

Distinguished Participants,

Dear Guests,

Ladies and gentlemen,

Allow me from the outset to welcome all the participants in this splendid hall of the Azerbaijan Philharmonic and to wish you every success in this forum where we gathered to discuss some of the most pressing issues of our education system.

Participation by a great number of experts from different countries that represent influential international organizations is of particular importance.

I am joining other speakers in the discussion of the vast subject of our conference. I must admit that experience accumulated by my country has been decisive in preparing this statement. There is no doubt, however, that the issues I will raise exist in any transition state.

Our knowledge assessment system was initiated in 1992 by the National Enrolment Board. The first series of exams based on tests was facilitated by the scientific, methodological and technical support from Turkey.

The first two years have shown that simple classification of student knowledge does not provide any significant impact on the educational process itself and does not facilitate creativity in teaching methods.

In order to create feedback and improve standards we needed a new scientific concept. Only then we can speak of innovation as a powerful tool providing real impact on the entire education system. We can say today with confidence that the past 15 years have been extremely complex in its challenges and tribulations.

And here are some milestones:

- Total transparency achieved in our system provides a solid basis for mutual evaluation and self-assessment as well as trust;

I would like to emphasize that our tests produce the so-called 'raw' scores. So far we avoided the Item Response Theory model because it does not allow candidates, their parents and teachers to make independent evaluation of exam results. Otherwise it would create problems leading to lack of confidence and distrust. However, I believe we have already achieved a stage at which Rush model becomes, in fact, necessary;

- Our system is unprecedented in the scope of communication between evaluation officials, teachers, candidates and the public at large;
- Based on test results, a total of 1 500 000 candidates have been granted entry and placed in different universities and vocational schools;
- A clear separation of activities has been achieved for stages preceding, during, and after the exam with clear objectives set for each stage;
- in accordance with this concept we created a database of test items that meet the standards of reliability, validity, etc;
- ongoing workshop program keeps producing new test items;
- the newly introduced pre-exam test arrangements allow independent evaluations by candidates;
- a big number of teaching and methodology guides now include sections with tests for each discipline and all grades;
- outsiders stopped interfering with evaluation officials;
- reliability of results in terms of candidates' scope of knowledge is guaranteed by inclusion of tests with different levels of complexity covering the entire curriculum;
- a broad range of self-training materials is now available to all candidates thereby providing equal opportunities in terms of access to high education for different groups including those who study in schools with relatively low teaching quality;
- a nationwide applications registration system has been set up;
- a special set of software and hardware kits provides for automatic reading of candidates' registration data and their answers in test forms;
- Exam structure has been formalized and now includes a database on educational institutions; professional areas covered by their diplomas; leaders of the testing process and designated observers; as well as candidates' data, including their photographs;
- software option allows for identification of copycats;

- another software option helps accelerate placement of candidates in professional categories.
- A special magazine with test results has been launched with same results published in our website and sent to candidates' mobile phones.

It is next to impossible to list all the activities that our board has carried out in the last 15 years and I don't think it is necessary. This conference will hear relevant statements on these achievements. I hope that participants would have the opportunity to discuss in detail all that has been accomplished and is yet to be accomplished in their areas of responsibility.

And here, I would like to draw your attention to another important issue. The real interaction between evaluation officials and secondary schools starts only when successful candidates have been determined and placed in high schools. It is at the post-exam stage that scores obtained by candidates begin to be felt at all levels of the secondary education system. Test results whether successful or not are invaluable in taking stock of what is happening in the teaching of certain disciplines at certain schools.

I should emphasize that any group of competing candidates used for sampling purposes is representative because every school sends its graduates to high school exams. Moreover, the number of candidates always exceeds the number of secondary school graduates in any given year, which shows that the prestige of high-school education is as high as ever.

We have analyzed results achieved, among others, in mathematics, physics, chemistry, biology, geography, history, native and foreign languages. These data are assessed at the national level and at the level of each district and each school. They give an idea of the current status of schooling. We also provide comparative year-on-year assessments to see how school scores correlate with test results and how they change over time.

This evaluation done nationwide exerts serious influence on educational standards and provides incentives for their alignment and improvement.

We do understand tests bring many risks for the entire teaching process. We are aware of things said by opponents, in particular with regard to the evaluation of knowledge in humanitarian subjects.

