

# **Higher Education System in Mongolia and Potential Reform Areas.**

## **UNDP Consultant Report**

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### **Introduction**

1. The terms of reference of this consultancy focus on assessing the higher education system and identifying potential reform areas. Meetings were held at the Ministry of Education, Culture and Science (MECS) with the Minister, Director of the Department of Higher and Vocational Education (DHVE), and DHVE experts. Ample access to members and support staff of DHVE was provided. Visits were arranged to the state universities (National University of Mongolia, Mongolia University of Science and Technology, Mongolian State University of Agriculture, Mongolian State University of Education, Health Science University of Mongolia, Institute of Commerce and Business), and leading private institutions. Aside from discussions at the MECS, I had useful discussions with the National Council for Academic Accreditation, the National Development and Innovation Committee, and UNDP. I also met with the ABD representative based at MECS, and members of a World Bank team, and was invited to be an observer at a meeting to reduce education budgets in light of the economic crisis. I was supplied with documentary materials (*Master Plan to Develop Education 2006-2015*, *Millennium Development Goals-Based Comprehensive National Development Strategy*, *Science and Technology Master Plan 2007-2020*, *Poverty Profile in Mongolia*, *Statistical Yearbook*, and the higher education working group reports). During the time I was based in an office of the MECS, I was interviewed by the media about the subject of higher education finance which provided me a sense of key issues of concern to all Mongolians. Finally, I would be remiss if I did not give a special acknowledgement to Mr. Dugersuren BAYER. He was a most gracious office colleague who helped me find my way around the Mongolian higher education system and provided me with many opportunities to ask questions. He displayed great patience with all of my questions and requests and I thank him for making it possible for me to learn a great deal in a short time. Other members of the department were also extremely generous with their time despite the many urgent and continuous demands made on government officers.
2. This report will review the tasks at hand, identify insights from international experience, and consider options for moving ahead. While my study of selected aspects of Mongolian higher education gave me the confidence to generally endorse the recommendations made by the working group. I have added other observations and additional suggestions based on international experience.

### **Background: A turning point**

3. Mongolia is at a turning point in the development of its higher education system. After the successful massification of higher education through both public and private initiatives since 1990 that reached

80% enrollment, it is prepared for a major restructuring of the higher education sector. Almost 9.0% of GDP goes to education, which makes Mongolia rank 7<sup>th</sup> highest in the world. Moreover, an education law guarantees that at least 20 percent of government budget is spent on education. However, higher education only gets only 12% of that amount (MP, p. 76).

4. The restructuring of higher education will harmonize with the Education Master Plan 2006-2015 (MP), and will focus on how to improve the quality and competitiveness of higher education and harmonize with international standards. This will involve, among other things, raising the quality of teaching and research, decreasing the number of institutions, rationalizing the cost of higher education, reducing graduate unemployment levels, and expanding the proportion of student in science and technology (engineering, natural science, medicine, agriculture, and also professional education). It also involves tripling the number of students studying in developed countries. All this can only be achieved through a more effective use and consolidation of resources, systematic effort to attract and retain the top talent, encouraging innovation in the short term and reducing the need to import high level talent in the long term, and by a benchmarking with compatible international partner institutions.
5. Mongolia's pre-1990 reform era left it with a high level of literacy, universal schooling, and a relatively solid system of senior secondary education. While equity for women has been achieved, a gender gap still exists: 63.8% of those with a university education are women (WB 2009:89). Since its transition in 1990 from a planned to a market economy, Mongolia raced passed most of its East Asian neighbors by nearly universalizing higher education. However, it now faces an arduous challenge, one faced by all rapidly expanded higher education systems – how to guarantee fair access among urban and non-urban populations, consolidate quality, and increase the relevance of higher education to social and economic development. If it can muster the technical expertise and political will to carry out such a reform, Mongolian higher education can become a global model for developed countries.
6. The largest land-locked country in the world squeezed between Russia and China but also in close proximity to Korea and Japan, Mongolia has become as market oriented as the four Asian dragons of the 1970s and 80s, and like them has drawn the attention and growing admiration of its overseas nationals. After facing toward Russia, Central and Eastern Europe for many decades, Mongolia has begun a tilt back toward the East Asia, a region fast becoming a global engine of economic development with urgent aspirations for building world class universities. Mongolia's higher education system has maintained its long standing educational relationships with Eastern and Central European systems, established significant ties to American higher education and other English speaking systems, but has also deepened its educational partnership links within Asia, especially, Korea, Japan, China, Taiwan, and Singapore. In short, it has established a broad array of multilateral cross-border relationships in higher education, an increasing source of global academic capital.
7. *Mongolia can justifiably launch a large scale restructuring of the higher education system at this time.* It has achieved success in providing universal access to primary and secondary education, though challenges remain. This has been no small accomplishment given the low population density over a vast region. Second, Mongolia's balanced set of economic relationships with the wider world can be facilitated by an expansive and globally engaged system of higher education. Third, such a reform is part of the foundation for a knowledge economy that can add value to the economic capacity of Mongolia, including the strengthening of its capacity in science and technology. Fourth, it already has universities that represent the national identity and possess a great deal of potential to become more

integrated. Fifth, the school system has generally produced students who are confident, disciplined, competitive, and have maintained Asian values toward education, including a respect for teachers. Sixth, at a time of economic crisis, it is especially important not to direct less attention to higher education. There is a risk that when the crisis ends, the system will be further behind. It needs to be move forward as the crisis subsides. Finally, and most importantly, if provided with the right conditions, the academic staff in Mongolian higher education can increase dynamism and potential to become a new force in the development of higher education.

8. A restructured system of higher education can provide a way to more positively mediate the effects of globalization. This would entail refining the view of what type of person universities want to foster among the young generation entering higher education. It would also mean encouraging a healthy spirit of competition; benchmarking the quality of instructional services, raising the standards of research to a more internationally recognized level, attracting the best talent and attracting back many overseas Mongolian students and scholars, consolidating talent and resources for greatest effect, providing more detailed justification for the funding requested from government and other sources; forging a closer link between the new 12<sup>th</sup> years of school and the first year of higher education, and building a more effective governance structure for higher education, both between the state and universities and within universities between managers and academic staff.
9. A number of suggestions and practical measures will be identified at the end of this report.

