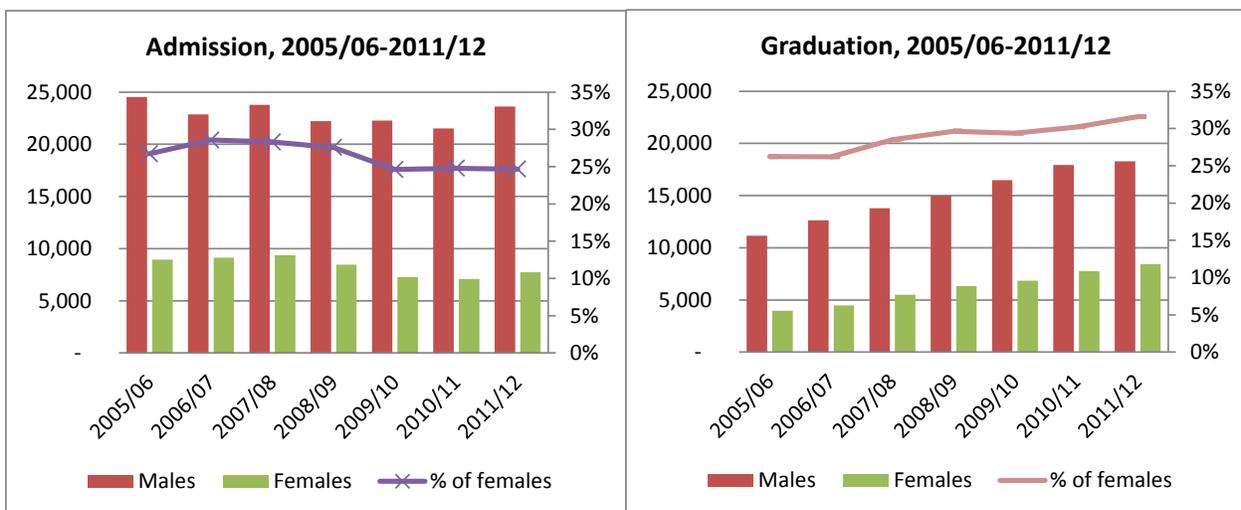
Figure 24: Distribution of students by subject, 2005/06-2011/12



Sources: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*; The Ministry of Education of the republic of Tajikistan & Tajikistan in numbers, 2011 and 2012

42. **The overall completion rate appears to be around 70-80 percent.** Though the completion rate varies widely between HEIs, the overall completion rate for higher education appears to be around 80 percent (Figure 25). Two major reasons for dropping out are academic failures and non-attendance. Available data does not explicitly specify financial constraints as a reason. It is noteworthy that even though the proportion of females among new admissions declined from 27-28 percent in 2005/06-2007/08 to slightly below 25 percent in 2009/10-2011/12, that of graduation steadily increased from 26.2 percent in 2005/06 to 31.6 percent in 2011/12. Further analysis is needed to explore of possible factors causing student to drop out.

Figure 25: Admission and graduation by gender, 2005/06-2011/12

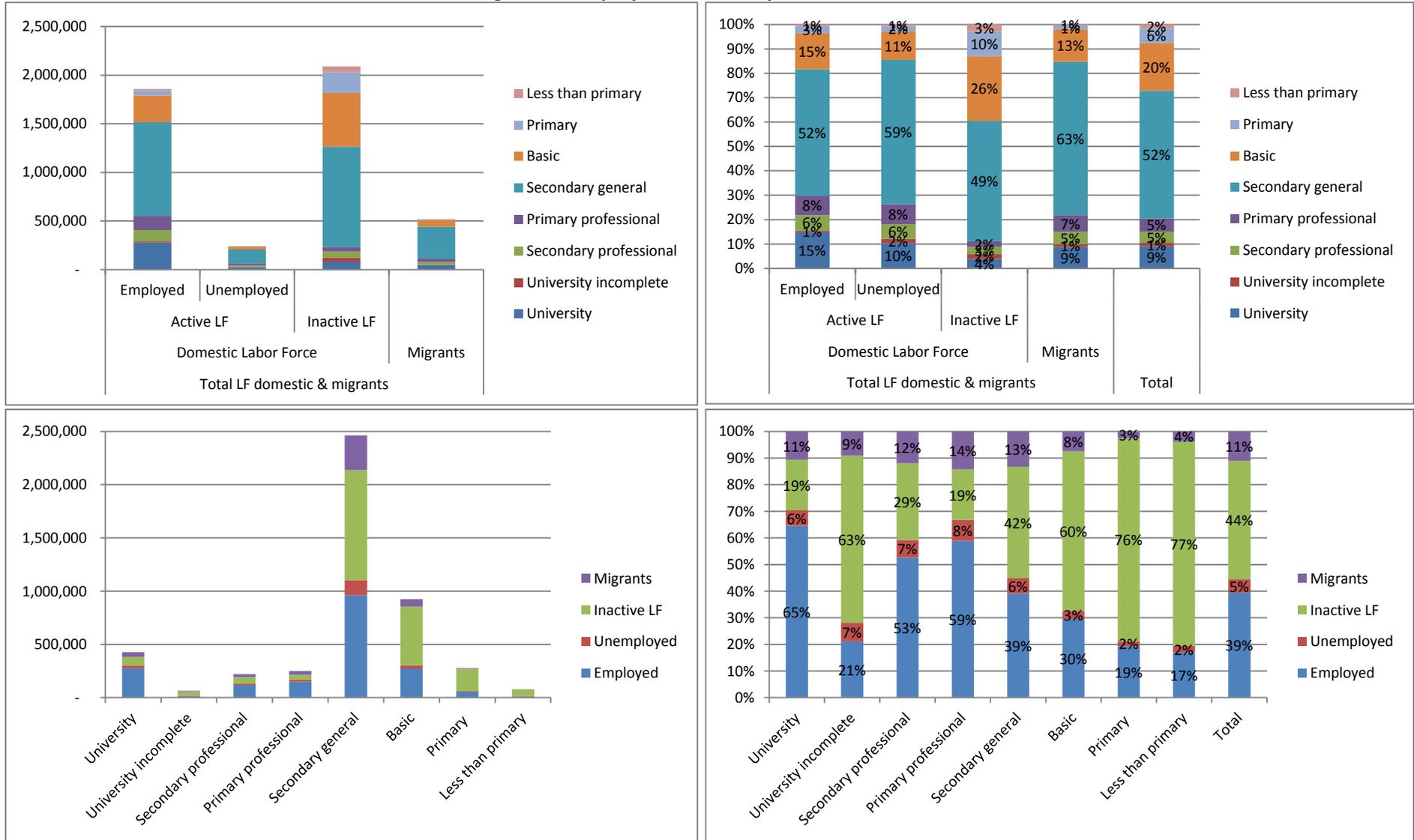


Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Labor Market Outcomes

43. **University graduates are more likely to be employed, followed by secondary and primary vocational graduates.** Figure 26 shows the employment status of the Tajik population by level of education. Of the total labor force (domestic and migrants) of 4.7 million in 2009, 9 percent were university graduates, 5 percent secondary and primary professional graduates each, and 52 percent general secondary graduates. However, university and professional graduates consist of higher proportions among the employed (15, 6 and 8 percent, respectively). University graduates are most likely employed (65 percent), followed by primary professional (59 percent) and secondary professional (53 percent). Of those with general secondary education, only 39 percent are employed and 42 percent are inactive, and the employment rate drops sharply among the lower educated population. More than 10 percent of each group with higher than general secondary education migrates for work.

Figure 26: Employment status by level of education



Source: Tajikistan Labor Force Survey, 2009.

Chapter 2: Governance¹⁶

44. This chapter looks at Tajikistan’s higher education governance. It analyzes the legal framework underpinning higher education governance at two distinct levels – governmental and institutional. In particular, the chapter looks at the challenges that Tajik higher education governance faces with regard to the introduction of democratization, collegiality and strategic management principles, the constraints put on HEIs by the current legal framework as well as the overly rigid top-down governance, which results in diminished quality and relevance of the services offered by HEIs, infringed autonomy and, therefore, lack of accountability. It also looks at the roles of different stakeholders in better understanding the forces shaping the HE system in Tajikistan.

2.1 Legal Framework

45. **The Law on Higher and Postgraduate Professional Education (hereby the *Law on Higher Education*) takes governance and management of HEIs to the operational level, leaving little space for HEIs to exercise autonomy and accountability.** There are a number of laws and regulations that underpin Tajikistan’s legal and regulatory framework for higher education.¹⁷ Of these, the Law on Higher Education is the most essential law that regulates major objectives of the state policy on higher and postgraduate professional education, including autonomy, equality, higher and postgraduate professional education systems, rights, and access to higher education. It covers four main areas of higher education governance: (i) the definition of terms in higher education; (ii) academic aspects and research, including standards, development of curricula, types of programs and the like; (iii) management of higher education, including licensing, attestation and accreditation; and (iv) financing of higher education (Table 4).

46. **Despite government promotion of the diversification of educational providers, the existing tax regulations and government’s attitude in general do not seem to encourage participation of the private sector.** Historically, private HEIs have not been welcomed in Tajikistan. The existing tax regulations put extra burdens on private providers. Government policy-makers seem to express distrust towards private sector participation.¹⁸ Hence, even though there was a period when seven private HEIs were operating, all but one were closed for unclear reasons.¹⁹ Today, the Penjikent Tajik State Pedagogical Institute is the only one left, enrolling less than two percent of higher education students. On the other hand, though legally a “state” institution, the State University of Commerce that enrolls

¹⁶ This chapter owes to a background paper by Karakhanyan, S., 2014, *Higher Education Governance in the Republic of Tajikistan: State of Affairs and Policy Recommendations*.

¹⁷ See Annex 1 for a list of laws and regulations governing higher education.

¹⁸ Officials of the MOES, State Agency on Supervision in Sphere of Education (SASSE), and an NGO alike pointed out that the Ministers of Education’s distrust in newly emerging competitors in the market might be a reason discouraging the private participation (meetings in January 2014).

¹⁹ Pavlova, M., (2011), *Tajikistan, Diagnostic Assessment of the Post-Compulsory Sector*. One of them was the American University. Reasons surrounding the closure vary. Grants from the United States and other Western countries were the source of financing. Additionally, its founder was a Tajik-born U.S. citizen. The institution faced legal battles with the MOES, inclusive of the institution obliging in multiple name change requests, and temporary closure to verify the institution’s documents and operations.

more than seven percent of students across two campuses is financially 100 percent independent from the state, and acts almost like a private HEI.

Table 4: Issues covered by the Law on Higher Education

Items covered by the Law	Defined items	Level of details regarding the regulated items
1 Goals, aims and principles of HE	Goals, principles, structure	In full details
2 System level governance	Government, ministries, HEIs	In full details
3 Autonomy and academic freedom	Autonomy with regard to recruitment and appointment of the staff	In full details
4 Types of HEI	University, academy, institute	In full details
5 Internal governance structure of HEIs	Academic Council, Executive body	In full details
6 Establishment and liquidation of HEIs	Establishment, licensing and liquidation of HEIs	In full details
7 Quality assurance	Only individual tools: licensing, attestation and accreditation	In full details
8 Financing	State funding and tuition	In full details
9 Selection of students	Student admission and teaching, rights and obligations	In full details
10 Selection, appointment and promotion of staff	Staff selection, rights and competencies	In full details
11 Structure of study programs	State education standards	In full details

2.2 System-level Higher Education Governance: Distribution of Responsibilities

47. **Tajikistan’s public higher education is governed by multiple layers of government bodies.** Governance of higher education involves the government (i.e. the Executive Office of the President), a republican state body responsible for education governance (i.e., the Ministry of Education and Science), line ministries,²⁰ and local bodies of higher education governance (i.e., HEIs). The competencies of each governance body are outlined in the Law on Higher Education. Unlike public institutions, private HEIs are governed either by the founder, or based on the founder’s delegation, by the board of trustees.

Responsibilities of the Government

48. **The government is the highest authority of higher education governance with an extensive approval authority over various legislation and standards.** The competencies of the government include:

- definition and implementation of a state policy in the field of higher education;
- ensuring budgetary allocation per HEI;
- development of legislation and approval of the normative legal acts defining the functions of HEIs;

²⁰ Mainly the HEIs in Tajikistan are within the jurisdiction of the Ministry of Education and Science. However, line ministries are also responsible for such professions as military, police, medicine and the like.

- drafting regulations on licensing, attestation and accreditation of HEIs;
- establishment, reorganization and liquidation of state HEIs;
- contracting international and inter-governmental agreements dealing with the regulation of higher and postgraduate professional education;
- adoption of state education standards for higher and postgraduate professional education;
- definition of specialties and fields of study for higher and postgraduate professional education; and
- setting normative requirements to human resources in different spheres as well as respective regulations for training specialists with higher and postgraduate professional education.

Responsibilities of the Ministry of Education and Science

49. **The Law on Higher Education places an extensive range of responsibilities for critical higher education policy and operational deliverables on the MOES, which may not be the most effective governance model.** The duties of the MOES are wide-ranging, as listed below. Taking into account the limited capacity of the MOES, the responsibilities are overwhelming and ineffective. Some HEIs indeed have found that MOES's involvement in their operational management prevents them from engaging in effective strategic management.²¹ Duties of the MOES include:

- development and introduction of state educational standards for higher education;
- development and approval of sample curricula and educational programs with compulsory subjects together with the organization and publication of course books;
- promoting development and implementation of innovative technologies;
- organization of licensing, attestation, and accreditation procedures;
- defining templates for state higher education documents, drawing up regulations on recognition and equivalence regarding foreign states' documents on higher education and academic status, issuing recognition documents;
- coordination of HEIs activities and sectorial and regional systems of higher education;
- establishment of HEI admission regulations for students, postgraduate and doctoral students;
- development and implementation of measures on the social security of students, postgraduate students and HEI employees in partnership with public organizations;
- contracting international agreements in accordance with the legislation of the Republic of Tajikistan; and
- taking part in the definition of needs per specialization.

2.3 Institutional-level Governance

50. **The Academic Council - the main governing and decision-making body for HEIs in Tajikistan - primarily implements MOES' directives and regulations, refraining from engaging in strategic management.** The governance of HEIs falls under the Civil Code, legislation on education, normative legal acts and the charters of HEIs, and the Regulation on the Academic Council of the Higher Professional Education Institution, which sets out the rights and responsibilities of HEIs. The latter regulation tasks the Academic Council as the main governing and decision-taking body of the HEIs with the Rector's Office as an executive body. Fifty percent of the Council members are appointed by the Rector (deputy rector, head of university departments, head librarian, head of post graduate division,

²¹ Interviews and focus group discussion with key stakeholders on institutional governance in January 2014.

representatives of public organizations, and representatives of other higher professional education institutions), and the other half nominated by the Academic Council (heads of faculty departments and representatives of academic teaching staff which may include a postgraduate student). Since there is still a teacher-centered approach to teaching and learning, students do not play an important role in institutional governance.²² The competencies of the Council are limited to the implementation of MOES' directives and regulations without any further adaptation to the peculiarities of the individual HEIs (see Annex 2 for detailed list of functions of the Council).

51. Despite the existence of the Academic Council, the Rector—who is appointed by the government—takes the ultimate responsibility for governance and management of an HEI. The MOES' Department of Higher Education, jointly with the respective line ministries and authorities, are responsible for nominating rectors for state HEIs. However, the ultimate decision on an appointment and dismissal of rectors is within the remit of the founding body, *i.e.*, the government, and rectors may be removed or transferred from their positions at any time based on a decision of the government. The rectors of private HEIs are appointed and dismissed by the founders/board of trustees. The Rector is the executive of an HEI and is responsible for operational management of the institution. In addition, the Rector's Office/Council is an adjacent advisory body to the Rector and the procedures for its formation and jurisdictions are defined in the HEI's Charter. The Rector is the *ex officio* Chairman of Academic Council and approves the composition of the Academic Council for a 3-year term. Despite the role of Academic Council defined in the Regulation, the Rector may even cancel the Council's decision in coordination with the institution and with approval of the MOES if the decision taken by the Council: (i) contradicts to the laws of the Republic of Tajikistan and the order of decisions of the higher authorities; and/or (ii) is to the detriment of the education process and to the scientific and methodological activity of the institution. According to the survey conducted for this study, in reality, even when the Council's decisions do not meet these conditions, final decisions at the institutional level are often made solely by the Rector.

52. The Law on Higher Education defines the level of autonomy of HEIs with respect to academic, financial and staffing matters, which is very limited as follows:

Academic autonomy: The government sets state standards for academic programs and provides sample curricula, which HEIs may use when developing a program. HEIs have to follow the standards for 85 percent of a mandatory program. The MOES must approve any changes to the curriculum prior to its operationalization. If HEIs revise a program, they would need to go through licensing, attestation and accreditation procedures. Because of such cumbersome procedures, few HEIs and faculty members endeavor to revise existing programs, or establish new ones,²³ resulting in outdated and irrelevant curricula. As for the student admission, each public HEI can enroll a specific number of students as specified in the license. The quotas for state-funded places are set by the MOES based on the number of specialists needed according to the claims of different governmental organizations, whereas the number of fee-paying students is submitted by HEIs to the MOES for approval. As for the private HEIs, the number is decided based on the applications and the final decision is with the Founder. In June 2014, a new unified entrance examination system will be introduced to improve transparency and fairness. With regard to graduation examinations, very few changes have been registered since the collapse of the

²² All the HEIs that participated in the survey stated having a Students' Council within the HEI; however, very few HEIs had student representatives in their Academic Councils.

²³ Interviews with HEIs representatives taken in January 2014

Soviet Union. It is still based on oral examinations with three questions for students to draw - an approach that hardly verifies the achievement of qualifications.

Financial autonomy: The Law on Higher Education limits and constrains HEIs to operate only within the budget approved by the MOES and Ministry of Finance. HEIs can decide how to use the funds allocated from the state budget and other sources,²⁴ but the MOES regulates salaries, practically giving little freedom to HEIs on spending activities. The institution is tasked with hiring decisions within the ministry's guidelines on salaries and personnel. Faculty appointments are made on a renewable contractual basis, typically for a one year period within the salary parameters set by the MOES. The revenue model for HEIs is limited to the budget set by the government and tuition fees set by the MOES. According to the respondents to the survey, the lack of a differentiated approach to salaries diminishes faculty members' motivation to perform better.

As for the revenue model, it is limited to the budget set by the government and tuition fees set by the MOES. Very few HEIs have the capacity to attract additional funds through grants, research and other sources. The budget is drafted by the HEI and submitted to the MOES for approval. According to the survey results, the items covered mainly include salaries, utilities, maintenance and renovation, services and the like. However, there is no special allocation for such major functions of HEIs as research. Significantly, budget allocation does not provide funds per program thus creating little or no incentives and opportunities for programs to change.

Human resource autonomy: With regard to enrolling members of staff, HEIs are restricted by the current legal framework. Rectors are appointed by the government. Vice Rectors are appointed by the MOES with a decree of the Rector and a service contract is signed between the three parties. Faculty Deans and Heads of Chairs are elected through the procedures defined by the HEI Charter. The scope of responsibilities of faculties is rather operational dealing with provisions for teaching, learning, and research. The scope of the Deans' and Heads of Chairs' responsibilities is limited to administrative, teaching, learning, and research. The staffing levels are also defined by the budget. The faculty and administrative positions are advertised by HEIs and selection and appointment are carried out by HEIs. Besides the legal constraints, the most acute constraint is that the higher education system fails to attract highly qualified staff to deliver programs, primarily due to lack of incentives. The system does not produce research staff or promote research among faculty members.

53. **HEIs in general lack the capacity and incentives to develop and implement an institutional strategy.** According to the survey of 20 HEIs, HEIs in Tajikistan are generally unable to clearly present a mission statement, vision, and strategic plan. This is partly due to lack of the strategic management capacity, but also partly due to their overdependence on the MOES. As discussed above, the Council has limited decision-making authority and refers all matters related to the structure of the organization, number and qualifications of the personnel, pay scales of the employees, changes in the curriculum, appointment of the vice-rectors, introduction of new or liquidation of outdated academic programs, changes in the tuition fees, changes in the number of students to be admitted to a program and the like, to the MOES for approval. This leaves HEIs with limited responsibilities, therefore diminished accountability, which is expressed only through mere annual reports and annual financial reports submitted to the Government as opposed to in-depth analysis necessary for accountability and enhancement purposes.

²⁴ Law on Higher and Postgraduate Professional Education, Ch. 6, Articles 34-36

2.4 Stakeholders

54. **Stakeholder involvement in the governance of Tajik HEIs is passive, often depending on the approaches and initiatives of individual rectors.** The primary role of stakeholders in system level governance should be active participation in the labor market research to advise the government on qualifications required by the labor market and the number of quotas necessary for higher education admission policy development. However, stakeholder involvement in Tajikistan is generally weak as discussed below.

Rectors' Council

55. **The Rectors' Council is a major stakeholder group for higher education, but its role is again limited to promotion and implementation of the regulatory and normative acts, rather than driving change and setting the strategic lines of development.** The Rectors' Council is a state public body.²⁵ All the rectors of the public and accredited private HEIs as well as the Chair of the Directors Council of VET institutions are represented in the Council. Its main functions are limited to the implementation of government policies and regulations.

National Student Association

56. **Representation of students in higher education governance is limited.** Nationally, there is a Committee on Youth Affairs, Sports and Tourism at the governmental level, but no unified national student union to bring issues related to youths and students to the attention of the government. According to the Law on Higher Education, each HEI should have a Youth Union in its structure to be represented in the Academic Council and be part of the Rector's Office meetings. However, the role of students and graduates is very limited, and they are not involved in quality assurance, governance, development and revision of the programs, which is an important role to help enhance the system.

Union of Employers

57. **Employers' Unions in Tajikistan function as stakeholder organizations representing the labor market, but they do not address higher education, which makes them isolated from the challenges that higher education faces.** Employers' Unions are established according to the Law on Employers' Unions.²⁶ Major unions currently functioning in Tajikistan include the Union of Journalists, the Union of Artists, the Association of Micro-financial Organizations, and the Association of Banks. According to the Law, the tasks of these unions do not include linking higher education to the labor market, but are limited to bureaucratic roles and protection of their members.

2.5 Corruption in Higher Education

58. **Anecdotally, corruption in higher education is prevalent in Tajikistan, degrading the value of higher education and eroding public trust in the system.** According to Transparency International's Corruption Perceptions Index 2013, which measures the perceived level of corruption in the public

²⁵ The Council functions according to the Regulation on the Rectors' Council No. 8/5 adopted by the Collegium of the MOES dated April 13, 2006.

²⁶ Approved by the Decree No. 32 dated May 17, 2004.

sector, Tajikistan is ranked 154 out of 177 countries or the lowest in the ECA region.²⁷ The *Life in Transition Survey* (2010) also observed that corruption in Tajikistan is one of the most tangible issues. Education is one market where corruption has long-term effects since a student obtaining an undeserved qualification is able to benefit through higher wages than s/he would have been entitled to without an ill-gotten qualification. It also impacts efficiency in the work place as skills do not match qualifications, which means people are underqualified for the jobs they perform. According to a survey by the Open Society Foundation,²⁸ four in ten Tajik parents perceive that their informal payments are necessary for their children to attain higher education. Teachers and principal/staff share similar beliefs - both also four in ten - that informal/improper parental contributions are a prerequisite for students' success in higher education. These unethical behaviors allow low performing students to enter and graduate from HEIs on the one hand, and deprive relatively higher performing students without means to make informal payments of opportunities to access higher education.

59. **Informal payments are made at different stages of the higher education cycle.** The beneficiaries of informal payments are often teachers and administrators/school officials at various levels. In some cases, students and their parents bribe people with relevant authority to let them bypass merit-based admissions processes, guaranteeing a seat at an HEI. For instance, prospective students are required to pay as much as TJS 66,674 (\$15,000) in bribes to enter the country's most prestigious universities, while even provincial colleges require several hundred dollars. Students also often pay bribes to receive good grades on exams or to receive a diploma.²⁹

60. **Based on a student survey of leading HEIs,³⁰ respondents believed that enforcing admission policies would reduce the strain on financial resources.** In the 2009/10 academic year, 18,000 high school graduates – slightly less than one-fifth of all high school graduates – attained scores indicating sufficient preparation to enroll in tertiary education institutions. However, HEIs enrolled more than 30,000 graduates that year (though the reasons are unclear), placing a significant strain on financial resources. In June 2014, the unified university entrance exam is going to be introduced which aims to reduce corruption and increase transparency.

2.6 Summary of Findings and Policy Recommendations

61. **System-level governance.** Tajikistan's higher education governance framework is characterized by direct and absolute centralized governance exercised by the government with limited autonomy with regard to study programs and institutional management on the part of HEIs, and therefore diminished accountability. As defined in the Law on Higher Education, the autonomy of HEIs is expressed through mere recruitment of staff and distribution of job responsibilities, conduct of teaching and research activities, financial and other activities as specified in the legal framework and the Charter of HEIs. There is no incentive structure that would drive reform implementation and, thus, improvement and enhancement of the services offered by the HEIs.

62. **Institutional-level governance.** On the other hand, the capacity of HEIs to move to increased autonomy is weak, questioned by the government representatives and even HEIs themselves. Mostly,

²⁷ Transparency International, Corruption Perceptions Index (2013).

²⁸ Open Society Foundation, Drawing the Line: Parental Informal Payments for Education across Eurasia, 2010

²⁹ US Department of State, 2011, *2010 Human Rights Reports: Tajikistan* (downloaded from <http://www.state.gov/documents/organization/160062.pdf> on September 26, 2013).

³⁰ Open Society Institute, Assuring the Quality of Higher Education in the Republic of Tajikistan, 2012

HEIs apply the policy frameworks adopted by the government with no further refinement to meet the specific needs of HEIs. This limited autonomy leads to limited accountability. Very few accountability mechanisms have been observed to be in place; few HEIs understand what accountability means beyond annual reporting to the government. Lack of capacity on the part of direct implementers limits the potential of the government to delegate most of the duties exercised by the government. The bodies established in the higher education system, including the Rectors' Council, seem to be solely set up to follow up on the MOES directives without any value added related to system development issues. Although HEIs are supposedly governed by the Academic Council, final decisions over institutional matters are often taken solely by the Rector without ensuring collegial decisions. Limited involvement of key stakeholders in the governance of HEIs has been observed, which makes HEIs quite isolated, thus, diminishing relevance and quality of the delivered service.

Recommendations

Recommendation 1:

Revise the current approach to higher education governance to introduce a collegial approach through involvement of key stakeholders. This could be done through introducing a governance model with a Governing Board at the apex of decision taking.

Recommendation 2:

Build on the capacity of the top-level administrators to introduce strategic management linked to financial management and quality assurance.

Recommendation 3:

Raise the accountability of HEIs through establishing robust internal quality assurance mechanisms.

Recommendation 4:

Introduce a robust incentive mechanism to ensure the faculty and administrative staff members feel they have stakes in system development and enhancement. This could be done through introducing a differentiated approach to financial rewards as well as introducing reward and sanction mechanisms.

Recommendation 5:

Provide intensive capacity building at the level of departments, chairs and faculty members to ensure the study programs are constantly updated and are relevant to market needs.

Recommendation 6:

Involve stakeholders at different levels of higher education governance - rectors' council, students, employers, professional associations, employers - to promote the relevance of higher education to meet labor market needs. With this aim, a major capacity building of stakeholders is also crucial to ensure they can meet this challenge.

Recommendation 7:

Revise the role of the Rectors' Council to ensure that the advisory body leads the system development and enhancement at the policymaking level and sets strategies for development.

