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Network of Education Policy Centers

Comparative analysis of National Testing Centres in Azerbaijan, Georgia, Ukraine, Kyrgyzstan and recommendations for Tajikistan

Final Report

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FOREWORD

This is the draft final report of the comparative analysis of National Testing Centres in Azerbaijan, Georgia, Ukraine, Kyrgyzstan, with the recommendations for Tajikistan. The analysis was prepared with the participation of four country experts who collected data and wrote the country review for the country NTC case.

This final report is based on the case studies, one for each of the participating countries. They were prepared on the basis of the framework matrix, which allowed the experts to provide all information necessary for this comparative study, but also to prepare a document that gives a deeper insight in specifics of each of the country and each of the National Testing Centres. Beside communalities there are also differences, as each of the centres developed, from the starting optimism of a well designed system to the more mature organization that had to take into account the realities of the system they are working in.

Country reports are results of the analytical work of the experts who were in most case involved in some of the phases of the establishment and development of the examination/assessment system in their country. None of them is working any more in the institution, so they could give an impartial view of the situation. They were collecting and analyzing information provided by the NTC but also by some of the main stakeholders. Reports provided are different both in style and information provided, but

The final report can only be general, but care has been taken to represent both common features across countries as well as particular exceptions from which one can learn. Where respondents are quoted, it is because what they say is representative for the experience of many in their situation.

The main expert would like to thank the experts who prepared the four country studies: Turgut Mustafayev from Azerbaijan, Nino Partskhaladze from Georgia, Liliya Grynevych from Ukraine and Duishon Shamatov from Kyrgyzstan. Their studies are available as separate documents. He would also like to thank Lana Jurko, Director of the NEPC, the Network and the Education Support Program of OSI for providing the opportunity to work on such an interesting study.

Every effort has been made to ensure that the information given here is correct. Any factual errors which might remain are unintended, and are responsibility of the main expert.

The analysis, conclusions and recommendations expressed here are those of the main expert only, and do not necessarily represent the views of the Network of Education Policy Centres, Open Society Institute, or other organisations or persons referred to.

Dr Sergij Gabrscek
Main Expert, September, 2010

1. Introduction

1.1. Background

OSI Tajikistan with support of ESP and in coordination with the World Bank and Ministry of Education is supporting establishment of a National Testing Centre in Tajikistan. The objective of the National Testing Centre (NTC) is to institutionalize fair and transparent assessments that will be used for improving learning outcomes and addressing issues of equity. The main goals of the NTC will be to administer reliable and valid forms of assessment including: University Entrance Exams (UEE), summative assessments at selected grade levels, and sample-based assessments. These tests will be used to support the MoE's goal of improving the quality of teaching and learning and introducing more equitable mechanisms in the entrance to universities.

OSI ESP wishes to draw on the experience of development of such institutions in the region, using case studies, to gain information and insight into lessons learned that can guide OSI-Tajikistan's engagement in the establishment of a national testing Centre, the first step will be to develop case studies of testing Centres in the region.

The objective of the case studies is to identify factors that constrain or obstruct the realization of the three objectives set for the National Testing Centres. These objectives are: (i) institutionalization of fair and transparent student assessments; (ii) use of those assessments for the improvement of quality of teaching; and (iii) achievement of equity.

1.2. Policy Rationale

Several studies conducted during the last twenty years have clearly emphasized the negative impact of corruption on the economic, social and political development of countries, because it increases transaction costs, reduces the efficiency of public services, distorts the decision making process and undermines social values. Moreover, it has been observed that corruption tends to contribute to the reinforcement of inequities by placing a disproportionate economic burden on the poor and limiting their access to public services.

What is corruption? Corruption is defined **as the systematic use of public office for private benefit that results in a reduction in the quality or availability of public goods and services.**

A quick review of the literature shows that a number of attempts have already been made to tackle the issue of corruption both globally and sectorally. However, it appears the education sector has not been given proper attention by many national education authorities and donors, despite the many grounds for assigning a particular priority to the challenge of combating corruption in education. Any attempts to improve the functioning of the education sector in order to increase access to quality education for all cannot prove successful if problems of corruption, which have severe implications for both efficiency in

the use of resources and quality of education and school performance, are not being properly dealt with.

According to Heyneman (2003), a school system, which is free of corruption, is characterized by the following:

- Equality of access to educational opportunity
- Fairness in the distribution of educational curricula and materials
- Fairness and transparency in the criteria for selection to higher and more specialized training
- Fairness in accreditation in which all institutions are judged by professional standards equally applied and open to public scrutiny
- Fairness in the acquisition of educational goods and services
- Maintenance of professional standards of conduct by those who administer education institutions and who teach in them, whether public or private

From the list it could be seen that many of the criteria for corruption-free system are linked to the quality assurance in education. Assessment and examinations are an integral part of the quality system, and provision of transparent and fair assessment by a professional assessment centre reduces opportunities for corruption. Establishment of a National Testing (or Assessment) Centre *per se* does not guarantee fair and transparent assessment, does not lead to improvement of teaching and doesn't provide equity for students.

Formal establishment of the NTC it's only the first step in providing mechanisms for changes in education system. This should be followed by other steps, primarily by enacting necessary legislation that encompasses all dimensions of learning, teaching, assessment and access to education. Appropriate and stable funding is needed for Centres to operate independently. Professional development of the staff of the centre and experts that are working with them in theory and practice of assessment and examinations, as well as continuous support to teachers in the assessment methodology are important vehicles for changes in education. Transparent procedures and public monitoring are of utmost importance for equity in education.

External examination and assessment systems, used in particular for access to universities, have existed in some countries, in particular in Western Europe, for more than a hundred years. In some countries, like the UK, there were also a mechanism providing common basis for assessment of students coming from schools with different curricula, with no national curriculum that would be used by all schools. In most of the new democracies, before 1990 all assessments, including school leaving examinations, were internal and school based, not transparent, in most cases unfair and results were not comparable between schools, even between classes in the same school. Higher education institutions were running their own entrance examinations. Often, each faculty within each higher education institution administered examinations independently. Many examinations were delivered orally and many could only be taken at the university where they were designed.

This system of selection is unfair, inefficient, and low quality. *It is unfair* because examinations have to be taken where they are designed; those who cannot easily travel have less opportunity.

The effect of this is to limit access to higher education to students who can afford to travel. *It is inefficient* because students must take a new examination for each institution to which they apply, and since they cannot do this at a single sitting, they must wait for a new test taking occasion. This may delay their entry by a year or more. *It is of low quality* because questions designed by faculty who are isolated from modern labour markets. They use skills that are out of date and they design tests whose administration cannot be standardized. But the key issue in entrance examinations is corruption.

To overcome some of those challenges educational authorities in many countries have decided to establish National Testing (or Assessment) Centres, responsible for all (external) assessments and examinations in the country/state. Some of them are also responsible for implementation of international comparison studies, like Pisa or TIMSS, for optimal use of resources that are available in the country and for attaining synergy between different assessments. Necessary legislation was enacted, finances provided by the state (in most cases less than actually needed for optimal running of the centres) and in many cases finances were also provided by different donor organizations at the very beginning of the establishment of the centre. Further development of the centre and assessment and examinations system is in that case then left to the Centre and the state.

Establishment of a National Testing Centre may follow a number of different objectives, depending on the state, but there are the three main objectives that are important for all of them: (i) institutionalization of fair and transparent student assessments; (ii) use of those assessments for the improvement of quality of teaching; and (iii) achievement of equity.

(i) institutionalization of fair and transparent student assessments;

Experiences from many testing centres show that there are some common factors that could impede the achievement of the mentioned objectives. The achievement of the first objective, institutionalization of fair and transparent student assessments, depends firstly on the establishment of a truly independent centre, free of any pressure, formal or non-formal, exerted by the ministry or governmental officials, political parties or anybody else having personal interests in results of the assessment. NTC should have an independent governing board, with representatives of main stakeholders and if possible, members should be nominated by the parliament, so it doesn't depend on the actual division of political power.

Examination and assessment information are to be used to assist policy makers, teachers and school managements in ways of improving teaching and learning, monitoring standards, and in the selection of students for scholarships, university and tertiary studies, and work. Examination and assessment processes and procedures are to comply with standards and requirements that uphold validity, fairness and transparency in educational assessment. This includes strict adherence to security and confidentiality procedures by all who are involved in examinations and assessment.

Procedures used by the NTC should be transparent and publicly available, as in many cases, despite providing all necessary information, the public could be still insufficiently informed about the role of external assessment and its specific features, procedures and possibilities,

and there are still groups in society that are interested in preserving the existing corrupt system of examinations.

In order for the national system of testing to act also as an effective anti-corruption tool, it must be based on appropriate technologies and procedures, so it requires a solid technological basis. The system must also be open to public monitoring and should develop necessary mechanisms for this purpose. It is, moreover, necessary to develop legislation that will define the consequences of violations in this field and ensure efficient mechanisms of public supervision of the functioning of the system. Development is needed to establish a normative legal basis on the criteria of objectivity and transparency of the external assessment system. In addition, in many countries there is still an insufficient number of specialists in this field, which impedes the spreading of external testing at national level, so there is a need to develop and conduct training and training programmes for experts in the external assessment system.

Clear and transparent assessment criteria and regulations are needed too. Standardised national exams — administered by independent testing institutions — reduce opportunities for abuses and fraud. Appropriate measures to detect and address problems also must be applied. These should include the physical verification of a candidate's identity, safe storage of exam papers, centralized grading and computerised testing, where appropriate.

Indicators for **institutionalization of fair and transparent student assessments**;

- independent NTC established
- reliable source of financing provided
- transparent employment procedures in the NTC ensured
- independence from political influences achieved
- NTC has an independent governing board
- Transparent selection of markers/examiners
- results of assessment and examinations regularly published
- students allowed to see their scripts
- appealing mechanism in place
- equal access to assessment/examinations provided for all candidates
- equal conditions in sitting the examinations provided
- transparent assessment procedures in place
- assessment procedures are published
- documents of NTC publicly available

(ii) use of assessments for the improvement of quality of teaching

NTC or any other assessment agency should help promote good teaching and learning by providing data and assessment-related information to those responsible for designing and delivering educational programmes.

Use of assessments for the improvement of quality of teaching depends primarily on teacher and their behaviour. Teachers should get acquainted with the assessment

instruments, results of assessment and develop teaching methodologies that would lead to improvement of quality of teaching. This could be done by individuals, or it can be done also systematically, providing dedicated trainings by educational authorities. This would normally happen when new approaches are introduced (like for example experimental work in sciences).

Assessment content, its administration and results of the assessment affect what teachers teach and how they teach. This depends on the form and purpose of assessment. For national and sample based assessment, which are low stake assessment, influence on teaching and learning is less pronounced. For high stake examinations, like secondary school leaving examinations, this is different. Most of the teachers teach to test, so narrowing teaching to areas that will be assessed or tested. In general examination syllabus covers less of the subject curriculum. Based on the type of assessment, which is most cases is pen and pencil, written examination, as multiple choice tests, short answer and rarely an essay (as more complex forms require of assessment more time and resources) teachers adapt their teaching, focusing on part of syllabus that will be tested. With appropriate design of assessment instruments and competences and skills that re required from students, additional areas can be introduced or emphasized. Such an example was introduction of practical experiments in science subjects in Slovenia, which were in syllabus but not implemented in most cases. After introducing that into Matura secondary school leaving examinations experimental work became part of implemented curriculum. Similar situation was with introducing probability and statistics in the Mathematics examination, area that existed but was not taught by teacher. These are positive examples. On the other hand, there is a number of examples of parts of curriculum that was never taught as it was not part of examinations.

Indicators for **use of the assessments for the improvement of quality of teaching**

- feedback to teachers and schools provided
- training on assessment methodologies for teachers provided
- support in linking assessment results to teaching methodologies provided
- professional support of NTC for teachers provided
- support for internal and school based assessment provided
- teachers involved in development of assessment instruments
- assessment instrument for assessment of higher cognitive domains developed
- providing forms of assessment that don't support rote learning
- teaching to test discouraged
- different forms of assessment provided

(iii) achievement of equity

Fundamental to equity in assessment is the recognition that the construction of the knowledge and skills to be assessed should involve a critical evaluation of the extent to which the choice of a particular set of knowledge and skills is likely to privilege certain groups of students and

exclude others by virtue of gender, socioeconomic, cultural or linguistic background. This is one dimension that has to be taken into account when preparing assessment instrument.

The other dimension is using assessment and examination for selection of candidates for further education when completing a particular level of education. Fair and transparent assessment system gives all candidates the same chances to successfully pass their exams and to qualify for the next level of education based solely on their merits. State wide examination, prepared by experts from or working with the NTC and run professionally provides equal opportunities for all candidates, without any bias if instruments are right. If such an assessment in then directly linked with a centralized system for application, selection and enrolment for higher level of education, then opportunity for corruption is minimized. Professional work of the National Testing Centre is of utmost importance to achieving this goal.

Indicators for **achievement of equity**:

- Equal access to assessment provided
- Assessment instruments are free of any bias
- Transparency of procedures ensured
- Confidence of assessment materials ensured
- Integrity of NTC and its staff ensured
- Management information system in NTC in place
- Feedback on assessment results provided
- Equal access to assessment from different schools, types of education provided

1.3. Actors in assessment

There is a number of actors that are involved in realization of the three objectives. Ministry, responsible for education, plays the most important role as the NTC are in most cases, under their responsibility, although not always directly. Depending on the situation, they are supportive for the work of the centre, provide necessary input when needed, coordinate work with other institutions and agencies. Many centres experienced that they often tend to influence the work of the NTC too, in particular with the case of high stakes examinations, when results are not as good as expected. They sometimes also try to participate or decide on staffing of the centre or want to employ individuals that have been working at the ministry. They could also take a patronizing role and seeing NTC as a (non-formal) part of the ministry. NTS has also a powerful role in selection processes for further education, based on results of examinations, so pressure could be exerted on individuals in NTC to having access to the databases and change results for the benefit of individuals, which is a corruptive act.

Students are direct beneficiaries and stakeholders in the process. They can directly influence the transparency and fairness of assessment, requesting information they need. They are entitled to a fair assessment, with clear and transparent criteria and regulations, known in advance and available publicly.

Another group of stakeholders are teachers. Assessment of students is indirect assessment of their teaching too, so they often feel threatened by results, in particular by results of high stakes assessments. In most of the cases they adapt their teaching to requirements of assessment/examinations, and so "teach for test". This could have a detrimental effect on teaching and learning, as it narrows the teaching to what is prescribed by the examination syllabus. Depending on the structure of school leaving examinations, some subjects that are not assessed receive less attention and don't have the same status as others. On the positive side, teachers can also benefit from trainings in assessment methodologies.

Universities are important stakeholders as external secondary school leaving examinations replace or complement entrance examinations. External examinations are in principle transparent and fair, are implemented under same conditions for all candidates and provide equity of access. If this is combined with the central application and enrolment system for the HE, corruption is minimized. There is resistance to this approach in particular by individual faculties or lecturers who might benefit personally from the old system.

Schools are also stakeholders of the process. Their students are assessed in different stages of schooling, and results of assessment could be used in different ways. They can be used for improvement of teaching and learning, if results are provided for individual schools and individual students (i.e. if the assessment is not sample based). Comparison can be made with other schools and the average result in the country. This is essentially a non-educational use of information that is not directly supporting the attainment of intended learning outcomes.

Different stakeholders are involved in the realization of objectives. Ministry officials can positively affect fair and transparent assessment by providing support to NTC, providing necessary funding for activities of the centre, enacting legislation that defines role of the NTC, its competences and responsibilities. They should defend independent status of the centre. Officials can negatively affect the assessment by imposing solutions that are not in line with the professionalism of the experts from the centre. They could also exert pressure on staff of the NTC in attempt to change or revise results of assessment or by simply requesting information they are not entitled to. Political pressure could also harm the work of the centre, in particular if that is linked to interventions for individuals with connections in high politics.

Schools and teachers can also affect fairness and transparency of assessment. This can happen on different levels. Positively, in preparing students for assessment, to provide them with all information needed to successfully participate in assessment. Students should have all information pertaining to the structure, administration and results of the assessment. On the other hand, they could negatively affect fairness and transparency of assessment in breaking rules, jeopardising secrecy of assessment materials, not following rules in invigilating candidates, helping them during the assessment, which is a form of corruption, regardless if teachers get something in return or not.

2. The Policy Rationale for establishing the NTC

2.1. Introduction

Case studies from all countries show a similar picture of the situation prior to the introduction of external assessment and testing and the establishment of the independent national testing centres, regarding the three objectives: institutionalization of fair and transparent student assessments, use of assessments for the improvement of quality of teaching and achievement of equity. There was a similar, very pronounced trait of corruption, fight for power and influence and non-transparency of the system that was in place. Studies notice that the corruption was a big problem also in the Soviet time. "Personal connections and bribes used to play a big role in getting employment and good positions in a centrally planned economy, a few young people did not bother with getting quality education. Their parents used to pay for obtaining places in higher education institutions or even buy university diplomas for them. Having higher education diploma was important for social standing," is stated in the report from Georgia. It also notices, that additional source of corruption emerged in addition to the *cultural grounds*. The corruption in education sector exacerbated as a result of *under financing* of the sector, with teachers' salaries being were low and even not paid timely. Many teachers complemented their poor salaries with the income received from private tutoring. Some of them were also HE teaching staff involved in university entrance who had access to the inside information about the criteria and methods for students' assessment. A similar system existed also in secondary schools, where teachers were granting good grades at school exams.

We could find a similar situation in all countries. In Ukraine, for example, most critical issues in obtaining education became the university admission issue, particularly due to certain bias and lack of objectivity in the assessment of candidate's academic achievements, outdated methods of entrance examinations in the form of oral and written subject-specific exams, and the existence of corruption schemes during the university enrolment process.

Admission to higher education emerged to be the most important process that was prone for corruption and non-transparency. Competition for the university entrance was strong, and as each university had conducted their own entrance examinations, there was an opportunity for corruption during entrance examinations. There was not a single, independent institution overseeing student admissions, in any of the countries.

Existing entrance examinations, which included oral questions and writing pre-prepared essays, subjectively assessed factual knowledge and memorization skills, and were affected by nepotism, favouritism, corruption, and a lack of transparency, as it is stated in the Kyrgyz report. Results could be manipulated and changed.

In Georgia, public was very suspicious about the members of the admission committees and the criteria they used for assessment. However in general terms, people believed that if they study well, they can get admitted to universities. This might have been the case for some universities, but definitely not for the most prestigious in any country.