### **The access debate**

10. The cost of education is increasing and this is especially demanding for non-urban households.
  - a. 67% of the personal loans taken by countryside cattle ranchers families are spent on higher education, so HE is source of poverty
  - b. According to the World Bank, 85.6% of the population 18 years of age and above that has attained a university level education is urban. This contrasts with only 14.4% of those from rural areas. It drops dramatically to 4.4% for those from the countryside, and 4.8% for eastern Mongolia (WB 2009:89).
  - c. Using the World Bank's classification of poor and non-poor, there are 90.3% of the former and only 9.7% of the latter with a university education (WB 2009:89)
  - d. Currently, 70.5% of those enrolled in university are from urban and 29.5% are from rural areas. Only 11.8% are not from Ulaanbaatar or Aimag and Soum centers (WB 2009: 95).
  - e. Nevertheless, of those rural students attending colleges or universities, 74.3% are in public institutions. (The figure for urban students is 69.1%).
  - f. This gap is even sharply mirrored in the capital city where almost 40% of the total population resides.
11. Given the debate over what and whether or not there should be a price tag for the opportunity to study in higher education, the student training fund (STF) will remain a central issue. It already makes possible increased access to higher education for those students who have a parent working in government, and students from poor families. Given that a large sector of the population still relies on

a rural or pastoral livelihood, there is always a need to ensure that access to higher education remains equitable and that those who are cannot afford it are not excluded.

12. It may be worthwhile to consider whether or not STF may function more efficiently with more independence from the Ministry and from institutions of higher education. It would be worth exploring whether the feasibility of STF receiving funding directly from the Ministry of Finance and contracting grants and loans to students.
13. A bigger question is whether or not Mongolia has the current conditions to support a more sophisticated system of student loans. The experience of developing countries with student loans was recently encapsulated in a World Bank paper entitled: "Financing Higher Education: Lessons From Developing Economies for Developing Economies" (2008: 143-174). *It might be useful to examine the best practices in the different student loan systems of developing countries.*
14. The international scene does have a few examples in which higher education is free. However, there are few countries in the current era that moved from fee-paying higher education toward free higher education. In fact, with the global trend toward massification of higher education, the norm has been for students and their families to take on a larger and larger share of the cost of higher education. This may be difficult for some sectors of the Mongolian population. Therefore, the cost of higher education should not bar herders and nomads from sending their children to institutions of higher learning if they are admitted to college or university. However, higher education is not compulsory. Most students choose to attend because they perceive an economic benefit will accrue to them after attaining a credential. *For those that attain such benefits, it would not be unbefitting that they shoulder a proportion of the costs of their higher education.* This is also another reason why the quality of higher education is of the utmost importance.
15. *Given the high cost of tertiary level education in comparison to primary and secondary education, most governments see it more sensible to concentrate their funds on a limited number of state institutions, including one or more national flagship universities, and to create a high standard which other institutions, both public and private can follow.* Funding public higher education or only a select number of public institutions should not be viewed as handicapping private higher education. However, public institutions should not be permitted to use their public land and resources to offer second level of course offerings that are profit-making full-fee programs. This can be unfair competition, unless similar benefits are available for private institutions.

## **The Tasks Ahead**

### *Rationalization*

16. The road that Mongolia chose since 1990 has left it with a market system whose national characteristics could not be fully anticipated at the time. For example, while it has led to increased access to higher education and much more open thinking about higher education, there was rapid approval for the establishment of private institutions of higher education that left the system, something that has worked against the attainment of economies of scale and could become an obstacle to raising the level of quality instruction and research. Moreover, the transition has left Mongolia with a large number of institutions of higher education that do not act together as a system, but rather as a

highly undifferentiated collection of public and private colleges and universities. There is as yet no mechanism for integrating the missions and programs of different institutions. This also holds true for entrance requirements and research programs.

17. *Thus, there is a critical need for a strategic approach to developing an interlocking system where the whole higher education sector can act as one force, with each institution fulfilling a unique role, based on its strengths; works with institutions to ensure that each provides excellent teaching in all areas relevant to its role; aims to promote international competitiveness where it occurs in institutions, understanding that all will contribute to this endeavor and that some institutions will have more internationally competitive centers than others; and values a role-driven yet deeply collaborative system of higher education where each institution has its own role and purpose, while at the same time being committed to extensive collaboration with other institutions in order that the system can sustain a greater variety of offerings at a high level of quality and with improving efficiency. That collaboration also includes increased cross-disciplinary collaboration within individual institutions.*
18. *There is a good case to consolidate the top institutions into one flagship university. There is an equally good case to be made for consolidations of other institutions so as to attain economies of scale. However, it could be counterproductive if institutions are pressured or urgently legislated to do so. If there is significant resistance, then it is best accomplished without haste and in a series of stages. This might begin by earmarking a special fund as an incentive for cross-institutional cooperation. Departments of different universities would use the fund to design ways to eliminate duplication, establish a joint program of teaching and research, and work together to strengthen capacity. Part of the fund could be used as an incentive for two or more institutions to identify areas of cooperation and to begin by fostering a consolidation of selective programs.*
19. *In order to accomplish this, an effective mechanism, such as a Commission on Higher Education can be established to move matters forward. This group would be composed of recognized leaders from academic and other social sectors in society and economy, as well as overseas academic leaders. The Commission would establish a secretariat and do a thorough review of the higher education system with an eye to rationalization. It would consult widely across society, take written submissions, and make recommendations about the restructuring of higher education. Among its main tasks would be to bring about a modern governance structure consisting of Councils that would advise on funding for taught academic programs degrees by research, as well as research grants. These Councils would be autonomous so as to encourage and foster a lively and dynamic dialogue across the nation about the improvement of higher education.*

#### *Attaining international recognition*

20. *There is little hope in developing recognized international standard universities without substantial resources and focused support from government. Although the top universities in the United States, for example, are private, yet their status as research universities has inordinately benefitted from and been highly dependent up massive government grants, especially in science and technology. Despite the current economic crisis, the reforms must go ahead with government providing a certain amount of support. If so, then universities need to substantially raise their levels of accountability and fiscal responsibility. At the same time, colleges and universities function best when they are relatively autonomous. This means granting statutory autonomy to institutions of higher education and making*

*them accountable under the law to the legislature*, as the representatives of the people, in order to ensure more public accountability when funding bills are legislated.