Recommendation 8:

Establish a National Student Association to ensure students' interests are considered at the national level policy-making. To ensure success of the association, a major capacity building as well as close collaboration with peers in more developed systems is recommended.

Chapter 3: Quality Assurance³¹

3.1 Introduction

63. **The massification and diversification of higher education has led to a pressing need for relevant and reliable quality assurance and accreditation processes to assure the public that the courses, programs and degrees offered by higher education institutions meet acceptable academic and professional standards.** Since the latter part of the 20th century, the massification and diversification of higher education worldwide has been driven by increased demand for highly qualified professionals in the ever more integrated and rapidly changing world economy. Similarly, in former Soviet Union (FSU) countries, the collapse of the Soviet system removed political barriers, resulting in the emergence and activation of market forces, and subsequently, globalization, diversification, and massification of higher education. In tandem with the rapid expansion of higher education opportunities—diversification and mushrooming of HE providers—the exponential growth of demand and supply posed a threat to the quality of higher education in general. This, in turn, gave momentum to the development of the quality movement in higher education all over the world from the 1980s onwards. Two major trends became evident:

- the need to establish tools for promoting mobility of professionals and students that would act as an interface between systems to ensure transparency and recognition of different degrees and credentials;
- the need to promote mechanisms assuring credibility and recognition of qualifications awarded by a given country.

64. **To keep up with global trends, the government of Tajikistan has undertaken higher education reforms aimed at transformation and integration into the international arena, but the tangible results are yet to be seen.** In fulfillment of the *National Strategy for Education Development 2020*, the government initiated reforms at the level of professional and higher education, which aim to enhance equity and access, to increase tertiary enrolment and to improve the quality and relevance of learning through a robust, reliable, transparent quality assurance system. Such an aim entails policy diffusion and transfer from respective international practices. However, higher education policy transfer from Western systems and subsequent diffusion in a post-Soviet system without establishing a favorable environment for the changes risks causing more of distortion to the existing system rather than improvement. In spite of the changes undertaken at both the system and HEI levels, the tangible results are still far below the internationally accepted standards.

65. **As in the case of many other FSU countries, Tajikistan faces an urgent need to overhaul its approaches to higher education in general and its quality assurance in particular.** The absence of effective quality assurance practices in Tajikistan's higher education have:

- resulted in inefficient and ineffective higher education management;

³¹ This chapter owes to a background paper by Karakhanyan, S., 2014, Quality Assurance of Higher Education in the Republic of Tajikistan: State of Affairs and Policy Recommendations.

- established a favorable environment for the proliferation of corruption due to a lack of robust accountability mechanisms;
- caused overlap and predominance of control tools resulting in stagnation and degradation of the system; and
- diminished the relevance of study programs to market needs.

Tajikistan's government aims to solve these issues through a smooth integration into the European Higher Education Arena (EHEA) by joining the Bologna Declaration after 2015, as discussed earlier.³²

66. **Given that Tajikistan has committed to joining the Bologna Process and EHEA, the *Standards and Guidelines for Quality Assurance in the European Higher Education Arena (ESGs)* (see section 2.1) is used as a frame of reference and analysis of Tajikistan's quality assurance system for higher education.**³³ The chapter is structured as follows. First, experiences in both well-established and newly emerging systems in Europe and in the Former Soviet Union countries are used as a point of reference for analysis and policy recommendations. Quality assurance developments in such countries as the Netherlands, Estonia, the Russian Federation and Armenia are looked at, considering governmental arrangements on external quality assurance in those countries and their positioning in the international arena. Second, to better understand the driving forces of the quality assurance system extant in Tajikistan's higher education, an inquiry into the quality assurance framework at the national and institutional levels is made. This chapter culminates with policy recommendations accompanied by reform actions for the establishment and enhancement of quality assurance at three levels, i.e., higher education system, quality assurance agency, and higher education institutions and programs.

3.2 Quality Assurance: International Trends

67. **With the growing demand on higher education performance towards the end of the 20th century, a need to revise the architecture of higher education management in general and the establishment of robust and coherent quality assurance systems in particular has become evident.** Quality assurance mechanisms originated along with the establishment of the first higher education establishments and have been exercised by HEIs for different reasons (control accountability, recognition, or/and enhancement), and to different extents of systematization. Thus, a move from a fragmented to a coherent and consistent approach to quality assurance has been registered as a major trend in higher education systems in all the parts of the world since the beginning of the 1990s. The Bologna Declaration in 1999 and the Brisbane Communiqué initiatives in 2006 were launched with a common goal: to increase student and professional mobility and transferability of qualifications, and greater integration or exchangeability of education frameworks. Ministers and senior officials from respective countries identified tools that could be used to promote the common goals of recognition and promotion of mobility of professionals and students. Among the action lines to be promoted, the common ones between the European and Asia-Pacific regions are:

- Establishment of a framework for qualifications to make educational levels transparent (BA, MA, and Ph.D.);

³² The statement was made during one of the interviews by the international consultant with the Ministry of Education and Science representatives. When asked about any official document stating this decision, no definite answer was received. The same refers to the statement on signing the convention on qualifications between the Government of Tajikistan and European Council.

³³ The international trends in quality assurance, in particular, the developmental trends at three levels, i.e., system, external QA and internal QA levels are analyzed in detail in Annex 3.

- Establishment of quality assurance frameworks for the region linked to international standards, including courses delivered online; and
- Development of various tools to promote recognition of educational and professional qualifications (diploma supplement, credit transfer and accumulation systems and the like).

68. **As providers of higher education became diversified and new ones emerged, countries started strengthening quality assurance mechanisms and joining quality assurance networks to assure the credibility of those provisions.** An increasing number of countries began establishing quality assurance mechanisms, while a new market niche was opened for accreditors - in some cases with questionable credibility in their functions and status award.

69. **All meta-systems for higher education quality assurance follow more or less the same standards and principles, regulating: (i) internal quality assurance of HEIs and programs; (ii) external quality assurance at system level; and (iii) external quality assurance agency.** At meta level, such quality assurance networks as the International Network for Quality Assurance Agencies in Higher Education (INQAAHE), the European Association for Quality Assurance in Higher Education (ENQA), the Asia-Pacific Quality Network (APQN), and the Council for Higher Education Accreditation (CHEA) were established to promote quality culture as well as safeguard higher education providers from the accreditation mills that also came into existence. Each of them covers a specific geographic area, except INQAAHE, which is an international network acting as an umbrella organization for all the QA agencies and networks. As part of their major objectives, the meta-organizations help higher education systems in identifying reliable QA agencies and accreditors and differentiating them from bogus ones. This is done by an external review of a quality assurance agency against a set of criteria/standards/guidelines promoted by the meta-organizations. Table 5 provides an overview of major meta QA organizations, their geographical coverage as well as the standards applied for international recognition of QA agencies.

Table 5: Overview of major meta-networks/association in quality assurance

Meta-networks/ Associations	INQAAHE	ENQA	APQN	CHEA
Coverage	World-wide	Europe	Asia Pacific Region	USA
Establishment	1991	2000	2003	1996
Standards for external evaluation	Guidelines of Good Practice	Standards and Guidelines for Quality Assurance in the EHEA (ESGs)	Chiba Principles	CHEA eligibility standards
Number of agencies externally evaluated	10 agencies have undergone external evaluation since 2009	39 agencies reviewed; 1 under external evaluation	1 agency (QAAC – Sri Lanka)	70 agencies, including formerly and currently recognized ones

Source: Author.

70. **A review of international best practices reveals that countries which aim to integrate into EHEA adopt the same approach towards quality assurance, i.e., compliance with the ESGs promulgated by the European Network for Quality Assurance (ENQA).** For a review of international best practices in quality assurance, the Netherlands, Estonia, Armenia, and the Russian Federation were

chosen. The justifications for the choice of the countries are provided in Table 6. The major aim was to identify the approaches that might be applicable to the Tajikistan’s higher education sector, considering the context and the ambitions of Tajikistan’s government to join the Bologna Declaration after 2015. The following sections compare characteristics of each quality assurance system in terms of: (i) the status of the QA agency; (ii) the scope and nature; (iii) use of internal QA processes; (iv) the role of and training of external peers; (v) the role of agency staff; (vi) panel composition and eliminating conflict of interest; (vii) reporting on outcomes; (viii) appeals system; (ix) follow-up mechanism; (x) international accreditation; (xi) international recognition of the QA agency; and (xii) transnational providers.

Table 6: The choice of and reasons for selecting agencies for international good practice review

Country	Agency ^{1/}	Reasons for Inquiry	Membership in QA networks	External Recognition
Russian Federation	NAA ^{2/}	As one of the former socialist systems; an agency that deals with state accreditation, a similar case with Tajikistan SASSE	ENQA, INQAAHE	ENQA member in 2009-12. Membership is to be renewed.
Russian Federation	NCPA ^{2/}	As one of the former socialist systems; one of the solutions that Russia came up with as an additional enhancement tool to state accreditation	ENQA, INQAAHE, APQN	In the stage of application for ENQA review
The Netherlands	NVAO	One of the leading systems in Europe	INQAAHE, ENQA	ENQA and EQAR – against ESGs
Armenia	ANQA	As one of the former socialist systems; recognized in Europe as one of the youngest (newly emerging) and dynamically developing QA systems.	Full INQAAHE members, affiliate of ENQA	Proof evaluation against ENQA standards by EU peers, getting ready for full external review by ENQA in 2015.
Estonia	EKKA	One of the good examples of a former Soviet system transformed to meet the European standards	INQAAHE, ENQA, CEENetwork	ENQA and EQAR – against ESGs

Notes: ^{1/} NAA: National Accreditation Agency; NCPA: National Center for Public Accreditation; NVAO: Dutch-Flemish Accreditation Organization; ANQA: National Center for Professional Education Quality Assurance; EKKA: Estonian Higher Education Quality Agency.

^{2/} NAA was formerly run by the current NCPA staff members and registered high achievements by being recognized by ENQA. However, since the Russian Federation Government took it over, approaches have changed. The term of ENQA membership expired in 2012 and the new application has not been filed yet. NCPA was initiated after the takeover as a public independent agency by the Guild of Experts.

i. Status of the Agencies

71. The quality assurance agencies of the countries under review were established at different periods of time. The experience of the agencies varies from five years for the youngest one (NCPA) up to about twenty years (NAA). There are three types of status, reflected in the funding and accountability mechanisms of the agencies:

- (i) supra-national - ownership exercised by the government, Ministry of Education and Science, in particular (NAA),

- (ii) national - quasi-autonomous organization accountable to the Ministry of Education and Science or Prime Minister's Office (EKKA, NVA), ANQA), and
- (iii) independent founders (NCPA).

ii. Scope and Nature of QA

72. **The agencies apply the same standards to the entire higher education sector regardless of the ownership of the institutions.** The scope of quality assurance mechanisms includes institutional and program accreditation. In some countries only one agency takes care of all the HEIs and programs (Estonia, Armenia); in others these functions are shared between two or more agencies (Russia, the Netherlands). In any case, depending on the choice of a QA mechanism, the panels are usually established accordingly to include the requisite professional qualifications and high level of expertise. All of the agencies cover private and public sectors and apply the same standards regardless of the status of the HEI - private, public, domestic or foreign

73. **The main emphasis is on quality enhancement and self-improvement as opposed to quality control.** With regard to the function, there is a clear trend to emphasize quality enhancement, self-improvement and provision of information to the public (NVAO, EKKA, NCPA and ANQA) as opposed to a control-oriented approach (NAA). The trend of moving from quality control to quality enhancement is dictated by the needs of the system and the expectations that the system sets for those agencies.

74. **The nature of the QA approaches also differs: in some cases it bears a voluntary character and in others mandatory.** In voluntary systems, if QA outcomes are likely to determine access to substantial resources or student enrolment, institutions do take the QA status seriously (NCPA, NVAO and ANQA). In contrast, if no consequences are linked with the quality assurance, and this is peculiar to the developing systems, a voluntary system might result in depreciation of perceived value of QA even in the case of successful implementation.

iii. Use of Internal Quality Assurance Processes

75. **Internal quality assurance processes of HEIs are used for external quality assurance procedures while evaluating HEIs or programs.** The value of an analytical and self-critical approach undertaken by HEIs cannot be overstated since this is the way that HEIs express themselves as mature and autonomous systems capable of maintaining a sustainable, ever-developing, and learning organization. Thus, HEIs engage in internal quality assurance activities primarily with the aim of enhancing systems. Conferring external recognition by an external QA agency is a secondary benefit. With this aim, HEIs produce self-evaluation reports to serve as background material for informative decision-taking. The extent of the analytical and self-critical approach depends on the maturity of the system. If the system is a developing one, predominantly the first self-evaluation reports (SERs) are descriptive in nature. In a system that is developing dynamically, evaluations tend to move from a descriptive approach to a more analytical one with each cycle of self-assessment (ANQA, NCPA, NAA, EKKA).

76. **The level and nature of an agency's involvement in the internal quality assurance processes of HEIs vary.** All agencies but one (NAA) provide a varying level of guidance for steering internal quality assurance processes of HEIs. Under these agencies' guidance, HEIs conduct self-evaluations and write SERs themselves, including stakeholders such as students and employers in the process. In contrast, NAA is directly involved in the preparation of an SER, and expects student, graduate and faculty members'

involvement only through participation in the surveys and, in the case of the students, taking exams. All the agencies conduct trainings, organize conferences, offer consultancy services, and arrange briefing/induction programs to sustain and deepen the quality of dialogue among stakeholders.

iv. Role of and training for external peers

77. **The importance of external experts' roles in promoting trust in the QA system as well as recognition at national and international level cannot be overemphasized.** External peers have primary responsibility for ensuring the consistency of evaluations, effectiveness of reports and therefore enhancement of the system. In all the systems, there is a heavy reliance on external experts. Thus, all the agencies in the sample have a set of established and publicly available policies and procedures related to the participation of external experts, their selection criteria, conflict of interests, composition of the review team, and the agency's role in the external review procedure. Unlike other agencies, NAA's experts are appointed by the Federal Education and Science Supervision Service at the Ministry of Education and Science of the Russian Federation (*Rosobrnadzor*).

78. **All the agencies but NAA provide some sort of induction or training for external experts.** Depending on the requirements of the system and on the nature of the final report, roles and responsibilities are assigned to external experts and respective trainings are delivered. Training of experts is a useful practice and recognized as an example of best practice since this provides a fair background for evaluating different institutions. The trainings also make it clear what the agency's expectations are with regard to procedures, expert behavior, conflict of interest and report production. Unlike other agencies, NAA does not provide trainings or induction to peers.

79. **Representatives from HEIs, employers and/or professional associations are part of external experts in all but NAA.** NVAO, EKKA, ANQA, and NCPA involve students, employers and international experts in their procedures. In contrast, NAA conducts its procedures through its staff members and one HEI representative per program under review, in a given institutional accreditation procedure.

80. **The language used for the process varies.** The procedure language is English in the case of EKKA, Russian in the case of NCPA and NAA. NVAO conducts its procedures in Dutch with exception of the procedures that look at internationally joint programs. ANQA, unlike the rest, conducts a bilingual procedure in all cases, using English as a second language.

v. Role of agency staff

81. **Involvement of agency staff in QA procedures ensures consistency of approaches in the HEIs as well as bringing in objectivity.** Generally, agency staffers are involved in accreditation procedures through the development of the quality assurance framework, coordination of quality assurance procedures, ensuring quality assurance of those procedures, training reviewers, and delivering orientations to HEIs on how to prepare for external evaluation. However, depending on the size of the agency, agencies might not have enough staff members to participate in all the procedures. In the case of the sample agencies, staff members are predominantly coordinating the procedures—desk reviews, site visits and report production—to ensure consistency and objectivity of results. In most cases, the coordinator is responsible, under the lead of the panel Chair, for drafting the final report based on the findings, judgment, commendations and recommendations submitted by the panel members. The procedure coordinator, however, is not considered to be a full member of the panel. Having agency staff as a coordinator for the procedure ensures uniformity in the reporting system. But, the case of NAA

stands out: the agency members are actually part of the panel and draft the report to be submitted to the Accreditation Board for decision-making.

vi. Panel composition and eliminating conflicts of interest

82. **To instill trust and credibility in the system, it is extremely important for the agencies to adopt a set of criteria and procedures for expert selection as well as for settling conflicts of interest, and to follow these procedures strictly.** All the QA agencies except for NAA try to bring in qualifications necessary to enable an in-depth evaluation of a given HEI/program. This is usually done by bringing in experts with complementary qualifications and a high level of expertise who would not only enhance the collegiality and collective decision making of the team but would also balance different stakeholder perceptions and the results of the evaluation. With an exception of NAA, all other agencies also include students and employer representatives, and have an established policy, which is strictly adhered to.

83. **International presence in review teams is becoming more prevalent.** The average number of panel members varies from three in case of NVAO up to more than ten in the case of NAA, depending on the number of programs in a given HEI. International presence in review teams is becoming more prevalent (NVAO, EKKA, ANQA, NCPA) and quality assurance agencies tend to have a favorable attitude towards it due to the growing importance of regional dialogue among quality assurance agencies and to the internationalization of HEIs.

vii. Reporting on outcomes

84. **The most important contribution of quality assurance procedures in the development and enhancement of the system is directly linked to the outcomes that it produces.** The outcomes of quality assurance procedures incur some consequences. In most cases in our sample, accreditation is linked to recognition, formal status, and links to funding or scholarships. In the case of NCPA, the outcomes are linked to quality enhancement and status at the national and international levels. As for the validity of outcomes, on average legitimacy lasts five years. The validity term is mostly determined by the stage of the system's development. In the newly emerging systems, especially those in transition, the term would range from 3-5 years.

85. **It is important to balance the level of public disclosure with the effectiveness of the process, taking into account the national context.** Regarding the disclosure of the QA outcomes, each system decides to what extent it would make the outcomes available to the general public. ANQA and NCPA disclose the formal status of the HEI and a summary of report. NVAO and EKKA provide the formal status, whereas NAA publishes the decision taken by the Accreditation Board and approved by *Rosobrnadzor* on its website. Whether to publicly disclose the outcomes or keep them confidential is a challenging question and there are valid arguments for either strategy. The argument against full disclosure of the reports is that both HEIs and external reviewers may be much more cautious in describing the actual weaknesses of a program or an institution if they know that the report will be published. Those who support this point of view argue that at least at the introductory stage of quality assurance processes, it may be better to have honest and complete but confidential reports, rather than censored but published reports.

viii. Appeals system

86. **Most agencies in our sample have established policies for handling grievances and programs related to the outcomes of a QA procedure.** The policies are reflected in an appeals mechanism that allows HEIs and programs to express their objections to a decision made. In these cases, HEIs, upon receiving the official statement of the outcome, within a set period of time submit an appeals application, clearly stating their grounds for objection. Some agencies charge an extra fee for processing an appeal. NVAO, EKKA and NCPA have established policies for appeals. In the case of ANQA, the appeals system is yet to be established. NAA deals with appeals through courts. In all cases, the entity handling appeals should be an independent one and have the capacity to provide an impartial judgment. In advanced systems such as NVAO, there is a well-established set of procedures that has already instilled trust in its operations.

ix. Follow-up

87. **Follow-ups by agencies on the expert panel report, which provides detailed recommendations on how to improve educational provision, is one of the best practices in QA for system enhancement.** The elements of the follow-up revolve around production of an improvement plan by the HEI drawing on the recommendations, implementation of the plan and monitoring visits to be conducted by the agency or midterm progress reports to be submitted to the agency. In our sample, all the agencies have a follow-up procedure, to a varying degree. In case of NVAO, EKKA, NCPA and ANQA, the agencies require an improvement plan and follow up on it within a set period of time through a site-visit. In the case of conditional accreditation, NVAO, EKKA and ANQA organize another site-visit based on the progress report submitted by the HEIs. In case of NAA, if shortcomings are detected, instructions are issued with a deadline for their implementation. NAA has developed special software to follow up recommendations made during the accreditation process with no site-visit.

88. **There are a number of other means to follow up the quality assurance procedures which feed back into system enhancement.** One of the most important enhancement tools is a system-wide analysis conducted by the agencies (NVAO, EKKA, ANQA) (ESG standard 2.8), which explores the impact of QA on the system, the achievements and the drawbacks as well as development trends. Based on the findings from such a system-wide analysis, the standards and procedures for QA are revised and enhanced. Agencies also organize regular capacity building events, including conferences, forums and workshops, which establish a good platform for sharing experiences, promoting quality dialogue and supporting networking at different levels. Another enhancement tool is regular publication of guidelines, manuals, handbooks and other resource materials for use by HEIs.

x. International Accreditation

89. **International accreditation is increasing at the program level, but not at the institutional level because the purposes are different.** Most agencies that provide accreditation outside their own country have internationalization in their mission statement and use their own procedures and standards to conduct accreditation. The decision-making body of that given agency takes accreditation decisions and grants the seal. Professional accreditors at the program level mainly conduct international accreditation, whereas institutional accreditation, performed by international accreditors, is rare. This is because the purposes of the two vary greatly. Program accreditation is aimed at giving status to the programs and attesting that the qualifications awarded are up to standard. The program accreditation by international providers could be a better approach to ensuring recognition of qualifications at the international level.

On the other hand, the procedure and standards for institutional accreditation are underpinned by institutional governance and management of educational provisions, which are mostly set at the national level. As a result, institutional accreditations are more effective when done by national agencies, which can safeguard the national approaches and values with inclusion of international peers.

xi. International Recognition of QA Agencies

90. **International recognition of a QA agency is aimed at ensuring trust in the operations of a given QA system, and is important in safeguarding the systems against accreditation mills.** Upon request of a QA agency, the umbrella networks such as INQAAHE, ENQA, APQN, and CHEA, form a team of peers to conduct external evaluation of the agency against a set of standards. Each of these umbrella networks has its own established standards and guidelines for external evaluation of agencies, which are more or less comparable to each other (see Table 5). Among the agencies in our sample, NVAO, EKKA and NAA have undergone international recognition against the ESG standards, though the term of validity of this exercise has expired for NAA. ANQA and NCPA have undergone a proof external evaluation and are getting ready for a real review after having fulfilled the recommendations in the proof report conducted by EU peers against the ESG standards. Agencies seek international recognition partly because they need to - for example, in Europe, no agency can become a full member of ENQA unless they have a positive report against the ESG standards - and partly to gain international credibility. As for INQAAHE and APQN, there is no requirement for international recognition to earn full membership, which explains scarcity of such a practice.

xii. Transnational providers

91. **Transnational provision of higher education is increasing, but quality assurance of transnational education is still rare.** In tandem with globalization trends, provision of transnational education has become prevalent. Transnational provision, also known as cross-border education, refers to hosting foreign university branches or programs or importing education and awarding qualifications peculiar to the importers/exporters. In fact, the meta-framework for the guidelines and standards for transnational provisions is set by the UNESCO/OECD Guidelines on “Quality Provisions in Cross-Border Higher Education”. In our sample, none of the agencies conducts quality assurance of cross-border education, except that ANQA is currently developing standards for quality assurance of cross-border providers within the frames of a TEMPUS (TNE_QA) project.

3.3 Quality Assurance: The Case of Tajikistan

3.3.1 Legal Framework

92. **Tajikistan’s legislation aims to assure the quality of higher education primarily by setting educational standards and assuring compliance with state academic standards through licensing, state attestation and accreditation.** While the Constitution states the right of every citizen to quality education (Article 41), the Law on Higher Education sets state educational standards of higher and post-graduate professional education as one of the pillars of the higher education system in Tajikistan. Articles 7 and 8 of the latter set general, and at the same time, minimal requirements for the content and organization of study programs. Article 8 states the aim of the state academic standards as being: (i) to assure quality education; (ii) to establish uniformity across the system; and (iii) to recognize documentation on higher and post-graduate professional education issued by foreign countries. Further,

Article 12 defines and elaborates on mechanisms for assuring compliance with the state academic standards including licensing, state attestation and accreditation which are compulsory for all institutions of higher education. In addition, the Law on Education of 2013 (President Decree No. 1004) has new articles on state regulation of education. Articles 26-30 refer to accreditation and attestation, in which the two procedures are joined in one term “complex assessment”.

93. **These legal documents do not clearly define the concepts of quality and quality assurance, or the potential of quality assurance systems and tools for enhancing quality.** While the quality assurance acts are scattered all over the legal documents, with considerable overlap and repetition of procedures and criteria, none of them clearly defines such concepts as quality, quality assurance, quality enhancement, quality control, and quality management.³⁴ There is no clear definition of the aim and role of quality assurance in the system, nor of the functions assigned to QA or the bodies responsible for its implementation at system, institutional, and program levels. Instead, the existing legal documents function as government control tools, but not as quality enhancement tools (see Section 3.3.2).

94. **None of the legal acts specifies the value of ensuring a range of providers and course formats in the system, e.g., transnational providers, distance education, joint and double diploma, or how the credibility of degrees awarded by different forms of education should be assured.** Establishment of Russian HEIs in Tajikistan, e.g., Tajikistan Branch of Moscow State University named after M. Lomonosov, is welcomed and accepted without reference to quality assurance procedures. However, as international experience shows, no branch of even a prestigious university has been proven to provide the same level of quality delivered at the main institution, simply due to issues including differences in management, resources, and qualifications of faculty members. Hence, there is a need to safeguard the national system of education through establishing clear regulations on what kind of provider can function in Tajik higher education as well as setting robust quality assurance mechanisms to ensure the quality of their provision. Thus, to allow this diversification, apart from substantial changes in the legal framework, an overhaul of the approaches to higher education should be undertaken to make it less dependent on individuals and more reliant on robust quality assurance and accountability mechanisms.

95. **The country needs to develop a legal framework to safeguard Tajik higher education from the risks of opening up the market to international accreditations.** As discussed earlier, the market of international accreditors is growing, which could be harmful, if the system is not safeguarded from the accreditation mills. There is no legislation in Tajikistan that regulates international bodies. The government urgently needs to develop a legal framework that answers questions such as whether the country will open up its market to international accreditors, whether it will maintain a register for international accreditors eligible to function in the Tajik HE, and whether it will set criteria and procedures for the recognition of international accreditors. The new framework should set out clear guidelines for operationalization of quality assurance at HEI, QA Agency and professional association levels as well as for avoiding opening up the higher education market to the accreditation mills.

96. **The country is yet to develop reliable qualifications and recognition tools, and descriptions of qualifications per degree and level based on knowledge, competencies and skills, both of which are required to facilitate educational and labor mobility.** Some steps have been undertaken in the direction of qualifications recognition. In June 2011, the President of Tajikistan signed the *Convention on the Recognition of Qualifications concerning Higher Education in the European Region*³⁵ and the Parliament

³⁴ See Section 2.1.2 in World Bank (2003).

³⁵ Signed on April 11, 1997, effective February 1, 1999. Currently, 53 countries (all Council of Europe member states, except

of Tajikistan ratified it in January 2012. The Convention stipulates recognition of degrees and periods of study unless substantial differences can be proved by the institution that is charged with recognition. It also requires that students and graduates be guaranteed fair procedures under the Convention. However, Tajikistan is yet to embark on a National Qualifications Framework (NQF), the development and operationalization of which is required to meet the conditions set out in the Convention, and which takes on average 7-8 years to complete. Although the government has introduced the two-tier BA and MA degrees and the European Credit Transfer and Accumulation System (ECTS) in 2007 in line with the Bologna Process, the implementation of both has been slow and remains incomplete so far. ECTS is yet to be fully operationalized at HEIs level. The BA and MA structure requires further development and revision to meet its objectives as well as to be comparable at the international level. A Diploma Supplement also needs to be developed, adopted, and put into practice to facilitate student mobility.