In Ukraine, situation was different. The 2002 sociological survey to study young people's attitudes to secondary leaving and entrance examinations revealed that two thirds of interviewees perceived these exams as non-transparent and biased and the practice of administering such exams as such that required significant reforms. There was public indignation and opposition against acts of corruption during admission campaigns, which eventually led to the attempts by individual universities to implement anti-corruption measures in relation to university admission: transfer to written examinations, making examination sessions open to the public, broadcasting of examination process taking place in examination rooms, implementing testing technologies in entrance examinations, etc. These were all actions that aimed to gain public trust and support.

Was the assessment used for the improvement of quality of teaching? Not at all. There was no emphasis on achieving equity, because it was merit-based, thus whoever would get high marks, would be enrolled at higher education institutions. Those who had connections or could offer bribes were in strong positions to secure enrolment, and those from rural areas and poorer backgrounds were disadvantaged. Wealth and personal connections replaced merit as the essential prerequisites to enrolment to most universities with state scholarship funding in Kyrgyzstan, adding additional pressure on already limited resources available for disadvantaged students.

The admissions committees mainly consisted of the faculty members from that institution. Fairness was subjective to each member's opinion and transparency was a big issue. Besides, each committee member had its own "candidate(s)" among applicants and in many cases committee members supported each other's candidate as they were colleagues at the same faculty. Assessment instruments were not free from bias as each examiner brought a different perspective and set of interests. It was also convenient to reach out to individual committee members in different institutions as they were easy to bribe. Corruption would take place in conventional ways, as well as the acquaintances were used to affect the grades.

They were also other forms of corruption, including giving higher grades in secondary schools as they were also important factor in some instance for selection of the candidates for higher education. Such an example comes from Azerbaijan, where the grades during the high school years and receiving a red diploma (honours diploma) allowed the high school graduates to take one test, get "5" (an "A") and enter a university. In case of getting "4" (a "B"), the student would be required to take two exams. Consequently, this led to bribery in high schools.

The situation called for intervention, following also examples of some of the new democracies, that decided to fight non-transparency and possible corruption in the access to higher education, with centralizing the entrance examinations, replacing them with external secondary school leaving examinations, and in many cases also central admission system.

There were different approaches in the four countries, with different vehicles towards changes, supported also by different international organizations and institutions, providing both financial and expert support.

Chaotic procedure for entrance exams and general mistrust about the system created the need for the establishment of a centralized testing system. Only centralized system could fight corruption, difference of procedures in different universities and create a transparent system for the country. Also, this could lead to equal assessment and give students more choice at the time of their admission.

2.2. Factors leading to the decision to establish the National Testing Centre

There were different approaches to the establishment of the National Testing centres. Some were initiated by the international organisations and/or donors, some by the Ministers of Education and nearly all of them with the support of the President or with a presidential decree. All of them were addressing entrance to the higher education, the point in the system which looked to be the most corrupted and less transparent and which needed urgent attention.

Ukraine started in 1999, when the International Renaissance Foundation initiated a pre-project research on external testing, studying new entrance examination methods as anti-corruption measures. As most of such studies rely on the experience of other countries, in particular on those with a long record of entrance examinations, the principal aim of the research was to study the worldwide expertise and testing practices for university admission purpose, as well as to summarize the existing national practice of using tests by the leading universities in Ukraine This later led to the establishment of the Centre for Testing Technologies which set out systemic work to study conditions and possibilities for implementing standardized external assessment of candidates during university admission processes.

Following the results of the study In 2002, an association agreement in relation to these matters was concluded between the International Renaissance Foundation, the Ministry of Education and Science and the Ukraine's Academy of Pedagogy, leading to a wide-scale educational experiment in implementation of external independent assessment based on testing technologies (EIA). Various assessment models were studied, the legislative platform for implementing EIA was prepared, and pilot-testing was conducted for various testing procedures and the tests in Ukrainian Language, Mathematics and History (which are the most common subjects in all countries studied).

Following positive experience in 2004 and 2005, the Cabinet of Ministers of Ukraine issued two regulations (Regulation #1095 "Some Issues of Implementing Standardized External Assessment and Education Quality Monitoring" of August 25, 2004, and Regulation #1312 "On Urgent Measures for Implementing Standardized External Assessment and Education Quality Monitoring" of December 31, 2005) legislating the deployment of the all-inclusive implementation of standardized external assessment in Ukraine.

Georgia too started with the World Bank financed Education System Realignment and Strengthening Project (2001) aimed at improving efficiency, equity and quality of the education system. Important component was to establish methodological and institutional mechanisms for the assessment of students' learning outcomes. Later the National Assessment and Examination Centre (NAEC) was established as a legal entity of public law. The WB project staff members and the Ministry of Education and Science officials played a big role in its establishment. It was suggested to establish the testing Centre that would conduct university entrance exams in addition to conducting other types of assessments. This was not the government, and the Ministry of Education and Science in particular was aware of the corrupt practices at HEI entrance exams. But there was a mutually beneficial relationship among these institutions as the ministry employees were most likely receiving their portion of the pie from the administrators of HEIs that were running their own university entrance exams, is stated in the Georgian report. Hence, the government rejected the idea of an independent institution running centralized HEI entrance exams, and the newly established testing Centre were initially charged with the responsibility of conducting sample based national assessments of students and international studies. It was only in 2004 when the decision was taken to conduct centralized examinations for the admission of applicants in the country's higher education institutions – following the Rose Revolution, determined to eradicate corruption in all spheres, including education.

Around the same time, in 2002, the Minister of Education of Kyrgyzstan called for a major reform to change the admission tests for higher education institutions and initiate national testing in the country. This was done with the help of the American Councils for Collaboration in Education and Language Study (ACCELS) and the financial support of USAID. In 2004, the National Scholarship Test (NST) project also created an independent testing organization, the Centre for Educational Assessment and Teaching Methods (CEATM), which took over the development and administration of NST in Kyrgyzstan. "The main goal of NST is to provide equal access to the higher educational institutions based on the results of the transparent, honest and independent testing. The NST measures the ability of school graduates to study in University", is stated on the CEATM website. The introduction of NST is associated with Kamila Sharshekeeva, Minister of Education in 2002, who was instrumental in the establishment of the centre. Unfortunately after her resignation her successors tried to bring entrance examination under auspices of the HE institutions. This is a good example how individuals with power and vision can change things, but very often this could be short live and without appropriate support it might lack sustainability.

In Azerbaijan the National Testing Centre, State Students Admission Commission of the Republic of Azerbaijan (SSAC), was established under the President of Azerbaijan Republic, with the Office of President's Education department active in the creation and strengthening of the NTC. It was established by a Presidential Decree in 1992, as an independent public institution which is required to report only to the President. It's independent from Ministry of Education, and governs all the stages of entrance examinations to higher educational institutions and degrees for both Azerbaijanis and International students. They started as the first such an institution, and the first admission

exam by NTC was conducted in 1992. Ministry of Education had almost no participation in this process, so situation is in some traits different from other countries. In comparison with the previous example, in Kyrgyzstan, this centre is much more "safe" in carrying out its duties, his independence guaranteed also by the authority of the President and his cabinet.

This leads to the question of opposition and actors that actively resisted the establishment of the National Training Centres in the countries surveyed. There was generally no open opposition, as for example in Azerbaijan, as the NTC was established by the President. But there was a very active and systematic hidden resistance from the administrative staff of Ministry of Education and universities as they were not involved in the establishment of the new institution. This meant a great loss of illegal earnings for them, but also Ministry of Education losing control over admissions. A hidden fear exists that NTC would assess its work as it tries to connect the low testing scores with the low level of high school education, which is unacceptable for the Ministry of Education. Ministry of Education then criticizes the NTC for designing questions in a way that they do not reflect the high school curriculum, which NTC actively denies. Currently, Ministry of Education unsuccessfully tries to design high school graduation exams that could substitute the entrance exams to BA degrees.

Georgia saw the new system of students' admission to universities being introduced very rapidly. The changes to the Law on Education were made in December, 2003 and the first unified national exams were conducted in the summer of 2005. The decision was met by a strong opposition from the side of HEI administrators, a few HEI faculty members, and also by students and parents who were expecting some gains from the old system. For several days there were street protests and hunger strikes, followed by public arrests, however, the new government stayed firm with its decision.

In Ukraine, apart from development and approbation of testing technology of external assessment its implementation also required political will, since apart from the positive acceptance of EIA by major part of the society there were and still are unsatisfied, those, who had direct influence on the possibility of enlistment into universities through bribes or connections. Among such people there are university rectors and professors, other influential people who got used to solving their problems through abuse of their official position, as it's stated in the Ukrainian report. It should be noted, that implementation of EIA was then favoured by political will of the former Ukrainian president Viktor Yushchenko. Political will plus prepared society and developed and approbated technological cycle during the TTC project were an impetus to the creation of UCEQA.

Situation in Kyrgyzstan was quite complex. Many university rectors were antagonistic about NST. Kamila Sharshekeeva, former Minister of Education who was a strong supporter of independent said in the interview "the rectors did not want to give up their kormushka[1]. In independent testing they could do nothing". University rectors were

[1] literally a "feeder", significant amounts of income generated from the illegal sale of government scholarships

interested in returning the desired income-generation mechanism of university admissions to the universities and aggressively opposed the creation NST. The fragile balance became obvious when the Minister, Sharshekeeva was removed from MOES position, as the ministers who followed her did not support independent testing. All future ministers of education were against, except two. Her immediate successor was against independent testing from the beginning, wanting to reserve testing and access to the database of test items and NST scores solely for the Ministry. This situation is hardly surprising, since the ministers are normally appointed from the pool of university rectors, who tended to benefit from the existing system.

2.3. Process of establishing the NTC

Changes in any system meet opposition, and that is particularly strong oppositions are to changes in educational system. If changes threaten the existing system with important benefits of certain groups, then all means are used to prevent the changes to be implemented. In most cases this is difficult to achieve as public opinion is against the privileges of individuals that are backed by the representatives of the ruling elite, but they use any means that could at least slow down the process which is imminent.

In Azerbaijan, as it was already mentioned, the NTC was established with a Presidential Decree and therefore, this establishment did not face serious obstacles. But there were a number of problems during the first year of administering the centralized multiple-choice testing in country, which shed some doubt over the coming examination. The test announcement was made in late June and the test took place only in November. There was only one test set, the questions of which were developed in an area well-protected by the security services. The students were allowed to choose up to 5 specialties, which were all tuition-free, and their answer sheets were sent to Turkey as there wasn't an optic scanner to scan the answer sheets in Azerbaijan at that time. The students had to sit for 6-7 hours to take the test, waiting at least 3 hours for the actual test to take place in cold classrooms. The scores, which were quite low in the first year, were announced in mid-December and the classes started very late in January of 1993, and the students entering during the first year of admissions had a shorter, 4.5 years of study. But there were just teething problems, that were successfully overcome in next testings.

Ukraine report states, that apart from development and approbation of testing technology of external assessment its implementation also required political will, since apart from the positive acceptance of EIA by major part of the society there were and still are unsatisfied, those, who had direct influence on the possibility of enlistment into universities through bribes or connections. Among such people there are university rectors and professors, other influential people who got used to solving their problems through abuse of their official position. There is another challenge, as despite having a substantial legislative basis, there is still no Law on the External Independent Assessment adopted by the Verkhovna Rada (Parliament). The changes to the Law on higher education have not also been made, stating that entry to higher educational institutions is based on the result of the external assessment. These projects were considered in the parliament, but the deputies were unable to reach a

decision on them. This allows any new government to implement their own vision of EIA conduct and speculate on this issue during the election campaigns. So the centre is still vulnerable to political influence due to the absence of the appropriate legislation. And although the Regulations on the Centre presuppose creation of the civil council as independent board with consultative functions, this civil council has not been formed so far.

Georgia faced the government rejection of the idea of an independent institution running centralized HEI entrance exam, as they feared the opposition, mainly the administrators of HEIs, states the report. The newly established testing Centre was for that reason initially charged with the responsibility of conducting sample based national assessments and international studies. After the new government came into power after the Rose Revolution, it was determined to eradicate corruption in all spheres of the government, including education sector, and the decision was taken to conduct centralized examinations for the admission of applicants in the country's higher education institutions.

Work of the NAEC was initially financed both by the WB project and the Ministry of Education and Science. Soon after the end of the WB financing, the Ministry decided to separate a national assessment function from them and transfer this responsibility to the National Curriculum and Assessment Centre (NCAC), decision that was largely influenced by the director of the Curriculum Development Centre and its staff members, as in their view the assessment instruments were not based on the existing school curricula and education strategy. This was highly criticized as the newly established division within that Centre did not have a capacity, trained staff members to conduct assessments, and was seen as conflict of interests. This move showed another issue that emerges all the time: relationship between school curriculum (and assessment) and entrance examinations. It was also an example of power game that happens in many countries.

Situation in Kyrgyzstan was different. From the full support of the Minister of Education, who stood behind the Centre (CEATM) and was even instrumental to the changes. She was very dissatisfied with the low level examinations and corruption during university admission.

The main goal of the National Scholarship Test (NST) project, financial support by USAID, was to provide equal access to the higher educational institutions based on the results of the transparent, honest and independent testing. But many university rectors were antagonistic about NST as they were interested in returning the desired income-generation mechanism of university admissions to the universities and aggressively opposed the creation NST. When the Minister Sharshekeeva was removed from MOES position, the ministers who followed her did not support independent testing, all future ministers of education were against, except two.

The state also introduced public competition for running the NTS in 2008, stating that the exam (which is, although meant for state scholarships, taken by most of the university applicants) can be conducted by any independent testing service that wins the tender organized by MOES. Each year, the MOES issues an annual decree on which institution will conduct the NST, but this announcement occurs late in the process. Even with this

obstacle, CEATM is the only organization that has expertise and resources available for implementing NTS and has so done it since then, winning the tenders. This additional hurdle put more pressure on the Centre, as there is little time to develop and pilot the assessment instruments.

2.4. Initial impact of the NTC on the changes of the prior conditions and practices

All the centres that were established noticed the immediate impact on the prior conditions and practices when they started to develop and then implement assessment. The first impact was manifested through strong oppositions of those institutions and individuals, who have their own stakes in preparation and running of entrance examinations and in selection procedures for higher education institutions. As noticed before, those include university professors, deans and rectors, as well as officers from the ministries of education; both lower and higher level ones. As newly formed institutions had strong support from the highest political levels, including Presidents and their cabinets, and some ministers that personally supported and fought for what they thought was the only way to eradicate or at least curb corruption in education, it was difficult to be openly against the new system. But in Georgia, before the Rose Revolution, the government even rejected the idea of an independent institution running centralized HEI entrance exams, as they feared the opposition - mainly the administrators of HEIs. In Kyrgyzstan, on the contrary, the Ministry of Education hoped to ensure equality of access to higher education and support for rural youth. The external NST actually aims to achieve objective, merit-based selection by testing knowledge and skills of secondary school graduates applying for government scholarships to study in higher educational institutions. By combating corruption, nepotism and favouritism, the NST was also designed to enable students from poorer areas to have fair chance to secure budget places at universities. This is an important issue of equity.

There was also international pressure to address corruption and provide transparency in testing and admission to higher education, and support for those efforts was provided by financing projects for development of a fair system and establishment of independent institutions. Such were the World Bank projects in Ukraine and Georgia, International Renaissance Foundation (Soros) project in Ukraine and USAID project in Kyrgyzstan.

In Azerbaijan, at first, the public was unprepared to a new type of testing. Over the years, State Students Admission Commission of the Republic of Azerbaijan (SSAC) has been transparent, responsive, and therefore gained significant popular support. This new system also created equal opportunities for all.

However, beside the positive effects regarding transparency, equity and reducing corruption at this interface, there were also some negative effects, that affect individuals. One of it is focusing of the high school students on private tutoring, and teaching is shaped according to the entrance tests. This will be discussed more in details in the next part of the document.

2.5. Involvement of teachers in the formulation of the policy

Studies show that teachers or their representatives were not directly involved in the formulation of the policy of the testing centre, as this is a general policy issue and requests a broader picture and departure from the existing practices. Policies are generally formulated on the levels of the Ministry of Educations, which have their own mechanisms for involving stakeholders in discussions on policies. Teachers' influence was more pronounced through the participation in the development of examination programs and syllabi and preparation of the test items used in entrance examinations. In Georgia, for example both testing Centres have established formal review/consultation committees for the review of their research instruments as a consultation mechanism. The members of the committees are, among others, also teachers from secondary schools and higher education institutions.

3. Legal and institutional arrangements

3.1. Legal basis for the establishment of the assessment centre

National Testing Centres in the four countries were officially established following developments in the access to higher education and entrance examinations, with the main goal of eradicating corruption at the interface between secondary and higher education. They pursued different paths, some more straightforward with the initial establishment of a testing centre, some through development and piloting with help and support of international organisations, loans and donors, and some even using foreign experts to set-up and run testing centres at the very beginning and the handing over to national expert.
The first centre to be established was the State Students Admission Commission of the Republic of Azerbaijan (SSAC) that was established with the Presidential Decree already in 1992, as the first centre in the four countries. The Statute of the NTC was approved by the Presidential Decree dated October 27, 1992. There have been some changes to the Statute since then and the current Statute was approved by another Decree of the President in April 2005.

National Assessment and Examinations Centre in Georgia was setup under the auspices of the WB financed Education System Realignment and Strengthening Project. It was officially registered on 5 July, 2002 as a legal entity of public law of Georgia by the administrative decree of the Ministry of Education and Science.

The Ukrainian Centre for Educational Quality Assessment (UCEQA) followed in 2006 by the Cabinet of Ministers of Ukraine Decree No. 1312 (31 December 2005) with the financial and expert support of the Testing Technologies Centre (TTC, which set out systemic work to study conditions and possibilities for implementing standardized external assessment of candidates during university admission processes) and the International Renaissance Foundation. This Centre has nine regional subdivisions, regional centres for educational quality assessment. A number of other legal acts were approved defining the processes of external assessment and responsibilities of the newly established Centre.

The National Scholarship Test (NST) in Kyrgyzstan has been conducted since 2002, with the help of the American Councils for Collaboration in Education and Language Study (ACCELS) and the financial support of USAID under a decree of the President of Kyrgyzstan. In 2003, the President issued another decree which was more detailed, and called for monitoring the enrolment process at institutions of higher education by the NGO community. On March 30, 2004, the President of Kyrgyzstan issued a further decree, No. 114, "On further development of the process of awarding state educational grants, conducting the National Scholarship Test and enrolment in higher education institutions", in which the newly created Independent Testing Organization (ITO) Centre for Educational Assessment and Teaching Methods (CEATM) was commissioned to conduct the NST in partnership with the American Councils for International Education in 2004-2005 and onwards.