21. An outside observer with a general knowledge of the Mongolian higher education system would immediately note an anomaly in the mode of finance. While some countries like the United States have been successful in having many highly esteemed private higher universities, this has been less the case in East Asia. Due to different histories of state building, East Asian neighboring countries, (including Japan, Korea, China, Singapore, Malaysia, Thailand, Indonesia, etc.) have strongly promoted private higher education in recent years but have focused most of their resources on a limited number of public universities. In short, while Mongolia can and should rely on private higher education to meet the growing demands of access to higher education and a diversifying job market, it should consider providing the resources needed to make its major public universities more highly recognized by 2020 or earlier. This is not meant to marginalize top private institutions. However, some state institutions seem in a better position at present to benefit from a concerted effort to raise their international profile through a systematic injection of funds.
22. A mechanism is needed to ensure that funds from government are dispensed in the form of block grants to individual universities, each bound by law to report back on the use of these grants. The size of these block grants would be allocated based on a systematic analysis of proposals put forward every three years by individual institutions to a Grants Council, composed of a distinguished panel of appointees with a secretariat to support their work. Proposals for the block grants could be based on a formula with student numbers, new and continuing programs, etc.
23. Legislative sub-committees can reduce or expand the size of these grants and give serious consideration as to how to avoid overlap across programs and institutions. However, *once dispensed to the individual institutions, the use of the block grants would be at the discrimination of the university management team. For example, the university management team may choose to top-slice a five percent portion of the block grant for discretionary use as incentives for young staff, or to build areas of academic excellence, etc.*
24. It is also worthwhile to set up a system by which units of the university that perform better get larger allocations. For example, while the block grant proposal may be based on the number of students, the speed at which units produce high performing students would matter in obtaining more funds. Units that take longer to accomplish goals can be penalized with a smaller proportion of funding.
25. The issue of the relationship between university administration, schools, departments and research centers merits more attention and can be taken up elsewhere. Reviews of research centers, school audits, individual staff appraisals, will all be taken into consideration.

#### *Governance: Steering*

26. More consideration can be given to the modality of reform. From an international perspective, the government provides most of the funding for higher education and has the legal power to determine broad policy directions. In Europe, such power is called “steering” and is subject to considerable debate. As European academic systems expanded, governments, which fund higher education, took increasing control over how these growing systems were organized. Internal academic management

remains mainly in the hands of the academics, but demand for accountability on academic performance is slowly changing the equation. The United Kingdom is a good example of how a state has exercised increased authority—measuring academic performance, imposing increasing fees on students, and the like. The academic community has had little impact on these policies, often unsuccessfully opposing them.

27. In the United States, colleges and universities have always been subject to the control of boards of trustees or regents. In general these boards have no academics on them, which is why they are called “lay boards.” These boards appoint presidents and other top administrators and determine institutional policy. Presidents serve, as the saying goes, “at the pleasure of the board.” (A few years ago, Harvard’s board, called the Corporation, lost confidence in the president and he quickly resigned. The faculty did not remove the president nor did they elect the new president).
28. Most American universities have a system of shared responsibility for policy. Academics determine key internal matters, including having a voice in the appointment of top administrators. Lay boards, which in the public universities are generally appointed by government authorities, are the main arbiters of the direction of the institution.
29. Many in the academic community worldwide argue that academic staff, as the heart of the university, should have a large measure of control over their universities. Academic institutions, before the age of mass higher education, did have a significant measure of institutional autonomy. But since massification, the power of the academic community to shape the destiny of their own universities and of higher education in general has been diminished.
30. Worldwide, the impact of marketization, the expansion of universities into giant bureaucracies, demands for accountability, and related forces have revolutionized the internal management of universities and how decisions concerning the direction of academic systems are made. This is why it can be unproductive to have centralized control by government in a market-oriented higher education sector that received minimal budget support from the state. Furthermore, it can lead to diminished quality in the system as institutions began to blame low quality on government regulations rather than taking responsibility for their own managerial strategies to increase quality.

#### *The status of private higher education*

31. In the case of Mongolia, private higher education institutions are attracting many more students in the areas of social science, humanities and business studies. Some proposed that a division of labor where state institutions would focus on the science and technology fields, leaving social science programs to the private sector. While private institutions might not have the capital and resources to compete with public institutions in fields of science and technology, such a division of labor can become counterproductive. Also, national universities should be able to set the pace in the social science and humanities programs as these get at the heart of national identity, core cultural values, civic responsibility, citizenship, and educational traditions. *Private universities should also be able to offer programs in both science and technology and social sciences and humanities, provided they meet the stringent quality standards that are also expected of the public institutions. However, differentiating the programs enough to avoid overlap should also receive attention.*