97. In sum, as outlined in the National Strategy for Education Development 2020, the country's education is clearly aimed at integration at the international level. Therefore, the respective legislation and legal framework should underpin this vision and should outline expectations from QA to ensure the operationalization of internationalization.

3.3.2 Quality Assurance Framework

98. **The current quality assurance system, which heavily relies on licensing, attestation and accreditation based on minimum standards, overburdens the system and yields limited quality enhancement.** Tajikistan's external quality assurance system currently consists of three consecutive steps of licensing, attestation, and accreditation. All of these steps are drawing on the same standards and more or less the same procedures and actors, overburdening HEIs without adding value to system improvement and enhancement (Table 7). For example, licensing, attestation and accreditation are all based on the same criteria and the validity period of the three tools is for five years. This means that to initiate an institution or a program, a license should be obtained first, which is a one-time procedure. Following the license, every five years, all HEIs must pay and undergo evaluation against the same criteria twice (first attestation and within three months accreditation). Further, the consequences of the two are the same with regard to the right to issue a diploma. On the other hand, these tools overlook functions such as quality enhancement, professional certification of graduates and provision of information, which are necessary for the effective operationalization of a quality assurance system, as discussed above (see Section 3.2.1). None of the tools engages major stakeholders such as faculty staff, or students, let alone employers. In addition, these stakeholders are never informed of the results of these evaluations. Interviews and focus group discussions with major stakeholders suggest that these tools are not trusted among the HE community and society at large since the quality of provision remains poor and there is little potential for improvement. In terms of recognition, apart from recognition by the government, professional recognition by employers is also lacking. The latter are not aware of and, therefore, cannot trust the existing tools since graduates, according to the respondents in our sample, are well below the standards expected.

Monaco and Greece), as well as Australia, Belarus, Holy See, Israel, Kazakhstan, Kyrgyz Republic, New Zealand and Tajikistan are parties of the Convention.

Table 7: Quality Assurance Framework in Tajikistan: an overview

QA Mechanisms	QA Functions	Actors	Validity	Standards	Requirement level	Cost per procedure	Consequences
Licensing	Initiation of an activity (establishment of HEI)	The State Agency on Supervision in the Sphere of Education (under the Ministry of Education)	Given at the launch of the HEI activities and renewed every 5 years through attestation and accreditation	Standards and Procedures for Licensing	Mandatory	TJS 560 (approx. USD 220)	Right to function
Attestation	Establishes that content, level, and quality of graduates comply with the requirements of state educational standards	The State Agency on Supervision in the Sphere of Education (under the Ministry of Education)	Every five years	Standards for attestation (the same as for licensing)	Mandatory	TJS 10,000 (approx. USD 2,200) on average	Right to award a degree, renewal of the license
Accreditation	Recognizes an educational institution as complying with standards of HE for a certain type of educational activity	The State Agency on Supervision in the Sphere of Education (under the Ministry of Education)	Every five years, within 3 months of being approved for attestation, the length can vary from 2 to 5 years, depending on the case	Standards are the same as in case of attestation and licensing	Mandatory	TJS 2-3,000 (approx. USD 450-680) on average	Right to award a degree and certificates for individual courses
Financial audit	Inspection of the extent to which the finances spent are reasonable and are in line with legal requirements	Internal Audit of the Ministry of Education and other Ministries under whose jurisdiction the HEIs are	Once per year	Standards applied at nationwide level for all types of organizations	Mandatory	Free of charge	In case of abuse detection serious consequences may apply.

3.3.3 External Quality Assurance Agency

i. Mission and functions

99. **The State Agency for Supervision in the Sphere of Education (SASSE) under the Ministry of Education and Science is in charge of external quality assurance in Tajikistan.** The SASSE was established in March 2007 according to the Government Resolution No.105. The mission of the agency is safeguarding state academic standards in the territory of the Republic of Tajikistan independently of levels of education (primary, secondary, vocational, and higher), their forms of property and administrative subordination. The SASSE consists of two departments and five units, including accountancy and technical support. It has branches in all the provinces, cities and districts throughout the country. Overall, there are 40 professional and 10 technical staff members at SASSE and it has a pool of about 300 peers, through which it conducts licensing and attestation (accreditation is conducted purely by the agency staff without peer involvement). The major functions of SASSE include:

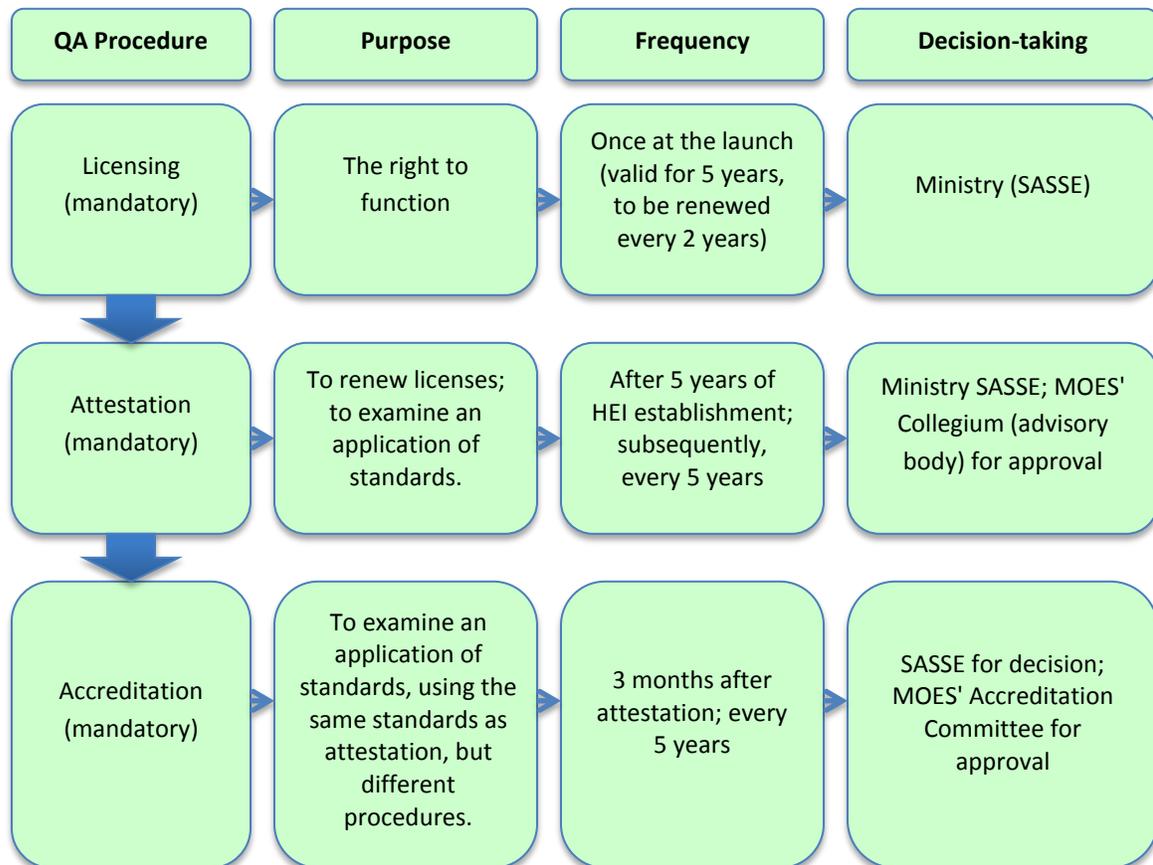
- **Licensing:** to issue the right to function to educational establishments;

- **Attestation:** to establish that content, level, and quality of graduates comply with the requirements of state educational standards;
- **Accreditation:** to recognize an educational institution as complying with standards of HE for a certain type of educational activity;
- **Supervision:** to conduct random control of educational activities based on the request of the Ministry of Education;
- **Nostrification (Latin):** to recognize foreign qualifications.

ii. Standards and Procedures

100. The SASSE primarily looks at institutional level as the unit of assessment, though program accreditation experts are involved in the evaluation team to assess programs; thus, licensing, attestation and accreditation are all at institutional level. The standards for licensing, attestation and accreditation have been in use for the three cycles³⁶ of 5 years and only minor changes have been made. The sequence of the application of the variety of tools is as follows (see Figure 27):

Figure 27: Flowchart of the QA procedures: purpose, sequence and frequency



³⁶ Prior to the establishment of the SASSE, a department within the MOES dealt with licensing, attestation and accreditation.

- **Licensing:** HEIs have to obtain a license from SASSE before operating. SASSE sends a team of experts to conduct the licensing procedure. A licensing procedure and criteria are applied by SASSE to check compliance with the minimum requirements to start an organization. A license is issued for 5 years, and after 5 years HEIs have to undergo attestation to renew the license for another 5 years. In case HEIs establish new programs, SASSE establishes a committee and then amends the license where the new programs are added. While it is possible to open new programs, in reality, it seems that it is close to impossible to open or close a program because of the rigid legal framework and numerous barriers.³⁷ According to the SASSE Director, there are plans to publish the licensing reports/outcomes on the SASSE website.
- **Attestation:** The first cycle of attestation takes place after 5 years of HEI establishment followed by two-year cycles for subsequent attestations. The agency prepares an attestation plan every two years for particular HEIs for the Ministry's approval. Based on the plan, the HEIs in question receive a notification about the procedure and the Ministerial decree. A year before the launch of the attestation procedure, SASSE requests the HEI to submit the number of students, based on which the agency sets the price for attestation for the HEI, with the maximum fee at TJS 10,000 (approx. USD 2,200) per procedure. According to the regulation, prior to attestation the HEI has to develop a self-attestation report and submit it to the agency. After receiving the self-attestation report, which is primarily based on the attestation and licensing criteria and revolves around collections of quantitative data without in-depth analysis, the agency sends an expert panel to conduct the site visit (interestingly, the peers in our focus group stated that they had never received any self-attestation report for their own reference).

During the site visit the team, which includes 4-5 agency members and, depending on the number of programs, one expert per program, compares the results submitted in the self-attestation report with their own observation. One example is that the visiting team is divided into two groups: the invited experts look purely at the program content and the agency staff look at the administrative management of the HEIs. According to the procedures, the attestation is supposed to take two weeks, but in reality, it could last for a month.³⁸ In all cases, the peers stated their non-familiarity with such documents as the self-attestation report, the desk-review of which is purely left up to the SASSE staff members rather than the peers. The site visit activities at program level involve random examination of students based on study plans, observation of classes, and checking thesis papers, practices that are broadly applied by NAA in Russia. Based on the data obtained during the site visit, the expert panel develops a report. Attestation has three major decisions: yes, no or conditional. A positive attestation decision entitles the HEI to renew their license. It should be noted that to date, no case of a negative decision on attestation has been taken, though one case of conditional accreditation has been registered (which was later successfully attested and accredited).

- **Institutional accreditation:** After an HEI receives a positive attestation result, within 3 months, the HEI management applies for accreditation, providing required documents including the conclusion of the attestation procedure. Accreditation is mandatory. Prior to the application, it should be approved by the Academic Council of the HEI. While the same standards are applied for attestation and accreditation, a different procedure is applied for accreditation. Based on the application of HEI, which also includes the results of attestation, the SASSE sends a committee of

³⁷ Based on the interviews and focus group discussions with the Ministry officials and HEI representatives.

³⁸ Based on the interviews and focus group discussions with the Ministry officials and HEI representatives.

agency staff members to pay a 3-day site visit to the HEIs to check the facts submitted in the documents. Only agency staff conduct the accreditation procedure and there is no self-evaluation report produced for this purpose. The decision is binary: yes or no. To date, no negative decision on accreditation has been taken. Upon a positive decision, the HEI has a right to issue diplomas.

101. **The reliability of the current quality assurance system is questionable, as the majority of HEIs remain open regardless of whether they meeting the standards.** According to the Director of the SASSE, even though all HEIs have undergone the attestation and accreditation procedures successfully, in reality, the majority of the HEIs do not meet most of the standards, which are quantitative in nature. For instance, standards such as the number and qualifications of teaching staff (young vs. senior; number of PhDs), resources, student success rate on reaching the stated benchmarks of achievement (minimum 80 percent requirement, in reality only 52-60 percent), the number of fields covered by the HEI to confer the status of a university (at least eight fields), square meters per student, and the number of books are rarely met by HEIs. Furthermore, despite the fact that the *Standards and Norms of Institutional Accreditation of Higher Professional Education Institutions*, adopted in June 2011, takes a mission-based approach, most HEIs do not even have a mission statement, let alone a working strategic plan. There is no self-assessment phase at HEI level as part of accreditation, even though there should be, according to the standards. Hence, in reality, all HEIs have been accredited, regardless of whether they meet the quantitative and qualitative standards. The reason for such lenient decisions is because the government feels responsible for keeping the state HEIs open,³⁹ which is an apparent result of the conflict of interests that exists between the founder and external evaluator, if the two are combined. In the case of Tajikistan, the government is the sole body responsible for both establishment and external review of HEIs.

iii. Peer-reviewers

102. **There is a dire need to build the capacity of peer experts to ensure effectiveness, consistency and coherence in quality assurance procedures.** SASSE forms an expert panel for attestation. To include peers from HEIs in the panel, SASSE sends an official letter to HEIs and requests nominations of about 10-20 qualified professionals in particular fields. The external experts are involved in the attestation procedure on a voluntary basis and no remuneration is provided except for travel costs and costs of stay. They are not involved in the accreditation procedure, which is solely carried out by SASSE staff—an approach which is quite the opposite of accepted good practice at the international level in general, and Europe in particular. All the nominees are automatically registered in the expert pool. Based on the profile of the HEI under review, the agency selects experts from the pool. Each program is assigned one external peer, so the number of experts involved in one attestation procedure depends on the number of programs that the HEI has. The expert panel also includes 4-5 agency staff members, who are acting as experts themselves and are responsible for the HEI administration components. The experts are guided through the Guidelines for Attestation, which includes the standards for attestation, but there is no prior training or orientation for the expert panel. This approach is quite similar to the approach promulgated by the NAA in Russia, which leaves little room for selecting the best-qualified experts and ensuring consistency of approaches in the external evaluation. As the experts in our sample stated, and the agency staff and HEIs supported in their statements, there is an urgent need to build the capacity of experts to ensure effectiveness, consistency and coherence in these procedures.

³⁹ Based on results from the survey at HEI level, interviews and focus groups with HEI representative and SASSE.

iv. Decision-making

103. **Attestation:** The Council of State Inspection in Education at the Ministry of Education and Science takes decision on attestation. It consists of 23 members, including 11 from the agency, four from the Ministry, the rest from other ministries and HEIs. During the Council's convention, the Vice Chair presents the case and then the Council takes a decision. The decision is sent to the Ministry of Education and Science Collegium—an advisory body—for approval. The Collegium includes the Minister, four deputy ministers, one rector from the Council of Rectors, and the Head of Dushanbe Department of Education. The Collegium approves the decision, following which the SASSE issues a certificate and the Minister signs it.

104. **Accreditation:** The decision is taken by the SASSE first, which then travels to the Accreditation Committee at the Ministry of Education and Science. The Accreditation Committee takes the final decision on accreditation and the Director of the SASSE issues a certificate on accreditation to the HEI signed by the Minister of Education and Science.

105. **In sum, Tajikistan's external quality assurance model follows the practices peculiar to those promoted by the ministries in post-Soviet systems and is not in line with the ESGs.** Such an approach to decision-making leaves little room for the credibility, reliability and transparency of external quality assurance let alone its independence, one of the most important principles and standards for external quality assurance in general and accreditation, in particular.

3.3.4 Internal quality assurance mechanisms at institutional level⁴⁰

106. **Most HEIs are yet to clearly set a mission and vision for their institutions.** Very few HEIs in Tajikistan have a clearly stated mission that takes into account their unique situation, but only a broad and general mission statement. Of the 20 HEIs that responded to the questionnaire, only four HEIs provided their mission with a reference to their Charter and the rest skipped the items on the mission and vision. Most of the HEIs found it difficult to explain how they are working based on the strategic plan and to what extent their quality assurance tools promoted its implementation.

107. **HEIs undertake multiple activities to ensure quality, but often in a fragmented, inefficient and ineffective manner, without a holistic system of internal quality assurance.** In 11 out of 20 cases, HEIs undertake classroom observations, monitoring and evaluation of teacher performance, control of educational processes, inspection, and audit on a monthly, weekly and even daily basis. In the remaining nine cases, a minimum of four tools were applied. In either case, however, most HEIs were unable to explain distinctive features of these different tools. All of the 20 HEIs have a Quality Control Unit with about 3-5 staff members within the structure of Academic Affairs Division. The major functions of the unit are monitoring and quality control of educational processes, in particular student assessment, achievements, and, most importantly, student attendance. Despite the existence of the unit, multiple other bodies, including deans' office, chairs, and academic affairs office also conducted "internal quality assurance" activities in a fragmented, overlapping and repetitive manner. In some cases, in addition to

⁴⁰ The analysis of the internal quality assurance mechanisms primarily stems from the questionnaires sent to 20 HEIs and follow-up meetings with them, focus group discussions with officers responsible for quality control and the credit system management units as well as with selected representatives of HEIs. Documents submitted by the HEIs on their achievements in quality assurance are also analyzed.

the aforementioned actors, special inspection units are established by the rectors to control for any sort of information that comes in and goes out of the institution or for the purposes of double control.

108. **Only one of the 20 HEIs has an internal quality assurance policy that aims at ensuring informative decision making for quality improvement, while the rest are guided by no systemic approach to quality assurance.** Five out of the 20 HEIs stated that they did not have any policy or procedure on internal quality assurance, while the rest referred to regulations on student assessment based on the credit system, rating of teaching staff, and the Charter of the HEI which cannot be considered as an IQA policy.

109. **HEIs typically develop study programs without involving key stakeholders, and without setting up an ongoing review process to ensure their continued relevance.** To HEIs, development, monitoring and regular revision of their study programs means following procedural steps set by the Ministry of Education and Science, which does not require involvement of key stakeholders or a review process. Reliability and relevance of study programs are sacrificed for two major reasons: (i) lack of involvement of key stakeholders such as students, graduates, employers in the development process; and (ii) lack of the procedures aimed at regular review of study programs to ensure enhancement and relevance to market needs.

110. **HEIs are currently guided by control-oriented standards to manage quality, which does not motivate them to improve.** The State Quality Management Standards adopted in 2013 through Decree No. 497, which are all quantitative, and thus, control-oriented in nature, are key quality assurance guidelines for HEIs, but they provide little incentive for enhancement. One of the 20 universities referred to the Federal State Educational Standards of the Russian Federation promoted by the Russian Education Inspection (*Rosobrnadzor*), which also have little to do with quality assurance and enhancement standards. The types and aims of standards promoted by the Ministry of Education and Science are not well understood by HEIs. This may be the result of a lack of capacity at national level to develop standards that simultaneously meet the needs of the country and align with international benchmarks.

111. **HEIs see the grading scale and credit system as tools for student assessment without having an overall student assessment policy.** None of the 20 HEIs has a student assessment policy that defines the underlying philosophy (assessment of learning vs. assessment for learning or both), assessment methods (formative, summative, diagnostic), subjects of evaluation, and the like. Furthermore, HEIs tend to see assessment as a tool for punishment rather than a way of promoting student learning. Last, but not least, an assessment system is most frequently confused with the credit system and reduced to a mere grading scale.

112. **HEIs collect outputs and quantitative data, but not processes and qualitative data to help quality enhancement.** It is important that HEIs collect and analyze both types of data if they are to better understand the driving forces behind educational processes and significantly improve their capacity for further enhancement. Moreover, it would reduce the risk of data manipulation: having only quantitative indicators provides enough room for manipulation of the figures, especially when the external evaluation tools do not look at the processes implemented, but only at the outputs.

113. **While most HEIs still lack understanding of “self-assessment”, there are a few examples of best practice where Tajik HEIs have conducted an in-depth self-assessment and been externally evaluated based on this self-assessment.** Within the framework of international projects (Tempus

Project: Central Asian Network of Quality Assurance (CANQA)), three pilot program accreditations were conducted. The staff of the respective programs and HEIs – University of Commerce and Khujand University went through respective trainings to conduct self-assessment, and the programs underwent pilot accreditation procedures including site-visits by international peers. As a result, two out of the three programs were refused accreditation and one program – World Economy of the University of Commerce – was successfully pilot accredited within the framework of Tempus Project CANQA. Another Tempus Project Establishment of a Quality Education Platform at Central Asian level plans to establish a register for QA agencies that have a right to conduct accreditation in the region. Similarly, within the frames of Swiss Tropical and Public Health Medical Education Reform Project in Tajikistan, the same good practice was identified at Tajik State Medical University (TSMU).⁴¹ The HEIs that have had the experience of international external evaluation highly value the lessons learnt, and acknowledge the benefits of such procedures for quality enhancement, and in particular, in changing in the attitude of the staff involved.

114. **Accountability at HEI level is extremely weak.** HEIs consider annual activity and financial reports as the only accountability mechanisms, leaving self-assessment of HEIs and programs outside accountability.

115. **Key stakeholders (student, faculty members, and employers) are not involved in quality assurance processes.** HEIs tend to involve students and faculty members more for inspection and control purposes, and rather than in quality assurance processes such as data collection, production of report, and the like.

3.4 Summary of Findings and Policy Recommendations⁴²

1. National Quality Assurance Framework

Recommendation 1: Legal Framework

To revise the legal framework of the country to bring in a systemic approach to higher education in general and quality assurance in particular by defining:

- the role of quality assurance in the HE system;
- what quality and quality assurance means for the country;
- approaches to quality assurance;
- enhancement as one of the major goals of quality assurance;
- the nature of quality assurance as an independent and mandatory procedure;
- the major actors in quality assurance;
- how quality of a diversity of providers will be ensured (transnational);
- how quality of alternative methods of education should be assured (e.g. distance education);
- the role of international accreditors and regulation of their activities in the RT.

⁴¹ A two-phase consultancy had a term of reference to “analyze the status of the medical curriculum reforms” and discuss the planned changes with the TSMU staff. Thus, the international peers conducted evaluation of the TSMU study programs against internationally accepted standards and provided recommendations for improvement.

⁴² Annex 4 provides a detailed timetable for sequenced reform actions, including actions, responsible persons/entities for the action, and a timeline to implement the recommendations.

Recommendation 2: National Quality Assurance Framework

To revise the national quality assurance framework to eliminate multiple and overlapping tools.

To establish the quality assurance tools that contribute to the system as a whole and include important aspects such as:

- assessment of functioning initiation of an institution or a program;
- supervision of functioning of programs and institutions to ensure maintenance of the minimum quality standards set by the government;
- financial audit;
- external independent evaluation to ensure higher level of quality against quality standards set by the independent agency;
- professional certification of graduates as part of program accreditation to grant a license to function;
- provision of information regarding recognition of institutions and programs (see Table 5 for a recommended framework).

116. The existing QA system is hampered by overlapping procedures, and neglects major elements of the higher education system, including the primary outputs of HEIs – certification of professionals and information provision. The recommended model: (1) eliminates the overlap; and (2) fills in the gap related to system outputs (Table 8).

Table 8: National Quality Assurance Framework: recommended model

Function	Purpose	Tool	Unit	Regulated by	Nature	Actor	Outcomes
INITIATION	Right to function	Licensing	Public, private transnational HEIs	Minimum standards for academic and functional purposes set by the MOES/SASSE	Mandatory	Ministry of Education and Science (MOES) (SASSE)	License to function
		Initial accreditation	Academic and study programs	Quality standards set by an independent agency	Mandatory	Quality assurance agency (QAA) of TJ	Certificate on initial accreditation
	Control for minimum standards	Monitoring	Public, private, transnational HEIs and randomly selected programs	Minimum standards for academic and functional purposes set by the MOES/SASSE	Mandatory	MOES (SASSE)	Report on compliance, in case of infringement revoking the license
IMPLEMENTATION	Inspection of financial expenditures	Financial audit	Public HEIs	Standards for auditing adopted by respective Ministries	Mandatory	Internal audit of the MOES for HEIs under its jurisdiction. Similarly, other Ministries conduct audit of their HEIs	Report on compliance with the state norms
	Quality enhancement	Accreditation	Public, private, transnational HEIs	Quality standards set by an independent agency	Mandatory	QAA of TJ	Links to funding
OUTPUTS			Academic and study programs	Quality standards set by an independent agency	Voluntary	QAA of TJ International accreditors Professional associations	Links to funding
	Graduate certification of profession	Professional certification	Graduates	Standards set by the Government and professional associations	Mandatory	Ministry, Professional associations	Certificate to function
	Information provision	Registration	HEIs, programs, professional associations, international accreditors	Standards set by the government	Mandatory	Ministry, QAA of TJ	Inclusion in the registers

2. External Quality Assurance Agency

Recommendation 3: National Quality Assurance Agency

Establish a national quality assurance agency, which is a legal entity governed by the public law.

The national quality assurance agency should:

- be independent from Ministries, HEIs and third parties;
- conduct external quality assurance of institutions and programs;
- be accountable to the Prime Minister or the President of the country or the public at large;
- conduct its functions and activities on a regular basis;
- conduct all its activities in broad consultation with its stakeholders – HEIs, government, students, employers, international peers and the public at large;
- take *Standards and Guidelines for Quality Assurance in European Higher Education Area (ESGs)* as the guiding standards and principles for its functioning or in the case of transnational providers UNESCO/OECD Guidelines on Quality Provision for Cross-Border Providers;
- undergo an external evaluation against international standards on a regular basis;
- build in broad consultation and involvement of all the stakeholders - HEIs, government, students, employers – to ensure ownership and legitimacy of approaches.

The national quality assurance agency should fulfill the following functions in the overall quality assurance system of the country:

- Accreditation of HEIs and their programs to ensure higher level of quality (including the diversity of approaches to program delivery: transnational; distance learning; and joint and double degrees).

The role of the national quality assurance agency should be to:

- ensure quality enhancement of the Tajik Higher Education System;
- conduct official recognition of HEIs and programs through accreditation;
- ensure national coordination of quality assurance bodies – both national and international.

External quality assurance procedures should take into account the effectiveness of the internal quality assurance processes in HEIs.

Recommendation 4: Quality assurance of distance education

To address quality assurance of distance education (DE) special arrangements are to take place at two levels:⁴³

At national level:

- review of legislation and regulatory framework to integrate the approaches to DE and its quality assurance;
- set intellectual property rights for virtual courses, recognition and licensing arrangements for providers, arrangements and regulations for the granting, accumulation and transfer of

⁴³ See Chapter 5 for detailed discussion on distance education.

educational credit;

- put granting the rights of delivery of such courses under the purview of respective Ministries;
- put the quality assurance of DE under the purview of the newly to-be-established independent QA agency;
- set methods of controlling bogus providers.

At the agency and HEI/program levels the criteria and procedures for DE should consider, among other things, the following:

- national regulations including alignment with the NQF, student and staff workload and degree-awarding and recognition;
- curriculum design and choice of media;
- teaching, learning and assessment methods considering the virtual character of the process;
- positioning of interactivity in a course;
- accessibility of the students to the teaching and learning materials;
- technical and academic support to students – considering national peculiarities/challenges of student learning;
- faculty qualifications with regards to the new mode of delivery, new skills and roles for staff, possibly linked to new contracts and reward systems;
- technical and academic support to staff;
- technical and academic support to the DL providers and their agents;
- students with special needs;
- financial allocations for the program and tuition fees;
- time allocated for research and development and for innovation in teaching, considering the complexity of virtual learning;
- internal quality assurance mechanisms to constantly analyze the delivery of virtual learning classes and ensure their enhancement.