3.2. Laws and bylaws that govern the position and the work of NTC

Once established, testing centres need appropriate legislation that allows them to carry out their duties according to their charter. General legislation applies, like the Law on Education and various other laws, Presidential decrees and orders, orders and decrees of the Cabinet of Ministers, and other legal acts, as it is the case in Azerbaijan. In Georgia, "Law of Georgia on Legal Entity of Public Law", applies. Testing centre is a legal entity of public law under the state control, and such institutions are given the freedom to independently conduct the activities envisioned by their charters, with the state having the right to control economic and financial activities, as well as the legitimacy, rightness, and effectiveness of operations.

In Ukraine, The Centre's work is regulated directly by the Decrees of the Ministry of Education and Science of Ukraine (MoES), which are usually changed annually, taking into account the changes, occurring in organizing procedures, security, providing results etc. The general issues, regarding the normative legal base for the implementation of external assessment and for the establishment of the assessment centre, are approved on the highest levels with the Orders or Commissions of the President of Ukraine and with Decrees of the Cabinet of Ministers, which also demonstrates the importance of the role and the activities of the Centre.

Particularly interesting is the position of the testing centre (CEATM) in Kyrgyzstan. Decree 404 of the Government of Kyrgyzstan (2006) provides regulations on the NST, stating that NST is conducted with an aim to distinguish the strongest and most prepared candidates for studying at higher education institutions, and for choosing them for state-funded budget places. Each year, the MOES issues an annual decree on which institution will conduct the NST, and in till now CEATM was the only institution that has capacity and expertise for conducting NST, although each year, there are people and organizations who want to take over NST.

3.3. Establishment of the NTCs and assessments taken

Testing centres were established, except for the one in Azerbaijan, where institution and testing methodology were developed mainly by the local staff and not as part of an international programme or project, after 2000. They were all supported by international organisations or donors. History of development of centres wit list of assessment carried out is provided in Annex 2.

The testing centre in Azerbaijan, State Students Admission Commission of the Republic of Azerbaijan (SSAC) was founded in transition period (from Soviet to National political system) in1992. The SSAC is responsible for providing university entrance examinations and students admission for higher (public, private and military) schools and colleges. SSAC conducts entrance exams for BA degrees in the country since 1992 and for MA degrees since 2005. The exams are conducted for Azerbaijani and Georgian citizens (who are mostly ethnic Azerbaijanis) only. International students' admission is mostly done by each individual higher education institution. Also, SSAC is not currently regulating admission to PhD degrees in the country yet. The broad purpose of SSAC is to advance quality and help ensure equity in education by providing fair and valid assessments, research and related services.

In Ukraine development started in 1999, when the International Renaissance Foundation initiated a pre-project research on external testing, studying new entrance examination methods as anti-corruption measures. In 2002 the Centre for Testing Technologies was established as predecessor of the UCEQA, starting systemic work on standardized external assessment of candidates during university admission processes. In the period 2002 – 2005 experiment was carried out with the financial and expert support of the TTC project, including piloting of technology of external testing on starting with 1,800 students and 300 educators in 2003 and arriving to about 42,000 school graduates took the external tests in Ukrainian language, mathematics or history in 2006, with 27 higher educational institutions joined the experiment. In 2006 Ukrainian Centre for Educational Quality Assessment (UCEQA) was established by the Cabinet of Ministers of Ukraine (with the financial and expert support of the TTC and the International Renaissance Foundation). With the obligatory annual external assessment of educational achievements for all school graduates applying to higher education institutions in 2007, around 500,000 school graduates took assessment in the Ukrainian language, mathematics and history.

The first phase (2001-2005) of World Bank financed project Education System Realignment and Strengthening Project started in Georgia, and in 2002 the National Assessment and Examination Centre (NAEC) was established as a legal entity of public law of Georgia. During this and next year a state exams was implemented nationwide for 9th grade students in three subjects: Georgian language, mathematics and foreign languages. After conducting the nationwide sample based assessment of primary school children in two subjects – Georgian language and mathematics conducted (2003-2004), a decision was taken to conduct centralized examinations for the admission of applicants in the country's higher education institutions and in 2005 first unified national exams were conducted (NAEC was testing students' learning across a range of subjects). Centre also started to implement IEA studies. With the state taking over financing of NAEC, Ministry of Education and Science of Georgia separated national assessment function from NAEC and

transfer this responsibility to the National Curriculum and Assessment Centre (NCAC). In year 2007 the new charter of NAEC was adopted. With the new development, administering of general aptitudes test in Azeri and Armenian languages started (2008) and administration of Graduate Record Examinations (GRE) for progressing to Master's level was implemented (2009). As the last development, administration on teachers' certification exams started in 2010.

The other organisation, the National Curriculum and Assessment Centre (NCAC), implemented assessment of students learning, teaching and internal assessment practices (2006-2007), assessment of teaching Georgian as a second language in the 1st grades of non-Georgian pilot schools (2007), National assessment in Georgian language and literature for 9th grade students (2009) and National assessment for 4th grade students in math and reading comprehension (2010).

Kyrgyzstan followed in 2002, when the Minister of Education called for a major reform to change the admission tests for higher education institutions and initiate national testing in Kyrgyzstan and the President issued a decree about the National Scholarship Test (NST), which was conducted at the same year. In the 2004, an independent testing organization, the Centre for Educational Assessment and Teaching Methods (CEATM) was created. Centre was commissioned the NST in partnership with the American Councils for International Education in 2004-2005 and onwards. Additional assessment were implemented: PISA (2006), the National Sample-Based Assessment (NSBA, 2007), second PISA and NSBA (2009).

In year 2010 Ministry of Education and Science started organizing tender for the right to conduct NST, and CEATM won the bid. Tests in Physics, History of Kyrgyzstan and World History were included by MOES to improve mechanisms to support applicants' selection for universities.

3.4. Position of the NTC in the national education system

Position of testing centres in the national education system depends on their mandate and form. State Students Admission Commission of the Republic of Azerbaijan is not under any executive branch of the Government. The head and deputy head of NTC are appointed by the President and the institution reports only to the President, and is completely independent from the Ministry of Education. The Commission covers admission to all BA and MA degrees in the country, and works closely with university and high school teachers during the preparation of tests and checking the results. In Ukraine, Ukrainian Centre for Educational Quality Assessment, that was founded by the Cabinet of Ministers of Ukraine, is a state institution and is managed by the Ministry of Education and Science of Ukraine. The centre director is appointed by the Decree of the Cabinet of Ministers. UCEQA is a separate legal unit, having a status of a state-run institution. The Centre has nine regional offices (regional Centres for educational quality assessment), each of which is a separate legal unit.

National Assessment and Examinations Centre in Georgia, NAEC is as a legal entity of public law of Georgia and it is accountable to the MoES. . The organization is managed by its director who in turn gets nominated by the Ministry of Education and Sciences and gets appointed on that post by the Prime Minister. NAEC does not have a governing body; it is unilaterally governed by its director. According to the new charters of NAEC and NCAC, the work of both of these organizations are governed by their charters, Constitution of Georgia, Law on legal Entity of Public Law, other normative acts and relevant international agreements. In addition the work of NAEC is governed by the Law on Higher Education, while additional relevant laws for NCAC include the Law on General Education and Law on Professional Education. Law on General Education and Law on Higher Education specify the responsibilities of NAEC and NCAC with regards to assessments and examinations.

Centre for Educational Assessment and Teaching Methods from Kyrgyzstan has a unique position in the education system. Organisation was established in 2004 and was by the Decree of the President of Kyrgyzstan commissioned conduction of the NST. One would expect that this would be the recurrent activity of the centre that developed modern testing methodologies and implemented them in testing candidates for the state scholarship. There was latent confrontation with the Ministry of Education that wanted to have control over the testing and its results and consequently over the selection mechanism for universities. Ministry issued in 2008 a decree defining that NST could be conducted by any independent testing service winning the tender organized by MOES. CEATM has been till now the only organization that fulfilled all the criteria, but tender procedures prevent them to prepare and implement testing with less time pressure. It also limits their work to the interface between secondary and higher education and their modern approach on testing is unfortunately not reflected on lower levels of education.

3.5. Responsibilities of the National Testing Centre

Responsibilities and mandates of the national testing centres in the four countries are defined in their acts and show some common traits and some differences. They are listed in Annex 3. All Centres have to provide their education system with valid, reliable and objective tools necessary for the assessment of students' knowledge and skills, which serve for selecting students for higher education. They have to provide the feedback to the stakeholders in the education system, but it depends on the country to which level. In Georgia, for example they have to provide the governments, secondary education schools, teachers, parents and students about the outcomes of teaching and learning, while in Ukraine they only have to provide information on IEA results on request of secondary schools and HE institutions. In Azerbaijan this aspect is not even mentioned (which doesn't mean that these information are not provided), while Kyrgyzstan (in the part that supports NST) mentions combating corruption through the provision of fair and objective assessment. Georgia and Ukraine explicitly mention research in their mandate, while the most important task in Azerbaijan is to carry out centralized students admission to all levels of higher education and vocational schools regardless of their legal structure and property form, and similar, but less binding definition of promoting wide and fair access to higher education through the development of a transparent enrolment system in Kyrgyzstan.

National Assessment and Examination Centre in Georgia also provides support to teachers by identify assessment criteria for group and individual teaching and help teachers with learning and applying such criteria. Centre's mandate looks to be the most wide and encompassing all the aspects of assessment and examinations/testing.
Kyrgyz Centre CEATM keeps all documents of applicants' NST results and information on admittance to universities, while State Students Admission Commission of the Republic of Azerbaijan creates, develop and efficiently uses the digital databases of students and graduates. This archive function is also defined in the Ukrainian Centre for Educational Quality Assessment that registers people who pass External Independent Assessment, and provide that information to secondary schools and HE institutions.

3.6. Relationships with other educational authorities and institutions

In order to carry out duties from their mandate, centres have to cooperate with different organisations and authorities that are also stakeholders of the centre's activities. Regulations of the Ukrainian Centre for example state that "while performing its primary functions the centre interacts with the central and local executive organs, organs of local governance, enterprises, institutions and organizations, as well as individuals..."

3.6.1. Ministry, responsible for education

There is cooperation between the testing centre in Azerbaijan and the Ministry of Education, from receiving the plan determining the number of seats available for each specialty, prepared together by the Ministry of Education and the Cabinet of Ministers to providing regional seminars where they introduce and explain examination results of applicants from that particular region , with the participation of authorities from Ministry of Education and Regional Education Department. In Ukraine, The Ministry of Education and Science is an organ that governs UCEQA and adapts the normative basis for annual conduct of the EIA.

Two testing Centres in Georgia have both formal and informal relationships with various players in education sector. MoES established and uses these Centres for the implementation and advancement of state education policy and programs. The Centres collect data on educational processes and outcomes and advise the Ministry on related matters. The Ministry either introduces changes through its administrative decrees or normative acts, or later takes those recommendations to the parliament which is ultimately responsible for passing legislation and endorsing policy decisions. Kyrgyz CEATM has close relations with MOES and conducts NST by winning tender organized by MOES.

3.6.2. Regional State Administrations departments of education

They help in organizing local EIA conduct in Ukraine, namely favour the preparation of testing sites, instructor and testing site administrators selection, issue own commissions on involvement and work regulations of educational workers during the EIA. In Georgia, the testing Centres frequently use the help of Education Resource Centres (regional and district

level units of MoES) that are charged with the responsibility of facilitating educational processes locally in the country's education establishments. Hence, ERCs facilitate the conduct of assessments and studies in their respective areas; mainly provide the assistance in disseminating information to schools. Azeri SSAC regularly has meetings in large cities before and after the exams to discuss the testing results. Each city/rayon education department gets an aggregate and school-by-school report cards following the examinations.

3.6.3. Regional institutes of postgraduate teacher education

There isn't a separate formal relationship of the State Students Admission Commission of the Republic of Azerbaijan with pedagogical or pre-service teacher training institutions. There is also no formal links with pre-service teacher training institutions in Kyrgyzstan. This training has been neglected by educational reforms and donor agency involvement and is in very poor shape. However, relations of CEATM with Kyrgyz Academy of Education (KAE) are limited. KAE is responsible for in-service training of school teachers and also for developing educational standards and developing textbooks. Unfortunately, only limited number of staff members of KAE work together with CEATM as test developers, but there is no institutional links.

In Ukraine, Regional institutes of postgraduate teacher education coordinate the work of those, responsible for the EIA, control formation of testing site network in the regions, train teachers together with regional assessment Centres. Each institute has a deputy director for educational quality monitoring, a department of educational quality monitoring. Similarly in Georgia testing Centres have working relationships with National Centre for Teacher Professional Development Centre (TPDC) and National Centre for Educational Accreditation (NCEA). They exchange information with these organizations, provide and seek advice of relevant staff members.

3.6.4. Schools

SSAC in Azerbaijan organizes seminars for high school teachers in which they are trained to write high quality test items, which will be offered from 2010 also via video conference for teachers outside Baku. Centre works with high school and university teachers during the test preparation for entrance exams. The exam results statistics are used to provide feedback to high school teachers. Results of the feedback are also rankings of the best high schools and universities in the country.

Both testing Centres in Georgia closely collaborate with primary and secondary schools where they conduct various types of assessments in accordance with the laws on general and higher education and in accordance with their charters.

Schools in Ukraine may request from UCEQA materials analyzing the results of their students. UCEQA also prepares annual reports on the EIA that thoroughly highlight the peculiarities of EIA conduct, test characteristics and indicators, as well as assessment results analysis which are available to schools too. In the years when assessment results

were counted as graduation marks in schools, the schools were responsible for delivering of students to the testing sites. In 2010 this norm was cancelled, empowering EIA results only as entrance scores to the higher educational institutions.

With schools in Kyrgyzstan there is a close link while graduates of schools take NST, and thus school administrators, teachers, students and their parents are interested in NST as it is a high-stakes test.

3.6.5. Regional and local authorities

Azeri centre started online application in the country for the first time in 2007. This could raise some concerns for equity as the applicants in the city and in the region did not have the same level of access to the Internet. In order to solve this issue, NTC worked with local and regional authorities. As a result, all post offices throughout the country offered free Internet access to all applicants who wanted to apply for countrywide examinations. Also, NTC administers the tests in some major cities of Azerbaijan, which are coordinated efficiently with the local authorities.
Ukrainian regional assessment Centres conduct methodological seminars for regional educational offices methodologists, prepare presentations and post them on web pages; conduct seminars for teachers on invitations of some educational institutions; participate in teacher training courses. In Kyrgyzstan, regional education authorities also work closely with MOES and CEATM to inform school administrators and teachers about NST regulations.

3.6.6. Higher education institutions

SSAC works with university teachers in preparation for the BA and MA entrance exams. The separate programs for the exams and questions are prepared and agreed with relevant faculty at universities. Currently the admission to MA programs in the country is conducted through 68 different specialty tests. SSAC is working with higher education institutions in order to decrease the number of specialty tests. Also, under the Presidential decree earlier this year, the universities are required to enter the data on their students and graduates to the database to be facilitated by the SSAC.

NAEC in Georgia also collaborates with HEIs as this testing Centre administers university entrance exams and GRE exams. Recently NAEC and NCAC have worked together on the development of a format and general directions for school leavers' certification exams (the development of detailed instruments will be the responsibility of NAEC).

Ukrainian UCEQA works on involving university professors and tutors in conducting testing in order to show the fairness and transparency of the procedures, thus improving the level of trust to the EIA of higher educational institutions.

3.6.7. Other forms of cooperation and involvement

There are some other forms of cooperation and collaboration. As it's stated in the report from Kyrgyzstan, there is lack of collaboration and joint work among stakeholders who work on education standards, curriculum development, textbook publication, teacher training and re-training, and assessment and evaluation. In Georgia, as a consultation mechanism both NAEC and NCAC have established formal review/consultation committees for the review of their research instruments. The members of the committees come from secondary schools and higher education institutions (teachers), research institutes for relevant subjects (e.g. institute of mathematics), TPDC, non-governmental organizations working on education research issues, individual experts in the field.

Conducting EIA in Ukraine also presupposes civil observation, to which the Centre invites civil organizations, journalists and other caring citizens. Such observers have to register in advance to attend the testing and follow appropriate rules in the auditorium. UCEQA also has to cooperate with other ministries and services, namely: in delivering testing materials to the testing sites (carrier service); in keeping order at the testing sites (security service), in providing medical help at the testing sites (Ministry of Healthcare), in maintaining informational security and confidentiality (Security Service of Ukraine).

3.7. Relations with the institutions

Relations with Ministry of Education of Azerbaijan are formal and mostly carried out through official correspondence. Although SSAC tries to work with schools to improve the quality of teaching, the schools are not always responsive towards the findings of centres' exams. The reason could be that the schools are operating under the Ministry of Education and lack their independent initiative. The same problem occurs when SSAC tries to work with universities on MA exams as the universities are reluctant to cooperate.

In Ukraine, all interactions described above are formalized and regulated by the respective decrees of the Ministry of Education and Science of Ukraine, commissions of the Cabinet of Ministers, agreements, and internal orders of UCEQA.

The above described relationships of the testing Centres in Georgia are informal as there are no formal agreements signed among those organizations – except when professionals are sub-contracted for the review of research instruments. Formal relationships exist between the testing Centres and international organizations in education field. Besides, NCAC has an agreement with MoES and WB as this agency is a recipient of WB financing within the framework of the Phase 2 of Education System Realignment and Strengthening Project.

3.8. The impact of the establishment of the NTC

Establishment of the national testing centres aimed at providing equity in education and in particular in the access to higher education, ensuring transparency in assessment(s) and its fairness for all candidates and to contribute to improvement of teaching and consequently learning too. Was this achieved in the four countries that participated in this study? There are common features but also differences. Ukraine's experience was taken as an example

for the following paragraph, and specifics from other countries added, if necessary or when different.