32. In fact, there seems to be a *need for a discussion about how much to orient Mongolian higher education to national, regional, and global demands*, as well as the extent to which market forces should be permitted to affect that balance, and whether there should be a differentiation of roles by different institutions. Obviously, the state will have to take on a steering role in this respect based on the widest possible discussions over this issue.
33. The issues involving private higher education remain complex but not insurmountable. The higher education system cannot survive without the private sector. However, in Mongolia, the private sector is still relatively new and in a formative stage of development. Many institutions are small and cannot attain economies of scale. *The solution to this kind of problem cannot be left to market forces alone. Education is unlike other marketed good. In many cases, poor quality institutions survive out of misinformation or out of the public view that it is better to have some higher education rather than none at all.*
34. This leads to the question of whether private higher education should be profit-making. This is a hotly debated issue worldwide, and national sentiments usually shape thinking about this. Mongolia can discuss this in terms of its own national characteristics. However, there may be a need for this to lead to the propagation of amendments to the law on higher education. *Generally, best practices dictate that education should be a non-profit enterprise and that any surplus be used to improve the system. Yet, some small profit-making might be sensible if it acts as an incentive to improve quality and fill demands that would be otherwise unmet.*
35. Private institutions have a right to compete. However, it is also critically important to ensure that they do not fuel credentialism. Some students and employers may not be able to differentiate between high and low quality credentials, especially since many new private institutions are identified by auspicious names, while not enough time has gone by for the public and employers to assess the true value of a credential from a particular institution. *The fact remains that private higher education has played a significant role in Mongolian higher education and is run by many committed individuals with a great deal to offer the system. However, not all of these institutions can be integrated into the larger system. Strategic discussions are needed and issues have to be debated by all those involved.* The risk is in adversity to change. Change is uncomfortable, but clinging to the past is not feasible. For all higher education institutions, or at least those that aspire to top levels of quality performance and recognition, the status quo is a mirage.
36. *The issue of underperformance of institutions of higher education will have to be faced at sometime in the near future.* Should they merely be accredited or denied accreditation? In short, should low performing institutions be permitted to continue or to be discontinued or be left to market forces? Would it be more productive to benchmark the quality of higher education institutions and provide a period of time for those at each level to move upward in quality? Again, this issue deserves more detailed consideration, discussion and regulation. One thing is for sure. In higher education, the issue of quality cannot be left to market forces alone.
37. *Students, especially those from the first generation in their family to attend university, need guidance and protection from sub-standard higher education.* It is already clear that many parents are concerned about the quality of higher education, perhaps even more than many administrators of private higher education. However, the decision on which institution to attend should still be a personal decision.



Wealthy families who are willing to pay full fees and not get tuition support should be able to attend the academic programs they choose. For students that receive tuition assistance (not loans), there is a need for government protection and a guarantee that they are receiving a quality education that has a good possibility of leading to productive employment.

38. A series of discussions coordinated by a high level Commission on Higher Education has the potential at this historical moment in time to lead Mongolian higher education toward an interlocking system in which the whole sector can act as one force with each institution fulfilling a unique role, based on its strengths. Only in this way, with a highly collaborative system, can one promote high quality, international recognition and global competitiveness.
39. Such discussions have to be ongoing. Planning and deliberation on higher education cannot be limited to one particular time period or issue. It has to be as dynamic as the environment around it. Such ongoing deliberations can also consider contingency plans for higher education should it encounter unexpected events such as another global economic crisis.
40. In point of fact, any *discussion about the needs of Mongolian higher education has to begin with the main purpose of a higher education. Unless it can answer this question, one which binds all institutions of Mongolian higher education together, then it cannot go forward to consider system refinements in which with each institution fulfills a unique role, based on its strengths.*

#### *The undergraduate experience*

41. Since Mongolian higher education is primarily about undergraduate learning, then its main business for now is the bachelor degree. This does not preclude a serious discussion about establishing an internally recognized research university. However, the main purpose of research in the current system should be to support high quality teaching. Therefore, one first needs to consider basic questions: What kind of citizen, knowledge worker, or technical specialist should be the focus of learning in an undergraduate education? *What should every Mongolian expect from a higher education? This moves the purpose of higher education beyond being a high level vocational training agency focused solely on job preparation.* While this does not diminish the need to prepare students for the job market, this needs to be in balance with the main purpose of learning in higher education.
42. Therefore, it is essential to have a clear conception of the major purpose that Mongolia wants to set for its higher education system. This is a precursor to other functions such as job preparation and it is also an indispensable basis for more advanced study as well as for the building a research university. For example, the *global discourse is full of reference to a multitude of traits that university students as global citizens should possess and as graduates who need to succeed in a modern competitive global economy.* These include being flexible, innovative, risk taking, adaptable, ethical, able to learn complex and cross-cultural communication skills, work collaboratively, possess analytical and cultural intelligence, ability to learn how to learn, and resourcefulness. Others would include becoming a competent explainer, synthesizers, model builder, problem solver, and localizers.
43. The fields of humanities and social sciences do not have a monopoly on these traits. Students in science and technology and its many specialist sub-fields also need a university education that prepares them for leadership and advocacy for the improvement of the human condition. A university

degree does not only certify a specialist in knowledge about mining, for example, but also a person who is committed to critical thinking, self-reflection, greater understanding of others, and upholding personal and professional ethics. Thus, there are things that any higher education system needs: It needs to define how its education addresses the cultural, social, and economic needs of the national development, but also the needs of individuals and groups for life-long learning in a world in which intellectual enquiry is the basis for engaging novel situations and newly emerging problems. *A general education course in higher education could begin by re-orientating students to learning, with new and different learning approaches and ways of thinking and investigation.*

44. In short, *there needs to be a clear set of values that guide the restructuring and reform.* These might include some of the following and those selected or added can be prioritized to guide deliberations: Quality focused, equitable, learner centered, value added, responsive, innovative, cost efficient, publicly accountable, ethical, socially responsible, etc.

#### *Bridging secondary and higher education*

45. The extension of schooling to 12 years deserves more attention. How much of that year should be used orienting students more toward future study of science and technology? A program of general education or liberal studies would become an induction to higher learning that facilitates the transition from secondary to higher education. *Rather than a single minded focus on examinations in that final year of schooling, students would focus more on the relevance of knowledge and skills to society and their futures. The emphasis would be on developing key intellectual abilities that would later enhance their study of specialist areas, whether it be engineering, health sciences, agriculture, etc., with a stress on relevance.*
46. Such curriculum considerations span the bridge between senior secondary school and higher education. As the enrolment rate in higher education begins to reach 80%, it is essential that more thinking be focused on how secondary schools are preparing students for college and university. The new additional year of secondary school presents itself as an important opportunity. This may also necessitate the need for an upgrading of students development services on campus.
47. This is more the reason to facilitate the transition from secondary to tertiary education. Colleges and university can consider establishing student development services with professional specific training in the field. *The degree to which students adapt to the new challenges of the learning environment in higher education, the more they will be able to quickly overcome personal problems, surmount academic challenges and made effective use of their time.*
48. Students prefer to academic rather than vocational/professional tracked higher education. Yet, there is a clear need for more middle level technical talent in the economy. Community oriented junior colleges that have vocational/professional courses and confer an associate's degree but hold open the possibility for articulation with bachelor degree programs upon graduation can be considered.