To start with TJ should assess the needs and purposes of distance learning quality assurance for the key groups of stakeholders: students, faculty, and partnerships between institutions or between institutions and other types of DE providers.

Recommendation 5: Capacity building of Higher Education Stakeholders

A major capacity building campaign on HE reforms in general and quality assurance in particular is crucial.

In particular, raising awareness and capacity building with regards to:

- the concepts, terms and principles used in HE and quality assurance;
- approaches to quality assurance leading to establishment of quality culture;
- quality assurance tools (internal for HEIs and external);
- set-up and operationalization of internal quality assurance systems for HEIs and programs;
- set up and operationalization of an external quality assurance agency;
- selection, training or induction of peer reviewers;
- concept, approaches and methodology on self-evaluation of programs and HEIs;
- interpretation of QA standards and procedures, ESGs in particular.

3. Internal Quality Assurance of HEIs

Recommendation 6: Internal Quality Assurance of HEIs

The HEIs should revise their approaches to internal quality assurance by:

- eliminating the multiplicity and overlap of such units and responsible persons as monitoring, quality control, audit, attestation, control for student assessment and the like;
- adopting a systemic approach to managing quality leading to establishment of a quality culture;
- establishing internal quality assurance systems that would ensure both control and enhancement of all the processes run by the HEI and its programs;
- using internal quality assurance as a major accountability tool and the means to informative decision making.

Furthermore:

- All HEIs should establish internal quality assurance systems covering the institution and programs, to ensure that the HEI fulfils its own mission, as well as the standards that apply to higher education in general, or to the profession or discipline in particular.
- The HEIs and their programs should take ESGs as guidelines for establishment of their internal quality assurance systems.
- All HEIs, including public, private and cross-border providers should commit themselves explicitly to the establishment of a quality culture, which values continuous enhancement of quality and quality assurance in the provisions of different services.
- The HEIs should have a strategy, policy and associated procedures for the assurance of quality provisions of their programs and awards.
- The strategy, policy and procedures should have a formal status and be publicly available and be regularly applied.
- To quality assure different processes run by HEIs, a process- and outcome-based approach to quality assurance should be adopted.
- HEIs should use self-evaluation as one of the methods to explore the processes run by a HEI and the resulting outcomes.
- Self-evaluation is a comprehensive, systematic and regular review of the organization's activities and results, which highlights strengths and the areas in need of further improvement. The results of self-evaluation report should be used for informative decision-making and feed into revision and enhancement of the strategies.
- The internal quality assurance activities should include the internal (students and faculty members) and external stakeholders (practitioners).

Chapter 4: Financing

117. **This chapter explores how higher education is financed in Tajikistan.** It analyzes various components of the sector, including public spending on higher education, student stipends, teaching staff salaries, institutional spending, and the dearth of private institutions in the country. The chapter also examines Tajikistan’s rising per-student spending. This chapter concludes with policy recommendations to address findings.

4.1 Public Spending on Higher Education

118. **Strong recent economic growth has helped to increase public funding for education.** Tajikistan has experienced one of the highest rates of economic growth in the last 15 years after the civil war ended in 1997. Even during the latest global financial crisis, Tajikistan’s growth rate remained relatively strong (Figure 28). As a result, Tajikistan’s public spending on all levels of education has grown steadily in the last decade. As a share of GDP, public spending on education increased from 2.3 percent in 2000 to 4.0 percent in 2012, excluding extra-budgetary funds and donor-funded public investment programs. It remains below the ECA average of 4.8 percent, but just about the average of countries with similar economic development status, and demographic compositions (Figure 29). The government intends to further increase educational spending, as stated in the *National Education Development Strategy Up To 2020*, up to 6 percent of GDP by 2015 and not less than 7 percent of GDP by 2020.

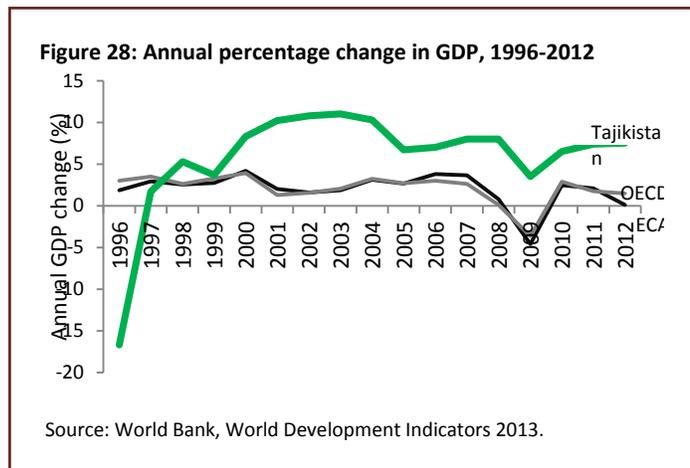
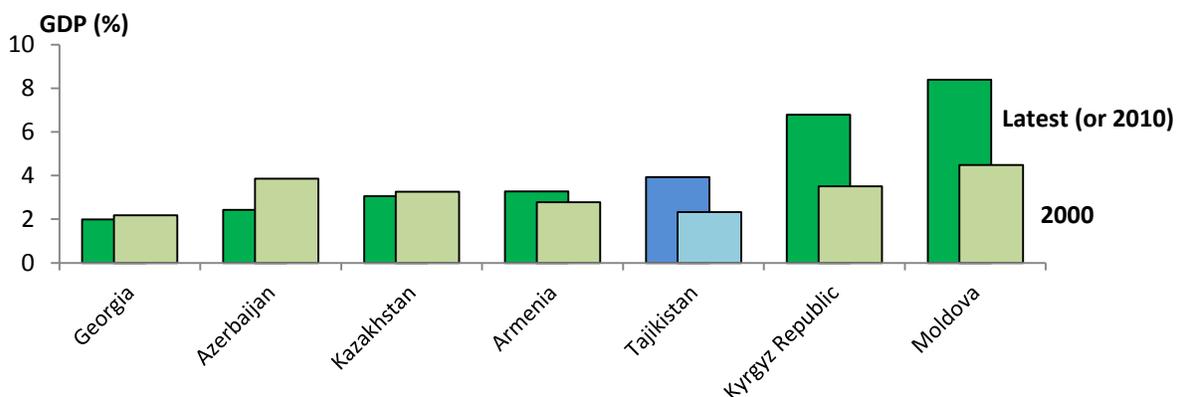


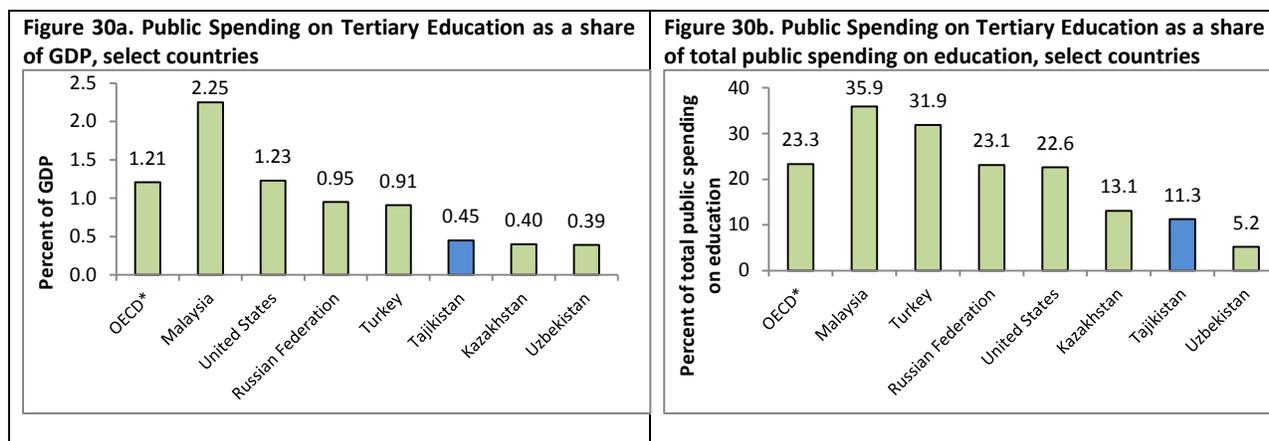
Figure 29: Public Expenditure on Education as a percent of GDP in comparator ECA countries



Sources: World Bank, EdStats; Tajikistan State Treasury of the Ministry of Finance.

119. **Tertiary education’s share of the overall education budget is at a similar level to Tajikistan’s neighboring countries and has slightly increased in recent years.** In 2009, public spending on tertiary

education amounted to 0.44 percent of GDP or 10.7 percent of total education spending, which increased slightly to 0.45 percent and 11.3 percent, respectively, by 2012 (Figures 30a and 30b). Tajikistan’s public spending on tertiary education falls far short of wealthier countries (where the tertiary enrollment rate is much higher in general), but at the similar level as a comparator country such as Kazakhstan.



Notes: *Refers to high-income OECD countries

Data for Tajikistan from 2012, Uzbekistan 2011, and 2009 or latest available year otherwise.

Source: Tajikistan BOOST v0.5 government expenditure database; Statistical Agency under President of the Republic of Tajikistan; calculated by World Bank staff; OECD (2012), and the World Bank EdStats database.

120. **While the Law defines that research is integral to an institution’s accreditation, HEIs typically are not engaged in research activities at all.** Academic staff of HEIs are obliged to allocate roughly 20-25 percent of their workload toward research. The government provides grants for research, but the sum of each grant is often less than USD 5,000, which is insufficient to result in impactful research. As in most Former Soviet Union countries, research has been detached from HEIs and housed in the Academy of Sciences.⁴⁴

4.2 Higher Education Financing Model

121. **State HEIs are primarily financed by the national budget and tuition fees with very limited alternative revenue sources.** The *Law on Higher Education* guarantees “funding from the state budget or grants” for teacher training, and “budgetary funding or private grants to ensure access to higher and postgraduate education under the state order”,⁴⁵ but with no indication of adequate, minimum thresholds for providing quality education to students. To meet the legal requirement, the government finances state-funded places in state HEIs on a merit-basis - though admission to higher education has not been perceived transparent in general. The state-funded students also receive monthly stipends. In addition, the Presidential quotas are provided for disadvantaged students in the form of free places.

⁴⁴ The Academy of Sciences of the Republic of Tajikistan consists of 20 research institutes and three territorial groupings. The Academy is organized in three thematic divisions: physico-mathematical, chemical, and geological sciences; biological and medical sciences; humanities and social sciences (Source: http://en.wikipedia.org/wiki/Tajik_Academy_of_Sciences, accessed on June 2, 2014).

⁴⁵ Law on Higher and Postgraduate Professional Education, Ch. 1, Article 4.

Free places are also offered to invalids of the first and second groups,⁴⁶ absolute orphans, children of citizens injured during the accident at the Chernobyl atomic power plant based on interviews. In addition, high performing fee-paying students who received 75 percent of “excellent” marks and 25 percent of “good” marks in all disciplines in four semesters are eligible to get transferred to budget groups. Altogether, about 40 percent of students have been funded by the state since 2008-2009. HEIs raise tuition fees from fee-paying students. HEIs are allowed to generate other revenues from donations, research contracts, and international grants, provided they do not conflict with the institution’s Charter, but the amount from these sources remains small. Non-state HEIs are financed entirely by the institution’s founders without any state funding. Since there is only one private HEI in Tajikistan today, the rest of the chapter does not include a discussion on private HEIs, and hence “HEIs” refers to state HEIs, unless otherwise noted.

122. **State-funded places are not allocated strategically to meet the changing labor market demand.** Each year, HEIs request a certain number of state-funded places for their institution and programs from the government. The Ministry of Economics and Trade, the Ministry of Education, and sectoral ministries approve the final number for each institution and program, primarily according to historical allocations without a systematic formula accounting for national priorities or prevailing labor market demand.

123. **Almost 60 percent of the state budget for higher education institutions is actually raised by HEIs themselves.** Starting in 2012, universities’ own revenues are counted as part of “state budget” for higher education. After withholding 10 percent taxes, the Ministry of Finance allocates the revenues back to the respective HEIs (Table 9). The tax has served as a disincentive to engaging in sustained efforts to build revenue to improve infrastructure and maintain modern and competitive curricula.

Table 9: Funding of Higher Education Institutions, 2012

Budget of Higher Education Institutions	Somoni (TJS in millions)		% of Total HEI Budget ³
University's own source of funds	187.0	(1)	56.2
-Tax of university's funds (10 percent)	18.7	(2)	5.6
Net Funds Available from own source of funds	168.3	(3) = (1)-(2)	50.6
+ Government-provided financing ¹	164.3	(4)	58.7
Of which: stipends	31.6		19.2
HEI Budget with construction	332.6	(5) = (3) + (4)	100.0
	USD 69.7 mil.²		
- Directorate of Construction under President	52.8	(6)	15.9
HEI Budget without construction	279.8	(7) = (5)-(6)	84.1
	USD 58.7 mil.²		

Note: Data for university’s own source of funds unavailable for previous years

¹ Includes funding from local budgets

² Based on an exchange rate of TJS 4.77 = USD 1

³ Excludes construction.

Sources: Tajikistan BOOST v0.5 government expenditure database; Statistical Agency under President of the Republic of Tajikistan; calculated by World Bank staff.

Per student spending

⁴⁶ The degree of disability (I, II, III groups) is determined by the High Board of Examiners under the Ministry of Health, which issues a special document allowing for various benefits.

124. **Tajikistan’s per student spending on higher education is very low in absolute terms, at only USD 490.** In 2012, Tajikistan spent almost four times as much per student on higher education as on general education (Table 10). It was equivalent to 51 percent of GDP per capita. Compared to the relative spending on tertiary education (including public and private expenditures on universities and colleges, but excluding R&D activities) for OECD average—which is only 1.7 times as high as that on general secondary education—and 43 percent of GDP per capita, Tajikistan’s spending on higher education appears relatively high. However, this is not to say that higher education is well financed in Tajikistan. Higher education is essentially an international commodity that requires expensive goods and services such as computers, libraries, laboratories, Internet, and equipment which are often influenced by international pricing and higher salaries to attract qualified faculty. In absolute terms, it is only 3.5 percent of OECD average (USD 13,528), 8.2 percent of Russia (USD 7,039), and 9.6 percent of Argentina (USD 4,680).⁴⁷

Table 10: Per Student Spending by Level of Education, 2012

Level of education	Total budget (TJS mil.) (FY2012) ^{1/}	No. of students (AY2012/13) ^{1/}	Unit cost (TJS)	Unit cost (US dollars) ^{2/}	Ratio (general sec. = 1)	Relative to GDP per capita (percent)
Pre-school	75.9	74,500 ^{3/}	1,019	214	1.73	22.5
General secondary	1,010.1	1,712,900	590	124	1.00	13.0
PTUs	29.5	23,238	1,270	267	2.16	28.0
Secondary prof.	34.7	42,800	811	171	1.38	17.9
Higher education	351.3 ^{5/}	151,003	2,326	490	3.95	51.4
Of which state-funded ^{4/}	164.3	59,902	2,743	577	4.66	60.6
Of which HEI revenues	187.0	91,101	2,053	432	3.49	45.3
Other spending	114.8	-	-	-	-	-
Total	1,780.6					

Sources: Tajikistan BOOST v0.4 and v0.5 government expenditure database; *Statistical Agency under President of the Republic of Tajikistan*; calculated by World Bank staff.

Notes: ^{1/} Budget data are for calendar year, while the student numbers are for academic year (September-June).

^{2/} An exchange rate of TJS 4.75= USD 1 and GDP per capita=953.32 USD for 2012.

^{3/} The number of students does not include those enrolled in early learning centers (ELCs) because they are mostly not government-funded.

^{4/} Includes funding at the local level.

^{5/} Includes HEIs’ own-source revenue which was not available for previous years.

125. **Stipend payments represent a heavy burden on the state budget for higher education.** One of the reasons for the relatively high unit cost for higher education is the provision of stipends for state-funded students. State-funded students receive

monthly scholarships/stipends of TJS 55-182 (USD 12-38) according to their performance (Table 11). Stipends totaling TJS 31.6 million are 19.2 percent of the total state budget for higher education, including construction (TJS 164.3 million) or 28.3 percent of state budget, excluding construction (TJS 111.5 million). In OECD member-countries, the average share of public spending on higher education allocated to scholarships and other grants is a mere 10 percent.⁴⁸ Furthermore, stipend payments in

Table 11: Scholarships for higher education students

Student Performance	TJS per month	
	2010-11	2011-12
Excellent	55	77
Good or excellent	39	55
PhD Student	130	182

Source: Ministry of Education, 2012, *Statistical Collection Sphere*

⁴⁷ OECD, *Education At a Glance*, 2013. OECD average: primary education (USD 7,974) vs. tertiary education (USD 13,528) in equivalent USD converted using PPPs for GDP.

⁴⁸ OECD (2012)

2011-2012 increased by more than two-thirds of the previous year's allocation (TJS 19.0 million). This presents a strain on already limited state-financing in higher education, and helps to explain the rapid growth in per-student spending in higher education. Given the strong incentives for students to maintain high marks, the provision of stipends could even be harmful, if a transparent performance evaluation system is not in place. As discussed earlier, given that many of the higher education students come from a wealthier family background and/or Dushanbe, it is likely that many of them do not need to rely on stipends to cover their living costs. On the other hand, stipends may be an essential supplement for students coming from a poor background and/or regions. According to a survey in 2012, students identified insufficient stipends as one of the main socio-economic factors contributing to an institution's poor performance, based on the selected universities.⁴⁹ More targeted provision of stipends is likely to improve its effectiveness.

Faculty salaries and demographics

126. **High and rising student stipend payments means that there is less state financing available for other vital areas including teaching and learning.** Teaching is one such an area. Monthly salaries in 2011/12 ranged from TJS 302 (USD 66)⁵⁰ for teachers without a scientific degree to TJS 1,124 (USD 244) for professors with a degree (Table 12). Junior teaching staff and those without a scientific degree are especially poorly paid, lower than or around the economy average (Figure 31). It seems quite demotivating for teachers at the bottom of the cadre who are paid TJS 302, which is only four times as much as the stipends for excellent performing students (TJS 77). Low salaries contribute to faculty needing to work multiple jobs, leaving less time for research. The wages for professors and lecturers with a scientific degree or a Ph.D. are higher than the economy average, but even a professor with a scientific degree earns less than industry workers such as construction, transportation and financial mediation. Salaries for those lacking advanced qualifications and experience are slightly below the average wage in the economy.

Table 12: Average monthly salary based on budget allocations and special funds

Position	Average Monthly Salary (Somoni)			
	2010/11	2011/12		
Rector	2,050	2,266		
Vice-Rector	2,120	1,853		
Other admin., technical and education support staff	486	587		
Teaching staff	With scientific degree ^{1/}	Without scientific degree ^{1/}	With scientific degree ^{1/}	Without scientific degree ^{1/}
Professor	915	472	1,124	492
Docent	547	326	654	323
Docent, PhD	713	-	837	-
Senior lecturer	583	434	694	512
Teachers	236	-	302	-
Assistant	336	329	433	402

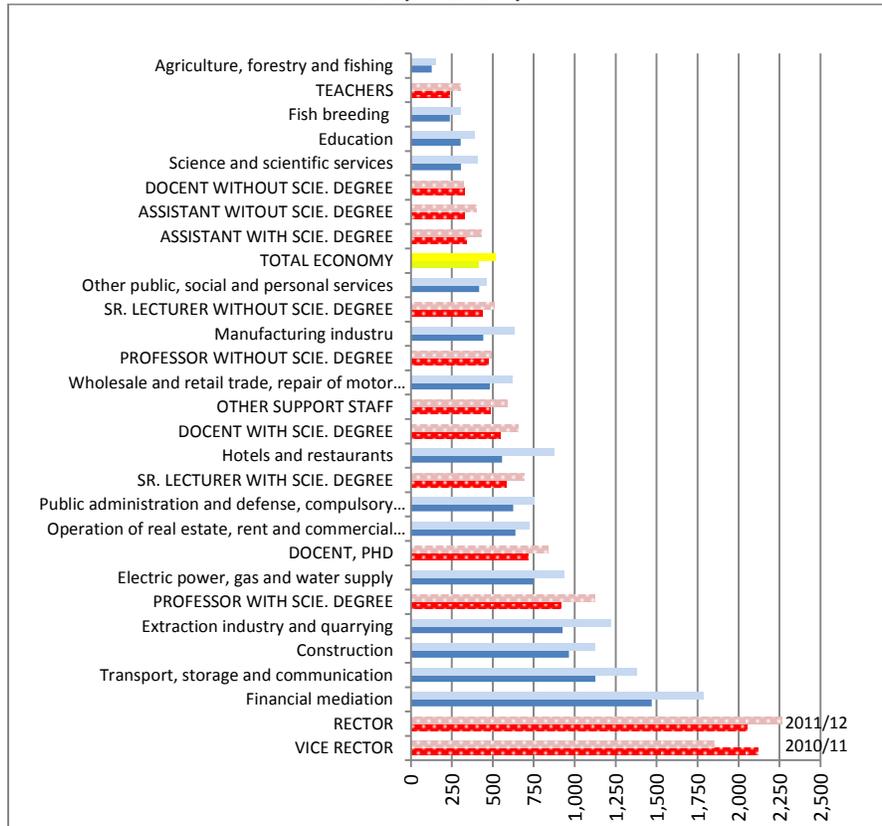
Source: Ministry of Education, 2012, *Statistical Collection Sphere Education: Republic of Tajikistan 2011-2012 years*.

Note: ^{1/} A scientific degree includes a Doctorate of Science or a scientific degree.

⁴⁹ Open Society Institute, *Assuring the Quality of Higher Education in the Republic of Tajikistan*, 2012

⁵⁰ At USD 1 = TJS 4.6.

Figure 31: Monthly average wages of higher education staff in comparison with other professions, 2010/11 & 2011/12



Sources: TAJSTAT, downloaded on May 28, 2014 from <http://www.stat.tj/en/analytical-tables/real-sector/> for wages by sector, and MOE for wages of education staff.

Note: Because the wage data for the higher education sector is for the academic year 2010/11, the average monthly wages by sector was weighted for 2010/11 by 1/3 of 2010 and 2/3 of 2011 wages and alike for 2011/12.

Institutional Expenditure

127. **The government provides capital budget for HEIs, which accounts for 15-20 percent of the total higher education budget.** Table 13 shows capital budgets allocated to HEIs that received an increased amount at least 20 percent between 2011 and 2012. These data reflect the fact that capital budgets are provided on a rather ad hoc basis without clear criteria.

Table 13: Select HEIs and Institutional Expenditure, 2010-2012

Office	TJS (thousands)			% change 2010-11	% change 2011-12
	2010	2011	2012		
Executive Office of the President of Tajikistan	39,930	30,500	52,800	-23.6	73.1
Ministry of Agriculture					
Branch of Agrarian University	710	785	1,272	10.6	62.0
Ministry of Culture					
National Conservatory of Tajikistan	1,229	1,504	3,080	22.5	104.7
State Arts Institute	3,809	3,516	4,412	-7.7	25.5
Ministry of Education					
State University of Khorog Town	1,488	2,020	2,770	35.8	37.1
Qurghonteppa State University	2,657	3,263	4,744	22.8	45.4
Kulob State University	2,135	3,202	5,425	50.0	69.4
Khujand State University	4,124	4,438	7,577	7.6	70.7
State University of Languages	1,151	1,564	2,148	35.9	37.3
Pedagogical State University of Tajikistan	3,630	4,726	6,903	30.2	46.1
Technical University of Tajikistan	4,742	4,338	5,753	-8.5	32.6
Branch of Pedagogical State University (Rasht)	192	359	898	87.5	149.9
Polytechnic Institute of Technical University	774	1,186	2,053	53.3	73.0

Note: Excludes departments and institutions with missing data for any year during 2010-2012

Excludes institutions whose expenditure declined in both periods 2010-2011 and 2011-2012

Sources: Tajikistan BOOST v0.5 government expenditure database; Statistical Agency under President of the Republic of Tajikistan; calculated by World Bank staff.

128. **Even though their legal status is a “state” HEI, three state HEIs operate and are taxed like privately-financed institutions.**⁵¹ The university does not receive any public funding and obtains its financing from student tuition fees and the Board of Founders. The major advantage of not receiving public funding is that the university has more financial autonomy over its budget, salaries, and tuition fees. On the other hand, while the university is not legally a private institution, it faces a larger tax burden – 18 percent – than public peers. Fees are USD 950 for full-time students and USD 650 for part-time students. The tax imposed on the university for these students is USD 170 and USD 117, respectively.

129. **Lack of private universities is a major concern from a financial and student-choice perspective.**⁵² A viable alternative to fully private HEIs could be the liberalization of the higher education landscape to foster the operation of public-private partnerships (PPPs).⁵³

4.3 Summary of Findings and Policy Recommendations

130. **The overall state funding for higher education appears to be at a similar level as that for countries in similar situations, but it is allocated ineffectively and inequitably.** Per student spending on higher education is relatively high compared to other levels of education. The reasons for this are not because teacher salaries are very high or student teacher ratios are very low. Rather, this is accounted for by the stipends that are allocated to state-funded students. As many of the state-funded students come from wealthier families who most likely to do not need financial support, a large portion of the

⁵¹ The Tajik State University of Commerce, Tajik State University of Law, Business and Policy, and Institute of Economy and Trade of the Tajik State University of Commerce.

⁵² World Bank, Review of Public Expenditures on Education, Policy Note No. 3

⁵³ UNESCO, “Growth and Typology.” In *A New Dynamic: Private Sector Education*, 2009.

stipends could possibly be discontinued without harming anybody. On the other hand, some students—poor and those from regions—may heavily rely on the stipends for living while studying. The stipends need to be better targeted to the needy to be effective. Similarly, part of the supposedly merit-based allocation of budget seats can be made needs-based to support disadvantaged students from rural areas, and for female students.

131. **Teacher salaries are too low to attract the younger generation.** The existing teacher salary scales favor senior faculty members with high academic qualifications with very low entry wages. This is likely to be one of the major reasons why HEIs are facing difficulties in attracting young faculty and why the overall faculty is rapidly aging. At present, teacher salaries are rigidly regulated by the government. The regulations need to be loosened to give HEIs more flexibility in providing financial incentives to attract the younger generation and to reward performance.

132. **HEIs need to diversify revenue sources.** For their revenue stream, most HEIs rely almost entirely on state funding for budget students and tuition fees collected from fee-paying students. This limits their financial flexibility to invest in teaching and learning improvements. On the one hand, HEIs need to explore more diversified revenue sources in collaboration with the private sector. On the other, the current tax system does not incentivize HEIs to raise more revenue. The government may want to consider applying different tax regimes for non-profit educational institutions.

133. **The involvement of the private sector needs to be encouraged.** At present, there are only one private HEI and three fully self-financed state (*de facto* private) HEIs.⁵⁴ This seems to reflect general distrust towards the private sector in education. The government's concern about potentially mushrooming low-quality private HEIs is legitimate—as it has happened in many countries. This can be avoided by establishing a functional quality assurance mechanism to be applied equally to public and private HEIs. The introduction of tax incentives and an innovative funding mechanism could encourage the private sector to enter the market—independently or in collaboration with state HEIs. An additional benefit may be improved efficiency of public HEIs through direct competition with private peers, generating efficiency gains for the entire higher education sphere.