3.8.1. Transparency and fairness of assessment

Transparency and fairness of the testing is embedded in the regulations, procedures and implementation of assessment, and can be monitored throughout all phases of the process. Ukrainian Centre UCEQA is a good example. It's an independent institution operating on a state budget funds. The Centre cultivates values of transparent and fair access to higher education, and was the first to provide graduate results that could be compared in order to assess the state of education in the country. Reports on external assessment are regularly published and posted in the internet. Assessment is conducted according to the same procedures informed in advance. Every test taker is put in the same conditions at the test sites. Each test lasts the same amount of time and does not allow the use of additional materials and cellular phone. EIA takers poll results show that students consider testing procedures more fair than school or university exams.

Each test work is marked independently by two examiners. Personal student results are shown only to the students and persons with whom the students decide to share them. Appeals are also allowed. If a student appeals, he can see his scripts. The Centre publishes and distributes to the test takers all the required materials before the testing (namely syllabi, describing the rules for the test takers, EIA program, test specification, test item samples and the rules of test evaluation).

UCEQA has a very strict employment policy. Since there is no legislation on the responsibility for test content disclosure, information security depends mainly on the morality of the staff and severe following the procedures. During the whole period of the Centre's existence since 2006 there were no information leaks. The centre is forced to select a great number of people to work as instructors and examiners.
Still the centre is vulnerable to political influence due to the absence of the appropriate legislation. And although the Regulations on the Ukrainian Centre presuppose creation of the civil council as independent board with consultative functions, this civil council has not been formed so far.

After the end of exams, NAEC in Georgia analyzes data and publishes both detailed and aggregate information which can easily be downloaded from their website. This information includes number of applicants, the list of students who got admitted to HEIs and list of students who got government scholarship with the indication of their scores and the amount of funding. Aggregate information is available for example about the success rates of applicants' enrolment by regions, districts and schools of Georgia.

3.8.2. Improvement of teaching and learning

External testing is a new type of assessment in Ukraine, which is why courses were opened for the teachers based in the postgraduate teacher education institutes. Every school teacher, involved into EIA conduct as an instructor or examiner are trained accordingly in the

regional centres of educational quality assessment. A lot of test compilations are being printed, but they often lack quality. It's expected that teachers will use the knowledge also for improving their teaching.
The mechanism of teachers and university professors' involvement in development of assessment instruments is not yet well developed. Furthermore apart from testing other assessment types should be developed in order to avoid pure test-type education. Since the Centre conducts only external assessment of school graduates, other forms of evaluation as well as monitoring of the quality of education of different grade students develop slowly.
Annually on conducting EIA UCEQA publishes an analytical report on the testing conducted, making comparative analysis of the results according to the regions, school types, territorial features etc. Upon request of administrative organs the Centre may present profile information about the schools in certain regions. This gives an opportunity to compare one's results with the rest and detect areas that need additional support and development, and also prepare teacher's training according to the needs.

The disparity in test scores by language and demographics in Kyrgyzstan raises serious questions for educators and policymakers in Kyrgyzstan. Urban schools usually have better resources, can afford to invest more in their students, and are better prepared for the type of skills that the NST measures. Teaching and learning in rural and mountain schools remains oriented towards rote memorization and recall of facts rather than skills development or attaining educational outcomes. Teachers in rural and mountain schools are also not familiar with effective teaching approaches or different testing methods. Most lack professional development opportunities to learn innovative teaching approaches, and as a result, focus on textbook coverage and promote memorization and recall rather than critical thinking and application of knowledge. In many cases, textbooks are the only tools that teachers follow strictly in their practices. Thus, while the NST has achieved more equitable access to higher education, it has not had a significant impact on educational methods or results.

3.8.3. Equity

Equity is an important issue in all systems. In Ukraine, regardless of the place of residence, everyone willing can register for the external testing with registration sites opened throughout the country. Materials on the EIA procedures and requirements are given to any registered participant free of charge. Participation in the EIA is also free. Every testing procedure is strictly regulated. There is a system of procedure control. That is why all the test takers are on equal terms during the testing. Civil control over the procedures is also planned. None of the test takers has access to assessment materials; they are highly confidential and are printed in the Centre behind closed doors. Every participant's work is encoded, and the checking results are stored in the information system in NTC.
Every participant receives his own EIA results, which can be found in the informational base on entering their personal code. Every participant's work is encoded, and the checking results are stored in the information system in the Centre. Everyone willing to enter a university has the right to participate in the external assessment, regardless of the institution type they studied in or the graduation time. External assessment for the people with special needs (namely blind, deaf, physically disabled) is not yet conducted. An experiment is

planned on this issue and the search for fund donors is still in progress, which would further add to the equity in Ukraine.

The Kyrgyz NST has been conducted over the last nine years. During this time, many young men and women have benefited from the test. Through its independent and objective testing, the test identifies strong students and, through its quota system, the test increases access to higher education to the strongest candidates regardless their geographic and social background. Data show that a great majority of students who take NST and win grants come from villages. This reflects the proportional representation of the geographic locations of schools too: majority of schools in Kyrgyzstan are located in villages. These results demonstrate that the NST is effective in terms of distributing university grants on more equitable terms. As an example, students from Bishkek schools constituted 19.2% of total number of students who took NST, but only 13.9% of the Bishkek students won grants. This is most likely due to the fact that students from urban schools often choose more prestigious specializations, and turn down scholarships if they are offered scholarships in specializations or universities that they do not want. Rural and mountain students usually enter the least prestigious specialities due to their relatively lower scores than grant winners from urban schools, and are more likely to accept scholarships for any specialization offered to them.

To achieve equity of access to higher education for ethnic minority applicants in Georgia NAEC from 2008 has been administering general aptitudes test in Azeri and Armenian languages as well.

3.9. Relationship between secondary school leaving examination and entrance examinations at the HE institutions

Before the application of testing system in 1992, the school-leaving examination in Azerbaijan affected the entrance examinations. If a student graduated from a high school with all excellent marks from school leaving exams, that student was required to take only one exam for the university. However, if this exam was not marked as excellent, then that student was required to take 3 exams together with the others. After the centralized testing was introduced, the secondary school leaving examination lost its importance in terms of university admissions. These two exams are totally different. Secondary school exam is taken by students for getting a diploma, which they need for graduating from a high school and applying to undergraduate entrance exams. The grades reflected in the secondary school transcript do not influence the result of entrance examination. It just proves that applicant has graduated from secondary school. However, there is one exception. If two applicants who apply for the same specialty score the same during a university entrance exam, then the high school leaving examination grades are used. Similar principle applies for other countries too.

For reducing corruption in the admission exams to HEIs, one of the important decisions taken by the Ministry of Education and Sciences of Georgia was the introduction of centralized university entrance exams (UEEs). This task was delegated to an independent

National Assessment and Examinations Centre. UEEs have completely replaced entrance exams that earlier used to be conducted by individual higher education institutions.

3.10. Relationship between internal and external assessment

There is not much connection between internal and external assessment. In Azerbaijan, they do not affect each other except when the scores are the same. Also, the final high school grades are used during the preparation of statistics. SSAC determines the correlation between the high school grades and the level of success at university entrance exams.
Before establishing testing Centres in Georgia the system of assessing students' learning outcomes was simple and not employed to inform the decision making process. Students were given grades on a scale from 2 to 5 based on the knowledge of certain facts. NCAC got involved in the development of such methods of assessment and examinations that would evaluate students' higher order cognitive and other skills.
Currently school teachers use multiple methods for the assessment of students' learning outcomes such as homework, class tests, observation, portfolio of work, presentations, self-evaluation, group work, involvement in educational process, etc. Teachers are free to choose the relative weight for each of those assessment methods (they had to use at least four of such methods) for computing the final score. However, the research showed that the new system of assessment was complicated for teachers and applying relative weights required too much of their time. The system of using multiple methods of assessment is believed to better identify the difficulties in student learning and develop remedial measures.

Internal and school based assessment in Ukraine has a criteria mark scale ranging from 1 to 12. Based on the marks, received during the school year (2 semesters) and the results of the graduation exams (usually in five subjects) Certificate of secondary education marks are formed. External Independent Assessment has a score scale from 100 to 200. In 2010 MoES decided, that university entrance marks will be based on the EIA scores in 3 subjects, and also the average certificate of secondary education score. Furthermore scores from 1 to 12 will be converted into 100-200 scale. In the opinion of the country expert, the importance of EIA results has been significantly decreased this way.

3.11. Influence of external assessment on the school based assessment

The introduction of external assessment does not seem to have significantly influenced the internal assessment system at schools. During the last two years, the Ministry of Education of Azerbaijan has tried to reform the high school leaving examinations by introducing a unified system to all schools in the country. The Ministry is envisioning offering these exams as a substitute for university entrance exams in future.

Unfortunately, there is little or no relationship between NST in Kyrgyzstan as external assessment with internal (school based) assessment. Only a small number of private schools use multiple choice tests. Thus, there is no evidence for the influence of introduction of external assessment on the school based assessment.

3.12. Possible persistence of old conditions and practices after the establishment of the NTC

After the establishment of SSAC in Azerbaijan, some old conditions and practices related to BA admissions continued for some years. For instance, some private universities also did their own admissions in addition to the SSAC exams, and artificially increased the number of their students. Also, there were a number of non-transparent cases related to the MA admissions and as a result, the Centre was charged with conducting centralized exams for graduate programs in the country since 2005. Moreover, SSAC still does not facilitate the admission of international students to local universities, a practice that is not transparent most of the time.

Other countries don't show or report any instances of continued old conditions and old practices. There is just tendency in many countries to reduce the power of the testing centres, their independency and bringing entrance examinations and selection of future students back to universities or to ministries, to have control over them, which would bring corruption back.

3.13. Anti-corruption measures implemented by NTC

There is a number of measures that testing centres implement in applying testing procedures. Azerbaijan uses a number of precautions, which can be found in other centres too. Test questions are chosen from a large pool of questions several days before the exams under the supervision of State Security Service (SSS). Those who select the questions are kept in NTC's closed facilities for several days before the exam and are released only after the exam takes place. Test books are offered in 4 different test sets. Buildings are rented for the exams. These facilities are closed to all visitors one day before the exams and only special security staff is present in those buildings. Everybody entering the exam building on the day of exam is checked at the entrance. No mobile phones, electronic equipment is allowed. Water bottles are required to have no label on them. Students are allowed to take out their test books after the exams. NTC staff members and subject experts are live on TV on the day of exam explaining the answers to questions and available to answer phone calls and e-mails from the public. The scores are announced within 2-3 days after the exams. There are two days after all exams are over for appeal. Scores are read at NTC by optic readers, no human factor is involved.

Georgia states, that the incentives for corruption exist for the first two types of assessments – internal assessment by teachers and grade completion exams. The new ethics code recently developed by the TPDC forbids teachers to take bribes, gifts from students or their parents. It also discourages the practice of providing private tutoring to their students. The latter was an accepted practice and teachers used to favour students who they were giving lessons to. To reduce the instances of bribe taking the government tries to increase teachers' salaries and benefits.

NAEC in Georgia has undertaken number of steps to curb the corruption and ensure the transparency and equity in access to higher education. First of all, in the first two years of

the reform the Centre launched a vigorous public information campaign to provide stakeholders with full information about the new model of examinations, new tests and assessment criteria. Evaluation showed that about 94% of applicants in the second year were adequately informed about the exams. Secondly, the agency tried to provide similar conditions for every candidate. Candidates can pass exams in 15 testing Centres located throughout a country – this allows applicants from rural areas and poor households access the Centres at less costs through saving on transportation and lodging. Thirdly, NAEC set up transparent examination procedures. There is extensive use of technology (internet, texting). Fourthly, NAEC established mechanisms to ensure the confidentiality of exam test papers and candidates' scripts. All these made it possible to objectively assess applicants' knowledge and skills and make an objective selection of entrants for HEIs.

The selection of candidates itself is made using specially designed software that considers candidate's score on the admissions test, the university faculty, faculty of choice, and the number of places available in the faculty. It is an automated process which excludes human judgment and the possibility of corruption.

3.14. Possible aspects of the NTC and its work that unintentionally contributed to corruption

The university entrance exams in Azerbaijan (and other countries as well) have become a very important step in most people's life in the country. The OSI-funded private tutoring studies recently confirmed that an absolute majority of high school students prepare for these exams with special tutors. Therefore, they tend to miss their high school classes and spend most of their time with tutors preparing for the exams. This leads to corruption in high schools where students bribe school directors so that they can miss classes while staying enrolled at school.

One of the negative outcomes of UEE in Georgia tests were that teachers started to teach to the test and students were studying mostly those subjects that they had to take at UEEs. Furthermore, in the last grade of secondary schools students' absenteeism was high as they were preparing for UEEs. To tackle the problem, starting from 2011 the government is introducing secondary school leaving exams for getting the certificate of school completion. Exams will be administered in all subjects and meeting a minimum competence score will be required for getting the certificate.

In Kyrgyzstan, the NST also had some unintentional consequences within the education system. When the NST was introduced, it was hoped that students would now be able to demand the quality education that would enable them to win scholarships and get free higher education. However, in many schools, this did not prove enough to produce quality education. Many teachers started focusing on test preparation rather than improving skills and knowledge. As the NST is a high-stakes test and there were cases when school teachers only did NST preparation, to the detriment of their students' overall education. Teachers changed class format and devoted large amounts of class time to test preparation to avoid political and administrative pressure. Some schools stop teaching according to their syllabus and textbooks, and only prepare students for the NTS after winter break.

In the NST, not all students can demonstrate their knowledge and ability because the majority of students are taught the 'rote memorization method'. The NST is designed to test critical and analytical thinking and problem-solving skills. Therefore, many students started taking private tutoring to learn the skills which are tested in the NST. Parents started hiring university professors or other specialists to offer private tutoring to their children.

There are also reports on corruption that is persistent. With the start of university admissions, many teachers begin attempting to make money. They were some university teachers who promised to help candidates and get money from them for helping them to secure budget places, and that Finance Police of Kyrgyzstan opened criminal cases against several teachers this year. One young woman said, "If you have money, then you can enter university with no problem. There is a saying these days, as because I did not enough money for budget, therefore I entered contract based. Thus, poor people cannot enter budget". These are the extreme cases, and few examples, and thus, they cannot overturn the overall successes of NST to combat corruption, but they still have to be taken into account.

3.15. Possible question of the integrity of the NTC

Even in the best system it can happen that the integrity of examination or testing comes under question. Almost every year there are examples in the well established examinations centre that for one or another reason. In most of the cases there are not linked directly to corruption, it can be just neglect which leads to the questioning of assessment results. In mature systems, this happens seldom, while in newly established ones that were set up in particular to fight corruption, this should be taken seriously.

There have been some scandals related to SSAC's activities in Azerbaijan. Once, the test questions were stolen during printing and few students managed to take through the correct answers to questions printed on the label of a bottle. This fact was discovered by testing centre and all people involved in it were severely punished. After this incident, the applicants are allowed only to take in to the exam still water bottles with no label. On another incident, one person tried to use a false ID and take the exam for another person. This was also discovered and punished. Apart from these, there have been cases in which certain people tried to mislead parents of applicants by presenting themselves as centre's employees and trying to get some money for placing their children at universities. NTC's official statements helped people to understand that it is not right to trust such people.
As described above, NST in Kyrgyzstan aims to combat corruption, and to a great extent the elements of corruption was minimized during admission to budget places. There are no any situations when the work of CEATM was questioned for integrity (e.g. leaking of tests, information, possible corruption), though sometimes comments from local people could be heard that "now there are elements of corruption because local organization and local people took over conducting NST from ACCELS and now that ACCELS has handed over to CEATM to right to conduct NST" but it is just a mentality of local people trusting foreigners as "clean from corruption".

However, there were unexpected and unintentional consequences of NST which let to corruptive practices. In 2010, there were 62 cases reports as violations of rules of NST. Two thirds of them were punished for using cell phones, while 20 percent of them were "kaskaders" as CEATM staff members termed them, when individuals take NST in place other candidates. As a result, NST results of the candidates who used stunts were annulled. It is widely reported that some students of universities who already took NST previous years attempt to earn money by taking NST in place of new candidates, and they can be paid up to 200 USD for doing stunt. Moreover, there are some individual entrepreneurial people who do business on NST, as they are said to collect test materials from test-takers of previous years, and then conduct test preparation trainings for young men and women, who then do stunts to earn money. Names of those stunts were given by the Centre to National Security Service of Kyrgyzstan to deal with this issue.

4. Organizational Structure of Testing Centres & Governance

National Testing Centres have been established following a number of different objectives, depending on the state, but there are the three main objectives that are important for all of them: (i) institutionalization of fair and transparent student assessments; (ii) use of those assessments for the improvement of quality of teaching; and (iii) achievement of equity. Organisational structure of the centre can contribute to elimination of bad practices and institutionalization of new practices. Formal organization structure doesn't necessary mean the efficient organization that has a direct effect on achievement of objectives, and does not just implements testing mechanically. One of the question is also, if there are forms of organization that are more likely to lead to lack of fairness or to impede improvement of quality. Country studies provide different approaches and different experiences, although the basic frame of the organization is the same.

4.1. General overview

Centres in all countries started with a small number of employees. Some stayed lean and the number of experts working for them didn't grow, while the others expanded. In Ukraine, for example, UCEQA currently employs 85 full-time workers. But at the beginning in 2006 only 30 persons were employed, and their numbers grew with the increase in the numbers of subjects and testing participants. Similar development could be observed in the NAEC, testing centre from Georgia, where in ten years number of employees increased from 4 to more that 100 hundred. Kyrgyz testing centre, CEATM has, in contrast, only nine employees.
Analysis of the organisational structure shows, that organization of different centres is very similar. The biggest one, Centres from Ukraine and Azerbaijan, have the central office, where the main functions are provided, and regional offices that play important role in implementation of the assessment /testing. For the centres in Kyrgyzstan and Georgia, there is just the central office, which covers the activities of the centre.

SSAC in Azerbaijan in the central office consists of the General Management/Director unit, IT support department (*Sector of technological support of exams, Sector for the development of information databases and Sector of information database maintenance and*

work with electronic archive), Exam Administration department (*Sector of organizational and methodological support and training and Sector of exams organization and management*), Department of work with test materials (*Sector of processing high school test materials, Sector of processing higher education test materials, Sector for the special skills examination and Sector of statistical research, scientific planning and innovations*), Department of test data bank and expertise, Accounting and organizational department and Sector of work with documents and public relations. There are five regional offices. There are also Scientific-methodological Subject Seminars and Expert Committees within the centre.