### **Quality: Research and Teaching**

*Benchmarking: national and international systems of ranking*

49. International league tables have become a daunting and unavoidable reality. Despite the many negative aspects of league tables, they have served the function of benchmarking universities and academic departments. While these ranking systems should not drive all that happens in higher educational reform, universities should be aware of where and why they are ranked as such. In the case of Mongolia, being ranked 7<sup>th</sup> in the world in the percentage of GNP for education raises expectations that it would have one highly recognized research university.
50. *Serious consideration should be given to establishing a National Flagship University with outstanding teaching and research that would have a higher international visibility.* As part of this activity, a newly established and expanded university town campus within or close to the city of Ulaanbaatar could be build for this purpose.
51. One characteristic of national flagship universities is that they often have many alumni and distinguished graduates in all sectors of society. *a multitude of traits that university students as global citizens should possess and as graduates who need to succeed in a modern competitive global economy.* These include being flexible, innovative, risk taking, adaptable, ethical, able to learn complex and cross-cultural communication skills, work collaboratively, possess analytical and cultural intelligence, ability to learn how to learn, and resourcefulness. Others would include becoming a competent explainer, synthesizers, model builder, problem solver, and localizers.
52. *This may take many years but there is no better time to begin to make the branding of the university more salient so that closer affiliation of alumni with ongoing university activities translated into relevant national and international social capital.*

*Building internationally recognized research universities*

53. While the focus of the reform should probably be on undergraduate education before moving on to advanced degrees, *much of tomorrow's economy will be born today in university research laboratories.* Moreover, there is a threshold of talent in Mongolia's premier institutions that if consolidated, could significantly raise the profile of a major research university. *However, in order to establish a research university, the current 10% graduate student population at top universities would have to grow closer to 25%.* Young teachers have little time for research and if they do not develop their research profiles early in their work careers, the universities will suffer years from now with deadwood, and will either have to continue to support low producing staff or encourage departures.
54. Regarding the current state of performance, there are two notable issues related to teaching and research. It is *difficult to achieve quality with student teacher ratios of 23:1, which seems to be the case at many public universities. A better ration would be 12:1 or 13:1.* Not only does the current ratio place a heavy burden on teachers but it also leaves them little time to do research that would contribute to their teaching.
55. It seems that most research grants go to the Academy of Science where basic research predominates. Some Academy of Science staff members teach at universities in a part-time mode to increase their salaries. There is a good argument to find a way that the Academy of Science can help strengthen a research university, either through consolidation or collaboration. Bringing them and other such units under the university would be of benefit to both.

56. The system-wide aspiration to upgrade the quantity and quality of research cannot be met without a body that is specifically designated to confer research grants. Much more is necessary before this can take place. Detailed guidelines and a detailed review would need to be carried out. The question needs to be more fully considered as to what constitutes research, what are the standards of quality of research papers, and on the relevance of research to specific aspects of Mongolia's development..
57. The relationship between a research grant council and the academy of science needs further consideration, especially as it concerns funds for specific areas like education, engineering and medicine. All of these councils would have to be linked to the ministry of Education, Science and Culture. Membership of councils should include those from the higher education sector, civil society and the NGOs, commerce and industry, and government. The Minister can call for nominations to these councils by notice and through the media.
58. Other considerations could be taken up, such as the balance and trade-offs between producing research of international visibility or national relevance, or *whether matching funds should be provided by government to encourage initiative on the part of institutions to raise private funds or donations for research.*

#### *Quality in undergraduate education*

59. Whatever type of governance is instituted, it has to be able to strengthen competitiveness. A worst case scenario would be if the number of graduates increases but they are ill equipped with knowledge and skills and unable to meet national development needs. At the very least, national universities need to be able to supply the high level talent needed for national development, evidenced by being able to compete with the graduates of other countries who are currently working in specialized positions in Mongolia. The aim should eventually be to move from importing high levels talent to producing enough local high level talent and importing basic labor instead.
60. There is clearly a need for focused support for the development of high quality teaching and learning, ways to identify best practices, performance based objectives, and a more systematic approach to problem based learning throughout higher education. In short, funding needs to be made available for staff development in teaching, a kind of capacity building that goes beyond just better teaching and into the scholarship about teaching. *Grants are needed for a competitive exercise that would reward innovative ways the improvement of teaching would be offered for this purpose within the larger framework of funding.*
61. When higher education systems grow and expand, inattention to quality places the entire enterprise at great risk. That is why a fully independent statutory council for quality assurance and accreditation needs to be established as soon as possible (there is now an accreditation unit). Its two functions, to accredit and promote quality would need to be separate. For example, participating in quality assurance activity should not, in itself, lead to accreditation, as going to driving school should not guarantee a driver's license.
62. The heart of the university is and will remain the academic profession. The nature of the work of the academic profession has changed rapidly throughout the global academy. Attracting the best and brightest into the academic profession has become a growing concern worldwide. When higher education was directed at an elite and less complex than it has become in the era of massification,

academic staff had a great deal of autonomy and less work pressure. The current state of the profession does not have the attractiveness in many countries that it once had. Therefore, I recommend a study of the academic profession in Mongolia's higher education system. *A better understanding of the profession in comparison with that in other countries will provide a better basis for management policies and practices in colleges and universities.*