⁵⁴ Three fully self-financing state HEIs include the Tajik State University of Commerce, Tajik State University of Law, and Business and Policy, and Institute of Economy and Trade of the Tajik State University of Commerce.

Chapter 5: Using ICT to Improve Access, Quality, and Relevance of Higher Education⁵⁵

134. **This chapter explores the potential of using Information and Communication Technologies (ICT) to improve access, quality, and relevance of higher education in Tajikistan.** It analyzes the physical, human, and financial capacity in taking advantage of modern technology in teaching and learning processes as well as university management. As the government has instructed HEIs to transform correspondence education to distance learning, the chapter also examines the current policies and regulations around correspondence learning and distance learning and identifies missing pieces to ensure successful transformation. It reviews international good practices in distance learning as a benchmark for Tajikistan.

5.1 ICT infrastructure for higher education⁵⁶

135. This section assesses the availability and use of ICT in HEIs to identify the opportunity to utilize ICT more effectively.

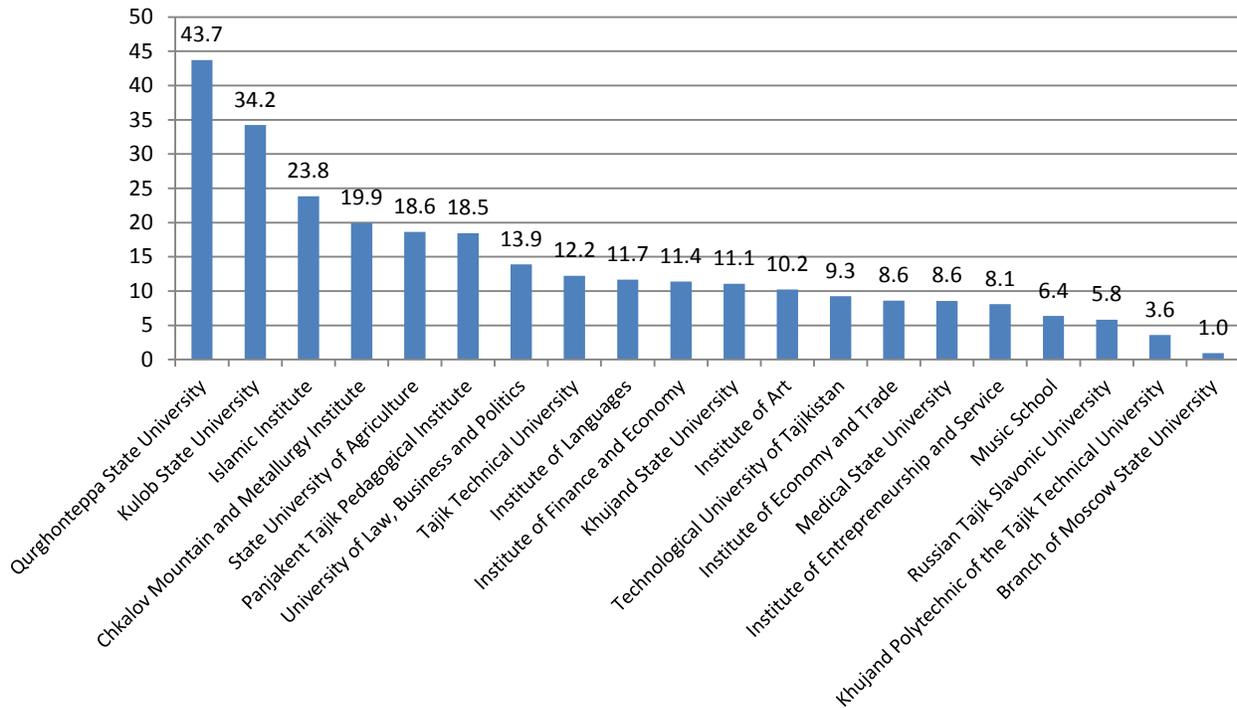
5.1.1 ICT Equipment in Universities

136. **HEIs have been increasingly using computers and the Internet not only for IT lessons, but also for other classes.** HEIs have enough equipment to initiate creation and delivery of online courses, but more access points are needed for students. The MOES has been helping to increase access points. The student-computer ratio has improved in recent years and more students have gained access to longer hours of computer access on campus. According to the survey conducted in February 2014 for 20 HEIs, the student-to-computer ratio is 14 on average, but ranges from one to 44 (Figure 32). The teacher-to-computer ratio is on average 0.9 - almost one computer per teacher, but also ranges from 0.1 to 3.3. Teaching software for information technologies exists in 19 HEIs, in which eight of them were developed by themselves, eight purchased, and four developed and purchased. Moreover, in 15 HEIs, software on non-IT subjects are available, of which eight were developed and seven purchased. Some HEIs also purchase supplementary equipment such as smart boards, projectors and digital cameras. Most HEIs (19) are able to solve technical problems related to computers within their own internal resources, and only in case of emergency, were experts from outside invited. All the universities have media tools including computers, tablets, notebooks, TVs, videoconference facilities, projectors, and white boards to a varying degree. In order to use online education for conducting courses or ICT training, some schools would need more facilities. To make computers available to a wider group of students, it could be possible to create computer labs at TARENA, who then can provide online learning opportunities for at least students of member HEIs. Partly to fill the unmet demand for computer courses for higher education students as well as school teachers and the general public, the MOES has initiated the establishment of computer centers around the country. As of 2012, there are 18 computer centers in Sughd, 14 in Khatlon, 13 in RRS, 2 in GBAO and one in Dushanbe. Additional centers are planned. These centers organize short-term computer courses.

⁵⁵ This chapter is heavily drawn from a background paper by Imaizumi, S. & Atoev, A. (2014). The background paper provides rich information about the general ICT infrastructure and detailed analysis and description of the pilot project conducted for this study, many of which have not been included in this chapter.

⁵⁶ Findings in this section are primarily drawn from the results of the survey of 20 HEIs in January 2014.

Figure 32: Number of Students per Computer



Source: Survey, January 2014

5.1.2 Internet Connectivity

137. **Most HEIs in Dushanbe have adequate access to Internet through broadband Internet and the majority of them have a Local Area Network (LAN) on campus, but Internet connectivity in rural areas remains a challenge.** The overall results show that all of the 20 HEIs surveyed in January 2013, including two HEIs located in rural areas (Panjakent Tajik Pedagogical Institute and Chkalov Mountain and Metallurgy Institute) have Internet connectivity, and all have regular access to electricity except the two in rural areas which have limited electricity supply during the winter time. In terms of the speed of the Internet, which is a key determinant to access various online education contents, all but Chkalov Mountain and Metallurgy Institute have adequate speed to access online education contents. The minimum bandwidth required for taking online courses is 1Mbps, which the majority of HEIs have, though some only have 512 Kbps. Moreover, TARENA has just doubled its global link to 64 Mbps in March 2014 and can provide HEIs with faster bandwidth, but the service is limited only to Dushanbe. In terms of network, most of the HEIs use ADSL and wireless and 20 percent use fiber-optic link. Most of the HEIs have Internet access throughout campus except for Qurghonteppa State University. According to the e-readiness assessment in 2012, of the 21 surveyed, 13 HEIs have a LAN. Among all 9,073 computers available in the 13 HEIs, 7,378 computers (81.4 percent) are connected to LAN, which means that they have sufficient facilities to provide Internet services to teachers and students and build and provide their e-learning content and access. Even in rural areas, if HEIs have LAN without Internet access, they can still provide access to e-learning materials through an internal network using LAN. Access to Internet is available in all HEIs through broadband Internet, nine of which are connected via FOLC, eight via xDSL, four via WiMax, and two via 3G. Fifteen institutions use Internet for administrative purposes, ten institutions use management information systems (MIS) and fourteen institutions for teaching

subjects. Twenty HEIs have developed their own master plans and strategies for the development and penetration of ICT.

5.1.3 Power Supply

138. **Power shortages are the biggest challenge for ICT development in education.** One of the challenges that Tajikistan faces is power shortages in winter, from the beginning of October to the beginning of March every year. Indeed, it is estimated that some “70 percent of the Tajik people suffer from extensive shortages of electricity during the winter”.⁵⁷ The state energy policy aims to meet this challenge by constructing different scale hydropower plants as well as introducing the alternative sources of energy, but no significant positive changes are foreseen in the short run. This shortage is one of the challenges that discourage most of the ICT for development (ICTD) projects in rural areas. This situation becomes severely challenging when it comes to ICTD projects in educational establishments located in towns and provincial cities. Usage of the stand-alone diesel generators as a temporary solution is growing in society. This approach, once popular in private sector companies, is now being adopted by public sector institutions. Schools and higher educational establishments rely on this approach.

5.1.4 Tajikistan National Research and Educational Network

139. **Tajikistan National Research and Education Network (TARENA) provides various ICT-related services for Tajikistan’s HEIs and research institutions and connects them to each other and with those outside the country.** National Research and Education Network (NREN) is a specialized service provider supporting the needs of research and education communities through Internet service and capacity building. Thousands of R&D organizations are connected with each other and share their information through the network. The network provides access to electronic information resources maintained by libraries, research facilities, publishers, and affiliated organizations. TARENA was established as association of the local academic community in March 2000 to provide ICT-oriented services to its member universities and research institutes of the Academy of Sciences of Tajikistan. It offers various ICT services which cannot be offered by private internet service providers (ISP) or IT companies such as ICT capacity building, computer facilities and network infrastructure for conducting experimental and research work. It also hosts certified centers such as ETC Thomson Prometric and Pearson VEU. Its main partner in funding and implementing various local and regional projects is the NATO Science Program. TARENA is also part of the Central Asian NREs (CAREN).⁵⁸ TARENA can leverage various financial resources and offers more opportunities for cooperation with commercial ISPs to connect various scientific and educational institutions which are located outside Dushanbe.

140. **TARENA is widely used by Dushanbe-based HEIs.** Only eight of the 20 HEIs surveyed belong to the TARENA network because TARENA provides services only in Dushanbe. Most TARENA users use multiple providers such as Eastera University LAN and Babilion-T. HEIs outside Dushanbe have no option but to use commercial ISPs services. Even if TARENA expands its network to provinces, the regional HEIs may not terminate their contracts with commercial ISPs due to lack of ownership of being a part of TARENA association.

⁵⁷ Fields, D. et al., 2012, *Tajikistan's Winter Energy Crisis: Electricity Supply and Demand Alternatives*, Washington, DC: The World Bank (<http://www.worldbank.org/content/dam/Worldbank/document/TAJ-winter-energy-27112012-Eng.pdf>).

⁵⁸ <http://caren.dante.net>.

5.1.5 ICT programs

141. **Fifteen of the 20 HEIs surveyed have programs for training ICT specialist skills as well as general computer literacy for non-specialists.** Teacher training for the implementation of ICT in education has improved. Almost all HEIs are in the process of meeting the Bologna education process, which requires teachers of different subjects to apply ICT in course delivery. Some HEIs provided courses on the application of ICT in pedagogy for teachers. A major problem with integrating ICT applications in the educational process is a lack of a complete set of software (OS, office applications), but localization of the software interface, especially for free and open source software, has made progress. This has had a positive impact on the implementation of ICT in education and the quality of ICT use.

142. **Demand for ICT specialists in the private sector and government is high, but HEIs are not providing high quality and relevant ICT education for their students in line with changing labor market demand.** According to the data from the MOES, 6,000 students are currently studying IT-related subjects, ranging from traditional courses such as information technology and system engineering to new courses such as information security, e-commerce, and e-banking. The graduates from these programs are not sufficiently qualified to meet the labor market demand for two reasons. First, the quality of the courses is not good enough to train nationally and internationally competitive specialists. Tajik students would have a much better chance of finding a job in telecommunication companies locally and internationally with a CISCO certificate than with a degree in IT from a Tajik university. It should be noted, however, that the training curriculum from CISCO Academy is not officially integrated into the universities' curriculum yet. In addition, three authorized CISCO Academy training centers in Tajikistan are unable to provide international-level training either, so that Tajik students are only competitive within the national market with this certificate. Therefore, to increase nationally competitive Tajik students, incorporating a CISCO training course will help equip them with more market-oriented skills, which increases the chance of employment. Second, the existing programs do not provide relevant training for newly demanded jobs such as network technologies, security specialist, server administrators, project managers, and web and mobile application developers. As a solution, Tajik HEIs have been developing more new courses. Moreover, the government has invited foreign universities to open branches in Tajikistan. For instance, a branch of Russian HEI opened in 2012 and three more branches of Russian, Belarussian, and Malaysian universities are expected to open soon.

5.1.6 Use of Internet for Research and Learning Management

143. **There is potential for using online research network and online libraries.** The survey looked at the use of Internet from research, learning management, and learning perspectives, and explored the potential for course provision via online format.

Use of Internet in Research

144. **Only 70 percent of HEIs access Internet for research purposes, and even among those who do, the type and quality of information that they access is often limited.** Internet is widely used as the main research tool (70 percent), followed by electronic libraries (30 percent). However, the quality of information seems to be not as good as it could have been due to limited resources available for research. Among the 19 HEIs which responded to the survey, only 8 subscribe to online research network which provides access to other universities, while 8 do not. The number of research networks that HEIs subscribe to varies among the eight institutions. For instance, the Medical State University accesses seven online research and library networks and the Khujand State University subscribes to

science magazines of Russian Federation, whereas the Panjakent Tajik Pedagogical Institute subscribes to only the USA international library. Other than the Internet, researchers refer to local resources such as local network, scientific research centers, and various internal systems including internal information systems, local file server, and internal TV and broadcasting system.

Use of Internet for Learning Management

145. **Learning Management Systems (LMS) can be a powerful management tool, if used effectively.** LMS can support teaching and learning management (course material storage, course management, homework provision and submission, test administration, online discussion, students' learning progress tracking, etc.) as well as administration management (attendance, tuition payment, and student information management). Among the 18 HEIs which responded, 11 use LMS. The following basic principles can help increase the use of LMS: not all teaching and learning activities have to be converted into LMS; and training on LMS should be conducted from a user-centric perspective (how LMS can help users), instead of a tool-centric perspective (how the tool functions and what it can do).

146. **Two HEIs have developed Education Management Information Systems (EMIS) in house.** While the initiatives were commendable, there are some weaknesses in the systems. In Tajikistan, two HEIs—Khujand Polytechnic Institute of the Tajik Technical University (KPITTU) and Khujand Institute of Economy and Trade of the Tajik State University of Commerce (KIET-TSUC)—have developed a custom-made EMIS at institutional level, which have been in operation at least for 4 years. These two systems are supported by teams of developers with high quality skill-sets, and teachers and administrative workers are also involved in the development and implementation processes. In particular, the KIETTSUC EMIS has been regularly updated. There are several weaknesses in the two EMIS, however. First, access to the systems is limited to within the respective university campuses for security reasons due to lack of security protection. Second, universities are owners and holders of copyrights and do not want to share their systems with other universities for free as they want to commercialize their systems. Third, the sustainability of the systems is in question due to frequent changes in developers and the emerging need for upgrading and standardizing of the system to meet the Bologna Process.

147. **To overcome fundamental limitations in the existing EMIS, it is worthwhile for HEIs and the MOES to collectively explore the most effective and efficient use of modern technology to manage institutions and the higher education system.** For example, in a few HEIs in Tajikistan, an open source platform called the Modular Object-Oriented Dynamic Learning Environment (Moodle) has been used for learning management and teacher training. To solve the copyright issue of EMIS, an application of open licensing scheme (e.g. GNU General Public License (GPL)⁵⁹) to these products would help protect the universities' rights while sharing them with other universities. Similarly, the Creative Commons Licenses, e.g., *Creative Commons License Attribution – Non Commercial 3.0*, can be applied for manuals and other documents. In order to maximize the use of these systems, a discussion with university leadership is recommended to consider the potential of developing partnerships with other universities as well as the MOES for sharing software applications and user manuals.⁶⁰

⁵⁹ GNU is the abbreviation of "GNU's not Unix" <http://www.gnu.org/>.

⁶⁰ OSIAF Technical Monitoring Outcome on Education Management Information System (EMIS) May — June 2012

Use of Internet in Learning

148. **This section assesses the availability of online content at universities.** Among the 19 HEIs which responded to the survey, only three HEIs offer online courses. For instance, the Khujand Polytechnic Institute of the Tajik Technical University offers online courses in math, informatics, Russian and Tajik languages, and economics. Since the majority of the population are more comfortable in Russian than English, much of the data and content consumed in the country through the Internet is coming from Russia or other Russian language sources.

5.2 Current Policies on Correspondence Education and Distance Education⁶¹

Distance Education in Tajikistan

149. **According to NSED 2020 and the Government Decision No. 334 dated June 30, 2012, the MOES is planning to implement distance learning in various levels of education.** The NSED 2020 expects HEIs to modernize education content, support and develop innovation in professional education and technologies, increase students' self-learning time, change the role of teachers from knowledge providers to learning process organizers, and migrate to the new standards of pedagogy built on a competency-based approach and module-based program with involvement from the required employers. Development of a distance learning system is a tool to achieve these goals and the Mid-Term Action Plan (MTAP) of NSED 2020 for 2012-2014 tasked the MOES and other relevant agencies to conduct a feasibility study to establish a distance education system. Distance Education is defined in the Law on Education as a type of learning process that allows students to learn by distance without face-to-face interactions with teachers by applying modern information and telecommunication technologies (Article 1). Citizens can choose the form of learning from full-time (day or evening), correspondence, distance, and external courses (Article 19). The provider of distance education could be both HEIs and vocational training institution (Article 16).

150. **In order to ensure accessibility of quality information resources and other materials used for distance education, a policy framework needs to be set to provide necessary devices to students through HEIs.** There are two documents which specify the implementation process of distance education. The *Procedure on Establishing Education Processes for Distance Education in the Higher Professional Education Institute of the Republic of Tajikistan*⁶² describes a conceptual level of distance education implementation approach in a holistic manner. It consists of five sections, including general terms, planning and running education process, main resources for the distance education process, principles, ways of evaluating and assessing students, and requirements for providing distance learning. Yet, the document does not specifically mention the business process reform using information and communication technologies. For example, Article 3 mentions that HEIs are responsible for providing convenient conditions for distance education for students, but it does not specifically mention what these conditions are. Moreover, while the process mentions the use of telecommunications media and computer equipment as a platform to ensure accessibility of educational resources, minimum technical requirements such as PC to student ratio and network bandwidth for individual students and teachers are not defined. As a way forward, this document needs to be evolved further with a specific implementation process when distance education is deployed officially to all the universities.

⁶¹ Annex 6 compares procedures for distance and correspondence education.

⁶² Approved by the Decision No. 16/9 of the Consultative Commission of the MOES dated October 31, 2009.

151. **The Licensing Requirements for Organizing Education Processes through Distance Technology based on the Training Curricula of Higher Education Institutions of the Republic of Tajikistan sets various standards for distance education, in many cases in too much detail but not comprehensively.**⁶³

Currently, distance education license is only open to existing HEIs. Therefore, establishing a new university focusing on distance education is difficult and any potential investors in distance education are discouraged. The licensing requirements are used for assessing existing HEIs' curricula using distance education technologies, including case technology, (tele)communication technology, and Internet or network technology. The document identifies the human, technical, technological, and administrative capacities necessary for building and implementing distance education technologies in HEIs in Tajikistan and sets standards for ICT infrastructure that institutions should own to run distance education successfully. For instance, it requires HEIs to possess classrooms equipped with technologies and training processes set by the State Standards on Education. The equipment specified by the document includes PCs, LAN, Servers (web/mail/file), website, LMS, satellite TV, Internet access, network access bandwidth, and physical space (classroom, labs, and buildings). The requirements go further to specify the student-to-PC ratio (8:1), and the minimum Internet bandwidth (1 Mbps incoming and 8 Kbps outgoing).⁶⁴ The licensing requirements also define the professional background needed for appropriate human capacity development categorized by professors, administrative personnel, assistants, engineers and technicians, instructors and tutors.

Correspondence Education in Tajikistan

152. **Compared to the procedures for distance education, that for correspondence education is described much more in detail.** The *Procedure for Students of Correspondence Education in the Higher Education Institute of the Republic of Tajikistan*⁶⁵ identifies standards and essential rules for correspondence education. The legislation consists of four sections, including general terms, requirements for the correspondence students' education plan, arrangement of self-learning process, and methodological support for the correspondence students. Compared to the procedure for distance education, that for correspondence education describes the implementation information more in detail, such as the duration of study program, classroom sessions (lectures, workshops (practical trainings), seminars, laboratory works, etc.), the number of course projects, the number of supervised pieces of work, and the number of exams, quizzes and induction weeks. Specific instructions for teachers in terms of how to consult with students are also provided in the correspondence education implementation process. The detail process is summarized in the Annex 4.

Current Status of Distance Education Implementation in Tajikistan

153. As of early 2014, the Khujand Polytechnic Institute (KPI) of the Tajik Technical University, Tajik State University of Commerce (TSUC), and Technical University of Tajikistan had already started implementing distance education. Table 14 summarizes experiences in e-learning and learning management system (LMS) by these three HEIs and others who participated in a pilot project (see the

⁶³ The Ministry of Education's Decision No. 25 approved this document dated January 8, 2004.

⁶⁴ This minimum bandwidth is justified as the global-to-national content ratio requires 80:20 for the Internet access, according to the e-Readiness Assessment of Tajikistan 2012. This capacity is required for the channel that connects HEIs and the Internet, and thus, all universities can easily meet these requirements. Moreover, TARENA has doubled its global link and it is 64 Mbps since March 2014, which meet the requirements even this minimum bandwidth requirement is applied to the global link as well.

⁶⁵ Approved on August 30, 2008 by the Decision No. 15/6 of the Consultative Commission of the Ministry of Education.

next section for details) on e-learning and use of LMS. Annex 5 summarizes the HEIs’ own suggestions as to how ICT can help solve challenges that they face.

Table 14: HEIs’ experiences in e-learning and learning management systems

Partners	TARENA	CICT	TUT	IES	UCA	TSUC	TTU	KPI
Experience and capacity of partners prior the pilot project (January 15 2014)	Over 21 moodle-based courses developed	CISCO, Linux Professional School	Delivery of National Technical University of Ternopil online courses	Locally developed LMS	Life-learning training delivery (offline)	Moodle.tguk.tj Over 160 online courses, 1,352 users, 12,619 online tests	Delivery of online courses for Bauman University of Moscow	Distance education form since 2013/14 academic year

Note: **TARENA:** Tajik Academic Research and Networking Association; **CICT:** Centre ICT (NGO); **TUT:** Technological University of Tajikistan; **IES:** Institute of Entrepreneurship and Service; **UCA:** University of Central Asia; **TSUC:** Tajik State University of Commerce; **TTU:** Tajik Technical University; **KPI:** Khujand Polytechnic Institute.

154. **Khujand Polytechnic Institute of the Tajik Technical University (KPI-TTU).** KPI-TTU has replaced its correspondence education department with a distance learning department. The migration process took three years. The institute stopped enrolling new students into correspondence programs in 2013/14. The platform to manage e-learning training processes and training materials were developed in-house by teachers and students as part of their assignments and diploma projects, and piloted during the third year of development with full-time undergraduate students. The institute has received licenses from the MOES to provide distance education training for three different programs. Online courses are available for full-time students as optional modules of the courses as well.

155. **Tajik Technical University (TTU).** Distance education technologies in TTU are most explored by teachers. Currently, TTU is preparing a legal and normative basis to enable itself to issue credits to the distance education programs. Students also use distance learning as supplementary courses. The most popular courses are related to ICT and languages. Students at TTU also actively use CISCO networking academy courses as TARENA Cisco Academy is located within the TTU. Since 2012, courses from the Bauman Moscow State Technical University (MSTU) are available at TTU. Two free courses from the MSTU on “wireless networks” and “information security in the information systems” were piloted by the ICT faculty. Those who took the course received certificates from the MSTU upon course completion. Because local e-learning materials are still scarce, this type of collaboration with foreign universities was crucial. However, due to administrative issues, these courses have not been used after the trial.

156. **Tajik State University of Commerce (TSUC).**⁶⁶ TSUC uses a Moodle-based platform for providing online learning because of the availability of human capacity to operate this platform, technological and legal advantages of using free and open source software solution, and access to globally connected support.⁶⁷

⁶⁶ In coordinating with the MOES, TSUC organized a workshop during the pilot project to share their experience with other universities. These issues were raised and discussed during the workshop.

⁶⁷ See <http://moodle.tguk.tj>. In order to build the platform and human capacity to run this platform, TSUC invested USD 17,400 (including fiber-optic based LAN, equipment, LMS server and application, and Moodle server).

157. **Technological University of Tajikistan (TUT).** TUT actively invests in providing e-learning courses in partnership with the University of Ternopol National Technical University (Ukraine) and the Tomsk State Pedagogical University (the Russian Federation). TUT established its own Centre of Distance Education (CDE) in February 2013.⁶⁸ As a platform for running e-learning courses, the Centre uses ATutor—a free open source LMS solution.⁶⁹

158. **Centre ICT.** Centre ICT is a non-profit organization established as a local CISCO Academy in 2009 with financial support of the Open Society Institute—Assistance Foundation. CISCO Academy currently provides some training courses. Fees for these courses are USD 130 for IT essentials (6 weeks) and USD 450 for CCNA (18 weeks). Centre ICT also developed curriculum for GNU/Linux Essentials, GNU/Linux Administration & GNU/Linux WEB, Mail, FTP services by Linux Professional Institute requirement. The fee for GNU/Linux courses (18 weeks) is USD 500. In the short-run, Centre ICT plans to launch more e-courses related to English proficiency to help young people expand their opportunities by accessing online courses offered in English. In the long-run, Centre ICT plans to develop and launch e-courses for accountants and financial managers to meet the expected demand for these specialists because all public organizations will need to migrate their systems to the International Financial Reporting System.

Conclusion and Recommendations

159. **The MOES and HEIs need to work together to develop a more comprehensive regulatory framework for distance education.** The current legislation regulates the development and implementation of distance education with very detailed licensing requirements and standards, which are sometimes unnecessary or irrelevant. These requirements limit the use of distance education technologies. A more flexible policy is needed to foster innovation and use of a wide range of online education resources, including global online course platforms. The MOES needs to develop a comprehensive regulatory framework for distance education through mapping the business process of correspondence learning and distance education, setting up a quality assurance mechanism, mobilizing multi-stakeholder experts, and developing a public-private partnership in course creation. Indeed, the private sector is interested in collaborating with universities in developing online courses jointly through providing some investment. In order to improve competitiveness among existing universities, allowing new entry of distance education institutions may be needed through developing an open licensing procedure with future higher education market stakeholders.

160. **Public-private partnerships are key to overcoming challenges such as a lack of online content, the weak capacity of ICT experts, and ineffective ICT investment.** First, while ICT can be utilized to improve access, quality and efficiency of higher education, the majority of students do not have sufficient language skills to take advantage of online courses available in English or even in Russian. Government investment, as well as collaboration between the private sector and HEIs, would be essential to producing more online content in the local language. Second, forming a partnership among the MOES, TARENA association, and Internet Service Providers (ISP) such as Tojiktelecom could solve problems such as information security, parental control over the Internet, and teacher and ICT expert training using distance education. Finally, the private sector could support HEIs in strategizing ICT investments to maximize the returns.