Ukrainian Centre for Educational Quality Assessment (UCEQA) has similar structure. It includes Management/Administration (8 employees), accounting (6) and several departments, that employ 3 to 6 persons. Those are: Nature-Mathematics subjects content department; Social-Humanities subject content department, Test item bank department, Informational security department; Data gathering and processing department; Software department; Organizational-Human Resources department; Speed Print department; Technology department; and Logistics department. Every department in the Centre is functionally important. Each department employs 3-6 persons.

The UCEQA structure was formed gradually, based on its main functions and task scales. It developed from the Centre of testing technologies that was the foundation of UCEQA had three main departments (apart from administration, accounting, human resources and a PR-manager):

- **Assessment materials development department,** with the following functions: test item database formation, development of syllabi on different subjects, assessment program, test specifications, test development, approbation and analysis, assessment model formation, result analysis, preparation of analytical reports on each subject.

Based on this department three new were created in the UCEQA, which serve the abovementioned functions:

A. Nature-Mathematics subjects content department
B. Social-Humanities subject content department
C. Test item bank department

Content departments (A+B) are responsible for test item and test paper content, accordance with the program and specification, adopted by the MoES. Test item bank department conducts procedure of test item selection and approbation, coordinates expert test item examination, conducts test item analysis.

- **IT department,** with the following functions: software development (for registration, testing site seating, answer sheet processing, result processing, scaling, certificate print, etc.); database formation, storage, protection and providing sanctioned access (test item database, testing participant registration database, EIA results and certificates database, etc.; answer sheet processing, EIA results processing, EIA results statistical and psychometrical analysis; format development and testing material imposition).

In the current UCEQA the mentioned functions are served by the following departments:

A. Informational security department
B. Data gathering and processing department
C. Software department

Activity of the Informational security department is vital, since there is no legislation so far, that would determine responsibility for information disclosure from the Centre, it is important to make this leak impossible technologically.

Logistics and procedures department, with the following main functions: development of EIA preparation and conduct processes logistics, making agreements with other structures (e.g. on testing material delivery to the testing sites and back, on producing security packs and boxes etc.), establishing technological lines for printing or processing of the testing materials.

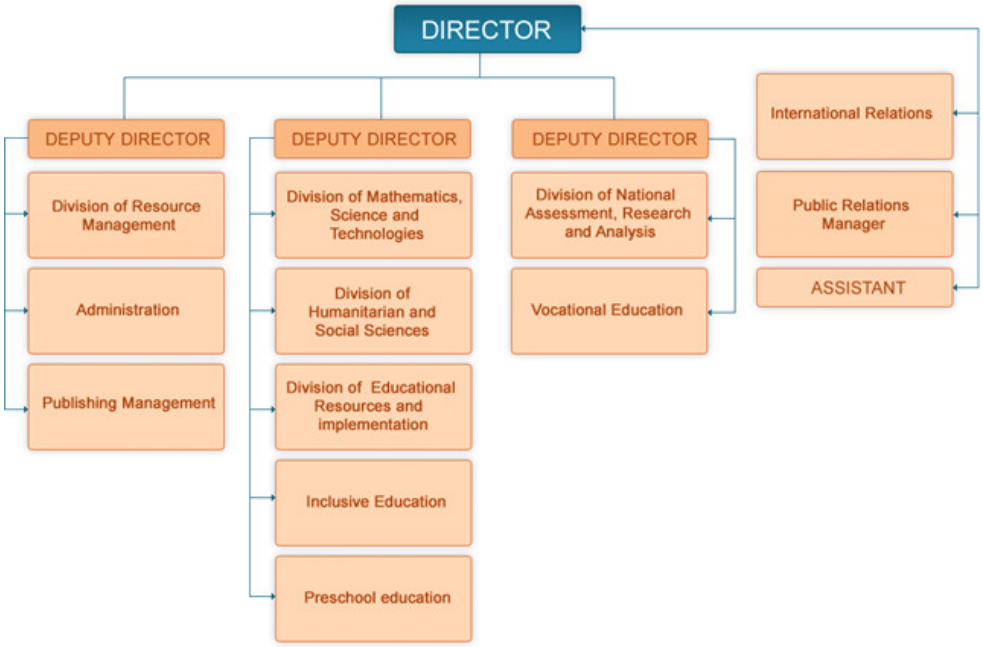
In today's UCEQA these functions are served by:

A. Speed Print department
B. Technology department
C. Logistics department

At the beginning of its functioning the Centre was unable to secretly print the test papers and ordered the print from the special state enterprise, that prints securities. At this moment UCEQA has a technological line for printing and does it independently. The Speed Print department was created for this sole purpose.

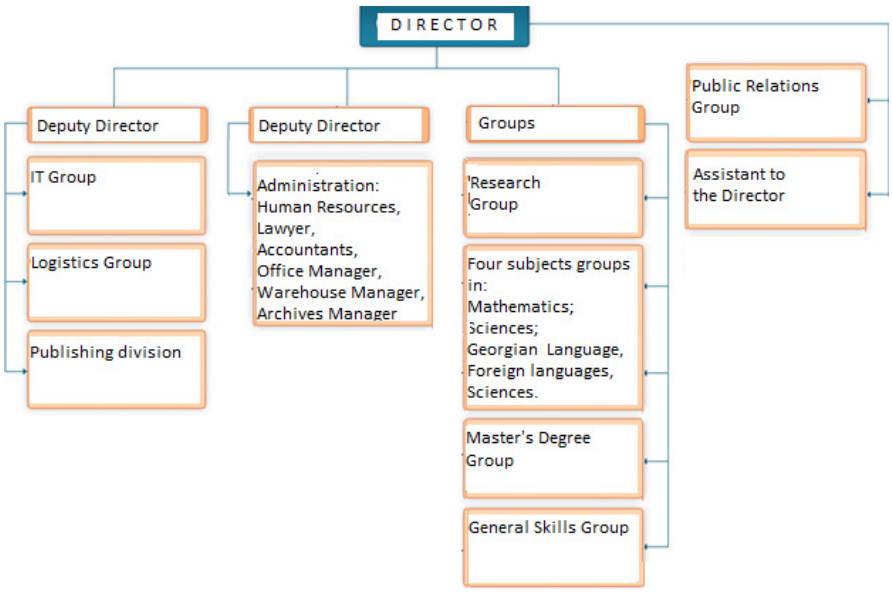
On the management's approval departments should cooperate with each other on certain issues. Without understanding the test specifications (department 1) it is impossible to develop answer sheets (department 2), without understanding the blank sheet or registration protocol structure (department 2) it is impossible to develop auditorium procedures.

The organisational chart of NCAC in Georgia presented below shows that Division of National Assessment, Research and Analysis is one of the many other divisions and functions of the Centre. Its sole responsibility is purely research related – preparing research plans, developing and pre-testing research instruments, collecting and analyzing data, writing reports and disseminating the findings. In the accomplishment of these activities the research division is supported by almost all other offices of the Centre (with the exception of preschool education office). Thus, Administration and Resources Management Divisions of the Centre issue contracts for short-term personnel, make payments and logistical arrangements (such as printing of tests). Publishing Management Office ensures the publishing of study reports. Public Relations Manager works with media and different organizations for wide dissemination of study findings. Staff members of subject divisions (Division of Mathematics, Sciences and Technologies and Division of Humanitarian and Social Sciences) who are responsible for the development of curriculum in the respective school subjects, collaborate closely with the consultants of the Research and Analysis Division on the development of research instruments for national assessments. When the research findings become available, the results are being used by the two subject divisions of NCAC for making any necessary adjustments to the existing educational programs and processes.

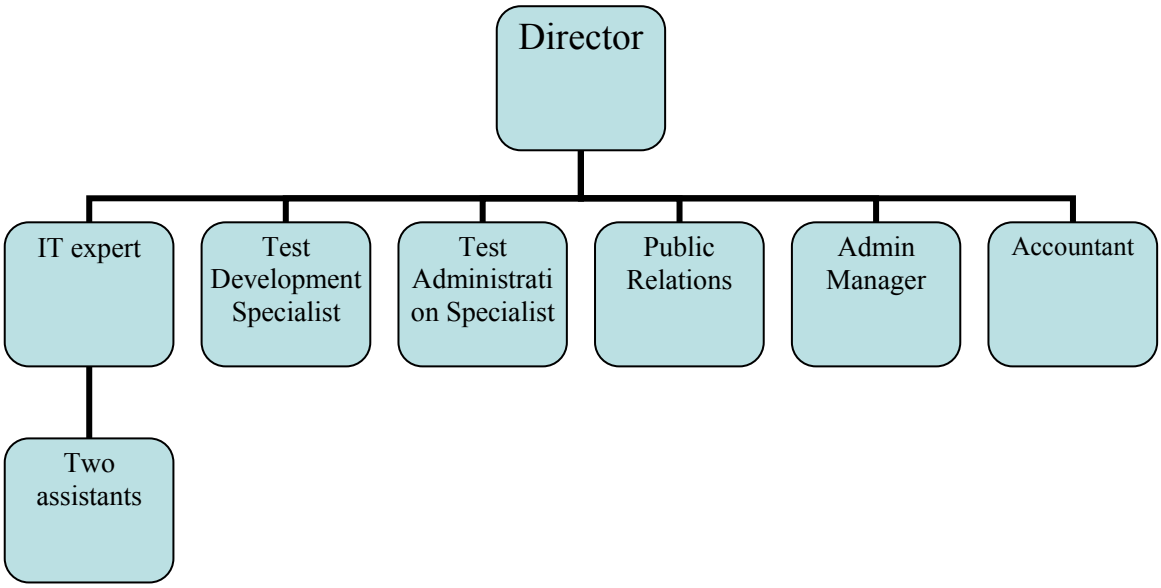


There are nine permanent staff members working for the division of national assessment, research and analysis – manager, research coordinator, psychometrics staff member, programmer, statistician, two subject specialists in two subjects – Georgian language and literature and mathematics. In addition, for each of those subjects the division hires 30 subject specialists to work on the development of research instruments. When required, research division of NCAC subcontracts data entry personnel and fieldworkers.

As to the National Assessment and Examination Centre NAEC), it is also governed by the director and has all the necessary support services for the implementation of assessments and exams. Number of permanent staff members on fixed contracts constitutes 48 persons, on temporarily fixed contracts 50, and the number of personnel contracted on a short-term basis reaches 7,000 (includes coordinators, supervisors, registrants, etc.). The distinction between the fixed and temporarily fixed contract personnel is that the latter staff members do not receive annual leave and other benefits from the Centre – though they are still considered to be employees of NAEC.



The organizational structure of CEATM is as follows. There are nine employees at CEATM. There is a director of CEATM IT specialist with two assistants, specialists for test development, specialist for test administering, public relations specialist, administrator/manager and accountant. The Centre is relatively small and there are no different departments. I was informed that the number of staff is sufficient for activities that have to be carried out. All members of the team have a direct effect on achievement of objectives.



In all centres there is a division of different assessments, in most cases as separate units, covering different levels of education. IN SSAC, for example, Department of work with test materials is divided into four sectors. Each of the first three sectors is responsible for test materials at different levels, i.e. high school materials, Higher Education materials and special skills examinations. But technological and administrative support is provided from the same departments for all exams. NCAC has a department for pre-school education and inclusive education, while NAEC has the groups for subjects, Master's degree and general skills.

4.2. Size of the organization and individual departments

None of the centres employs all experts that they need for the successful implementation of the assessment. In Azerbaijan, the organization works in cycles and during the exam period it gets really busy. The organization is understaffed and experts who are involved in test making are mostly external. They are from the local high schools, universities, and scientific centres. Some MA exams include essay writing. Shortage of experts is especially visible when these essays are checked. This is the case also on other centres. As it was stated above, number of permanent staff members on fixed contracts in NAEC is 48 persons, on temporarily fixed contracts 50, and the number of personnel contracted on a short-term basis reaches up to 7,000. As we saw in the Ukrainian testing centre,

departments have 3 to 6 employees. There too external experts are used as item and test writers.

4.3. Achievement of objectives and the NTC structure

The three main objectives that are important for the NTC are : (i) institutionalization of fair and transparent student assessments; (ii) use of those assessments for the improvement of quality of teaching; and (iii) achievement of equity. All aspects of structure have a direct effect on achievement of objectives. It's impossible to single out features that would be more important than others, and it's also not easy to link some aspects that would be necessary just to implement the assessment. For example, implementation of latest information technologies professionally helps to fully automate examination process and eliminate human factor and thus, subjectivity and corruption. Advanced statistical research of entrance examinations gives feedback for teaching in each subject area. The seminars provided on the basis of analysis and reports help to develop each area separately, and provide teachers with the feedback on their teaching and students' learning and could lead to improvements in the quality of teaching. Structures with regional offices or ad-hoc centres provide the equity for all applicants across the country. It's nearly impossible to separate all those tasks and link them with individual departments and units exclusively. This is part of the synergy that exists within the centre and all are responsible to achieve the main objective: eradication of corruption in entrance examinations, ensuring transparency and at the same time maintaining confidentiality, of both testing materials and results. Personal integrity is also of paramount importance, as stakes are high, both for institution and for candidates.

4.4. Cooperation and coordination between different department units

Testing centres are small (and understaffed) comparing to the tasks that are given to them with the mandate. To optimise resources and time (preparation and implementation of testing is always under time pressure) cooperation of different departments is condition sine qua non for successful completion of the testing cycle. Beside that there are also activities that involve different department sequentially or parallel. One example: Without understanding the test specifications (department 1) it is impossible to develop answer sheets (department 2), without understanding the blank sheet or registration protocol structure (department 2) it is impossible to develop assessment centre procedures.

Coordination of work between different department units is also provided with regular meetings and implemented through team work.

The staff members of the centres manage the process smoothly; however this requires intensive work schedules during the main cycle. During the testing period, a major part of engaged workers is involved on the contract basis, mainly working on implementation on the test sites, invigilating, marking scripts (if necessary) and helping with logistics of implementation. Their number varies with the number of candidates. All employment contracts provide for confidentiality and state that they are responsible for not disclosing or

abusing the information on the content of the coming testing, personal test taker data, any process of testing material creation, delivery and processing.

4.5. Staffing procedures at NTC

National Testing Centres in all four countries were newly established institutions in the professional field which was new, as there were no external examinations before and most of the assessment was schools based. There were no institutions professionally working in the area of testing.

When the testing Centres were set up, experts were needed to be employed and to work with them. Most of the centres had support of international projects or international experts, started as small organisations that gradually developed to the size and structure that provided optimal performance with optimal cost. Capacity building of the staff of the centre was part of the projects and provided basic competences for different positions in the centre. Further trainings were provided later on, both in the country as well as outside, at universities, institutes and examinations centres.

Where did the employees of the testing centres come from? Mainly they came from different universities, schools, different educational organizations (in the State Students Admission Commission of the Republic of Azerbaijan). SSAC has hired new staff under the requirements of recently approved Public Service regulations, under which the staffing procedures are available publicly. Under these regulations, SSAC hires people through rigorous selection procedures.

In NAEC in Georgia, most of the professional staff members came from academia and research institutions. As the core staff members were hired during the implementation of the first phase of the WB's education project, hiring procedures had to be transparent and follow certain procedures. Therefore, vacancy announcements detailing job specifications and functions were issued and placed in various media outlets and hiring decisions were made by EPCC. Later the same procedures were followed when NAEC was established (it still was receiving WB financing); however, hiring decisions of the core staff this time were made by the organization's director. Within the last 10 years the number of staff members increased from four to about a hundred.

NAEC's core personnel is assigned to specific groups – such as general skills group, mathematics group, research group, etc. Each of those groups has from two to four fixed-term permanent staff members. The biggest group is IT group that has eight permanent staff members. If we consider staff members who have temporarily fixed term contracts than the total number of employees reaches 100 persons and the size of each group varies from 4 to 11 persons. So, research and foreign languages group each comprise of 11 employees, Georgian language and literature – 7, master's level, general skills and natural sciences groups each have 6 employees, mathematics and humanitarian sciences groups each have four employees.

In Ukraine, UCEQA and RCEQA (regional centre) employees are selected usually on competitive terms. Just as five years ago today, unfortunately there are certain staff problems in the assessment system. At the beginning of the system's formation employees were mostly selected from the system of education. Programmers are a separate category. They worked mostly in the financial system. That is why an effective advanced training of all employees was required.

Previous experience in assessment and examinations was not required for the future employees of the testing centre (except in Kyrgyzstan) , as there was no equivalent institution in the country, as stated before; therefore it is hard to find people in the country who have previous experience in a similar field.

It seems that the staffing procedures of the CEATM were transparent. The vacancies were announced openly, but snow-ball strategy was also employed to attract strong candidates. The special requirement for professional staff responsible for assessment was that they should have understanding of education matters. Two employees, the director and test developer came from American University in Central Asia and were experienced educators already. Two more candidates came from Bishkek Humanities University. Knowledge of local languages is a requirement and thus the latter two are bilingual and they speak Russian and Kyrgyz. Experiences in assessment and examination were a condition for employment. Prior to joining CEATM, most staff members had negative experience with assessment system in Kyrgyzstan.

4.6. Training of staff

As previous experience and previous knowledge of testing and assessment was neither required nor available, training of staff was of utmost importance for professional work of the testing centres. Centres provide different training programmes for their staff.
The staff members of SSAC in Azerbaijan attend regular trainings before the exams according to the role they play in the process. There is cooperation with other similar organizations abroad and the experience is regularly shared.

It should be noted that there is almost no staff turnover at Georgian NAEC and many of them work in the organization from early years of its establishment. The capacity of staff members was built during the first phase of WB education project through attending training courses abroad and getting assistance from international experts. In addition, before implementing any new initiative, relevant staff members go to study tours to well established educational research institutions in Europe, US or Canada.

UCEQA in Ukraine was helped by the Open Society Institute, International foundation "Renaissance", financing technology development and staff training. Part of the UCEQA employees took part in the program "Testing in Education" in the framework of International visits of leaders with support of US State Department; in training course "Creation and development of Assessment systems" on the basis of Educational Testing Service in Princetone, USA. Currently UCEQA staff training is conducted in the

framework of the program USID: Ukrainian Standardized External Testing Initiative (USETI).

A major goal for CEATM that was established in 2004 is the development of human resources with the skills necessary to construct and administer sophisticated, secure, educational assessment services. The key areas for training are: 1) test item and test development, 2) test analysis. 3) test security, 4) examinee registration, 5) test administration. Trainings are conducted in overall test construction, item weighting, equating, psychometric analysis, scoring and scaling. ACCELS and consultants began training on these subjects in the first two years of the project in Kyrgyzstan. CEATM staff also got trainings when they joined the centre, as many consultants visited CEATM from abroad to provide on job support and consultation. They also learned from their own experience and via trial and error, and from reading literature on testing and assessment.