We cannot but agree with most of these arguments. But can we ever hope that gifted boys and girls would do well at high schools if they don't have even basics of knowledge supplied by secondary schools ?

There is no answer to that question.

The share of the minimum sum of knowledge to be exhibited in a test before candidates can enter a specialized school has been changing but never exceeded 20% of the maximum score.

A much bigger danger lies in the fact that sometimes tests have been introduced thoughtlessly and unprofessionally not for verification purposes but simply as a teaching innovation.

Mathematics has always been compared to a windmill: if you put grain in it, you get flour for bread; if you put stones, you get sand.

Mathematical methods are producing a one-time assessment of the situation in the educational system.

But what can we offer to change the situation?

This is the problem that all of us gathered here to discuss.

In fact, the need to establish common educational space is directly related to globalization and the emergence of full-fledged information societies.

The transition to knowledge societies is accelerating.

Drastic changes are imminent in labor markets as well as in the public perceptions of required standards of knowledge.

Information revolution is already here. Our description of the changes may differ. Some describe this as Toffler's 'third wave', others speak of postindustrial society, yet others insist that we are entering an information age.

One thing is clear - we are living in an age where our ability to produce, store, transfer and receive information is undergoing a drastic change. Virtual reality permeates every sphere of society and is everywhere - from office to home.

After the emergence of speech, and the invention of printing, radio and television we are witnessing what can be called the fifth information revolution.

The 2003 Information Society Summit in Geneva has, in fact, moved the problem of knowledge society from the realm of sociological and philosophical discussion to the decision-making domain.

Transition states have found themselves least prepared for the new challenge. Faced with political transition and increasing globalization, they have been cornered by their own insistence on economic models that perpetuate 'catching up' and lagging behind the so-called 'Golden billion'.

The notorious third wave of democratization brought to political mainstream huge masses of people that face their governments and political systems with an ever-increasing avalanche of demands.

In the 20th century modernization was a more or less organized transition. In the 21st century we are witnessing a multi-pronged process with its own laws, cultural ideas and preferences, and options for political and institutional change. If education and science are not included among government priorities, the society at large will suffer.

Globalization coincided with the breakup of the Soviet Union which launched a geopolitical landslide where the collapse of the Soviet system and the subsequent systemic crisis led to a sharp deterioration in living standards and quality of education throughout the post-Soviet space.

The exalting feeling of freedom from totalitarian shackles was replaced by a feeling of deep pessimism and despair. People did not believe that chaos and anarchy would ever be overcome by civilized attitudes.

Researchers and teachers in all transition states were in dire straits.

Intellectuals started moving overseas and the prestige of teachers and their living standards sank very low. It became clear that de-ideologization alone does not lead to economic development and civilized market relations.

The hopes expressed by certain leaders that it was enough to eliminate the command and order system to arrive at synergies and order proved illusory.

Maslow spoke of five human needs that include subsistence, security, love, self-realization and self-mainstreaming.

In the years following the collapse of the Soviet Union, transition states were mostly trying to solve problems related to the first categories of needs. Obviously, education at that point could not guarantee self-realization and self-mainstreaming.

Analysis of education in transition states has shown that they are totally different from problems in other parts of the world.

While some countries are facing the challenges of illiteracy, lack of women's access to education and the need to provide for universal primary or secondary education, transition states are mostly dealing with a totally different set of problems.

Here, already by mid-20th century full eradication of illiteracy became possible. By 1970s our countries have introduced compulsory second medication and a network of secondary, secondary vocational and higher schools.

Moreover, in the last decade of the 20th century most of the transition states have adopted new constitutions providing for the right to secondary education.

With the collapse of totalitarian Marxist ideology, changes were needed that had no precedent in other regions.

First and foremost, we are dealing here with a schooling model that has been dominant.

The other challenge is the undying public belief that Soviet system was the most progressive in the world and any attempts at reform only aggravated the situation.

Some teachers and scholars were confident that de-ideologization was a sufficient remedy and the previous system could continue with minor cosmetic changes. Successes of the Soviet school are undeniable.

To a certain extent, particularly as regards the teaching of sciences and technical subjects it was unsurpassed.