⁶⁸ <http://cdo.tut.tj/>

⁶⁹ <http://www.atutor.ca/>

5.3 Pilot Project

5.3.1 Overview of Solution Models

161. **Four solution models were proposed and piloted for this study to explore potential solutions to challenges faced by Tajikistan’s higher education sector, as identified in NSED 2020.** The proposed solution models included: (i) teacher training and teaching resources; (ii) life-long learning; (iii) supplementary courses; and (iv) learning management. Under the each model, a few activity options were developed (Table 15). Five HEIs and two NGOs volunteered to participate to test the feasibility of these models as implementing agencies and partners. Of the nine options proposed, eight options except Option 2 of Model 1 were piloted. Table 16 summarizes the models, activity options, objectives of each option, and participants.

Table 15: Piloted Solution Models

Challenges	Solutions	Solution Models			
		1. Teacher Training and Teaching Resources	2. Life-long Learning	3. Supplementary courses	4. Learning management
1. Inadequate teaching materials, equipment and facilities and access to information	• Provide more access of materials via online, including virtual lab experiments	X			
2. Poor integration between research and higher education	• Use National Research and Education Network to connect research and education communities				X
3. Limited professional development opportunities for faculty	• Provide teacher education contents via online	X			
4. Weak linkage between higher education and the labor market	• Provide relevant technical and business training via online		X		
5. Poor management and planning capacities	• Provide online management tools				X
6. Lack of effective quality assurance and performance evaluation mechanisms	• Online performance evaluation system can be used				X
7. Lack of distance learning system	• Provide various distance learning options			X	
8. Lack of life-long learning opportunities	• Provide access to skill upgradation courses		X		
9. Less learning hours for Tajik students	• Provide more learning opportunities for Tajik students			X	
10. Low capacity and aging faculty due to low wages compared to other job opportunities	• Provide more learning opportunities for Tajik students			X	

Table 16: Pilot Models

Model	Options	Planned Activities	Objectives	Implementation Partners
Model 1: Teacher Training and Teaching Resources	Option 1: Use existing online courses for teaching materials and teacher training	Curate online teaching materials/teacher professional development courses and translate into Tajik if needed and make them available for teachers.	<ul style="list-style-type: none"> To clarify the feasibility of using existing teacher professional development courses for teacher education and teaching materials in Tajikistan. 	<ul style="list-style-type: none"> TSUC TTU
	Option 2: Create Tajik original courses for teacher training	Identify good teacher educator and materials and create and upload online courses in Tajik.	<ul style="list-style-type: none"> To clarify the feasibility of creating and providing Tajik online training courses. Assess the demand and cost of course production. To assess the capacity of Tajik universities to take part in Coursera or other online platform courses. 	<ul style="list-style-type: none"> None
Model 2: Life-long Learning	Option 1: Use existing online courses for life-long learning	Conduct an awareness building activity with universities to encourage anyone interested in life-long learning opportunities to take online courses. Universities providing life-long learning courses can pilot adopting online life-long learning courses into their course offerings.	<ul style="list-style-type: none"> To clarify the feasibility of curating appropriate courses for specific skills development from existing online courses. To assess the skill levels required for students to take online courses. To assess the feasibility of using online courses as a way to facilitate employment. To assess the feasibility of incorporating online courses as a part of the life-long learning courses in universities. 	<ul style="list-style-type: none"> TTU
	Option 2: Create Tajik original courses in collaboration with the private sector	Identify companies in finance and IT industry, which could offer their corporate training courses as a pilot online course.	<ul style="list-style-type: none"> To clarify the feasibility of creating or providing corporate training in an online course format. To assess the impact of course on developing appropriate skills for students to potentially get employed. To assess the feasibility of incorporating courses provided by the private sector into universities' life-long learning curriculum. 	<ul style="list-style-type: none"> TSUC

Table 16: Pilot Models - continued

Model	Options	Planned Activities	Objectives	Implementation Partners
Model 3: Supplementary courses	Option 1: Awareness Building	Conduct awareness building activity with universities to inform students with opportunities for learning available online.	<ul style="list-style-type: none"> To clarify demand from students on the courses. To identify characteristics of students who are interested in taking online courses. 	<ul style="list-style-type: none"> TUT TARENA
	Option 2: Universities make online courses	Conduct a quick assessment through interviewing universities in terms of making online courses as part of the credits and identify challenges and necessary changes at the policy level needed to be changed.	<ul style="list-style-type: none"> To clarify the feasibility of including online courses as a part of university credits and identify challenges and necessary policies. 	<ul style="list-style-type: none"> TSUC TUT
	Option 3: Run a learning hub	Open a learning hub as a part of Coursera’s initiative and encourage students to participate in informal learning sessions.	<ul style="list-style-type: none"> To clarify the feasibility of starting a learning hub in Dushanbe. 	<ul style="list-style-type: none"> Centre ICT
Model 4: Learning Management	Option 1: Explore an option of using NREN	Explore the potential for introducing National Research and Education Network (NREN) in universities to connect research and higher education sector. Conduct knowledge exchange activities with countries close to Tajikistan using NREN to learn from their experience.	<ul style="list-style-type: none"> To inform Tajik universities and the government about NREN at the practical level. To assess the feasibility of Tajik universities to join NREN and identify necessary government support and the feasibility of implementing the support. 	<ul style="list-style-type: none"> TARENA
	Option 2: Explore an option of using learning management tools	Explore the potential for using learning management tools in universities to improve administration capacity of the universities and teachers. If any universities and teachers are interested, they could use the tools as pilot by having an agreement with learning management tools companies.	<ul style="list-style-type: none"> To match demand of universities and supply of learning management tools to solve school administration problems. To clarify the feasibility of introducing learning management tools. 	<ul style="list-style-type: none"> TARENA

5.3.2 Results of the Pilot Project

162. This section summarizes lessons learned from each of the eight options under the pilot project.⁷⁰

Model 1: Teacher Training and Teaching Resources

Option 1: Use existing online courses for teaching materials and teacher training

163. The pilot results suggest that it is feasible to train teachers using online courses available in Tajikistan, but there are a few challenges to overcome. First, most of the courses are currently limited to how to use Moodle and how to create e-learning courses, and not necessarily on the subjects. Major reasons are: (i) the ICT related faculty is the one who is taking the initiative in making e-learning courses; and (ii) MOOCs courses available in different subjects cannot be officially accredited in Tajikistan. Therefore, only Open Education Resources (OER) with creative common license can be explored as potential courses, yet these have not been explored enough. Another option is to formalize locally created courses using various open source platforms such as Google Course Builder and Udemy and courses created through public-private partnerships such as Intel's digital literacy program. Second, Internet accessibility is still insufficient. While teachers were able to access courses with current Internet availability, the feedback from the teachers indicates that access to Internet is still a challenge. Without more improved speed and accessibility, it is likely that this would become a real challenge for a larger scale operation. Third, there is currently no mechanism to formally recognize course certificates from MOOCs platforms as a formal training qualification. Teachers would be incentivized if those certificates were recognized as professional qualifications by the government, universities, and industry.

Model 2: Life-long Learning

Option 1: Use existing online courses for life-long learning

164. It is possible to use existing online platforms such as Intuit for life-long learning, but a full application of this model could face limitations for the following three major reasons. First, there is no mechanism to measure the learning outcomes of these courses and further business model development is needed to operate this model in a more systemic manner. Second, free or inexpensive access to high-speed broadband is essential for a large-scale operation, which is not widely available in Tajikistan at this stage. Third, it seems that there are insufficient online materials for non-IT subjects in Russian, which limits the scope of online learning.

Option 2: Create Tajik original courses in collaboration with the private sector

165. While the sample size was small, participating firms clearly indicated that they are willing and eager to collaborate with HEIs in creating online (and offline) courses and contributing to the development of skills and employability of students together. Such collaboration would benefit both students and employers. More opportunities for this type of public-private partnership can and must be created since there are no legal obstacles to doing so. There will be a need to establish a legislative framework, however, to formally recognize newly developed curricula and courses as part of university education so that students can receive adequate credits.

⁷⁰ See Annex 7 for detailed activities and outcomes of the pilot project.

Model 3: Supplementary Courses

Option 1: Awareness building

166. The awareness raising activities provided information and opportunities for the participants to take online courses for their life-long learning opportunities. The survey respondents saw a number of advantages of using e-learning, but also warned that for e-learning development, human capacity development and localized materials are needed. As advantages, they pointed out that the e-learning can reduce corruption and the urban-rural divide, cost less than traditional education, and also allow professional development through life-long learning and independent learning opportunities. At the same time, the respondents highlighted limitations of e-learning, including lack of technical capacity and low motivation of trainees for independent learning. Two major challenges are the language and recognition of online courses. At present, online courses offered by the INTUIT Open University are most popular among Tajik university students and teachers alike for two major reasons: (i) content is in the Russian language; and (ii) certificates issued by the University are accepted by local organizations, at least commercial companies and even universities, unofficially, while hiring new candidates. There are two implications. An expansion of online learning would require both increasing materials in Russian or Tajik languages, and improving English knowledge among students and teachers. The government needs to work with HEIs and the private sector to establish a mechanism for formal recognition of online courses.

Option 2: Universities make online courses

167. The pilot proved that Tajik university has the capacity to create their own e-learning courses with support from partner universities overseas, such as TUT and Ukrainian University. The university also has some capacity to conduct e-learning courses for teachers. Since materials in Tajik are limited, course creation capacity development as well as adjustment and adaptation of overseas courses will be needed when introducing distance education.

Option 3: Run a learning hub

168. Center ICT proved its capacity as well as a reputation for positioning itself as a learning hub. To build on its experience and realize its potential, Center ICT needs to:

- Develop and launch online English courses (English Essentials and English Advanced) for trainees. To do this, it is necessary to: (i) learn from the experience of existing online courses; (ii) prepare a curriculum for local context; (iii) recruit instructors for teaching English courses; (iv) purchase learning materials; (v) develop e-version of English courses; (vi) test the courses; and (vii) update and share them online;
- Provide technical and administrative (Internet access) support to potential trainees for available online courses (mostly in Russian and English);
- Design and approve a guidebook for potential trainees of online courses;
- Create and regularly update an online course catalogue by language and subject
- Introduce this new service as supplementary courses for those who are interested in existing training courses of Centre ICT;
- Monitor, evaluate and improve this service.

Model 4: Learning Management

Option 1: Explore an option of using NREN

169. NRENs in the Central Asia region are currently positioned as Internet service providers and as a bridge to connect with other countries' academic communities. Technical support to universities is another type of service that universities seek from NREN at the country level. There is room to leverage NREN further by providing more services to universities, including hosting and exchanging online courses, developing online courses for member universities, building the capacity of member universities on using e-learning platforms such as Moodle, and different types of MOOCs platforms. Also, strengthening the regional network and increasing the member universities would provide more resources to universities. At institutional level, LMS and e-learning are slowly growing. Moodle is the most popular platform used throughout the region. With broadband and Moodle in place, access to LMS has become less problematic. However, the most difficult part is development of learning materials and changing pedagogy. Also, gearing students and teachers towards e-learning is not an easy process.

5.4 International Examples of Distance Learning

170. Tajikistan is in transition from correspondence education to distance learning. This section aims to provide lessons learned from international experience in the development and provision of distance learning.

Policy Level

171. **It is essential to set up a quality assurance mechanism for distance education to assure its quality is no less than traditional face-to-face education.** In Sri Lanka, universities need to follow the QA framework developed based on the Common Wealth of Learning's framework when creating distance education courses. In Malaysia, in 2005, the government enacted a constitution and required the Wawasan Open University and all colleges go through the same quality assurance protocol as traditional universities. The only major difference in the qualification system between the two types of universities is the entrance requirement. Indira Gandhi National Open University (IGNOU) in India, a national distance learning university operated by the central government, also operates as an accreditor for open university and distance education systems in India through the Distance Education Council (DEC). Open universities in Korea, Hong Kong, the United Kingdom, and South Africa are subject to national quality assurance mechanisms. Learning resources from the International Institute of Educational Planning (IIEP) at UNESCO would be useful as well.

172. **Distance learning cannot provide all education, and needs to be strategic.** Countries and HEIs have to be strategic with the choice of subjects to be provided through distance learning based on objectives, available resources, feasibility and priorities. For instance, the University of Moratuwa in Sri Lanka offers only Bachelors of Information Technology through distance education and retains its reputation for prestige. The Wawasan Open University in Malaysia is more open, but yet offers a few selected subjects such as MBA, industrial management and construction. In contrast, India's IGNOU offers 175 academic programs with 1,100 courses at certificate, diploma and degree levels as well as non-accredited extension and skill-oriented programs, and accepts students from abroad. Pakistan's government-funded Virtual University provides diploma, Bachelor, and Masters, focusing mainly on computer science, economics, and business, using free-to-air satellite television broadcasts and the Internet.

173. **A phase approach for building educational resources is a key.** In the Russian Federation, since mid-1990s, the Government has paid attention to the informatization of education, the development of telecommunication networks, and production of information and education resources. The first phase was to set up an NREN for Russia called the Russian Research and Educational Network RUNNet, in the framework of the National Program “Universities of Russia.” As a next step, the government created educational resources through launching several large-scale education portals under the framework of the Federal Targeted Program “Development of the Integrated Educational Information Environment” (2001-2005). Ten Federal Educational Portals were set up between 2002 and 2004. Special attention was paid to professional education and advanced training of pedagogical, administrative, engineering and technical staff. This became a success factor for introducing new educational technologies into the educational process. As a part of the Program, 42 regional centers were used for training teachers in a distant mode.

Course delivery mode

174. **Often times, distance education is delivered in a blended mode where the role of tutors is essential.** For learning subjects, courses are delivered online or CD-ROM for those who do not have Internet access but have computers or access to computers. In the case of Pakistan’s Virtual University, locally recorded and produced course lectures are broadcasted over free-to-air television as well. All the prescribed texts, reading materials and lecture notes are available in the web-format and provided through a comprehensive Learning Management System (LMS) hosted on the Virtual University web servers and accessible over the Internet. Regular communications with tutors and some face-to-face meetings will be conducted over the weekend or allocated weeks for learning subjects with other peers and teachers, and taking tests. Students usually come to learning centers near-by for this purpose. Using e-learning materials, the courses will become more student-centric with a personalized curriculum, which allow students to learn more. In the case of Wawasan University in Malaysia, the university expects students to have PCs but if they do not, they can come to one of the six regional centers, which provide PCs and Video Conference facilities, which are accessible free of charge. India Gandhi Open University (IGNOU), serves students in 40 other countries abroad.

Course Creation

175. **There are a number of interesting examples of creating courses in house or by outsourcing in the US, but they might not be applicable to non-US institutions.** The Western Governors University in the United States purchases course materials from publishers based on their requirements. It also works with companies providing Massive Open Online Courses (MOOCs) such as Udacity and Udemy to create customized content. The State University of New York (SUNY) offers credits for MOOCs (to reduce students’ enrolled time on campus and reduce the cost of degrees) and provides faculty members with incentives to develop and use online courses that meet general education requirements. Some courses could be “guided MOOCs” where a SUNY instructor helps SUNY students go through a course that was created by another institution. The Colorado University intends to use the MOOC platform as a channel for buying and selling content to extend its course offerings.⁷¹ The Massachusetts Bay Community College deploys a “flipped classroom” model where a MOOC from MIT provides content, whereas the College provides discussion and supervision. The Community Colleges collect fees and award credits.

⁷¹ “The Maturing of the MOOC” Department for Business, Innovation and Skills

While these MOOCs platforms may work in the US, if these platforms were to be used in other countries, they have to adapt and go through the quality assurance scheme of each country.

176. **In Russia, the Creative Commons license is gaining popularity for content creation, but a culture of sharing is not established yet.** The government is investing in developing high-quality interactive and multimedia educational resources. According to UNESCO IITE's report on "Education Portals and Open Educational Resources in the Russian Federation", the concept of open licensing with respect to educational content only arrived in Russia in 2012. While people are aware of the concepts of copyrights and author rights, they still know little about open licenses. Thus, a content sharing culture is premature. UNESCO-led workshops in 2011 contributed to raising awareness on open licenses. Yet, the government is already aware of the impact of having interactive and multimedia resources, which can surpass traditional textbooks in information and didactic aspects. Therefore, at the request of Ministry of Education and Science of the Russian Federation, these resources are being developed on government orders. Currently, most of the educational contents have been developed through the "Russian General Education Portal" (www.school.edu.ru).

177. **The University of Pennsylvania is exploring a sustainable business model for MOOCs.** The university joined as a participating university in one of the MOOC platforms, Coursera, to provide free online courses. It provides funding for course creation on a proposal basis. MOOCs are used more as marketing and branding for schools and in fact, it is used as a way of introducing a new degree and testing some courses related to the new degree. Faculties also see this as an opportunity for them to reach out to a wider audience, which is a big incentive for them. When revenue is generated from the certification model, the university splits the revenue with Coursera as agreed in the contract.⁷²

178. **The African Virtual University (AVU)—a Pan African Intergovernmental Organization—was created by 18 African governments with a mandate of "significantly increasing access to quality higher education and training through the innovative use of information communication technologies."**⁷³ The AVU has developed four Bachelors in math and science and 219 modules and 100 videos were created as open education resources. The university launched two MOOCs courses (open distance and e-learning professional development and peace management and conflict resolution) in partnership with the African Development Bank to develop a proof of concept model. They also mobilized resources and various partnerships to develop a sustainable plan as a next stage to mainstream MOOCs.

179. **The Wawasan Open University of Malaysia forms a mixed team consisting of internal professors and other external members including editors and videographers for course creation to localize available open education resources (OER) and course materials from open universities.** When starting, the Wawasan Open University initially bought courses from the Open University in the UK and customized them with a local content creation team, which consisted of professors, editors, and video producers. Buying courses from the existing Open University accelerated the process of launching the university. Today, they use open education resources and locally available materials to develop content. After identifying course materials and defining the design of the course, actual course production is outsourced to the contractor. Depending on the course, the course creation typically takes about 18 months for a curriculum to be certified. If it takes more than 3 years, the university terminates the contract. After the first draft course is created, content specialists and local and international external

⁷² Presented at the MOOCs for Development Conference held on April 10 and 11, 2014.

⁷³ <http://www.avu.org/About-AVU/introduction.html>.

peer reviewers are invited. A course package includes a study guide and a textbook. Courses are reviewed annually and revised within five years.

180. **The Western Governors University in the US collaborates closely with the private sector to select and develop course materials to create demand-driven courses.** The university implements competency-based education and their courses are oriented towards professional skills development. Programs for each student are determined based on assessment of his/her prior learning and customized to assist the student get the job that she/he is aiming for. With a competency-based model, not all students work on the same materials. The university primarily purchases materials from publishers that meet their needs, though it sometimes creates its own materials

181. **The Russian Federation also collaborates with the private sector to increase the volume of educational resources.** For instance, an excellent example of an open system designed for distance education is the Internet University of Information Technologies (INTUIT, www.intuit.ru). One of the leading Russian publishers producing periodicals and books on information technologies called the Open Systems Publishing House, has helped produced educational contents since 2003. Another private-sponsored project is Educational Video Portal UniverTV.ru (<http://univertv.ru>) launched in 2009 to support distance education. The project objectives are to preserve cultural heritage, the traditions and the high quality of Russian education, and help Russian-speaking people abroad in getting access to education.

182. **The Open Education Resource Foundation focuses on widening access and reducing the cost of tertiary education for learners everywhere, especially for those who are excluded from the formal education sector.** One interesting model of using Open Education Resource (OER) for school education is OERu, coordinated by the OER Foundation, an independent, not-for-profit organization. The OERu network of institutions offers free online courses for students worldwide. The OERu also provides affordable ways for learners to gain academic credits towards qualifications from recognized institutions through partnering with universities. OER means learning materials that have been released under an intellectual property license, permitting their free use of re-purposing by others. OERu tries to provide pathways for students to achieve credible credentials for approved courses based solely on OER.⁷⁴

Role of Teachers

183. **In distance learning, teachers become facilitators rather than lecturers and teachers can use their time to engage with students more.** There is a new teaching mode called “flipped classroom” which means homework is conducted during the class and lectures are watched at home. This pedagogy flips the conventional education style. In this way, students can get more support from teachers during the interaction time through homework and group exercises at school. This requires a different type of training for teachers.

184. **Online education environments can also support teachers by creating social network communities for teachers, which could provide potential incentives for teachers to teach better.** In Russian Federation, online social network communities are used to support the integration of new technologies in education, the development of new teaching methodologies, and the exchange of good practice and ideas among teachers. The Government’s main goal for using ICTs and electronic educational resources at school is to change the nature of the educational process and improve the

⁷⁴ <http://wikieducator.org/OERF:Home>

effectiveness of teaching techniques and students' independent learning. Under this Government's strategic goal, online social network communities could be a catalyst for motivating teachers to teach better and share their lessons.

5.5 Summary of Findings and Recommendations

185. **Tajikistan has a number of champions who have demonstrated their capacity and potential to lead the transition from correspondence education to distance education and the development and delivery of online learning courses.** They are highly motivated and interested in learning about e-learning and learning management systems from each other and from international experience, and implementing distance education in an innovative way to transform and improve access to, and quality and relevance of higher education in Tajikistan. While the government has developed policies on distance education at a conceptual level, a more holistic approach and detailed procedures need to be developed for a successful transition from correspondence education to distance education. This section summarizes findings on use of ICT for higher education and proposes policy recommendations.

Policy and stakeholder involvement

186. **For successful implementation of distance education, stakeholder consultation needs to take place to develop a holistic framework and policy for distance education.** If the policy and governance of quality of online content are not assured, distance education may harm the quality of education. A strong quality assurance mechanism for online contents would be key to ensuring high quality education provision through distance education (see Recommendation 4 in Chapter 4 on quality assurance for details). Since distance education will transform the publishing industry and bring more opportunities for new companies to enter the online content creation market, the government needs to create an environment for the fair market competition. The local partners intend to draft a common roadmap for promoting e-learning in Tajikistan. Taking this initiative as a base, inviting international experts and conducting knowledge exchange activities are also recommended.

Infrastructure

187. **HEIs could have better and more stable Internet access by working closely with private power suppliers as well as TARENA.** All HEIs in Tajikistan have access to Internet to some extent, but most HEIs in rural areas suffer from lack of electricity during winter and limited access to a high-speed connection. TARENA provides high speed Internet to HEIs, but only those in Dushanbe. However, there are private companies, even in rural areas, that can supply stable electricity throughout the year. By partnering with private Internet service providers (ISPs), TARENA could possibly provide rural HEIs with better access to the Internet. In fact, TARENA has increased its external Internet bandwidth from 34 Mbps up to 155 Mbps since the middle of March, 2014. It is provided within the CAREN2 project co-funded by the European Union. This new link connects Tajik academic community network as a part of the Central Asian network to GEANT via Hong Kong. TARENA with this updated capacity has an opportunity to strengthen its current network within Dushanbe and expand it further in the provinces of Tajikistan by providing better services. TARENA's services are currently limited mainly to the provision of Internet and Intranet as well as capacity development. In collaboration with other regional NRENs, TARENA could play an expanded role in providing more services such as e-learning programs to HEIs.

188. **ICT investment can be optimized and improved by analyzing current utilization rate per equipment and comparing return on investment and potential utilization rate per equipment.** Currently, no strategic discussions and rigorous analysis on ICT investment are conducted when the HEIs purchase ICT equipment. As a result, sometimes the choice of ICT equipment is not appropriate to leverage its use and also utilization of particular ICT equipment is not well thought out, causing a low utilization rate. Therefore, there is a room for improvement to invest more efficiently and effectively to increase the utilization and impact of each ICT equipment investment.

Capacity Building

189. **The role and capacity of existing players need to change and improve for the development and delivery of distance education.** Capacity building of teachers and IT staff is essential for online course development and delivery. Teachers need to learn new ways of teaching using online materials. Like a flip classroom, teachers' role will shift from a knowledge provider to a classroom facilitator with more interaction time with students. Libraries can play an important role in creating courses by becoming a central hub for available courses, providing advice on the use of third party materials and copyrights, and tutoring on how to use open source materials without breaching licenses.

Content Creation

190. **Public-private partnerships can help develop more local online courses in Russian or Tajik.** Most students take online courses in Russian or Tajik due to their limited English knowledge. However, online courses in Tajik are scarce, mostly limited to ICT-related subjects. For more students to be able to take online courses, HEIs need to develop their own courses and/or translate and customize available online education resources in English into Tajik or Russian. Increasing the number of English language courses should also be considered to help more students learn English. Private companies are willing to collaborate with HEIs in developing online courses and providing students with skills required in the labor market, or more precisely, skills required by them and their industry.

191. **There are a number of tools and platforms for content creation and dissemination, including mobile learning platforms and televisions that Tajik HEIs can adapt.** During the pilot activities, only ATutor and Moodle were tried as course creation platforms, but there are other tools and platforms such as Udemy and Google Course Builder to be explored. Considering the fact that more population in Tajikistan are connecting Internet through mobile phones, adapting mobile learning platforms is another option to provide more access to learning contents to those who are in remote areas. Also, delivering courses through televisions is alternative method for reaching to rural population as they own televisions.

192. **Policies on authorship and ownership of online courses need to be discussed.** One of the big challenges to using online education resources is to have localized, high quality materials. Localization costs money and as does using licensed books. Utilizing a creative commons license is a recommended approach for content creation to ensure that copyright is protected, but is open for various usages. Evidence from around the world shows that economies of scale are readily applied, indicating clearly that significant efficiency gains can be attained by shifting to open licenses. UNESCO could help address international copyrights and permanent collections of Open Education Resources (OERs).

193. **Students would be more motivated to take online courses if they are certified.** Intuit—a Russian online course platform—issues certificates upon course completion, and those certificates are recognized in Russia where many Tajik migrate for work as well as by Tajik companies, though informally. This is one of the reasons why Intuit is popular in Tajikistan, apart from the language of instruction. The government needs to establish a policy on accreditation of online courses.

Chapter 6: Conclusions and Policy Recommendations

194. This chapter concludes with a summary of major findings of each chapter and policy recommendations for government's consideration.

6.1 Summary of findings

195. **Overview and performance of the higher education system.** The sector expanded rapidly after the early 2000s and stabilized in the last few years. The tertiary (university and college) enrollment rate of 22 percent is lower than most Europe and Central Asian countries, but much higher than countries at a similar level of economic development. However, access to higher education is strikingly inequitable by gender, socio-economic status, and geographical location. Of the 35 higher education institutions (HEIs), 22 are located in Dushanbe and RRS where only 9.6 percent and 22.9 percent of the nation's total population live, respectively, and enroll 62 percent of students. Only just around 30 percent of higher education students are females. Students from the richest 40 percent consumption quintiles constitute 65 percent of higher education students, compared to only five percent from the poorest 20 percent or 16 percent from the poorest 40 percent. The quality of part-time correspondence education in which about 30 percent of students are enrolled is widely considered much weaker than that of full-time programs, pushing the MOES and HEIs to modernize the former as distance education. Tajik HEIs enroll a relatively large number of students with a relatively high student-teacher ratio on average. In this sense, the system is quite efficient, but it may not be accompanied by quality. The teaching workforce is rapidly aging and increasingly less qualified, and the system is unable to attract and retain qualified young scholars to replace them as they gradually approach retirement. While university and college-educated individuals are more likely to find a stable job in the formal sector, earn higher incomes, and are less likely to be unemployed or poor in Tajikistan, many employers are unsatisfied with university graduates' skills level. Students themselves feel that they do not possess adequate qualifications and relevant skills required in the labor market. An increasing number of students are taking courses delivered in Tajik rather than Russian, which can adversely affect their chances of success in the job market. Tajik HEIs are not engaged in research since research has traditionally been conducted primarily by Academy of Sciences, with little linkage with the former. Finally, in addition to generally low levels of quality, the 11-year general education system is unable to adequately prepare most students for higher education.