4.7. External collaborators

System of national testing wouldn't work without external collaborators. Testing is "labour intensive" activity in the implementation period, and Centre's permanent staff needs additional co-workers for logistics of the testing, including actual testing. Besides that, they also need experts who are working as item writers or examiners.

A good example is SSAC, who involves teachers from high schools, universities and other educational institutions as test item authors and experts to prepare the database of test items. It also works with relevant institutions during the preparation and conduct of skills examinations as these are done for arts, music, architecture, and PE. These external collaborators are selected on the base of expertise in relevant field. The list of these external experts is available to public. NTC also has a database of exam building officers (managers) (EBO) and exam room supervisors (ERS). These people are mainly from schools, universities and other education-related organizations. A day before the examination NTC leadership selects EBOs and ERSs from this database and hires them during examination. These collaborators are selected on the basis of their experience and performance in ruling of examination. ERSs are selected among candidates who are NOT the experts in subjects used in examination. Having a close relative taking examination is also considered during selection of EBOs and ERSs.

Teaching test site administrators, their assistants, senior instructors and examiners was conducted by specialists from regional centres of educational quality assessment together with scientific-educational staff of regional (city) institutes of continuous teacher education with the aid of district boards of education and science.

E.g. to organize and conduct EIA in 2010 257.2 thousand educational workers were engaged. 14523 persons who were engaged in the EIA for the first time underwent various forms of training.

Educational workers from secondary schools, technical schools and universities were engaged as examiners in the Ukrainian language and literature and also English, who

checked open form tasks. UCEQA conducted instructive meetings for senior examiners. Special attention was paid to their acquiring practical skills of open form task assessment criteria. In 2010 598 examiners of Ukrainian and 254 of English were trained.

After training engaged employees acquire corresponding certificates on UCEQA qualification. Educational workers that acquired UCEQA certificates in the previous years attend instructional briefings. In 2010 briefings were attended by 71303 persons.

Interestingly enough, CEATM staff members said that they have sufficient number of people, but when they conduct NST, they hire volunteers, part-time employees and assistants for 2-3 months. For example, more than 20 test developers are hired every year for preparing test items. In 2010, for administering tests in 78 test Centres in the region, part-time employees are hired.

4.8. Research and development unit

Only two testing centres, NCAC and NEAC in Georgia have in their structure a research unit. CEATM is a small organisation and does not have capacity for research and development in house, but probably outsources those activities too. Azeri and Ukrainian Centres provide extensive analysis of testing results and feedback to stakeholders.
SSAC claims that it has an extensive research unit. The results of examinations are assessed and detailed statistics are worked out at the end of each cycle. These findings are made public. The statistics include the results of entrance examinations to vocational schools, BA degrees, and MA degrees. The report includes:

- Examination results (total and subject-based) by regions
- Comparison of examination results of urban and rural regions
- Comparison of examination results in different years
- Gender aspects of examination results
- Most popular universities and specialties
- Competition for different (in particular, oil-related) specialties, etc.

Based on these statistics NTC management also provides recommendations for urgent measures as well as long- term reforms.

Ukrainian testing centre has the problem of the absence of professional psychometrics specialists, and this problem persists. Such specialists are not trained in universities in Ukraine, as there is no one available to teach them. That is why it is vital for the Centre to find ways of training of such specialists in order to improve analytical work, states the country specialist in his report.

CEATM does not seem to have research and development unit, and they do not conduct what they call “secondary research” or research based on tests they conduct.

4.9. Governing body of the NTC

Two institutions have, according to their case study, governing body.

SSAC is governed by an internal Board. Presidential decree approves the members of the Board. The head, deputy head and other heads of departments are normally members of the Board. The Board meets regularly to decide the issues on the agenda. The meetings are valid when at least half of the members are present. The decisions are made based on the simple majority voting. Depending on the topic, representatives of other state agencies may be invited to the meetings. Centre may also establish Advisory Council to decide on certain issues and may invite independent experts and representatives of other state agencies.

CEATM has got a governing body consisting of 12 people. This governing body provides CEATM with sound direction, continuity and effective support. It oversees that there is short-term and long-term planning with a strategy for accomplishing the Centre's goals. It monitors that CEATM has clearly formulated policies wherever necessary to give consistency and order to its operation, and ensures that these policies are understood and implemented properly. Governing body members are nominated by the board members themselves. To become a member of the board one has to be influential person and should have a solid voice in community. He or she should be highly educated and understand the principles of education. Job of a board member is voluntary and considered to be service to education and society of Kyrgyzstan. Governing board is not responsible to anyone, but themselves. Board members are nominated and elected for 3, 4 or 5 years, and the term of service of different members varies, so that there is overlap and continuity in the work of the governing board. Board members meet formally once a year to discuss annual matters, and also meet more regularly as the need requires. They also keep close connection via email and phone communications for immediate consultation and action.

5. Operations (exams and tests)

Mandate of the testing centres define, at least broadly, exams and tests national testing centres are offering and implementing. Main categories of test are entrance examinations for university entrance, which are provided in different forms, from subject based to attitude and higher level skills test; national assessments for different levels of education, and international comparison studies, including OECD's PISA in studies of IEA. Some centres are offering also professional tests for different professions, as well as university placement tests too. This gives a good coverage for assessing quality in education and provides information for teaching and learning. When designing the assessment and testing system we should always have in mind their contributions to the three main objectives of the National Testing Centre.

5.1. Types of assessment

Testing centres in different countries implement different types of examinations and assessments, but their common denominator is entrance to higher education as their main "product".

The oldest centre, State Students Admission Commission of the Republic of Azerbaijan (SSAC) administers centralized entrance examinations to bachelor and master degree

programs to all public and private schools, to vocational schools in the country, as well as entrance tests to selected government agencies.

National Assessment and Examination Centre (NAEC) in Georgia administers and implements international assessments, HEI entrance exams, GRE exams and teachers' certification exams. At the end of 2010-2011 academic year NAEC will also be administering 12th grade completion certification exams for school leavers. The most important aspect of their work are HEI entrance exams that used to be administered in a highly corrupt way, thus, affecting the equity of access to higher education. Their sister organization, National Curriculum and Assessment Centre (NCAC), runs national assessments.

Centre for Educational Assessment and Teaching Methods (CEATM) in Kyrgyzstan mainly conducts National Scholarship Test, and from 2002 to 2010, it has now conducted NST nine times. Apart from National Scholarship Test, CEATM is involved in conducting tests commissioned by various organizations. In 2006, Centre has been commissioned the PISA study, and in 2007 the National Sample-Based Assessment (NSBA), in accordance with national standards.

Ukrainian Centre for Educational Quality Assessment (UCEQA) conducts External Independent Assessment (EIA) of entrants to higher educational institutions' educational achievements. EIA results were till 2009 also valid as school graduation exams.

5.2. Reliability and validity of the assessment/examination instruments

Assessment instruments are prepared by subject and/or testing specialist, following the design of the testing. They should be reliable and robust, and they should be valid, i.e. should measure the knowledge or competences we want to measure. Testing centres have different approaches to this, but all claim that their instruments are valid and reliable. Without a detailed insight into the instruments and reports of analysis is difficult to support this claim, but expert from the centres were trained in the basic and advanced theories and practices of assessment, including the design of the instrument, by international expert. This aspect of the assessment is very important, as it contributes to the goals of the NTC, namely fairness and equity, as instruments should be bias free.

SSAC did some analysis about the predictive value of their examinations. They provide entrance examination to both Bachelor and Master degree programs, as well as to some government agencies. Applicants to Master degree programs are mainly one-time applicants to Bachelor degree programs. The significant part of applicants to government agencies are one-time applicants to Bachelor or Master Degree programs. Research shows that there is a high correlation between the examination results of the same applicant. This means that, for instance, a person who scores high in Bachelor degree entrance examination also studies well and scores high in Master degree entrance examination. There are no data available about the process of defining reliably and validity of their instruments. It is also

true that most of the centres anywhere in the world are somehow reluctant to disclose that kind of information.

In Georgia, for the preparation of tests NAEC subject matter specialists conducted compatibility studies of school curricula and HEIs' requirements; exam instruments were pilot tested many times in all regions of Georgia to ensure the internal consistency and content validity of the instruments. Moreover, psychometric analysis was conducted and discrimination index and difficulty level of items was determined before items were selected for the final versions of tests. This ads to the quality of instruments and testing in general.

EIA requirements in Ukraine are based on the program of secondary schools and the requirements of higher educational institutions to entrants. Test specification should meet the requirements of the EIA programs, adopted by the MoES of Ukraine. The test includes items of various difficulty levels – from less to more difficult. Three types of test items were used at the external testing: multiple-choice type (closed form tasks with one correct answer, items on correspondence, tasks on sequence), short answer type of questions and open-ended type of questions. Test items and fragments are first approbated and standardized. During the years of operation UCEQA staff and hired workers fill the bank of UCEQA test items. The main methodological principles of test creation are test accordance to the EIA program, and test item validity, objectivity, reliability, accuracy.

Tests are developed by experienced school teachers, scientific staff of National Academy of pedagogical science, university professors, that undergone special training. Each test on each subject is developed by three developer groups. Each group develops two variants of the test on each subject. For instance in 2009 33 test variants and 495 pseudo variants of tests were developed. One test variant on each subject was developed by UCEQA methodologists. Instructive materials on test creation were prepared for the test developers. Every specialist involved in test creation signs the contract of confidential information non-disclosure.

Test content validity is achieved by the procedure of its creation, scientific-methodological reviewing, international expert conclusions, and approbation. On reviewing and modifying of the tests they undergo literary edition. All tests are compiled in Ukrainian (state language). For graduates of educational institutions where teaching is conducted in the language of national minorities, UCEQA provides test translation into Russian, Hungarian, Romanian and Moldavian.

5.3. Transparency of assessment

Transparency of assessment on different countries has already been discussed in the previous parts of the document, and we'll just shortly describe some of them.

In Azerbaijan the anti-corruption measures indicated in Part 2 show how transparent the system is set up. Overall, the public trusts the SSAC's procedures and believes that it is a transparent institution.

Georgia introduced centralized university entrance exams (UEEs) for reducing corruption in the admission exams to HEIs, implemented by NAEC. Centre has undertaken number of steps to curb the corruption and ensure the transparency and equity in access to higher education. First of all, in the first two years of the reform the Centre launched a vigorous public information campaign to *provide stakeholders with full information about the new model of examinations*, new tests and assessment criteria. The Centre produced and disseminated leaflets and other information materials, used all media outlets including Internet and TV. NAEC also used assistance of ERCs in disseminating information, conducted meetings, presentations, press-conferences, and provided telephone hotline number.

Among other things, during the examination days, video monitors are installed in every testing room allowing live transmission to parents and other observers outside the Centres. Inside the Centres certain number of administrators, coordinators and supervisors are ensuring the smooth run of the exams process.

Transparency, accessibility, fairness, justice, objectivity of the EIA is achieved by the appropriate logistics and procedures on every level of assessment preparation and conduct, result processing and informing the test takers of their achievements.

In Ukraine, civil observation campaign on EIA conduct was organized by the Committee of Voters of Ukraine, civil network "Opora" with the aid of International Renaissance foundation and USETI. Representatives from these organizations observed every stage of EIA conduct. According to UCEQA and RCEQA data in 2010 over 5,000 civil observers were present in testing, checking and result processing sites, on the meetings of regulation and appeals committees. Beside that, accreditation of media representatives, who highlighted the process of EIA conduct, took place in Ukrainian and regional centres of educational quality assessment. Over 200 media representatives of central and regional media observed the procedure of EIA conduct in testing sites. Following civil observation press-conferences were held and generalized materials were prepared.

All these activities and systems in place show, how important is transparency of the system and how seriously this is taken by testing centres.

5.4. Availability of materials and information on assessment

In the information age availability of information and materials adds to the transparency of assessment and testing. It's important that all information needed for individual candidate is available timely, completely and that there is no small print. This is one of the very important aspects of transparency and fight against corruption.

SSAC provide all information on their website. Web pages are updated regularly and include all necessary information about assessment procedures, application, FAQ, news, information about NTC, etc. During the exam period, specially designed pages operate that allows students to apply online, buy tickets to trial tests online, view maps of each facility where the exam will be conducted, calculate their scores, check their results, and contact the NTC. Also, information about the opportunities to study abroad is also available online.

Information is available through Centre's publications. Separate series for BA and MA exams and the results of statistical research are published throughout the year. These publications provide the program to prepare for the tests, test dates, samples of test and application forms, instructions for application, list of available universities and specialties, and the results of research done by the institution.

Applicants can also learn their exam scores via text messages. NTC cooperates with one of local phone companies that allows applicants to send their unique ID number via text messages and receive their results back.

After each BA exam, the representatives of NTC are live on one of the local TV channels with their subject experts. They go through the hardest or most controversial questions, explain the answers. Anybody may call or e-mail their questions and have live connection with NTC's representatives.

NTC representatives, especially the head of institution regularly gives press conferences to local media and reports about the results of its work.

All materials and information regarding tests conducted by CEATM are easily available on CEATM web page (www.testing.kg), in publications of reports, in information provided to MOES, international organizations, schools, students and general public via mass media. The staff of CEATM are also approachable and willingly share any information regarding the tests. All CEATM documents (regulations and other acts) are also publicly available. CEATM has a website which has many resources for teachers to guide them in their preparation of their students for NST and possibly assist them in teaching differently than in traditional ways. However, currently, only a small fraction of secondary school teachers, mostly from Bishkek and other urban centres, have access to internet.

Every EIA participant in Ukraine receives printed informational materials during registration. Moreover, information concerning EIA can be found on the UCEQA webpage www.testportal.gov.ua. Namely: informational materials, program requirements, test samples, normative basis, instructions, analytical reports on EIA conduct as well as various social and scientific research, answers to the frequently asked questions, etc. With support of the International Renaissance Foundation a specialized magazine "Testing and Monitoring in Education" was established, that also publishes all the required EIA materials (www.timo.com.ua). Annual analytical reports on EIA are also published in a separate editorial and are sent to the main libraries of the country, to state managerial organs and also to the regional state administrations.

A broad informational campaign is conducted annually to inform all citizens on the peculiarities of EIA organization and conduct in the following year. Informational-explanatory work is done by employees of MoES, UCEQA and RCEQA, Education Boards of Regional, Kyiv and Sebastopol State Administrations, Regional (City) Institutes of continuous teacher education and also Ukrainian Standardized External Testing Initiative (USETI).
Everyone willing to take part in the testing receives an informational bulletin during registration, where he may find information on the coming EIA, namely: list of subjects, testing schedule, external assessment participant rights and responsibilities, information on testing result determination, etc.

In order to inform the general public UCEQA and RCEQA organize public meetings with students of 11th grade, their parents, secondary schools graduates of the previous years, technical schools and university students of I-II accreditation levels, education community and media representatives in every region of Ukraine (e.g. in 2010 they were attended by 169800 persons).

To provide informational-advise aid for the public telephone hotlines have been established in UCEQA and 9 RCEQAs. “Q&A” and “Forum” pages operate on the UCEQA and RCEQA official websites, where employees of these institutions answer the questions online regarding EIA organizing and conduct. During 2010 campaign UCEQA website was visited by 2.5 million users.

To timely inform the public of the EIA conduct preparation process there is a section on UCEQA website called “Event Chronicles”, where one can daily find new announcements on main events that happen in the process of preparation for EIA. Press and web conferences are held with participation of UCEQA and RCEQA directors (140 such conferences were held in 2010).

Articles of topical issues of EIA preparation are published in the media (over 1.5 thousand published in 2010).

With the aid of USETI program 2 video and audio commercials were launched on national TV and radio stations featuring “EIA participants’ registration”. To inform testing participants on their actions in case of procedure violations a commercial “If you are indifferent you may lose your chance”, that was on air on national TV channels.

CEATM does massive information campaign as follows

- “hot line” (telephone service) organized at CEATM office
- information tables on NST and its registration organized in each school
- Information on NST registration published in central and regional newspapers in Kyrgyz, Russian and Uzbek.
- Advertisement about registration and rules of NST shown on Kyrgyz national TV channel KTR showed in Kyrgyz and Russian.

- Information on NST registration presented in National Radio Channel and channel Evropa +
- Web page of CEATM (www.testing.kg) containing all required information about test and registration
- Information in newspapers (e.g., "Kupi – prodai" (buy and sell), teachers' newspaper Kutbilim and others)

Detailed examples provide a good overview of different methods that are used to provide information individuals or organizations need. Full transparency is also important to get the public trust, as at the very beginning the public is suspicious on the novelties.

5.5. Information on assessment results

Not only instruments and procedures, results are also important for transparency of examinations. Individual results are available only for candidates and institutions they are applying for, but aggregate results provide information about general performance of candidates and the quality of education system.

In Azerbaijan, the public is informed about the total results of the exams. Overall scores, the number of people scoring on certain levels, the numbers of admitted and failed people in numbers and percentages are announced.

After the end of exams, NAEC in Georgia analyzes data and *publishes both detailed and aggregate information* which can easily be downloaded from their website. This information includes number of applicants, the list of students who got admitted to HEIs and list of students who got government scholarship with the indication of their scores and the amount of funding. Aggregate information is available for example about the success rates of applicants' enrolment by regions, districts and schools of Georgia.

Information about success rates by schools was published by NAEC just once and it had a negative outcome on students with low academic achievement. Because students' success in entering HEIs influences schools' rating, there were instances when schools were reluctant to enroll students with poor academic achievements, or they were not allowing such students to graduate by making them repeat the same class. Nonetheless, starting from the 2010-2011 academic year the MoES introduces "Schools Branding" initiative and students' success at HEI entrance exams will be one of the criteria for ranking them. Furthermore, according to this initiative, the graduates from the highest ranking schools will automatically get enrolled in HEIs of their choice.

Information regarding assessment results of NST, PISA and NSBA in Kyrgyzstan as aggregated data is available to public in forms of published reports, mass media publications and on-line documents at CEATM web page, however, individual scores of NST are not available to public because it is a high-stakes test, and only students themselves or their schools can have access to their results. Previously, CEATM got into

trouble many times because the NST results were misused and many people suffered because of that.

EIA favors fair and equal access to higher education, giving also comparative information on the graduate knowledge level nationwide. But due to the absence of other types of assessment we cannot compare the work of schools on other levels, trace the reasons of educational successes and failures, point out educational progress, evaluate the work of schools, give more information on it to the teachers.