It is common knowledge that already in 1956 - after the launch of the first artificial satellite of the Earth - sovietologists spoke of highest educational standards of the USSR that created unimaginable scientific capacity.

Analysis of educational situation at the end in the 1950s has shown that some factors were not taken into account both by diehard opponents and by champions of the Soviet system.

They kept forgetting that Soviet standards were part and parcel of the command and order system, and the breakup of the latter automatically led to the breakup of the educational framework.

It was a technocratic model geared towards the needs of the military and industrial complex as well agriculture and industry which themselves failed to meet both the needs of the country and the international standards.

Finally, the crisis in education did not start after the breakup of the Soviet system but was evident already in the last decade of the USSR period.

Moreover, with all its real or fake benefits, the Soviet system was dogmatic. Any change here is exceedingly complex, and not only for reasons of red tape and unwillingness to reform.

No reform can change the attitudes of a huge mass of teachers brought up in certain traditions and keeping their faith.

On the other hand, it is this conservative faith that kept alive some valuable traditions in the difficult years of transition.

When preparations were made to overcome the crisis, it became obvious that conservative teachers are the main obstacle to reform. And here, I would like to refer to the experience of my own country where reform was mostly aimed towards transforming the Soviet educational paradigm.

At present, we have 4538 schools, including 13 private ones; 48 universities, including 14 in the private sector; 60 secondary specialized schools providing college-style education, including 4 in the private sector, and 107 vocational schools.

Wide regional network and high schools in the cities of Gyanj, Nakhichevan, Lenkoran and Sumgait help overcome the problem of providing access to education for all segments and in all districts.

Educational reform in the first years of independence has seen the need to produce textbooks for different levels of education. Today this problem is resolved. Moreover, textbooks are free for all schools.

Aggression and occupation by Armenia of 20% of our territory has led to a situation in which more than a million Azerbaijani citizens have become refugees in their own land.

For refugee and displaced children, educational environments were created that preserve their former infrastructure. All schools from occupied areas are operating under their former registration numbers and with previous teaching teams.

We made a conscious effort to avoid positive discrimination or establishing any quotas for refugee children.

Today they are full-fledged members of educational process. The only benefit provided by the State is free admission to the fee-based schools.

Annual assessments of enrolment of their graduates in high and vocational institutions have shown that current teaching quality in these reestablished schools is comparable to the average level for the country.

This is a huge achievement of the last decade.

One of the most complex problems of the recent time was the change of the alphabet. I should note that in the 20th century Azerbaijan has seen three reforms of its national alphabet.

The conditions for the first two were provided by several generations of Azerbaijani scholars.

You may be aware that starting in the seventh century the ancient alphabet was replaced by a system based on Arab letters with addition of symbols adapting it to the needs of Azerbaijani language.

Already in the mid-15 century, Mirza Fatali, a great Azerbaijani scholar, philosopher and playwright, spoke of the need to reform the alphabet and replace the Arabic-based system by one based on Latin letters.

In 1923 a Turkic Studies Congress provided main principles for the adoption of a system based on Latin letters and catering for the specific needs of the Azerbaijani language.

Transition – following 12 centuries of Arabic-based writing - was rapid and nationwide. Illiteracy was dealt with unprecedented speed and by mid-1930s literacy levels in Azerbaijan have exceeded 70%.

However, in 1936 the Soviet government imposed its arbitrary and scientifically invalid decision on transition to Cyrillic writing system.

Only after 20 years, during the so-called ‘Khrushchev thaw’ this alphabet was reinforced and changed in accordance with the demands of Azerbaijani grammar.

On the 18th of October 1991 Azerbaijan has restored its independence and decided to return to Latin system of writing.

However this political decision had to be reinforced by education and publishing policies.

Thus, Azerbaijan that eliminated illiteracy back in 1959 faced anew the challenge of engaging its people on a fresh crusade for literacy.

Obviously, information technologists and availability in the country of several thousands of newspapers and magazines helped overcome the problem of mass transition to Latin letters. The last five years have seen a whole generation of children learning to read and write in Latin letters.

However, they are now cut off from the mass of books that have been published over the last 60 years.

Following the Presidential decree on the changeover to Latin-based printing, 262 textbooks with a total circulation of 7 million have been published, each in 25 000 copies distributed among municipal, district and rural schools.