196. **Governance.** The separation between governance that deals with approval of strategy and policies, performance appraisal, and overall supervision on the one hand, and management that occurs inside the institution and deals with operational matters on the other, is essential for successful higher education institutions. It has been widely agreed that a greater degree of autonomy (when coupled with accountability) typically correlates with higher performing systems and institutions, though the capacity to lead and manage a complex academic enterprise must be present before autonomy is granted. In contrast to international trends, Tajikistan's current higher education governance framework is characterized by direct and highly centralized governance, exercised by multiple layers of government bodies. This takes governance and management of HEIs up to the operational level, leaving little space for HEIs to exercise autonomy and accountability. Essentially, HEIs—ruled by a government-appointed rector without an effective collegial decision-making body—remain implementing bodies of government's directives and regulations. As a result, HEIs generally lack the capacity and incentives to

develop and implement an institutional strategy. Stakeholder involvement by students and employers in the governance of Tajik HEIs is passive, often depending on the approaches and initiatives of individual rectors. Even the Rectors' Council's role is limited to promotion and implementation of the regulatory and normative acts, rather than driving change and setting strategic lines for development. The public sector overwhelmingly dominates the sector and the private sector—both private HEIs and private enterprises—is almost absent due to the uninviting regulatory framework, and government's general unfavorable attitudes towards private entries.

197. **Quality assurance.** The massification and diversification of higher education globally has led to a pressing need for relevant and reliable quality assurance and accreditation processes to assure the public that the courses, programs and degrees offered by HEIs meet acceptable academic and professional standards. To keep up with global trends, the government of Tajikistan has undertaken higher education reforms aimed at transformation and integration into the international arena. Tangible results are yet to be seen, however. The country also needs to develop reliable qualifications recognition tools and description of qualifications per degree and level based on knowledge, competencies and skills to facilitate educational and labor mobility.

198. At the system level, Tajikistan's current quality assurance model follows the practices common to those promoted by the ministries in post-Soviet systems and is not in line with the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG), which the government aims to comply with. Under this model, the State Agency for Supervision in the Sphere of Education (SASSE), which is in charge of the external quality assurance under the Ministry of Education and Science, aims to assure quality primarily by setting state educational standards and requiring HEIs to be in compliance with the standards through licensing, state attestation and accreditation. However, the model does not clearly define the concepts of quality and quality assurance, or the nature of quality enhancement or quality assurance system and tools. The SASSE does not have sufficient exposure to the ESGs and lacks the capacity to improve the national QA system. Also, as a result of conflicts of interest—the MOES is both the founder and regulator of state HEIs—the majority of HEIs remain open whether or not they meet the standards. Strengthening the capacity of SASSE and aligning the existing model with the ESGs would help improve the quality of higher education.

199. At the institutional level, most HEIs are yet to clearly set a mission and vision for their institutions. HEIs undertake multiple activities to ensure quality, but often in a fragmented, inefficient and ineffective manner, without a holistic system of internal quality assurance. They are guided by control-oriented standards to manage quality, which does not motivate them to improve. The flip side of limited autonomy is extremely weak accountability at the institutional level. Key stakeholders (student, faculty members, and employers) are not involved in quality assurance processes. HEIs typically develop study programs without involving key stakeholders, and without setting a review process for ongoing revision to ensure their continued relevance. HEIs exercise quality assurance to a very limited extent by reducing it to purely control mechanisms and collection of fragmented quantitative data. Inquiry into the teaching and learning processes and in-depth self-evaluations are not undertaken, which significantly limits their capacity to learn and promote quality enhancement. Most HEIs still lack understanding of self-assessment. Even in this generally weak environment, there are a few examples of good practice to be disseminated, where Tajik HEIs have established an effective internal quality assurance mechanism and conducted an in-depth self-assessment as well undergoing external evaluations based on the self-assessment.

200. **Financing.** Strong economic growth in recent years has helped increase public funding for education in general, and for higher education. Primarily due to low higher education enrollment rates relative to wealthier countries, higher education's share of the overall education budget is lower than that of wealthier countries, but similar to that of neighboring countries. The current higher education financing model is very simple. The government finances "budget" seats in state HEIs on a merit basis (about 40 percent of the total students), a small number of Presidential quotas for disadvantaged students (about 3.5 percent of the total students), and capital budget for HEIs (15-20 percent of the total higher education budget). While the Law on Higher Education defines that research is integral to an institution's accreditation, research at HEIs is typically under-financed primarily because research is conducted by the Academy of Sciences, which are separate institutions. Given unfavorable tax regulations and government's unwelcoming attitude towards private HEIs, private investment in higher education is limited: there is only one private HEI and one *de facto* private HEI (i.e. fully self-financed state HEI).

201. State HEIs primarily rely on two sources for financing: (i) the state budget for budget-seats; and (ii) tuition fees. Recently, the government started counting revenues raised by HEIs as part of the state budget for higher education; about 56 percent of the higher education budget is actually raised by HEIs themselves. Budget seats have been allocated to HEIs and programs according to historical allocations without strategically reflecting the changing labor market demand. Until this year, each HEI conducted entrance examinations at institutional level and allocated budget seats based on the criteria stipulated in the Rules for student enrollment to HEIs annually approved by the Board of the Ministry of Education and Science and registered by the Ministry of Justice. As the government introduces the unified university entrance examinations this year, it is expected that the allocation of budget seats will become more transparent and truly merit-based. It is generally perceived that the Presidential quotas are awarded in an inconsistent manner as well, but the results of the unified entrance examinations are yet to be applied to their allocation.

202. Relative to the level of economic development, per student spending on higher education is not low in Tajikistan. However, this is not to say that higher education is well financed in Tajikistan. Higher education is essentially an international commodity that requires expensive goods and services such as computers, libraries, laboratories, internet, and equipment which are often influenced by international pricing, and higher salaries to attract qualified faculty. The limited state budget for higher education is not effectively spent. About 30 percent of the state budget is provided as stipends for state-funded students without an effective targeting mechanism.

203. **Information Communication and Technologies (ICT) for higher education.** Demand for ICT specialists and ICT literacy in general is growing both in private and public sectors. Indeed, HEIs have been increasingly using computers and Internet not only for ICT-related courses, but also for other classes. HEIs have enough equipment to initiate the creation and delivery of online courses. Most HEIs have adequate access to Internet through broadband Internet except for those in rural areas, and the majority of HEIs have a Local Area Network (LAN) on campus. Tajikistan National Research and Education Network (TARENA) provides various ICT-related services for Tajikistan's HEIs and research institutions based in Dushanbe and connects them between themselves and with those outside the country.

204. The MOES has instructed HEIs to discontinue existing correspondence programs and switch to distance education programs as part of the strategy to modernize education content, support and develop innovation in professional education and technologies, increase students' self-learning time,

change the role of teachers from knowledge providers to learning process organizers, and migrate to the new standards of pedagogy built on a competency-based approach and module-based program with involvement from the required employers. As of early 2014, three universities have implemented distance education, led by a number of champions who have demonstrated their capacity and potential to lead the transition and the development and delivery of online learning courses.

205. Despite these initiatives, the sector faces some physical and technical challenges if it is to fully take advantage of ICT to provide high quality and relevant ICT education. Power shortages are one of the biggest challenges for ICT development in education. While the majority of HEIs meet the minimum bandwidth requirement of 1Mbps to offer and use online courses, students still feel the speed of Internet is not fast enough. TARENA has just doubled its global link to 64 Mbps in March 2014 and can provide HEIs with faster bandwidth, but the service will be limited only to Dushanbe. More access points are needed for students. The sector lacks localized software in Tajik language, ICT experts, guidance on how to use ICT, public funding, and cost optimization models for ICT investment. The use of Internet for research purposes is limited.

206. Four ICT-based solution models were piloted to explore potential solutions for challenges that Tajikistan's higher education sector faces. The pilot project witnessed that there is potential to use ICT more effectively to improve access, quality and relevance of higher education in Tajikistan. It also identified reforms required to realize this potential. In order to ensure accessibility of quality information resources and other materials used for distance education, the MOES and HEIs need to work together to develop a comprehensive regulatory framework for distance education in consultation with stakeholders. This includes setting up a quality assurance mechanism for distance education to assure that its quality equal to that of traditional face-to-face education. In addition, the development of good quality local content available in Tajik or Russian language is essential to expanding distance education.

6.2 Policy recommendations

Recommendation 1: Quality and Relevance Enhancement

- **Develop mechanisms to enhance a culture of quality at system and institutional levels.** The existing licensing, attestation and accreditation system is a quality control tool, which does not promote a culture of quality. Considering the HE context and culture in Tajikistan, quality enhancement at institutional level can succeed only if there is a robust external quality assurance system and internal support from the top and middle management, which encourages the development of an internal quality assurance system to drive positive outcomes. It is therefore of the utmost importance to revise the national quality assurance framework and tools and to streamline the existing quality assurance system and align it with the ESGs. It would be ideal to establish an independent national quality assurance agency, but if that is not feasible, it may be possible to strengthen the capacity of the existing State Agency on Supervision in the Sphere of Education under the MOES and transform its function in alignment with the ESGs.
- **Deregulate educational standards to allow HEIs to involve employers and stakeholders in developing programs which better respond to labor market demands.** Employers are willing and eager to collaborate with HEIs to improve the relevance of the higher education curriculum to meet their own needs. Liberalization and modernization of education standards to allow participation of employers and stakeholders in curriculum development is essential and likely to

result in an immediate impact on the relevance of higher education and therefore the employability of higher education graduates.

- **Create incentives to attract young scholars.** The teaching workforce is rapidly aging and increasingly less qualified. HEIs are facing difficulties in attracting younger generations. HEIs should be allowed to create more flexible, performance-based salary scales to attract competent professionals. State funding for professional development opportunities could be an option to attract younger generations.

Recommendation 2: Governance

- **Revise the current approach to higher education governance to introduce a collegial approach through involvement of key stakeholders.** This could be done through introducing a governance model with a Governing Board at the apex of decision taking.
- **Build the capacity of administrators.** Build on the capacity of the top-level administrators to introduce strategic management linked to financial management and quality assurance.
- **Build the capacity of institutions.** Provide intensive capacity building at the level of departments, chairs and faculty members to ensure the study programs are constantly updated and are relevant to the market needs.
- **Introduce a robust incentive mechanism to ensure the faculty and administrative staff members feel they have stakes in system development and enhancement.** This could be done through introducing a differentiated approach to financial rewards as well as introducing reward and sanction mechanisms.
- **Involve stakeholders at different levels of higher education governance to promote the relevance of higher education to meet labor market needs.** The role of the Rectors' Council should be revised to lead system development and enhancement at the policy-making level and set strategies for development. It is essential to involve and strengthen the capacity of various stakeholders, including Rectors' Council, National Student Association (to be established), employers, professional associations, and employers to ensure what is expected of each player.
- **Create a favorable regulatory framework for the private sector to collaborate with the state HEIs.** Increased private sector participation is likely to enhance competition and diversity, and also reduce burden on public funding for further expansion and quality improvement of the sector.

Recommendation 3: Access and Equity

- **Design effective student aid instruments to assist under-represented students with both living and tuition expenses and monitor instrument effectiveness.** Other than the small number of Presidential quotas for disadvantaged students, there is no financial support mechanism for under-represented students. Improved student aid instrument should good targeting of under-represented students such as girls, the poor, and rural students.
- **Develop targeting criteria to provide stipends to the needy.** Stipends take up 30 percent of the state budget for higher education in total, which is no small amount. However, about 40 percent of higher education students come from the richest 20 percent consumption quintile, a group which is less likely to need stipends to support their living costs. Stipends should be targeted only at those who are in need of financial support.
- **Designing academic and social support mechanisms to address possible inadequate academic preparation and assist students with the transition to higher education.** The support mechanisms should provide various types of support because under-represented students are

often less prepared not only for accessing higher education, but also completing higher education.

- **Enhance access to quality education for disadvantaged students by improving the quality of distance education.** About 30 percent of higher education students are enrolled in part-time correspondence programs, which tend to serve disadvantaged students in rural areas, working adults, and females. There already are successful distance education models introduced by a few HEIs. To support this reform and improve the quality of correspondence/distance education, the government and HEIs, in collaboration with stakeholders, need to create a comprehensive regulatory framework. Involvement of the private sector to improve curriculum and connectivity is essential. Providing course contents through TV is also one way to reach disadvantaged students in rural areas as they have access to TV.

Recommendation 4: Funding enhancement

- **Strategize the allocation of budget-seats to better respond to changing labor market demands.** Budget-seats have been distributed to HEIs and programs more or less according to historical allocations. The state funding should be spent more effectively to respond to state priorities and labor market demands.
- **Consider increasing the overall public funding for higher education, particularly for quality enhancement activities.** At present, most of public funding is spent on salaries and some other recurrent costs and there is little room to invest in quality.
- **Provide research funding for HEIs to foster research in HEIs.** Most HEIs are not engaged in research at all primarily due to a historical division where HEIs were teaching institutions and the Academy of Sciences were research institutions. However, modern HEIs cannot function well without doing research. In particular, industrial research would benefit both HEIs and industries.
- **Review the tax policy on HEIs.** Currently, state HEIs are taxed 10 percent on their revenues, while private ones are taxed more. There is a need to review the tax policy to encourage HEIs to increase and diversify their revenues and encourage the private sector to invest in the sector.

Annex 1: Tajikistan's legal and regulatory framework underpinning the higher education system

- Constitution of the Republic of Tajikistan (1994; amended Sept. 26, 1999 and Jun. 22, 2003);
- Law on Education (2004, amended May 17, 2004, No. 34; Dec. 28, 2005, No.143; Dec. 22, 2006, No. 222; Jun. 18, 2008, No. 407; Mar. 26, 2009, No. 488; May 19, 2009, No. 529; Aug. 5, 2009, No. 545; most recently amended as the Presidential Decree No. 1004, Jul. 22, 2013);
- Law on Higher and Postgraduate Professional education (2003, amended Apr. 22, 2009, No. 1314);
- Charter of the State Agency on Supervision in Sphere of Education (Regulation of the Board of the Ministry of Education, Mar. 30, 2007, No. 7/10);
- Law on Licensing Certain Types of Activities (Sept. 1, 2005, No 337);
- Regulation on Specificities of Licensing Certain Features of Activities (Government Decision, Apr. 3, 2007, No. 172);
- Procedure of Providing Attestation, Accreditation and Licensing of Educational Institutions (Government Regulation, Feb. 5, 2003, No. 54);
- Statute on the attestation of higher education institutions (Decision of the Board of the Ministry of Education, Sept. 3, 2004, No. 18/8);
- Requirements of licensing the organization of distance education programs of higher educational institutions of the Republic of Tajikistan (Order of the Minister of Education, Jan. 8, 2004, No. 25);
- Defining criteria for the status of higher education institutions (Decision of the Board of the Ministry of Education, Sept. 3, 2004, No. 18/6);
- Regulations of general and educational areas of higher education institutions (Decision of the Board of the Ministry of Education, Apr. 30, 2008, No. 6/19);
- Standards and Norms of Institutional Accreditation of Higher Professional Education Institutions (Jun. 28, 2011);
- Guidelines for organizing internal evaluations of educational institutions, which implements programs in vocational, higher and postgraduate education (Order of the Minister of Education, Jul. 13, 2004, No. 309);
- Standard statute about educational establishments of higher professional education (Government Decision, Feb. 21, 1996, No. 71); and Regulation on the Academic Council of the Higher Professional Education institutions in the Republic of Tajikistan (May 26, 2006, No. 18/3)

Annex 2: Functions of the Academic Council

Taking decisions on the process of education, scientific and research, financial and economic activities;

- Summarizing annual achievements with regard to education, scientific and research activity, and making recommendations for improvement;
- Approving reports on education, scientific, research and financial activities as well as training of specialists (in faculties) and activities of scientific associations under the HEI;
- Resolving issues associated with the establishment and closure of faculties, departments, and scientific laboratories;
- Approving curriculum and syllabi for preparation of specialists, determining and approving the list of programs, which provide education for specialists. 85 percent of study time is stipulated by the standards and curriculum approved by the MOES, leaving 15 percent to HEIs to integrate new waves of developments in a particular field, to train specialists;
- Regulating the education process including changing the ratio of training exercises and developing individual and practical work for the students;
- Changing and adjusting the standard time for calculating the total volume of education work performed by the professors and teachers;
- Recommending exemplary students for scholarships and stipends from the Academic Council;
- Approving financial and human resources for the above mentioned activities;
- Making decisions on usefulness and liquidation of the education and science divisions based a performance assessment of their scientific and organizational work;
- Recommending candidates for enrollment in doctoral programs, one year post-graduate study, reassignment to the position of junior and senior research assistant, as well as provision of research for 3 months, 6 months and one year for completion of candidates and doctoral dissertation, developing textbooks and other teaching materials and approves the topic for candidate's and doctoral dissertation;
- Arranging temporary staffing for vacant positions as professors, teachers and heads of departments; and
- Approving HEI's non-budget revenue and expenditure detailed in the annual report.

Source: Regulation on the Academic Councils of HEIs of Tajikistan (May 26, 2006, No.18/3)

Annex 3: Quality assurance functions and approaches

i. Functions of a quality assurance system

207. **Quality assurance aims at promoting such principles as efficiency, effectiveness, credibility and recognition—the elements so necessary for ensuring visibility of a country’s educational system at the international level.** Effective quality assurance systems for promoting these principles in higher education should cover: (i) assessments related to the initiation of an institution or a program; (ii) supervision of functioning of programs and institutions to ensure the latter maintain the minimum standards; (iii) accreditation to ensure higher level of quality; (iv) professional certification of graduates—most frequently done by professional associations—to grant a license for professional functioning; and (v) provision of information regarding recognition and accreditation of institutions and programs.⁷⁵ These functions of quality assurance are complementary to each other and represent a complete set necessary for system effectiveness. Different governmental and non-governmental organizations can be in charge of these different functions and, therefore, mechanisms. However, the most important thing is a coherent design (function- and actor-wise) since any change in one of the functions will directly or indirectly affect the other, thus, bringing about deficiencies in the system.

ii. Definitions of Quality

208. **There are five common definitions of quality for higher education, what it entails, expectations of the system:**⁷⁶

- **Quality as excellence:** The traditional concept of quality is associated with the notion of providing a product or service that is distinctive and special, and which confers status on the owner or user. Quality is differentiated and exclusive.
- **Quality as perfection (zero deficit):** The notion of quality as conformance to a specification or standard. This approach has its origins in the notions of quality control in the manufacturing industry. It is a basis for measurement, a neutral term to describe a required characteristic of a product or service.
- **Quality as fitness for purpose:** The definition of quality adopted by most analysts and policy makers in higher education is that of fitness for purpose. Exponents of this approach argue that quality has no meaning except in relation to the purpose of the product or service. Quality is judged in terms of the extent to which a product or service meets its stated purpose(s).
- **Quality as value for money:** Quality as effectiveness in achieving institutional goals. This is a variation on the fitness for purpose model, though places more attention on efficient use of inputs.
- **Quality as transformation:** The transformative view of quality is rooted in the notion of ‘qualitative change’, a fundamental change of form. Transformation is not restricted to apparent or physical transformation but also includes cognitive transcendence. In educational terms, transformation refers to the enhancement and empowerment of students or the development of new knowledge.

⁷⁵ World Bank, 2003, *Tertiary Education in Colombia: Paving the Way for Change*, Washington, DC: The World Bank.

⁷⁶ Harvey, L. and Green, D., 1993, “Defining Quality”, *Journal of Assessment and Evaluation in Higher Education*, vol. 18, issue 1, Taylor and Francis Publications.

209. **The definition of quality has a major consequence for type of criteria, standards and procedures that are required to assure quality.** All the concepts above (and others) are valuable and there is no one single definition of quality. However, when a country opts for a particular definition, it must be clearly specified. Depending on the definition of quality adopted by a country, a QA framework and tools are defined and operationalized. To better understand what model to opt for, or what kind of mechanisms to develop, an inquiry into quality definitions is crucial to avoid:

- Misinterpretations;
- Existence of multiplicity of tools resulting in an overlap, repetition and inefficiency of the system (this is usually caused in newly emerging systems where a desire to over control is prevailing); and
- Incoherency of the system.

210. **There are a number of means to establish a *quality assurance* mechanism to promote a quality culture that will ensure sustainable development and enhancement of an organization.** *Quality management, quality enhancement, quality control, quality enhancement, quality planning* are all means to assure quality and promote a quality culture. Each of these terms is defined as follows:⁷⁷

- **Quality Culture:** It refers to a set of shared, accepted, and integrated patterns of quality (often called *principles of quality*) to be found in the organizational cultures and the management systems of institutions. Awareness of and commitment to the quality of higher education, in conjunction with a solid culture of evidence and with the efficient management of this quality (through quality assurance procedures) are the ingredients of a quality culture. As the definition of quality changes and evolves over time, so must the integrated system of quality culture (approaches to and arrangements for quality provision) to support new quality paradigms in higher education.
- **Quality Assurance:** An all-embracing term referring to an ongoing, continuous process of evaluating (assessing, monitoring, guaranteeing, maintaining, and improving) the quality of a higher education system, institutions, or programs. As a regulatory mechanism, quality assurance focuses on both accountability and improvement, providing information and judgments (not ranking) through an agreed upon and consistent process and well-established criteria. Many systems make a distinction between *internal quality assurance* (i.e., intra-institutional practices with a view to monitoring and improving the quality of higher education) and *external quality assurance* (i.e., inter- or supra-institutional schemes of assuring the quality of higher education institutions and programs). Quality assurance activities depend on the existence of the necessary institutional mechanisms preferably sustained by a solid quality culture.
- **Quality Management:** An aggregate of measures taken regularly at system or institutional level to assure the quality of higher education with an emphasis on improving quality as a whole. As a generic term, it covers all activities that ensure fulfillment of the quality policy and the quality objectives and responsibilities and implements them through quality planning, quality control, quality assurance, and quality improvement mechanisms.
- **Total Quality Management (TQM):** A particularly influential and comprehensive approach to quality management, which places emphasis on factors such as continuous improvement, customer focus, strategic management, the need for explicit systems to assure quality of higher education, and a view of leadership and supervision that stresses employee empowerment and

⁷⁷ Analytic Quality Glossary - <http://www.qualityresearchinternational.com/glossary/>

delegation. Such an approach to quality management emphasizes assessment that is undertaken against: (i) defined objectives or standards (set internally or by external funding bodies); (ii) measures of customer satisfaction; (iii) expert and professional judgment; and (iv) comparator organizations. TQM is considered to have a close conceptual and philosophical link with benchmarking methodologies. Such an approach has been mostly applied in the economic sector of societies, being less used in the academic world.

- **Quality Control:** A phrase that refers to the process of quality evaluation that focuses on the internal measurement of the quality of an institution or a program. It refers to a set of operational activities and techniques (monitoring activities and a structured internally planned and implemented policy) elaborated and used to fulfill requirements of quality. It aims to both monitor the process and eliminate any causes of unsatisfactory functioning. Sometimes a minimal quality control (mostly in the form of some kind of certification) exists serving as a filtering mechanism in confirming that a higher education institution is fulfilling minimal agreed upon quality requirements and has appropriate quality monitoring procedures in place.
- **Quality Enhancement:** Quality as enhancement or improvement, focusing on the continuous search for permanent improvement, stressing the responsibility of the higher education institution to make the best use of its institutional autonomy and freedom. Achieving quality is central to the academic ethos and to the idea that academics themselves know best what quality is.
- **Quality Planning:** It consists of a set of actions establishing the objectives of and the conditions required for a quality higher education institution, and incorporates the implementation of quality mechanisms in the system. Quality planning includes product planning (identification, classification, and determination of the importance of the features referring to quality as well as to the establishment of the objectives, the conditions referring to quality, and its constraints), managerial and operational planning (including its organization and programming), an elaboration of quality plans, and the provision of quality improvement measures.

211. **In addition to an internal quality assurance mechanism, there should be a system of external quality assurance as well as an organization that will actually undertake external quality assurance procedures to ensure the outcomes produced by HEIs and programs are credible and reliable.** Once a country defines quality and a quality approach (enhancement or control, or both), it needs to develop and operationalize quality standards and procedures to ensure compliance of the system with the set standards, and therefore, sustainable development of a system.

iii. European Standards and Guidelines

212. **Tajikistan aims to integrate its higher education system into the European Higher Education Area (EHEA), which would require the development of a robust quality assurance system in alignment with the European Standards and Guidelines for Quality Assurance.** Throughout the last decade, high quality of provision has been one of the key aims of the current reforms in the EHEA, and has led to increasing demand for quality assurance. Of all the work carried out in this regard at European level, the *European Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESGs)*,⁷⁸ adopted in 2005, are considered as a cornerstone, reinforcing the importance of institutional autonomy and responsibility in QA. When working on QA processes, higher education institutions (HEIs) are expected to develop internal quality culture. In turn, countries integrating into the EHEA are

⁷⁸ See the link for the publication: http://www.enqa.eu/wp-content/uploads/2013/06/ESG_3edition-2.pdf.

expected to develop robust external quality assurance procedures as well as establishing agencies, which would comply with the ESGs.

213. **Based on the ESGs, countries with the European integration agenda adopt and further refine the standards and guidelines to meet local needs.** The ESGs are being applied at three distinctive levels: (i) internal quality assurance within higher education institutions; (ii) external quality assurance of higher education; and (iii) external quality assurance agencies, in all the countries that have joined the Bologna Declaration. Countries are expected to adopt the ESGs to fit the local context. Overall, the major expectations of the system promulgated by ESGs are:

- The improved consistency of quality assurance across the EHEA through the use of agreed standards and guidelines.
- Enabling HEIs and quality assurance agencies across the EHEA to use common reference points for quality assurance.
- Identification of professional and credible agencies through a register.
- Strengthened procedures for the recognition of qualifications.
- Enhanced credibility of the work of quality assurance agencies.
- Enhanced exchange of viewpoints and experiences amongst agencies and other key stakeholders (including higher education institutions, students and labor market representatives) through the work of the European Consultative Forum for Quality Assurance in Higher Education.
- Growth in mutual trust among institutions and agencies.
- Promotion of a move toward mutual recognition.

Internal quality assurance system at HEIs

214. **The most common definition for quality is “fitness for purpose”, which entails a mission-based approach to quality assurance in general and accreditation in particular.** A review of international experience shows that the most common definition for quality is “fitness for purpose”. For a mission-based accreditation, an HEI is expected to set a clear mission, and drawing on the mission statement, to define its strategies for development and implementation of the mission. Along with a comprehensive and well-designed strategic plan, it devises a quality assurance system that ensures smooth and effective implementation of the set strategies. On a regular basis, the HEI is supposed to produce a self-evaluation report at institutional and at each program level to ensure they are achieving the set objectives, identifying gaps and revising activities to fill in the gaps and promote enhancement of the system, thus increasing its effectiveness and relevance to the market needs.

215. **The self-evaluation report is the main tool management can draw on during informative decision-making, and for accountability and recognition purposes.** The self-evaluation report acts as a key decision-making document since the analysis included in the report covers both the internal and external environment in general, and the facts the HEI should consider in its decision-making for improvement. Additionally, for accountability and recognition purposes, HEIs apply for external evaluation of their operations for the following reasons: to get an external view on their developments and operations; to bring in new waves of change through external experts to ensure continuous enhancement; and to obtain accreditation from the HEIs and/or the programs. Accreditation would credit the HEI for fulfillment of its mission and contribution to research and the development of society .