Results, acquired by the students are disclosed in individual and comparative forms. Individual results are presented on students' personal pages, located on UCEQA website. Only students, who acquire PIN-codes on EIA registration day, can visit those pages. Testing results on each subject appear on personal pages right after checking.

Each student can print the information card from his personal page using standard software. The card is then handed out at the admission at universities. Validity of the information, presented in the card is checked by admission employees through the system "Konkurs" (Competition) that interacts with UCEQA certificate database. Information cards are double checked by UCEQA employees in the process of checking decrees on student enlistment to universities.

Comparative EIA results are presented in tables with statistics data. These tables are created through statistical characteristics analysis and comparison sorted by administrative-territorial units. A separate section describes test psychometric data.
EIA result disclosure (except for personal results) is done in the form of a "Report on the EIA of educational achievements results of secondary school graduates who desire to become university students", presented in the internet (USEQA website), "Testing and Monitoring in Education" magazine special edition, and an editorial, that is sent to major libraries in Ukraine, Administration of the President of Ukraine, the Cabinet of Ministers of Ukraine, the Ministry of Education and Science of Ukraine, Regional State Administrations.

5.6. Results of individual students

Students can access their results using different mechanisms, but in all centres the main access to them is electronic, via Internet.

Each student in Azerbaijan can learn his or her results via text messages, online, or through publications by using the unique ID number. After all exams are over for certain level of education (BA or MA), usually 2-3 days are given for appeals where students may see their scripts and answer sheets.

NAEC's set transparent examination procedures. From 2006 on, before the appeal procedures begin, HEI entrants are able to see scanned pages of their marked scripts on the Internet after entering their personal information. (Applicants may also receive hard copies

of their scripts.) The same way they can also see their individual exam and final scores on the Internet and receive this information via text messages sent to their cell phones.

Ukrainian centre gives answer sheet copies on request to the test takers in paper or electronic forms. The process of a test taker's work identification sequence is the following: filled answer sheets are sent to nine processing centres. Processing centre location is unknown to the test takers, their parents, relatives or acquaintances. This provides the opportunity to prevent the attempts of finding influence schemes on people, who were involved in answer sheet processing. In the processing centres answer sheets are scanned and verified.

There is appeal procedure at NST in Kyrgyzstan, and individual students have the right for appellation and seeing their scripts and checking marking for possible errors.

IN Ukraine, appeals consideration on violations of EIA conduct procedure, EIA results is done by regulation commissions of RCEQA and UCEQA meeting the requirements, set by the Regulations on the EIA conduct, Regulations on the regulation commission of RCEQA, Regulations on the appeals commission of UCEQA, all approved by the MoES Decree. For instance in 2010 RCEQA regulation commissions considered 24 appeals on violations of EIA conduct procedure during the main sessions and 7010 appeals on the EIA results, which constitute 0,55 % of general number of test takings.

In order to prepare materials for appeals commission consideration the work of the following units was organized: group of UCEQA specialists who double checked the EIA results during automated answer sheet processing and personalizing (technical expert assessment); five specialist groups of educational and scientific workers who double checked open test items in Ukrainian language and literature, English, German, French and Spanish (specialist expert assessment).

Information on the appeals consideration consequences is located on the test takers' personal web pages. Each of the appealers was also sent an excerpt from the appeals commission decision, test taker's EIA card and primary copies of answer sheets.

5.7. Subjects assessed on different levels of education

The following paragraph provides information about subjects and/or types of testing, that are used by different testing centres.

Azerbaijan offers the following subjects:

Bachelor: Azerbaijani Language, Literature, Azerbaijani history, World history, Mathematics, Physics, Chemistry, Biology, Geography, Foreign language (English, German, French, Russian, Arabic, Farsi). The BA exams are conducted in 4 groups and students applying to each group are tested on certain subjects.

Master: Logic, Foreign Language and IT (in some places math) skills are tested in the first round. The second round is different for 68 different programs and each program has individual specialty program.

Government agencies: Depending on the type of the government agency, the question types and subjects vary.

In 2010, those wishing to enrol in HEIs in Georgia had to pass four compulsory exams – General Aptitude Test (GAT), Georgian language and Literature, Foreign Language (English, Russian, French or German) and one elective subject from the following list of subjects: math, history, geography, physics, and biology depending on the faculty or faculties he/she was applying. If an applicant was applying in different fields he/she might have ended up passing more than four exams.

The most debated exam in the beginning of introducing UEEs was GAT that was a novelty in Georgia. Up until 2010 the allocation of scholarships was based on the results of this test only as NAEC considered that this test puts all candidates in equal conditions and is a good predictor for assessing learning potential and success in an academic life. Starting from 2010 the scholarships are rewarded based on the performance on all four exams giving an explanation that this system would be fairer. For the calculation of final scores the scaling model is used that makes it possible to compare scores of those entrants who took different versions of the same exam subject, and also compare scores of different subjects.

Subjects for IEA in Ukraine are the following: The Ukrainian Language and Literature, Mathematics, Ukrainian History, Biology, Chemistry. Geography, Physics, English, German, French, Spanish, Fundaments of Law, Fundaments of Economics, Global History and Foreign Literature.

5.8. The impact of the testing methods on teachers and teaching.

There is a clear pattern of the impact, as could be seen from information below. If testing is in line with the school curriculum, teachers tend to teach to test. If test is different, then teachers prepare students for entrance examination, and very often this also means absence from school in last year of secondary education.

Since preparation programs in Azerbaijan are published at the beginning of each academic year, the students use those programs to prepare for the tests. Students mostly prepare using private tutors. Teachings by these tutors are directly related to test programs and test question types. During the last 2-3 years of high school students mainly focus on test preparation. As a result, the attendance becomes very poor in high schools. High school teachers do private tutoring and spend most of their time and energy for their private students. This affects the quality of teaching at high schools. University teachers also prepare students for BA and MA exams.
The high school teachers do private tutoring and prepare students for the tests. There is unofficially agreed way of teaching for the tests that most of the teachers use. University teachers do tutoring for MA exams.

One of the drawbacks of UEEs in Georgia is that graders use their status to charge higher fees for private tutoring they provide, as they try to convey a message to prospective candidates that they know better the structure and content of exam instruments than other tutors and that NAEC does not do much in its PR campaign to refute this perception.

One of the negative outcomes of UEE tests were that teachers started to teach to the test and students were studying mostly those subjects that they had to take at UEEs. Furthermore, in the last grade of secondary schools students' absenteeism was high as they were preparing for UEEs. To tackle the problem, starting from 2011 the government is introducing secondary school leaving exams for getting the certificate of school completion. Exams will be administered in all subjects and meeting a minimum competence score will be required for getting the certificate.

NST data, especially test items were strictly confidential, because the CEATM staff were cautious that the test items would be misused by others and confidentially would be violated. As a result, those higher order thinking skills such as problem solving and critical thinking which are tested in NST are important competencies, but there was limited effort to connect them to teacher training institutions so that teachers could also learn to teach those competencies. Thus, other agencies in the system did not benefit much from potentially very useful area.

EIA takes place in May-June, which is why, as teachers note, starting with April most graduates pay major attention to studying the subjects they are to pass at EIA. According to the teachers' observation it is difficult to prepare for the testing during studies due to the lack of time. That is why most test takers study additionally by themselves or with a tutor. We can assume that the scale of tutoring has increased with the implementation of EIA, although we lack statistics data to be certain. Parents understand that they no longer can secure their child's entry through bribes that is why they force their children to study, especially with a private tutor.

The number of various materials with test samples that teachers use at their lessons grows each year. Also concerns grow, that students put most efforts into remembering, not understanding. That is why other forms of assessment, more oral questioning and student portfolio development are planned to be introduced in schools.

Analytical EIA reports mention the parts of educational programs where students showed poor results. Thus teachers may see which sections of the program should be paid more attention to.

5.9. Levels of knowledge assessed

There are different levels and types of knowledge that are assessed in different examinations.

The SSAC entrance test assesses an average level of the students' knowledge in certain subject areas that are taught at high school or university. The test questions include easy, medium, and difficult questions. There is no proficiency exam for specific specialties (like lawyers, doctors, etc.)

The same is valid for other testing centres, as they want a good spread of candidates' results to be able to select candidates for the places at universities.

Beside general, subject bases knowledge, some institutions are developing and running also assessment instruments that assess higher levels of knowledge. In Georgia, in addition to the emphasis on curbing corruption, one of the important directions of NAEC's work was to develop and introduce new assessment methods for the assessment of students' higher levels of knowledge. The new instruments placed more importance on the assessment of analytical, practical skills rather than assessing knowledge of facts. Subject tests include closed and open-ended items and an essay, for the assessment of which graders are trained extensively.

The NST in Kyrgyzstan is from the very beginning designed to test critical and analytical thinking and problem-solving skills.

5.10. Use of assessment data

Testing centres conduct their own analyses and prepare reports that are published. There is wealthy well of assessment data that could be analysed, using secondary analysis and looking at different aspects of results, beyond the basic mechanical presentation of percentages, which is the case in most of the instances. They should be available, after fulfilling certain set of conditions, to researchers and research organisations. What is the situation in some of the countries, that provided information?

In Azerbaijan, he data of SSAC is available on its web site or in publications. These data are used mostly by NGO or media. The level of usage by the Ministry of Education is very low.

On special request to UCEQA research institutions in Ukraine may acquire permission to analyze EIA data. An example of such research is a recent «Study of the quality of the assessment-based university admission system in Ukraine based on the standardized external assessment of secondary school graduates», that was aimed at developing methodology and techniques for assessing and monitoring quantitative indices expressing quality of the university admission system based on standardized external assessment using the analysis of worldwide practice and Ukraine's own educational and cultural traditions, and examining quantitative indices indicating quality of the university admission system based on standardized external assessment.

How is access to those data regulated? Certain information is public and widely available. However, the confidential information about applicants, test questions, etc. is not available.

Certain institutions may request the scores of certain people, but this requires special permission.

5.11. Support for teachers

There is some support for teachers provided by the testing centres, although the main aim is selection procedure for universities, not improvement of teaching and learning. This is in particular pronounced at centres that implement assessment which is not directly linked to school curriculum and subjects.

SSAC conducts seminars with teachers, but cannot affect the curriculum. It also publishes supplementary tutorials to schoolbooks. IT tries to introduce new type of questions each year. The main purpose is to avoid questions that require learning data by heart and do not need analytical thinking. Although these changes in questions sometimes are met by public with criticism, it affects the learning outcomes positively.

Centre organizes subject seminars throughout the year which are open to everybody. In these seminars outstanding teachers from high schools and universities share their knowledge in particular subject area. These seminars are also good platforms for interchange of new ideas and approaches in teaching. In seminars test items used in entrance examinations are discussed in the light of statistical data obtained for that test item, which is very useful for the development of high quality test items. Newly introduced test items are also put on the table. This gives a great opportunity for seminar attendants to prepare their students for entrance examinations. Testing Centre also assists teachers with its publications.

As mentioned above, CEATM does not directly provide trainings on assessment for teachers, as they have no requests for that.

5.12. Impact of assessment

Beside positive, there is also negative impact of assessment.

The main negative impact of having centralized exams is that the students focus on private classes, as a result of which their attendance at schools becomes poor and they don't study well at high schools. Teachers too tend to give private lessons for entrance examination, and in many cases what is assed at examinations is not linked to the school curriculum, which in a way represents a schizophrenic situation.

The results of UEEs are going to be used as one of the criteria for ranking schools, but these results are not used by NCAC for making or revisiting national curriculum. NCAC staff members think that UEE exam items are not based on the entire school curricula and sometimes they even deviate from it.

One of the drawbacks of UEEs is that graders use their status to charge higher fees for private tutoring they provide, as they try to convey a message to prospective candidates that they know better the structure and content of exam instruments than other tutors and that NAEC does not do much in its PR campaign to refute this perception.

6. Financing

6.1. Budget of the National Testing Centres

6.1.1. Azerbaijan

The budget of NTC is public and provided from the state budget. In 2010, it was 1,074,000 AZN (1,342.500 USD) from the State budget (about 10.7% increase from the previous year).

6.1.2. Georgia

The total budget of NAEC in 2009 was about 4 mln. USD and the share of government's financing was 79%. The remaining funds were mainly received from the collection of exam fees. (For example, the fee for one subject of unified entrance exams constitutes 10 laries which is about 6 US Dollars.)

Table 1. Share of different sources of financing in NAEC's budget in 2009.

Sources of Financing	Percent
State Budget	79.0%
UEEs fees	14.3%
Graduate Record Examinations fees	3.7%
Fees for appeals	0.4%
Selling of books	0.7%
Other sources of income	1.8%
Total	100%

The budget execution document available on the parliament website gives limited categories of the expense items of NAEC. It can be seen from the table below that the salaries of staff members and short-term personnel constitute the biggest part of the agency's expenses – 77.5%.

Table 2. Share of different expense items in the total expenses of NAEC in 2009.

Expense Items	Percent
Staff members' salaries	22.0%
Salaries of short-term personnel	55.5%
Per-diems	2.6%
Office expenses (communal expenses, printing, publishing,	13.9%

etc.)	
Maintenance expenses of buildings, vehicles, equipment	3.1%
Other expenses	2.9%
Total	100%

6.1.3. Ukraine

EIA system is financed by the state budget costs. Test takers are not charged for the participation in EIA.

But the costs of state budget are very limited, which is why UCEQA activity is partially financed by charity organizations. E.g. costs for informational booklets, posters, TV and radio commercials, and specialist training were given by USID through Ukrainian Standardized External Testing Initiative (USETI); civil observation program support – International Renaissance Foundation (IRF). Also a small bit of income comes from the conduct of trial testing, for which the participants pay.

Financing expenditures on conducting EIA is achieved through a separate budget program "Conduct of EIA and educational quality monitoring by the UCEQA and its regional divisions".

UCEQA has a separate line in the MoES budget.

Annual budget of UCEQA and its 9 regional divisions in 2010 constitutes 97. 022 UAH million (12.128 USD million, counting 1 USD = 8 UAH), while overall MoES budget is almost 20 UAH billion, and overall education expenditures in the state constitute 76.8 UAH billion.
Budget of a single RCEQA constitutes 6.3 UAH million. (787.500 USD)
Actual expenses for EIA conduct in 2010 (except for costs, allocated for staff salaries, municipal services, UCEQA and RCEQA ongoing maintenance) constitute 54.8 UAH million (6.85 USD million), namely:
Expenditures on invitation production – 113.2 UAH thousand,
Auditorium packages with test papers and answer sheets production and packing – 1,751.5 UAH thousand,
Engaged employees salary– 40,586.9 UAH thousand,
Informational support– 366 UAH thousand
Delivery of materials to testing sites and of invitations to the test takers – 6,246.7 UAH thousand,
Testing site and result processing and checking sites security, – 3,456.3 UAH thousand,
Printing-packing complex equipment maintenance and consumable costs – 2,255.1 UAH thousand.
Average actual costs per testing in 2010 constitute 39 UAH (4.88 USD). In 2009 – 52.63 UAH.

Expenditure cuts for EIA preparation and conduct were achieved by the following actions:

- Test site network shortening through implementing multi session on separate subjects;
- Decrease in the employee salary extra charge;
- Involving smaller amount of examiners for open task checking through decreasing the number of subjects with open tasks;
- Implementing the procedure of certificate acquisition with testing results without expenditures on the document's production and delivery to the test takers.

It is planned to charge EIA participants for the second attempt at the testing from next year on.

6.1.4. Kyrgyzstan

The establishment of CEATM and its NST project cost only one and half million USD which is far less than many other educational projects are spending with limited impact. CEATM conducts educational tests and attempts to earn for its living. For example, money is obtained from different organizations, such as PISA and NSBA assessment were commissioned and financed Rural Education Project of World Bank. According to the representative of the REP of World Bank, it cost about half a million for PISA competition participation in 2006.

Following the principles of honesty and transparency, CEATM publishes its annual report on expenditure. Collected finance and used money are provided in the form of tables (See Appendix E). Here is detailed information about finance matters of NST from the CEATM report from 2009.

In 2009, CEATM won a tender announced by MOES to conduct NST. NST was conducted for money from registration fees, and partially funded by ACCELS (USAID). In total, 33 579 candidates took NST in 2009. 9 615 800 som (204.000 USD) were collected from registration fees. In addition, 12 611 772 som (268.000 USD) was provided by USAID and by selling of manuals / brochures of NST. 85% of financing for NST normally comes from students' fees, and 15% from USAID.

From September 2008 to April 2009, test developers (university professors, school teachers) who were selected for developing test items, worked on development of test items, reviewing, editing, and translation of tests and so on. Salary of test developers, reviewers, CEATM administrators, and also for taxes and social funds payments, the money was used 2 545 221 som (54.000 USD) and 1 112 766 som (24.000 USD). Translation into Kyrgyz and Uzbek languages cost 34 019 som (730 USD). Before the final tests were ready, they were piloted and analyzed. Expenses for copies of test materials, test forms and piloting and analysis cost 98 263 som (2100 USD). For printing certificates, a color printer was purchased for 58 395 som (1250 USD).

To make convenient for candidates to save money and time for travelling, registration was conducted in each district of Kyrgyzstan. Test registration fee was 200 som (a little less

than 4 USD) for main test and 200 som (a little less than 4 USD) for subject test in 2009. Registration for NST was done by district and town education offices and educational institutes. 64 people signed contract to work as registrars (responsible people) for 3 months. Their salary and money for tax reduction and social fund deduction cost 84 971 (1810 USD) and 37 149 som (790 USD) respectively. Salary of staff of CEATM who provided consultation to registrars, tax and social fund cost 4 100 (87 USD) and 1 793 (38 USDF) som respectively. Registrars were provided with materials necessary for their work (manual on registration, registration forms, talons of registration and ticket for NST, and so on). Materials for registration, information placates and materials for applicants were all printed and sent by post in required amounts to every registrar. Thus, post services cost 373 940 som (7960 USD). All working materials were provided in Kyrgyz and Russian. Expenses related to registration materials cost 119 358 som (2540 USD).

Every test-taker received free of charge copy of "Preparation for NST" brochure, not manual with the same name which is fee paying. In this brochure, applicants could get info about structure of test, rules of test and responsibilities of test-taker. Brochure was printed in Kyrgyz, Russian and Uzbek languages, and it cost 316 308 som (79.080 USD).

To maintain secrecy, tests were printed in special typography (printing place). During test printing, guards responsible for confidentiality were on duty. Their work was also paid. For printing main and subject tests 805 507 som (17.140 USD).was spent. For preparing answer sheets were spent 58 978 som (1.255 USD).