63. Academics in Mongolian higher education have heavy teaching loads and high student teacher ratios. Despite the consensus about the needs to improve instructional quality, increased demands for assessment and evaluation is likely to be met with some trepidation unless it is as much driven from below as from above. *Rather than regulations on improving quality, it is more important to foster a culture of quality.* While summative evaluation is necessary for tenure and promotion, there should be an *equal amount of attention to formative evaluations that are collegial* and can help academic staff identify areas of strength and weakness far in advance of summative assessments and annual performance based reviews.
64. Teaching remains at the center of most academic work and while good scholarship should not separate teaching research, and service, it is possible to take a single out the quality of instruction for special attention. My visits to colleges and universities convinced me that the management teams of these institutions are giving serious attention to improving instructional quality, much more needs to be done. Methods of teaching are given more attention than methods of learning. I heard a great deal about problem based learning, *but the diversity of intellectual styles among students gets far less attention.* Student ability levels get more attention than how students use their abilities differently to solve educational problems. The more teachers can differentiate among the intellectual styles of different students, the more they will be able to foster more creative and innovative styles of thinking, styles that harmonize with the needs of a rapidly changing economy and society. I would here recommend a program of research on the intellectual styles of Mongolian students (as well as their teachers) and workshops aimed at practical ways to improving instructional practices.
65. My visits to colleges and universities were very useful. However, it was not possible in a short period of time to know to what extent any of the following were being effectively used to improve quality: *mentorship schemes, student development services, learning centers, cross-disciplinary team teaching, classroom multimedia services, web based instructional delivery, web based students to teacher communications, and external reviews of academic programs and student assignments.* While there may be difficulties with having all programs assessed annually by overseas external examiners due to costs incurred in translating a large package of program materials and student assignments, it might be economical to choose one program each year for external examination, thus minimizing translation costs. This would also raise the international visibility of programs.
66. Moreover, given the increasingly worldwide shift to cross-border higher education which offers the possibility of a more diverse and international experience, Mongolian higher education may want to be in a position to take advantage of this trend. This means finding better ways to attract short or long term students from developed and developing nations, integrating them into campus life by providing opportunities for them to share their cultural traditions with Mongolian students, and creating an atmosphere in which Mongolian students are able to present their national culture in a dynamic campus environment. For students from Mongolia that cannot afford an overseas education, such

activities with academic staff and students from other parts of the world can help create a virtual international experience on their home campus.

67. Finally, planning could begin at one university for the establishment of a center for the advancement of university teaching. One role of this independent center would be to provide support throughout the university but especially for young academic staff by running workshops and providing various services that foster a culture of quality.

## **Other recommendations**

### **1. Overabundance of colleges and universities:**

- a. benchmark quality levels, set targets, offer support, set deadlines
- b. operationalize a culture of quality as it harmonized with established styles of scholarship, including teaching, research and service. Increase the emphasis on formative as opposed to summative reviews.
- c. offer incentives for but do not compel consolidation
- d. provide grants for cross-institutional collaborations
- e. encourage some institutions to convert to community oriented junior colleges that have vocational/professional courses and confer an associate's degree but hold open the possibility for articulation with bachelor degree programs upon graduation can be considered.

### **2. Obstacles to enhanced student learning environments**

- a. Give special attention to how to link the new 12<sup>th</sup> year of schooling with post-secondary colleges and universities.
- b. Provide students with more, better, and accurate information for making choices regarding their further education, including how to make better choices of academic or vocational/professional programs in colleges and universities after graduation from secondary school.
- c. Establish student development centers on campus with trained professionals in the area of student development.
- d. Balance the current focus on quality instruction with more of a focus on the nature of student learning. For example, student ability levels get more attention than how students use their abilities differently to solve educational problems. The more teachers can differentiate among the intellectual styles of different students, the more they will be able to foster more creative and innovative styles of thinking, styles that harmonize with the needs of a rapidly changing economy and society. A program of research on the intellectual styles of Mongolian students (as well as their teachers) and workshops aimed at practical ways to improving instructional practices.
- e. Establish professional career services on campus and involve students beginning after their first year of study in anticipating their careers after graduation. Involve business and commerce in the activities of the careers service office.

- f. Cultural diversity promotes learning. Actively recruit many more foreign students for one or more semesters of study on campus, establish international students centers and have a program of activities in which local and international students can benefit educationally.
- g. Improve mentorship schemes, student development services, learning centers, cross-disciplinary team teaching, classroom multimedia services, web based instructional delivery, web based students to teacher communications, and external reviews of academic programs and student assignments.
- h. Consider what among the multitude of traits university Mongolian students need as global citizens and as graduates who need to succeed in a modern competitive global economy (i.e., being flexible, innovative, risk taking, adaptable, ethical, able to learn complex and cross-cultural communication skills, work collaboratively, possess analytical and cultural intelligence, ability to learn how to learn, and resourcefulness. Others would include becoming a competent explainer, synthesizers, model builder, problem solver, and localizers).

### 3. Raise the visibility of an internationally recognized flagship research university

- a. In order to establish a research university, the current 10% graduate student population at top universities would have to grow closer to 25%
- b. Student teacher ratios of 23:1 need to be reduced for academic staff to have the time for research, high quality teaching, and service beyond the university.
- c. Require academic publications in international journals for tenure and promotion.
- d. Improve salaries and working conditions.
- e. Institute an up or out career sequence. Provide two three year contracts. Those not granted tenure are not provided with another contract.
- f. Grant statutory autonomy to public institutions of higher education and make them accountable under the law to the legislature for their budgets.
- g. Disperse block grants to institutions but permit university heads to top-slice a five percent portion of the block grant for discretionary use. These funds can be used to build areas of academic excellence, be incentives for young staff, etc.
- h. Academic staff granted more opportunities to present their research overseas.
- i. Begin building a culture of philanthropy and capitalize on alumni networks. Establish an office of alumni and university development affairs and more regularly involve alumni in the establishment and branding of a research university.
- j. Have government provide matching funds for large donations to public universities.
- k. Strengthen governance capacity: Recruit deans externally, appointed by and accountable to the president, after consultation of views of academic staff.
- l. Regularly have key academic programs externally examined.
- m. Given the high cost of tertiary level education in comparison to primary and secondary education, concentrate funds on a limited number of state institutions, including one or more national flagship universities, and to create a high standard which other institutions, both public and private can follow.
- n. Identify international peer universities, benchmark quality with them and systematically build partnerships.
- o. Plan and execute a series of systematic study delegations to other higher education systems to examine what dimensions might be adapted to particular aspects of higher education reform in Mongolia. For example, this might include focused study tours to major systems but also to smaller systems such as Hong Kong and Singapore where there is a concentration of government supported internationally

recognized universities but where the promotion of high quality private higher education has recently become a priority.