Today the program is in its second phase launched by the President's decree on the publication of 300 textbooks in such categories as *Dictionaries and Encyclopedias*, *Azerbaijani Language and History*, *Classical and Modern Literature*, *World Literature* and their wide availability to students of different levels.

A number of decrees have been adopted to change our educational system. A number of projects carried out by the Ministry of educational received support through World Bank loans.

I would like to draw your attention to the following decrees and resolutions signed by the President of Azerbaijan over the last few years:

1. *Approval of Educational Reform Program*, 15 June 1999;
2. *Improvements in the Educational System of the Republic of Azerbaijan*, 30 June 2003;
3. *Reinforcement of Secondary Schools Infrastructure*, 4 October 2002;
4. *Approval of the 2005-2007 Program for the Construction of New Secondary Schools, Overhaul of Existing Schools and their Provision with Modern Teaching Equipment*, 17 of February 2003;
5. *Approval of 2005-2007 program for the provision of information and communication technology infrastructure for secondary schools of the Republic of Azerbaijan*, 21 August 2004;
6. *Approval of nationwide program for overseas education of young nationals*, 19 October 2006;

7. *Approval of 2007-2010 program for the modernization of preschool education in the Republic of Azerbaijan*, 12 April 2007
8. *Approval 2007-2015 program for overseas education of Azerbaijani youth*, 16 April 2007;
9. *Approval of the thousand seven-2012 program for the development of vocational school infrastructure in the Republic as a budget*, 3 July 2007;
10. *Construction of new facilities to replace obsolescent buildings for public schools and the overhaul*, 16 August 2007;
11. *Establishment of awards for best public schools and best teachers*, 4 of September 2007.

Azerbaijan is proceeding with large-scale school construction. As we start this conference today, thousands of pupils have entered newly built schools.

I'm pleased to note that, apart from state financing, non-governmental sector is actively involved in this endeavor.

The *New Azerbaijan - New Schools* initiative launched by the **Geydar Aliev Foundation** engaged the capacity of the private sector in reinforcing the infrastructure of public schools.

The economy of Azerbaijan is growing. Next year the Baku-Tbilissi-Jeyhan pipeline will be launched while new oil deposits are being put in operation, and the entire oil industry is forging ahead.

However, even if, overnight, we magically overhaul all of the 4538 schools and provide them with new roofs, this will not create a new educational environment.

Whatever we say about the importance of infrastructure, the biggest priority is to establish the required educational environment and improve teaching quality.

The newly introduced nationwide test -based knowledge and assessment model would be instrumental in school reform. It would be complemented by a new extracurricular system of student activities.

Engaging with students in new forms of self-study programmes has led to the production of huge amount of manuals. The Academy of Sciences, the Ministry of education and the State Enrolment Board have pooled their intellectual resources to create a system of workshops that

is partly fulfilling the growing needs for self-training. But this can only be part of the required solution.

Yanusz Korczak, one of the greatest authorities in teaching science, offered a classification of teaching environments based on the following four approaches:

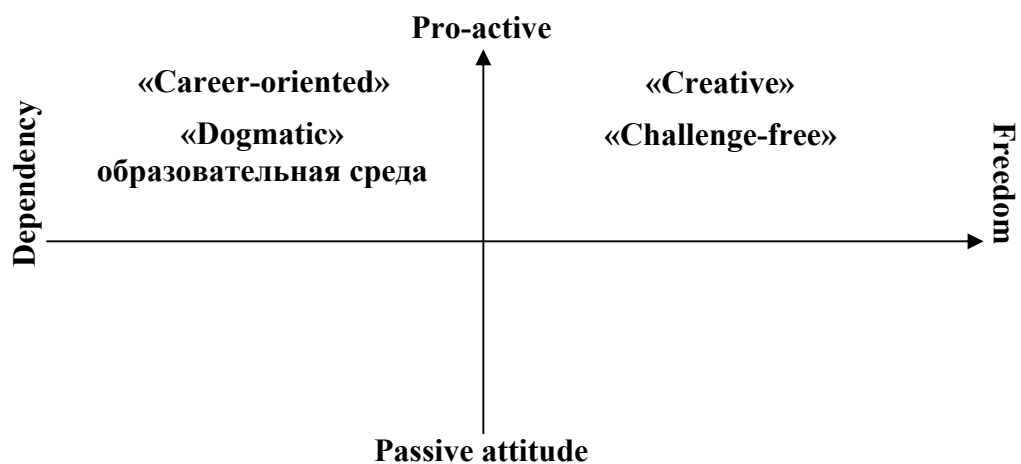
-- dogmatic approach, creating a passive and independent personality;

-- career-oriented approach, creating an active although dependent personality;

-- challenge-free approach producing people that love freedom but lack initiative,

and finally

-- creative approach which encourages love of freedom and personal initiative.