NST took place from 21 to 23 May and from 25 to 31 May, 2009. 88 test Centres were established across Kyrgyzstan so that test-takers do not travel far to save money. NST was conducted by 348 administrators who underwent special training by CEATM staff. Test administrators were to strictly monitor the procedures of test, discipline and prescribed rules so that each candidate had equal opportunity. Training of test administrators cost 96 692 som (2.060 USD). Each test administrator received all required materials for conducting test. All procedures of NST was documented in special protocols, and schemes of test-takers seating arrangements, were worked out, and printing of all these materials cost 18 950 som (403 USD). Each team of administrators was provided with stationary (scotch, scissors, chart papers, pens, rulers and so on). Teams of test administrators travelled to 88 test Centres established in each district of the country. Every team consisted of team leader and 10 administrators. Each team was provided with a minibus rented by CEATM for test administrators' travel and for transporting test materials. For conducting tests in the south of the country, round trip air-tickets were purchased for Bishkek-Osh-Bishkek, Bishkek-Batken-Bishkek, Bishkek-Jalalabad-Bishkek races for 627 540 som (13.350 USD). Test administrators were paid per diem, cost of which and tax and social fund was 2 335 850 (49.670 USD) and 1021229 som (21.730 USD) respectively.

Certificates with NST scores of candidates were printed in special papers protected from false copies. To maintain confidentiality and objectivity of test results, printing of certificates is done at CEATM office with colour printer. Expenses related to preparation and printing of certificates cost 179 695 som (2.060 USD). Every candidate received

certificate with their NST scores, and certificates were handed during farewell party at schools.

For publication of test materials in Kyrgyz and Russian in Kutbilim newspaper, and in TV channel KTR, in radio channel Kyrgyzstan Obondoru, Evropa +, it was spent 127 644 som (2.060 USD).

Thus, all these financial matters are openly described in annual reports and on webpage of CEATM.

6.2. Definition of annual budget

Annual budget is defined every year and forecasted for the next three years. At the beginning of each year, the budget discussions are conducted by relevant government agencies and compared to proposed budget from each agency. The expectations of each agency are adjusted to the priorities for that year and the available funds in the state budget. Final draft is usually ready by September and approved by Parliament before the end of the year.

The charters of the testing Centres state that the budget of the organization is formed through the targeted funds from the state budget, grants, and from income received from the provision of services. The Centres are permitted to use funds only for undertaking those functions of the organization that are stated in their charter.

Because the majority of financing for both testing Centres in Georgia come from the state budget, the budgeting process starts in the first quarter of each year. In the middle of the year the final budget is submitted to the Ministry of Finance which later is passed to the Parliament for approval.

Since examination is an important process for the country, the budget normally covers all activities of NTC. The scope of work increases from one year to the other, therefore the annual increase of budget is observed.

Adequate funding of assessments and examinations has a crucial importance for getting quality data/information, ensuring equity and for curbing corruption. As mentioned earlier, in view of both NCAC and NAEC staff members financing is adequate for the implementation of their activities. NAEC staff members and contracted personnel receive good remuneration that guarantees the reliability of results. However, the lack of air conditioning for example in the testing Centres may have some negative consequences on the assessment outcomes.

7. Lessons learnt

Country studies provide account on the lessons learnt from the very beginning with the analysis and piloting of different approaches, through establishment of testing centres, their development and work in implementation of testing and other assessment they are responsible for. They presented in this paragraph, by country, to show communalities but also differences among them, that stem from their status and mandate. This will allow us to present recommendations for Tajikistan.

7.1. Georgia

- Introduction of new assessment methodologies and of a new model of university entrance exams is considered to be a **success story** as they improved the methods of students' assessments and substantially reduced corruption. This was mainly attributable to a **strong political will** of the new government that introduced reforms in a short period of time. Another factor was the **staffing** of the Centre that attracted dedicated and reliable staff members. One more factor was **gaining public trust** through the administration of **corruption free exams** and vigorous **public relations** campaign. Lastly but not the least, **sufficient financing** provided to the Centre enabled it to achieve stated goals.

- However, there are areas of the state policy and areas of the testing Centres' operations that are debatable and yield to **negative consequences**. One of the debatable issues was the **separation of national assessment function** from NAEC that was largely stemming from the lack of dialogue and consultations between NAEC and National Curriculum Centre. Therefore, to ensure the **usage of results** it is of utmost importance to have a **good dialogue** and consultations with the end user before implementing any assessments.

- Another debatable issue is **publishing aggregate information** on applicants' achievements on UEEs by schools as it turned out that it **negatively affected** students with poor academic standing. But on the other hand, it allows parents to make more **informed decisions** about the school's choice for their children.

- A debatable issue is also the assignment of the function of **conducting international assessments** to NAEC. In many other countries this can be done by any research institution selected on a competitive basis. It seems that NAEC holds **monopoly** on conducting international assessments in Georgia. The positive side of NAEC conducting international assessments can be considered the fact that NAEC has vast experience and easy access to schools; whereas one of the negative sides could be the fact that it may contribute to inefficient use of resources as other research institutions may conduct those studies cheaper.

- Another issue is the **public monitoring** of NAEC's operations. During five years of conducting UEEs, NAEC has **gained public confidence** and everything is built on the faith that this organization is doing a good job. No external monitoring has been done so far of certain aspects of its operations - for example regarding the actual workings of

its IT systems and software (e.g. random assignment of students to sectors, assigning enrolled students to specific faculties of their choice, etc.).

- Finally, **no public information** is available as well on the utilization **of resources** according to specific budget items and by specific exams and assessments. It would have be desirable to require testing Centres to report expenditures by projects- e.g. costs of conducting Olympiads, teacher certification exams, etc. This would require making changes to the format of financial reporting.

- In order to ensure continuing trust of general public in NAEC's operations, it would be **important to re-examine the charter** of the organization and relevant legislation in order to make the system even **more transparent, more efficient and fairer**.

7.2. Ukraine

- EIA implementation is considered by the estimations of both citizens and specialists to be the **most successful reform** in education, conducted in the recent years.
- EIA implementation became an **effective mechanism of preventing corruption** on entering the universities. We also acquired information on the **real condition** of graduate **educational achievements**. EIA is also a tool of raising educational standards in schools.
- Furthermore, according to experts, the **most vulnerable aspects** of the Ukrainian standardized external assessment are such components of the whole system as the **legislative and regulatory** institutionalizing of testing, **quality** of the subject tests, and also **organizational and procedural issues** of test administration and the logistics involved.
- First and foremost, **legislative foundation needs to be secured and operationalized** for the standardized external assessment to be accepted as part of existing educational practices. The laws of Ukraine on education adopted prior to the external assessment implementation do not contain provisions on this educational phenomenon and do not regulate many of the legal relationships with regard to various procedures of standardized external assessment administration. The **prepared amendments** to relevant legislation have **not been adopted** by the Verkhovna Rada of Ukraine for a long time; some of these amendments are also rejected for technical reasons.
- Absence of appropriate legislation makes EIA **vulnerable to political decisions** of power that is changing. Politicians still often use it as a subject for political discussion. EIA result usage remains an important issue. E.g. current MoES management proposes apart from EIA reintroduction of entrance examinations at universities starting next year. Thus students will enter following the results of EIA, secondary education certificate and university exams. So the value of EIA is thus neglected and conditions for the return of corruption on entering the universities may be reestablished.
- **No UCEQA supervisory council** has been created so far, although it has been mentioned in the Regulations on UCEQA. It also increases the **influence of MoES** on any changes, connected with EIA conduct and the usage of its results.

- Every year a wide-scale discussion is brought about on such issues as **granting privileges** to certain categories of applicants. These problems become particularly urgent shortly before and after university enrolment since general principles of standardized external assessment (fairness, objectivity, and equal access) come into clash with university enrolment practices.
- There is also a **difference in performance** results shown by graduates who completed their secondary education in **town and village schools** as well as students who completed different programs of study. In particular, the Statistical Report on Standardized External Assessment of 2008 shows that qualitative indices of subject tests performance results for secondary school graduates from urban and rural areas differ considerably in the high-scoring segment of the scale.
- In this case, the system of university selection criteria does **not cover all characteristics** of a person which determine his/her ability to gain higher education. Apart from the level of students' academic achievements, the system should evaluate other qualities, in particular the **general learning competence** which defines the capacity for successful studying, motivation to continue education, etc.
- Orientation of the standardized external assessment exclusively on particular subjects does not take into account the **contemporary competence paradigm** in education, forcing students to concentrate only on the subjects they are going to take for standardized external assessment, thus **putting limitations** on the general educational orientation of secondary education.
- That is why we face challenges of **improving** test item content on one hand, and on the other – **development of a new** test, aimed at checking abilities of **General Learning Competence Test** (GLCT). Implementing this very test should **equalize the chances** of graduates of this and previous years, both in cities and villages.
- EIA should be **developed on other stages** of school education. It is not provided yet. The Centre, having its technological bas could successfully conduct monitoring research of educational quality. But no costs are allocated for this, firstly due to the **lack of political will** for conduct of such research. Unfortunately, the system of external assessment in Ukraine is too **concentrated on entrance** to higher educational institutions and thus is **not used for monitoring** and improving the quality of the system of secondary education.
- The history of EIA implementation demonstrates that it should be **implemented gradually**, starting with experiments, voluntary for students and educational institutions. Meanwhile society forms positive attitude towards such an assessment system. Appropriate sociological research should be conducted, that would demonstrate the people's attitude towards the existing system of examinations and their striving for change. The experiment should be conducted in close cooperation with the Ministry of Education and Science, working out the appropriate normative basis.
- And the most important factor is the **presence of political will** to introduce **transparent assessment** and **conquering corruption** in education. The reform develops successfully when there is political will, a developed effective technological cycle of external assessment, is a need for change in the society, is trained staff, when schools and universities are interested.

7.3. Azerbaijan

- The SSAC has already been operating in Azerbaijan for about 18 years. Over this period, SSAC has **significantly improved** its technological and operational **capacity**. The first exams in 1992 to BA programs in the country had a very limited scope. The answer sheets were printed in Turkey and were sent back to Turkey after the exams as SSAC itself did not have optic scanners. Today, this **institution has more staff members**, conducts entrance exams not just to BA, but also MA programs, vocational schools and some state agencies, regularly **publishes** journals, has its own publishing facilities and operates completely independent. SSAC also has established a **good reputation** among general public. People believe that by entering any of the exams conducted by SSAC, they will be part of a **transparent and fair process**. SSAC also conducts detailed **research** of results and **provides statistics** in all areas of its expertise. Every year, the public observes some **improvements** in the examination procedures. SSAC tries hard to make all important **information available** to public through its website, publications, and regular press conferences. SSAC's website is **regularly updated** and is user-friendly. Also, the SSAC has become a **respected institution** internationally with various major events organized by them in Baku in the past few years.

- Despite all these successes, SSAC has also faced some **challenges** and is criticized for some aspects. First of all, SSAC does **not have its own experts** and relies on high school and university teachers for the preparation of exam questions, which is the case in UK, as well. For transparency reasons, SSAC puts the **list of these experts on its website**. Once the names are known to public, these experts are on priority list for **private tutoring**. This is another highly criticized aspect that is created by SSAC's examinations, although this is highly related to **poor quality** of high school education. All high school students shift their focus during the last years of their studies from studying at high school to **attending private classes** and **preparing** for university entrance exams. The attendance becomes very poor and this leads to **corruption at schools**.

- Another area where things can be done differently is the **relationship** between SSAC's **research results and teaching** at schools. Currently, SSAC's feedback is **not widely used** as schools are managed by a different governmental organization- Ministry of Education. The **inter-agency cooperation is weak** and the poor results are visible.

- Despite the challenges with experts, private tutoring, and memorization in schools, SSAC's work is **positively recognized** in the country as a tool that **provides equity and transparency** for university entrance procedures.

7.4. Kyrgyzstan

- There is a **shortage of** solid and systematic **research of the aptitude tests** and their implications for equity and quality issues in a society such as Kyrgyzstan which is experiencing dramatic changes and issues of equity and worsening quality of education are top priority. The test results need to be **systematically analyzed** and **used to strengthen** the education system. The test results could be used more effectively in addressing this disparity as well as improving quality of education. As the competencies tested in NST, PISA and NSBA are considered very important, it is imperative that **proactive** attempts are made to **promote the same competencies** in all schools, and especially in village and mountain schools. It is necessary to **proactive improve teaching and learning** in those schools as well as **correct imbalances** in resources in education, particularly in rural and mountain area schools.

- Regarding National Scholarship Test, it is necessary to achieve that **talented youth from rural schools are well represented** in the most prestigious universities. Grants are distributed proportionally to quota categories, however, majority of grant winners from rural and mountain schools get enrolled in universities in regions rather that in Bishkek. They usually enter lower prestige universities and faculties because their scores are low and they cannot compete with the top scores of Bishkek. It is imperative to mandate the faculties that they enrol students according to quota categories. To correct imbalances in how grants are assigned, it is necessary to **introduce quota category for departments** but not for universities. I am mindful that some top universities will resent this because they fear that students' coming with lower NST due to quota categories may lower their standards and perhaps ultimately undermine the quality of high quality institutions. However, these universities should be made aware that the scores of the applicants from rural and especially mountain schools far lower than those of urban (Bishkek) schools' students not because they are less able, but primarily due to poorer quality of schooling they had been exposed. Universities thus can work proactively to help these applicants by **offering additional training**.

- As a rule, high quality universities are located in Bishkek. Currently, many village students apply to regional universities instead of coming to Bishkek, because living in Bishkek is expensive. It is necessary to take **proactive measures to help rural students** attend urban universities otherwise the gap and stratification will further increase, only small fraction of students in big cities' students keep getting quality education. If a quota system helps students from rural areas come into the best universities in Bishkek, it is necessary to ensure they will **succeed and maintain** that institutions' **standards**. Universities themselves need to offer additional courses, but the scholarship from the state should include not only tuition fees, but also accommodation expenses too. Many applicants often choose to enter smaller and less prestigious universities in provincial centres or small towns precisely because living in Bishkek is very costly.

- Eventually, perhaps it is necessary to **eliminate the budget places** at universities in Kyrgyzstan. There are many cases when parents who can afford to pay contract fees, still want their children to study in budget places. The budget system could be replaced

by **university-based discounts** in fee payments to students based on their performance, while the government could then allocate funds for needs-based scholarship only. This needs-based scholarship could include not only university fees, but also accommodation, books and other expenses which allow promising applicants from around the country to apply and study at any university irrespective where they are from.

- As stated above, one of the **unintentional negative consequences** of the introduction of NST has been the **rise of private tutoring** which specifically prepared the students to take NST thus resulting in continued inequity within the education system. If any individual is being deprived of the equal opportunities to compete for state scholarships due to their financial constraints, then definitely the government officials should work on it. The education officials in Kyrgyzstan need to do **systematic analysis** and develop necessary safety nets in place so that there will be no anticipated or unanticipated fall-outs based on testing.

- Most of the issues raised by the creation, implementation and direct and indirect outcomes of the NTS are related to **broader educational issues** in Kyrgyzstan. There is a need for more consolidated **collaboration and joint work** among stakeholders who work on education standards, curriculum development, textbook publication, teacher training and re-training, assessment and evaluation. International organizations involved on education reforms in Kyrgyzstan, under able monitoring and coordination of the Ministry of Education, should work collaboratively. They will have very limited success because their **activities are not well coordinated**. Projects are duplicated and nearly most of them were not institutionalized, resulting in a **lack of sustainability.** International organizations are involved in small projects for long-term periods with separate reform initiatives, and therefore, **fail to implement systemic change**. Systemic chance in the education is possible when all stakeholders and international organizations coordinate their activities with each other.

- To conclude, Kyrgyzstan achieved a lot of progress with its initiatives of establishing independent testing organization. It took strong will and commitment from MOES to initiative this reform, but **full support from government and president of the country was necessary** to pursue this initiative and sustain it. Finally, would other countries in Central Asia want to learn from the successful experience of Kyrgyzstan in the field of testing is another matter, because of the latest tragic events in the country, because of the poor socio-economic conditions in the country, many neighbours would rather want to learn from US, or even Russia, but not from Kyrgyzstan.

8. Recommendations for Tajikistan

Country studies are a well of information regarding different aspects of establishing and running national exams. Each of the centres had his own particular experience, but some of the experiences are general and should be taken into account of any new centre, to prevent learning from own mistakes, where that is not necessary. Recommendations were prepared

based on the country studies and the present comparative studies. Order of recommendations is not important, as their importance depends on the situation and conditions.

- National Testing Centre in Tajikistan will face a number of challenges when introducing the new entrance examinations. Those challenges will be linked to bringing transparency and eradicating corruption in the education system, providing equity for all applicants and providing feedback to education system, in particular to teaching and learning.
- With the establishment of the NTS in Tajikistan the first step was made. This could be a success story as in other countries, but there will be many obstacles as their work will interfere with the existing system of corruption.
- For the project to be successful, a strong political will of the government and Ministry of Education in particular should exist. Without the strong support, which also has to be backed by resources, human, financial and material, this will not be possible.
- Process of the staffing of the Centre should attract dedicated and reliable staff members, and appropriate training should be provided to them, both home based and abroad.
- International projects and support provide excellent mechanism for capacity building, so this help and support should be used whenever possible.
- Experience from other countries show that it's important for the staff of the testing centre to speak English language as there is a wealth of literature in the area of assessment.
- Sufficient financing should be provided to the Centre to enable it to achieve stated goals.
- Important factor is gaining public trust through the administration of corruption free exams and intensive public relations campaign, in particular at the beginning of the work of the centre. The best result is the error free, transparent and corruption free examinations system, with public confidence.
- It would be beneficial for the image of the centre if NTC in Tajikistan would provide for public monitoring of its operations, showing complete transparency of its work and instrument it's using.
- Experience from other countries show, that, the most vulnerable aspects of the external assessment are such components of the whole system as the legislative and regulatory institutionalizing of testing, quality of the subject tests, and also organizational and procedural issues of test administration and the logistics involved. Special attention should be paid to this area
- First and foremost, legislative foundation needs to be secured and operationalized for the external assessment to be accepted as part of existing educational practices.
- Absence of appropriate legislation makes any centre vulnerable to political decisions of power that is changing. Politicians still often use it as a subject for political discussion. The value of NTC could be neglected and conditions for the return of corruption on entering the universities may be re-established.