### **APPENDIX: 8 Key questions w/answers**

1. The location of Mongolia's higher education is located in the international setting. International comparison on key indicators such as (1) government expenditures on higher education and per student expenditures, (2) # of institutions, (3) # of faculty members, (4) R&D budget , and (5) salaries of faculty members may provide a good picture.
  - a. Mongolia ranks 7<sup>th</sup> in the world in the percentage of GDP for education. The Education Law requires no less than 20% of the government budget be spent on education. However, higher education only gets about 11% of the education budget (12.4% in 2009-2010 but will drop to 11.2% in 2015).
    - i. If educational finance is handled responsibly, spending more on higher education usually translates as higher quality. For example, Hong Kong spends about 30% of the education budget on higher education. Though this is more than Singapore, Korea, and Japan, Hong Kong has the highest concentration of top rated universities in one city than elsewhere in Asia. Nevertheless, one could argue that several other Asian countries do not allocate a much larger slice of the pie to higher education than does Mongolia. However, these societies have large private sectors that enroll most of their students. For example, in South Korea, Japan, Taiwan, the Philippines, and Indonesia, private universities enroll the majority of students—in some cases upwards of 80 percent. Mongolia's private institutions of higher education only enroll 34% students.
    - ii. With respect to per student expenditure as a percentage of GDP, Malaysia and Hong Kong tower over all other Asian countries (except perhaps India), but I could not get a precise comparative figures for Mongolia. UNESCO's data base has some figures but they may be out of date for Mongolia.
  - b. There are far too many institutions of higher education. If there are 162 institutions of higher education, then the average number of students at each institution is about 900 students. This is no way to attain economies of scale. Moreover, Mongolia should consider following the lead of other developing countries in consolidation of institutions. For example, the average number of students in higher education was 3,112 in 1990, up from 1,919 in 1990, when about 80% of China's institutions of higher education had less than 4000 students and 60% had less than 3000 students. By the year 2000, 612 colleges and universities were consolidated into 250. Several universities now have over 50,000 students. Other developing countries, such as those in Southeast Asia are dealing with similar problems, especially at the outset of privatization when there are many small colleges and universities being established. However, after the initial phase of privatization when the number of institutions grown quickly, there is a need for quality assurance that often ends in the closure and consolidation of many institutions.



- c. There are too few faculty members for the large number of students, about one faculty for 23 students. For example, it is 10.5 at the University of Pennsylvania, 11.5 at New York University, and UNESCO has the international figures. In Singapore's NUS engineering faculty it is 13 to 1. In the recent QS World University rankings of top universities in the World, student-faculty ratio counted for 20% of the ranking. Of course, student-faculty ratio is not automatically indicative of quality teaching and research.
  - d. The R& D budget is certainly important for strengthening research universities. However, one has to be careful about making a direct association with research productivity. For example, the R&D budget for Hong Kong is 0.7% of GDP, extremely low by international standards. However, it has some of the highest rates per capita of research publication productivity in the world. Still, a R&D budget that is only 0.28% of GDP (Mongolia) places Mongolia 70<sup>th</sup> in the world. [Hong Kong ranks around number 50]. Moreover, Mongolia has a military and natural resources and Hong Kong does not. Therefore, Mongolia is quite far behind in terms of R&D budget and it is difficult to have research universities at that level.
  - e. I already mentioned low salaries of academic staff and how it has led to a brain drain. It is no surprise that Mongolia is unable to attract enough top academics. I have met several (not noted in my report) faculty who left the university to go into business because of the poor salary and working conditions in the universities. Attracting the best academic staff has to be a priority
2. Mongolia has 80% enrollment in higher education while the higher education sector receives very limited resources – is the level adequate, especially in view of resource allocation?
- a. I think it is clear from my report that with respect to resource allocation, Mongolia is not in line with those of its high performing neighboring systems of higher education, namely Japan, South Korea, Singapore, China, Hong Kong SAR, etc. where government provides a great deal of financial support and resources to the top national flagship universities.
  - b. The level of resource allocation may have been adequate before, especially in the early 1990s when the economy fell backward after the drop in financial support from the USSR. At that time it was crucial to make investment in basic education and literacy the most important priority. However, if there is a genuine intention to raise the quality of higher education (particularly in the top institutions which could lead the rest of the system), then more substantial and sustained government support is needed. Of course the question follows: Should a larger slice of the education budget be directed at higher education, even when there will be another year added onto secondary school (and in the midst of the global economic crisis)? The answer is yes but there is a need for careful consideration of the pace of investment and one does not want to lose ground with respect to the Education Master Plan 2006-2015.
  - c. It is important to consider whether the government can shoulder the entire cost of a substantial quality upgrade. That is why it may be important for the government to focus on a limited number of institutions, and also to institute a formula by which those institutions that are able to attract funding through donations, either domestically or from overseas, should receive matching funds from government.
  - d. In the long run, the state universities should not look to government to be the main financial supporter. However, at this stage, the government should help position the state universities so that that can eventually raise most of their funding by themselves. That is not possible now or in the near future. It will be a gradual process that will take several years to a decade.

3. The student training fund (STF) benefits both students who have a parent working in government and students from poor household. What would be the breakdown of the beneficiaries? Is this scheme more beneficial for poor students, rather than government officials and their children.
  - a. It is not easy to sustain the argument that students who have parents working in government should be advantaged in terms of financial support for higher education. In the long run, such a policy will do little good for inspiring confidence in government. Like LaRocque and Yee (2004) study of STF, I question the civil service entitlement. I cannot find a clear breakdown of the beneficiaries and not could locate the full text of the LaRouque and Yee report. I have not seen or heard of much fresh thinking about student fees and loans in higher education except for the recent public pledge to introduce free higher education. While no capable student should be prevented from continuing his or her education due to poverty, the answer would seem to be a national system of loans, rather than free education. The experience of developing countries with respect to student loan schemes is varied. Those developing countries which do not have the infrastructure needed to institute a comprehensive loan scheme are cautioned about starting one. However, Mongolia has a much smaller and more manageable population than countries such as China or Vietnam. It should be possible to launch a viable system of nation-wide student loans for higher education, one that can guarantee a high degree of cost recovery.
  