Annex 4: Proposed Timetable for Quality Assurance Reform Actions

Description of Activities	Timelines to implement recommendations	Responsible entities/persons
Establishment of a General Committee with inclusion of key stakeholders and international experts to revise the legal framework, including definitions of such major concepts for the system as quality, quality assurance, quality culture	About 2 years considering adoption	Ministry of Education and Science, newly recruited staff for the TNQAATE
System-wide awareness raising on QA issues	On-going	Ministry of Education and Science, newly recruited staff for the TNQAATE
Develop charter and other regulatory documents for the newly to-be-established QA agency (Tajikistan National Quality Assurance Agency for Tertiary Education: TNQAATE)	2 months (might take longer if we consider its adoption by the Government)	General Committee
Establishment of TNQAATE	Once the Charter and the regulatory documents are adopted	TJ government
Development of an operational manual for the TNQAATE	3 months	TNQAATE and the General Committee
Training of the TNQAATE staff on operationalization of the agency	2-3 weeks of intensive training with on-going recommendations	International and local experts
Develop an operational manual for internal quality assurance units for HEIs and programs	3 months	TNQAATE and the General Committee, international experts
Capacity building for ministries, the newly established agency and HEIs on external and internal quality assurance tools	2-3 weeks of intensive training with on-going recommendations	International and local experts
Support to HEIs to establish and operationalize the IQAs	About 8 months	TNQAATE along with the international and local experts
Development of procedures, standards and evaluation approaches to institutional and programme accreditation <ul style="list-style-type: none"> • set up committees for institutional and programme accreditation standards development with involvement of international experts • set up a committee to develop the procedures and respective regulatory documents with involvement of international experts • benchmarking of criteria and procedures against best practices • ensure involvement of all the key stakeholders in the development process through workshops, discussions, circulations of drafts, etc. • refine the drafts after collecting the opinions of the stakeholders 	About 1 year	TNQAATE along with the international and local experts

Description of Activities	Timelines to implement recommendations	Responsible entities/persons
<ul style="list-style-type: none"> • pilot the developed procedures and standards at 5 HEIs and 5 programme levels • finalize through refinement based on the pilot results • Adoption of the standards and procedures by the government 		
Based on the pilot results develop three procedural manuals and accompanying guidelines for (1) institutional accreditation; (2) initial programme accreditation; (3) programme accreditation.	2-3 months (the development starts with the first pilots)	TNQAATE along with the international and local experts
Development of procedures and criteria for registration of international accreditors and professional associations eligible to conduct accreditation in TJ	2-3 months	TNQAATE along with the international and local experts
Adoption of recognition criteria		TJ Government
<p>Based on the developed and adopted procedures and standards deliver a series of capacity building events</p> <ul style="list-style-type: none"> • for the HEIs to interpret the standards and procedures and conduct self-evaluation at program and HEI levels • for the TNQAATE staff members on how to interpret the standards and procedures (most of the staff should be included in the committees tasked with development of standards, procedures and evaluation approaches) • for the local experts on how to do the review and produce a report • for the TNQAATE accreditation council on how to interpret the standards, procedures, evaluation approaches and how to take decisions 	On-going	TNQAATE along with the international and local experts
Identify a pool of local and international peers	On-going (starts with the first training of local peers)	TNQAATE along with the international and local experts
Start full implementation of the procedures and close the first cycle	TNQAATE	Within 5 years of commencement
After the closure of the first cycle and in-depth system-wide analysis should be done leading to revision and enhancement	Starting from the year 4 of the 1 st 5-year cycle	TNQAATE along with the international and local experts

Annex 5: Possible ICT solutions for higher education challenges

Based on workshop discussion.

Issues	Possible Solutions
Capacity development of citizens	Leverage distance education to meet this challenge through running joint distance training courses provided by TUT and University of Ternopil in Ukraine. This is expected to be launched in April 2014.
Provision of teaching materials to students	There are examples of using both online resources and textbooks.
Quality assurance of distance education	Improve the quality of distance education in collaboration with the private sector to meet market demand. For instance, short term online courses jointly created by the private sector such as banks could be an option.
Intellectual Property Rights for teaching materials	There is a need to ensure that teachers are provided with a secure environment to share their teaching materials without being plagiarized. This issue could be solved by using creative common license.
Control of teaching and examination process to avoid fraud among students	This issue needs to be discussed and documented in the process of distance education at the policy level and an international example could be applied.
Process of assessment (examinations) and defense and presentation of assignments and diploma projects	International examples show that exams, defense and presentations of assignments take place in a physical place. Distance education implementation process document needs to define this process as well.
Management process of students' learning plan	Management process can take place through using some functions of LMS. It is possible to use international examples.
Time management of teachers and students and payment method for part-time teachers who are paid by hour.	Time management can be recorded and tracked by the system, but this process needs to be considered carefully and documented in the distance education procedures.
Qualifications needed for teachers to teach distance education	Through introduction of distance education, the role of teachers switches from information provider to learning facilitators. If the universities are to use the same teachers for distance education, they need extra training for the role. If they are to hire new teachers, they should look for someone who has experience in conducting workshops and facilitation, in addition to subject knowledge. It is possible to use international examples to identify the profile of teachers needed for distance education.

List of Participating Organizations

The pilot project was launched in December 2013 and ended in April 2014. It took place in two phases. The first phase was focused on exploring the partner organizations' capacity to pilot one or more proposed options. During the first phase, a series of workshops and meetings were arranged locally and via video conferences. These workshops not only helped raising awareness, but also motivated partner organizations to keep engaged in the project. The event also served as a venue for sharing knowledge of existing distance education programs in Tajikistan. The second phase was the implementation of the pilot models. Through Skype sessions and knowledge sharing, technical assistance was provided throughout this phase.

Organization	Abbr.	Form of participation	Solution Models
Tajik State University of Commerce	TSUC	Implementing partner	Model 1: Option 1 Model 2: Option 2 Model 3: Option 2
Technological University of Tajikistan	TUT	Implementing partner	Model 3: Options 1 & 2
TARENA	TARENA	Implementing partner	Model 3: Option 1 Model 4: Options 1 & 2
Tajik Technical University	TTU	Implementing partner	Model 1: Option 1 Model 2: Option 1
Centre ICT	Centre ICT	Implementing partner	Model 3: Option 3
Institute of Entrepreneurship and Service	IES	Partner	n.a.
Khujand Polytechnic Institute of the Tajik Technical University	KPI	Partner	n.a.

Annex 6: Comparison of the Procedures on Distance and Correspondence Education

The tables below compare the Procedure on Establishing Education Processes for Distance Education in the Higher Professional Education Institute of the Republic of Tajikistan and the Procedure for Students of Correspondence Education in the Higher Education Institute of the Republic of Tajikistan.

Table 17: HEI Responsibilities in Training Process

Distance Education	Correspondence Education
<p>6. Higher education institution is responsible for provision of learning and methodical materials in this process. For each specialty, the following materials need to be provided:</p> <ul style="list-style-type: none"> • sample training curriculum covering the whole range of learning subjects in compliance with the plan of teaching; • working plan for each individual subject; • materials for independent learning of students, questions and tests, samples of assignments, diploma and course works, textbooks and teaching guidebooks in both hard and soft copies; • accessibility of content of lectures; • materials needed for internship: plan and program of internships (educational and industrial), types of reporting forms and so on. 	<p>20. The following materials should be provided to the correspondence students in the faculty:</p> <ul style="list-style-type: none"> • state standard of education and study program plan, subject to request of student; • details on code and name of specialty, name of relevant department, names of head and teachers of department, address of department including building, room, telephone, website, e-mail address and so on; • student's training timetable for the semester and/or year of study; • official letter from department to student's employer seeking an additional vacation for the period of exams , state examination, diploma project. The sample for such an informing letter will be developed and approved by the Ministry of Education. The first section of this letter will contain duration of the vacation and the goal of the program, as well as content of the up-coming semester. The second part of the letter will describe the actual study time for the student during the semester. This letter needs to be signed by rector with registration in the special notes of the dean who is in charge of its implementation. Similar letter to outsider students will be delivered by post office. • Additional vacation is granted to those students who are successfully completing training materials, do not have any exams to retake, and successfully passed all requirements of the study program. • Additional trainings subject to period and time of study, possible sickness of students, availability of exams and quizzes to retake can be either split into shorter periods or shifted to another time.

Table 18: Means of acquiring knowledge

Distance Education	Correspondence Education
<p>For providing tools and materials of distance education in parallel to traditional information resources, the following means of distance education are used:</p> <ul style="list-style-type: none"> • multimedia books, • electronic educational and methodical guidebooks, • electronic books and textbooks, • learning software applications, • practical computer sessions, 	<p>Students of correspondence education should be supplied with the following materials:</p> <ol style="list-style-type: none"> 1. Range of lectures (if text-book is not in compliance with the training program or text-book availability for 1 student is less than 1/2 copy); 2. Guidebook based on the training program including the following: <ul style="list-style-type: none"> ○ theoretical foundation of the training program with topics and methodical indicators for acquiring, questions for self-testing and the list of textbooks; ○ topics of workshops and seminars with highlighted methodical indicators for students to prepare for these events, list of questions and references;

<ul style="list-style-type: none"> • series of tests, • educational videos, • audio materials. <p>They allow providing training programs through the telecommunication channels.</p>	<ul style="list-style-type: none"> ○ supervised works (table with options, methodical guidance for their completion, supervising actions); ○ topics for laboratory works and methodical guidance to prepare for them. This guidance will be introduced during the laboratory works or will be recommended to find it from the library; ○ topics for course works (assignments) and the methodical guidance to complete them; <p>3. Series of tasks</p> <p>4. Methodical guidance on completing course assignments that consists of the following sections:</p> <ul style="list-style-type: none"> ○ outline and volume of the assignments; ○ list of primary resources; ○ content and compounds of explanatory guidance with methods to develop each sections; ○ graphics section requirements, if needed; ○ recommended literature/further reading <p>Supporting the methodical series with audio and video devices as well as CD/DVDs are recommended.</p>
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Table 19: Requirements for Providing Education Process

Distance Education	Correspondence Education
<p>Requirements for Providing Distance Learning</p> <p>1. To approve the capacity of providing one or several training programs via full-fledged distance education system the education institution can apply to the Ministry of education of Tajikistan for assessment of its capacity according to the following attributes and other methodical requirements of this form of education:</p> <ul style="list-style-type: none"> • availability of methodical and teaching materials for each teaching subject (module) or availability of specific cases (curriculum, teaching materials with usage of multimedia); • availability of corporate information system for document exchange that can fully manage the education process; • availability of human capacity that is trained to work in the modern information reached education environment; • availability of methods including electronics for assessment of students' knowledge; 	<p>II. Requirements to the correspondence students education plan</p> <ul style="list-style-type: none"> • Education plan for correspondence education specialties shall be developed by the relevant department of HEI and submitted to the Ministry of Education for approval. • Education cycles and modules must be in compliance with the relevant specialty of full-time (traditional) education. • Classroom sessions (lectures, workshops (practical trainings), seminars, laboratory works, etc.) within one year of study should not be less than 160 hours. • Volume of workshops, seminars, and laboratory works shall not make less than 60% of the overall volume of classroom sessions. • Number of course projects should not be more than 1 and the course assignments not more than 2 during a semester. It should be in compliance with the education plan of the full-time study. • Number of supervised works in entire period of study should not be more than $n_{k,l}$, measuring indicator, which is identified as follow: $n_{k,l} = 0,01 * N$, where N is overall volume of classroom session for full-time form of study. • Number of exams during one year of study should not be more than 10 and quizzes not more than 12. • Education plan for 1st year students should envisage 1 introductory session of 8 to 10 days long in October and two exam sessions not less than 2 weeks for each semester; in a following years two exam sessions and in the 6th year (if study course is 6 years) one exam session. Date and length of exam session should be identified by the HEI education department in agreement with the deans of faculties.

Table 20: Student Progress Assessment and Evaluation in both forms of education

Distance Education	Correspondence Education
<p>V. Principles, ways of evaluation and assessment of students</p> <ul style="list-style-type: none"> • Ongoing monitoring, mid-term and final assessment of graduating students will be conducted by the education institutions through traditional methods and usage of electronic means (e-testing, etc.). 	<ul style="list-style-type: none"> • Main types of distance assessment of students are: <ul style="list-style-type: none"> ◦ supervised works, exams, quizzes, course projects, reports from internships like study, field, and pre-diploma, as well as state examination, defense of graduation works and others... • Assignments for self-managed work can be delivered to student through distance technology of education such as Case-technology, Internet-technology.

Requirements set in DELR	Descriptions
1. Requirements for supplying the training building	Physical facilities (classrooms, labs, building)
1.1. General requirements	Training processes must meet the State Standard on Education (SSE) norms. For conducting laboratory works equipped laboratories must be available in HEIs or branches. Or institution

Requirements set in DELR	Descriptions
	<p>should be capable to supply lab either virtually or physically located in distance.</p> <p>HEIs that use DET purely should possess studio equipped with multimedia projectors for arrangement of video-conferences. Student evaluation should be conducted.</p>
1.2. Case technology	Case sessions will be arranged in classrooms equipped for full-time form of education. Availability of LAN, access to Internet and projector are needed for effectiveness.
1.3. Internet or network technology	<p>Supplying students with a working place equipped with multimedia computer and Internet access.</p> <p>Each teacher has to feel comfortable with providing online or offline training sessions and has to be confident in using available resources.</p> <p>Institution should be fully equipped with ICT infrastructure and office equipment for online delivery of sessions.</p>
1.4. Communication technology	For arranging video-conferences, institution should own a studio or studios. Telecommunication equipment and servers should be configured in a secure location. Each student should be supplied with workspace equipped with PC, VC facilities, testing equipment, video recording and watching equipment.
2. Providing training process	
2.1. Technical support of the communication training process	HEI is obliged to create an engaging learning environment for students.
2.1.1. General requirements	Institution should provide students during training sessions with basic ICT resources necessary for acquiring learning discipline.
2.1.2. Case technology	Institution should provide access to Internet website full of training and methodical resources; teacher – student interactive communication.
2.1.3. Internet or network technology	<p>Institutions should provide learning management system that allows to develop, store, access, deliver and manage education process through Internet with at least 2 Mbps bandwidth; education website with registered domain name; availability of instant messengers, teleconferences, email and other online facilities.</p> <p>Institution guarantees to students 24 hour access to its regularly updated information resources, interactions with teachers.</p>
2.1.4. Telecommunication technology	Computers used for training within the Institution shall be connected to its single network with at least 30 Kbps transmission capacity. Telecommunication lines capacity should be: incoming channel not less than 1 Mbps for student; outgoing channel not less than 8 Kbps for student
2.2. Requirements for the training process technical supplies	
2.2.1. General requirements	Number of computers and their locations should be in accordance

Requirements set in DELR	Descriptions
	to the sanitation norms; workspace for a PC should not be less than 4 m ² . All PCs should be connected to LAN.
2.2.2. Case technology	Supplying teachers and administrative staff of institution with PCs and access to Internet and satellite TV channels is important.
2.2.3. Internet or network technology	Multiple options to access information and training resources that facilitate training processes and ensure education quality should be available. On average, 8x1 is rate of students to PC. As for teachers, 1 computer should be available for 3 hours per day for teacher, i.e. 4 teachers per 1 workspace. Teachers should have opportunity to interact online and offline with students.
2.3. Supplying training process with literature, training and methodical items	
2.3.1. General requirements	HEI is responsible for supplying students with training literature; training and methodical resources in paper or electronic format; to arrange training processes; for availability of training disciplines syllabi.
2.3.2. Case technology	Training and methodical supply of the case for students should include: training plan for the semester; event plan for full-time students; consultation, etc.
2.3.3. Internet or network technology	Training and methodical materials should be located in the LMS platform. Every user will access them using individual login and password.
2.3.4. Telecommunication technology	Availability of audio and video materials is compulsory. Training material for an individual assignment should be available for each student. Multimedia material can be used a copy for 8 students. Textbooks and methodical guides should be available a copy per 2 students.
3. Requirements for human capacity of the training process	Capacity building of teachers and tutors
3.1. Improvement of the pedagogical staff	
3.1.1. General requirements	Teaching staff of HEIs includes: professors and teachers; administration and officers; assistants; engineers and technicians; teachers and administrative personnel and tutors that via DET deliver training sessions in branches. Number of the tutors depends on number of students.
3.2. Educational background of teachers	Not less than 60% of teachers – methodologists should hold academic degree or position and not less than 20% of them should hold doctoral degree or professor. Teacher – methodologist should have a professional background in the area of a to-be-taught discipline. Not less than 20% of tutors should hold scientific degrees. All of them should have higher education degree and at least a 72-hour-training-certificate on learning training methods of DET.

Requirements set in DELR	Descriptions
3.3. Professional development of teachers	
3.3.1. General requirements	One professional development training course should not be less than 72 hours and should be taken in 5 years.
4. Ratio of training area and the number of students	

Annex 7: Results of pilot project

Model 1: Teacher Training and Teaching Resources

Option 1: Use existing online courses for teaching materials and teacher training

Activities completed	Results
<p>TSUC conducted a teacher training focused on using a Moodle Content Management System (CMS) platform for creating online courses, and methodological workshops on e-learning to teach how to develop education materials for this platform and teacher-student interactions.</p>	<ul style="list-style-type: none"> • Over 80 teachers were trained on basics of e-learning and content management. After this training, teachers were expected to be able to create tests and quizzes on Moodle platform. More than 16 teachers finished a course on e-learning & Moodle basic training. Six teachers became tutors for other teachers. Through this workshop, teachers contributed to creating over 12,000 tests available in this platform. • As an additional result of the pilot, a number of workshops conducted during the pilot raised awareness among university leaderships, students, and teachers about their planned launch of the University Distance Education Centre, which manages TSUC e-learning platform – moodle.tsuc.tj. TSUC platform was launched in February 2014 and offer 370 courses. The number of registered users (2,354) has exceeded the expectation.
<p>At TTU, four teachers took courses such as network security, web programming, and electricity and magnetism from three different online platforms (2 from Coursera, 1 from Code Academy, and 1 from Lingualeo). Besides the three online platforms, Intuit platform (Russian) was also examined. The teachers took these courses a few hours per week.</p>	<ul style="list-style-type: none"> • Coursera seems the most appropriate for learning due to its good quality materials, available from leading universities. It is also an advantage that there are no distracting adverts. Coursera style courses are suitable for Tajikistan in terms of integrating these courses into education processes at universities. However, since English is the most dominant language in this platform, usability of the platform seems limited. • The required bandwidth was 1 Mbps. The teachers were able to take these courses with current Internet access, but the participants commented that access to Internet was still a challenge. • Trainees of Lingualeo (3 students of TTU) have not completed the training course. However, they liked the presentation of materials and organization of learning as a game with an embedded video. • The Code Academy is an interactive and convenient environment for learning programming. • Intuit is popular for Russian language courses and up-to-date course availability. However, the learning environment of Intuit was distracting due to banners and ads. Intuit, therefore, seems to be more suitable for supplementary courses.

Option 2: Create Tajik original courses in collaboration with the private sector

Activities completed	Results
<p>A survey was conducted with six firms in banking (1), ICT (3), education consulting (1), and consulting (1). The size of the companies varied from a micro company with less than 10 employees to a large company with over 250 employees. Top management of these</p>	<ul style="list-style-type: none"> • The survey revealed that four out of six companies have their own online and/or offline training courses. Regardless, all respondents expressed their interests in collaborating with HEIs to develop online courses. All of them are ready to hire students who complete these jointly created courses. • All but one company are interested in investing in creating online courses by local universities. Their interest ranges from pure computer literacy courses to professional development courses like management, IT-specific courses, networking administration, banking and marketing. • The main reason for their interest is to invest in human capacity development. Companies suffer from a lack of human resources. Therefore, through developing online courses, companies can share their ideas. One of the respondents also

<p>firms responded to the survey.</p>	<p>pointed out that they are willing to give their best ideas to universities to make practical courses together because they can then train students through universities before they join the company.</p>
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Model 3: Supplementary Courses

Option 1: Awareness building

Activities completed	Results
<p>This activity was combined with Model 4: Learning Management, Option 2: Explore an option of using learning management tools and the awareness building workshops covered both e-learning and LMS as a topic.</p> <p>TARENA organized two workshops for universities and relevant stakeholders. The workshops aimed to contribute to raising awareness of partner universities on LMS and e-learning. As a local experience, the workshop discussed TSUC’s experience in capacity building of e-learning based on the Moodle free open source e-learning platform. As international examples, cases from South Africa and other countries were introduced. The workshop also offered local experts’ experience in using online courses such as Intuit, TOL media academy (distance learning hub on online journalism), iLearn (an online learning system devised by the BBC World Service Trust for media professionals in developing and transitional countries), and edX (a non-profit online initiative created by Harvard and MIT that offers interactive online classes and MOOCs from the world’s best universities).</p>	<ul style="list-style-type: none"> • An expected outcome of this workshop was an establishment of an expert group that will draft a roadmap to facilitate LMS and e-learning integration in universities in Tajikistan. This draft can be introduced in the next session of the ICT Council under the MOES for approval and recommendation as guidance to universities to develop LMS and e-learning. Though this outcome has not been achieved yet, the TARENA team is determined to pursue this goal as one of their activities this year. In the last session of the TARENA board meeting on May 14, 2014, the issue of developing the roadmap was raised. As a next step, TARENA will present the roadmap at the conference hosted by CAREN in October, 2014. • A survey was conducted to measure the impact of the awareness building workshops as well as to identify perception, awareness level, and future opportunities for using e-learning and LMS in Tajikistan. The total number of respondents was 38 from 15 HEIs and legal and private entities, consisting of 24 male teachers, 6 female teachers, and 4 male and female students each. Among the teachers, the majority’s expertise fell under ICT and ICT-related fields. However, the range of subjects that respondents were interested in taking online was much wider than their fields of expertise. Indeed, language, accounting and software development were the top three most popular subjects. Women were more interested in a wider range of subjects such as law and ICT policy, compared to men. • The workshops made it clear that it is feasible to introduce LMS and many universities prefer to use free open source platforms such as Moodle.
<p>TUT contributed to the organization of a workshop hosted by TARENA. TUT shared the experience of the newly established Center for Distance Education (CDE) and its online platform with 27 participants, including teachers, students, local and international experts. The online platform of CDE helps teachers develop and upload new and existing training materials to share with students. Since ATutor is free and open source software (FOSS), any electronically available materials can be easily shared by converting them into an XML file.</p>	<ul style="list-style-type: none"> • Since the TUT provides e-learning courses in partnership with the University of Ternopyl National Technical University (Ukraine) and the Tomsk State Pedagogical University (Russian Federation), it seemed that the university itself had not built ownership in developing technical and human capacities for its distance learning. With the establishment of the CDE, this is likely to change as the CDE will build necessary local capacity. • As a result of the workshop and other e-learning relevant workshops, TUT also established an ICT club in the beginning of March. The club members include teachers, students and professionals and meet every two weeks to exchange information and concerns about e-learning. The first meeting was held to introduce e-learning facilities of TUT to other partners.

Option 2: Universities make online courses

Activities completed	Results
<p>TSUC arranged workshops and conferences with two universities' administration and explained the importance, advantages, and cost of e-learning implementation. TSUC also identified human resource needs for administering LMS and e-learning.</p> <p>At the newly opened the University Distance Education Centre in February 2014, TSUC launched its own e-learning courses. It is financed as a part of the university administration and e-learning classroom is equipped with basic technical equipment. Two groups of part-time (correspondence education) students took "accounting and professional audit" (29 students) and "financing" (12 students) courses through the online learning portal of the university. The online materials for teaching were created by teachers facilitated by the team of the Center. This activity helped improve the quality of online training materials and drafting a separate roadmap on e-learning development in TSUC.</p> <p>Students have already taken exams. The Centre plans to evaluate the results and create a policy document for a further decision making by the TSUC leadership team.</p>	<p>Overall feedback on the introduction of distance education was positive. Challenges identified by a small number of teachers include:</p> <p>University administration</p> <ul style="list-style-type: none"> • The university administration does not finance upfront costs for the creation of new high quality courses, discouraging teachers and technical staff to take the initiative. • The university administration does not explicitly support teachers to become online course tutors. <p>Teachers</p> <ul style="list-style-type: none"> • Fifteen percent of teachers do not have enough computer skills, especially online computing and online course creation. For instance, 10 percent of teachers do not have any electronic teaching materials (syllabuses, lectures, quizzes). • Five percent of teachers do not believe in the effectiveness of distance education and prefer traditional pedagogy. <p>Technical</p> <ul style="list-style-type: none"> • Available equipment and facilities are underutilized. • Electricity supply is unstable in winter. • Required Internet access is not available in some areas of the country • Software and equipment for web conferencing are not complete. <p>The policy document created by the Center will include pricing policy for distance courses and teachers' activity. The result of this pilot also plays a vital role for the TSUC in seeking a license from the MOES to provide distance education service.</p>
<p>TUT conducted a pilot through its own Centre of Distance Education (CDE) and TUT Centre of Innovation and Communication Technologies. The CDE conducted its first training on ATutor integration in teaching process for 30 teachers. A 45-hour long training was conducted to build TUT teachers' capacity to develop online courses available via CDE's platform. The CDE also intended to conduct preparatory training courses for applicants to TUT and its foreign partners. Teacher training on "technology of distance learning courses implementation," focused on using ATutor platform, initiated at the end of March 2014.</p>	<p>More than 30 teachers from different departments of TUT were trained and all of them completed the training course. Training lasted for 10 days and provided 10 sessions for 1.5 hours per day. ATutor was used as a platform because it is a free and open source platform, capacity building training was available in Ukraine, a partner university in Ukraine had solid experience on using this platform and materials were also available. It was also easy to create online courses by uploading XML files. However, the challenge still remains as teachers are resistant to use new technologies in their professional activities.</p>

Option 3: Run a learning hub

Activities completed	Results
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<p>Center ICT identified, assessed and selected existing distance learning online courses to be delivered through their center. The main selection criteria for the courses are their relevance to the training courses delivered by Centre ICT. After course selection, the Center provided training on how to sign up, select and learn subjects through online course platforms (Intuit and Coursera) for participating students and teachers. Experience of using these courses was then shared through two workshops organized in TARENA and TUT in March 2014.</p>	<p>Twelve students from Centre ICT signed up for Intuit. Of whom, four completed GNU/Linux Essentials and Administration and received a certificate of completion from Intuit. (One of the students had completed an English language course and another one an economics course before the pilot project started.) Three teachers also finished IT courses through Intuit. Those who completed the course found online courses to be more convenient compared to traditional courses.</p> <p>The pilot project contributed in improving their organizational capacity.</p>
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Model 4: Learning Management

Option 1: Explore an option of using NREN

Activities completed	Results
<p>TARENA initiated and hosted an international online meeting jointly with CAREN (Central Asian Association of NRENs) in March 2014. CAREN unites 4 countries in the region: Kazakhstan (KazRENA), Kyrgyzstan (KRENA), Tajikistan (TARENA), and Turkmenistan (TuRENA). For arranging the video-conference, a Vidyio platform was tested and used. Experience of NRENs from various countries was shared as summarized below.</p>	<p>One of the positive outcomes of this event is that CAREN is now seriously considering LMS and e-learning as a potential service provided to member universities. This point was included in the CAREN’s annual meeting that took place on May 7 and 8, 2014. As a next step, CAREN is planning international meeting on October 1 and 2, 2014, which will include a dedicated session on e-learning. An additional suggestion was to create a list of universities in the region that have experience in e-learning and distance education and share among the members.</p>

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