Our dislike of the dogmatic attitude - so prevalent in Soviet years - did not lead us to encourage career-oriented or challenge-free teaching environments as the basic approach.

However, we could not hope that more than 5000 schools could, in a short period of time, produce creative environment within their walls.

Nevertheless the geographic distribution of best-scoring candidates in entrance exams has shown that virtually every district produces children with enormous potential for self-training.

The history of teaching science contains several educational paradigms offered by:

- Jan-Amos Kamenski;
- Jean-Jacques Rousseau;
- Johann Heinrich Pestalozzi;
- John Locke.

Jan-Amos Kamenski insisted that:

- teachers should lead in the transfer of knowledge to students;
- education should be team-based and teamwork should be the basic tenet of educational framework;
- "punishment would have the benefit of at least intimidating other pupils, if not the person against whom it is inflicted";
- educational should be based on norms, rules and methods.

This paradigm became the basic one for transitional states.

According to Jean-Jacques Rousseau;

- individual values should be put above public values;
- educators should adjust themselves to the needs of the students;
- education should center on the needs of the individual.

This type of environment encourages relative freedom was but produces extremely passive personality. In fact, it has never been widely appreciated and was only used by a few teachers.

The model offered by Johann Heinrich Pestalozzi:

- promoted socially passive attitudes with recognition of the need for personal freedom;
- insisted on bringing up the poor in accordance with the spirit of the industry where education should be merged with the operation of industrial institutions;

- did not build up capacity for development and led to passive social attitudes, depriving the student of any chance for self-empowerment.

In fact, this model was designed to provide lowbrow workforce for industrial enterprises and is no longer relevant.

John Locke developed a model that:

- developed initiative and creativity;
- put public values above those of the individual;
- promoted career-oriented although dependent personality.

This model is successfully applied in private schools.

Yanusz Korczak:

- developed a model geared to the individual;
- promoted creative environments that encourage initiative and independence in every child;
- insisted that educational environment should develop students' capacity for efficient personal self-development,
- offered incentives for students to engage in a wide range of activities helping them to become genuine masters of their own development.

It is the latter model that we would like to adopt. However, teaching science in transition states is currently unable to meet the needs of education engendered by a world of knowledge-based societies.

Environments propitious to individual development are highly desirable for the most talented children. But we cannot encourage innovations that create partitions between children. At the same time, teaching methods are not prone to change if the content of education remains unchanged.

On the other hand, crisis in education could be overcome only through improvements in relevant systems.

Here lies the real issue – is it possible to establish a teaching paradigm that would cover all children while preserving their diversity?

Many countries have favored regular selection of the best students who later are allowed to proceed to the next level of education. Thus, the number of graduates after the final school year is the same as the number of available seats at universities, and the only challenge is to distribute them among different faculties.

The constitutions of the members of the Commonwealth of Independent States provide, with few exceptions, the right to complete secondary education. As a result, candidates for universities greatly outnumber their capacity while lacking the required knowledge.

Moreover, incentives to higher education in transitional states are not related to education itself and sometimes boiled down to evading military conscription. This produces a host of new challengers for nationwide knowledge evaluation system and the entire system of education.

According to an old and witty anecdote, two bricklayers, when asked what they were doing at the site where a temple was built, had two different answers. While the first one said that he was simply putting stone upon stone, the second insisted that he was building a temple.

This story is directly relevant to what we are discussing here.

On the one hand, we are putting stone upon stone so that, step-by-step, improvement is achieved. However, this is not our final goal. In the global scheme of things, we are all aware that we are building an information society.

A society based on knowledge.

A society whose image will depend on achieved levels of education.

A society which should have a place for every future generation on planet Earth.