4. There is a mismatch between the fields provided in higher education institutions and the fields required for the job market. Are there any further insights on this matter (e.g., possibility of fostering public-private partnership).
  - a. At this time, the job market does not appear to be diversified and the intention to support a decrease in social sciences and increase in science and technology makes good sense in light of the expectations for the increased excavation, processing, and export of mineral deposit related products. I also heard the view, but did not get systematic empirical proof, that students preferred the social sciences because it was easier to attain passing grades, and because the schools did not prepare them adequately in mathematics. This is another aspect that could benefit from more detailed examination.
  - b. I raised the question of public-private partnerships in my discussions with university leaders and other academic and administrative staff and all could point to their progress in this area. They are aware of the importance of public-private partnerships and know that universities around the world have made this a priority. However, I did not have the time to speak with private industry about their views and experiences concerning partnerships with universities. This would be a separate consultancy. The economic atmosphere during the time of my visit was colored by the global economic crisis. The future after the crisis is viewed as an economy

with a heavy reliance the excavation and processing of mineral deposits. Yet, no feasibility study exists that posits possible scenarios of development with public-private partnerships between universities and new industries that will improve the job market for graduates on higher education. The extent of planned economic diversification also remains an important question as it related to planning in higher education.

5. The report mentions that the purpose of the higher education is not only to prepare students for work, but also to foster students' development as a whole. On this point, Would the current curriculum as well as teaching method at higher education institutions require substantial re-thinking. If so, how?
  - a. The opportunity presents itself now for substantial rethinking about the purpose of higher education, especially with the new 12<sup>th</sup> year of schooling. With an 80% enrollment in higher education, there should be a relatively seamless intellectual transition from secondary to tertiary education.
  - b. My discussions with students revealed a clear sense of national and cultural identity. However, beyond that the discussions with them did not give me a sense that they exuded a stakeholder view of higher education and the national development. Universities worldwide are wrestling with how to integrate the concept of global citizenship into first year curriculum. The undergraduate has to remain vibrant through a lively discussion and debate about curriculum and teaching methods in higher education. I would argue that the quality of a nation's innovative talent has a great deal to do with the learning environment provided at its top universities. In the respect, the risk of complacency is too big to contemplate.
  
6. What is the assessment of the current accreditation unit? It seems that they will be the key for quality assurance in higher education.
  - a. This is a central question and would require a more detailed investigation in order to draw stronger conclusions. The unit is only 10 years old. They have already accredited 87 colleges and universities (a figure that seems high but I did not verify it). That is a large number of institutions.
  - b. My impression is that the accreditation unit is staffed by well-informed, committed, and hard working experts who take a serious view of the issue. However, the accreditation process is in its infancy. If it had a more detailed and forward looking plan, I did not have an opportunity to learn a great deal about it on this visit. The accreditation unit seems to be entering a new second stage of operation.
  - c. Fortunately, the accreditation establishment in Mongolia has remained active among the regional accreditation and quality assurance organizations (Asia Pacific Quality Network and INQAA). This is a positive step. However, judging from the challenges that Mongolia's higher

education is confronting with respect to accreditation and quality assurance, I would have expected a much more detailed forward looking plan. I heard nothing about benchmarking national institutions with those in other countries. Also, they accredit universities, and then accredit programs. I did not get the time to double check this information.

- d. While they note that there are over 100 private institutions of higher education, they for see that the number will drop to 10 private universities, and they note that the current lack of quality among the teaching staff of private universities.
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7. The definition of quality higher education is still vague in Mongolia. If this is the case, is there a need for capacity building among the policy makers, academics and administrators? If so, in which area?
    - a. My report recommended focused and systematic study delegations to other Asian systems with small populations that have a high reputation for quality assurance, notably Singapore and Hong Kong, but also the larger systems of Malaysia, Korea and Japan.
    - b. All areas should be studied, including accreditation, quality assistance mechanisms that are system wide and institutional. Quality audits at the academic department level, as well as annual staff development reviews, evaluation of courses and programs with a component for external examination, as well as comprehensive institution wide management reviews. The fact that students pay a large proportion of the costs of higher education means that student should also be involved in the assessment of instructional delivery as well as an overall assessment of the learning environment of their institutions and the effect of the entire university experience on their ability to be creative and innovative thinkers committed to the higher values that a college and university education is expected to uphold.
    - c. Finally, I think that Mongolia needs to address the issue of quality in a way that draws upon international experience. However, I also think it needs to address quality assurance in a much more innovative way particular to Mongolia that will distinguish itself in the international community.
  
  8. What about a rough estimation of the financial resources required to increase the post-graduate students to 25% and to reduce the student-teacher ratio as proposed.
    - a. Although this was not part of my brief to estimate those costs, the calculations would not be difficult based on the figures already available. However, restructuring has to come first. Let me put forward the following:
      - i. Invest in a national-flagship research university a new site with a new campus and facilities. This could occur in one of several possible ways:
        1. Consolidate the top state universities into a single research university with Faculties of Medicine, Engineering, Agriculture, Education, Humanities, Natural Science, and Social Science. The current structure of separate specialist universities is no longer relevant to the social and economic challenges of building an information society and knowledge economy and it diminishes the capacity of the higher education system to be internationally competitive.
        2. If the political will to consolidate is absent, the next possibility would be a system-wide confederation of universities, each headed by a president that is

accountable to one Chancellor and one Council or Board of Trustees. This is not an ideal solution but it is a step along the way to consolidation. The current line-up of state universities (except for the national university) is too specialized. Capacity building requires the kind of deep collaboration across academic areas that only some form of consolidation can make possible.

3. Consolidation is more likely to break the constraints of the traditional academic system led by disciplines of study and make it possible for more cross-disciplinary enterprises and the establishment of new fields of study more relevant to Mongolia's developmental challenges.
4. A research university must be able to attract the top talent. At the same time, a way must be found to divert unproductive academic staff to other sectors of the economy. This may include an up or out system of tenure and promotion. This could be further explored.
5. One way or another, the top research university has to find a way to be as comprehensive as other major research universities in neighboring countries. At the same time, the legal barriers to institutional autonomy have to be removed.

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