The necessity and the Preparations of e-learning Programs for the Secondary Students in Mongolia

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1. Introduction

1.1 The current education situations for secondary students of Mongolia

Figure 1. Distance Learning System

As we see in the above picture, Mongolia is one of the vast country which it has comparatively few populations in the world. With not well equipped educational, migrant living styles and short of informatics teachers, the rural secondary students have troubles to take a proper education. To solve and meet this problems is the e-learning in rural area in Mongolia.

During the last 10 years, high education enrollment has increased 3 times and the level of high education participants exceeds 2,500 students per 10,000 inhabitants. One of the new elements of higher education in Mongolia is a booming in the number of private institutions of higher learning in which more than 20 percent of all students are studing. One of the reasons of increasing number of students is to establish e-learning system in Mongolia.[1]

The following is the Mongolian education system:

Pre-higher education:

- Duration of compulsory education: Age of entry: 7 Age of exit: 16
- Structure of school system: Primary
- Type of school providing this education: Primary School
- Length of program in years: 5 Age level from: 7 to: 12
- Lower Secondary
- Type of school providing this education: Junior SecondarySchool
- Length of program in years: 4 Age level from: 12 to: 16
- Upper Secondary
- Type of school providing this education: Upper SecondarySchool
- Length of program in years: 2
- Age level from: 16 to: 18
- Certificate/diploma awarded: Gerchilgee (School Leaving Certificate)

School education:

Primary education lasts for five years. Secondary education is divided into four years' lower secondary school and two years' upper secondary school. There are a number of technical and vocational schools which admit the graduates of lower and upper secondary schools. These schools focus on certain vocational skills and prepare trained workers and technicians for the labour market. Upper secondary education leads to the Gerchilgee (School Leaving Certificate).

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1) The current status of e-learning in Mongolia, Dr. S. Baigaltugs. Dec. 16. 2004

Higher education:

Higher education is provided by universities, colleges, institutes and private institutions of higher education. The Ministry of Science, Technology, Education and Culture (MOSTEC) is responsible for higher education matters. Since 1991, following the reform of higher education, the former Polytechnic, the Russian Language Institute, the State Pedagogical Institute, the Pedagogical Institute, the Agricultural Institute, the Medical Institute, the Management Institute and the Military Institute have been upgraded to university status. In 1992, BA, MA and PhD degrees were introduced. Public higher education institutions are funded by the central or local governments. There are also private higher education institutions. The Ministry approves these institutions and sets their standards.[2]

2) IAU, World High Education Database(WHED), 2006

1.1.1 Literacy Education: Past and Present

Although the clear indicator and criteria does not exist to define terms of "literate" and "illiterate" in Mongolia, as defined in the Human Development Reports an "Adult Literacy Rate" is defined as "the Percentage of people aged 15 and above who can read and write a short, simple statement". According to the sole definition which was used in Population and Housing Census of 2000 the term "Literacy" is defined as ability to read and write a short simple statement in Mongolian and literature refer tom the following definitions, namely illiterate, neo-literate, literate, functionally literate.

Illiterate is a person who is not able to read and write, but in Mongolian case major part of illiterates could perform simple mathematical functions to use in their daily life.

Neo-literate signify a person who is able to perform very basic tasks like to read a sentence word by word and to make a copy of what is written without fully understanding of its meaning.
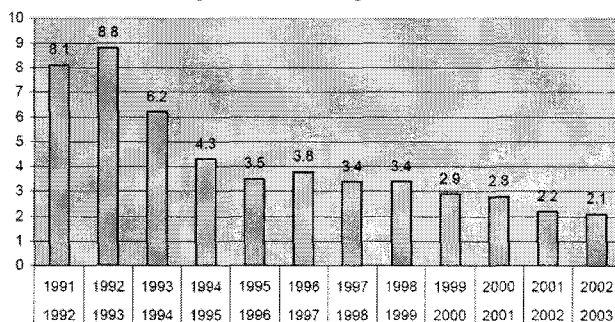
Figure 2. Drop-out rate after 1990[3]

3) Literacy country study:Mongolia, Dr. Bachuluun Yembuu, 2006.

Literate is a person who has strong willingness to improve his/her educational level.

Functionally literate person is one who is capable to take advantage of his/her acquired skills in daily life.

By 2001, the school enrollment rate for children aged 8-15 years is 86.5%(girls 89.6%, boys 83.4%) and the drop-out rate is 2.8%(girls 2.4%, boys 3.2%). The drop-out rate is higher in rural areas - 3.7%, as opposed to urban areas - 1.4%.[4]

4) ibid

2. The necessity of e-learning for secondary students

Mongolian government has planned that it will eradicate the illiteracy rate 99.9% of adult literacy rate by 2008; establish gender balance; to reach 99% of school enrollment rate by 2012 to set up an effective mechanism of monitoring evaluation based on existing information database and survey results.[5] Even though the illiteracy rate is high, the manyyating secondary students are apt to miss the regular school class.

5) Education for All Global Moniroring Report 2006.

2.1 increasing children's educational opportunities are two of the most important reasons for migration. However, school-aged migrant children are more than three times more likely to be out of school than long-term resident children. There are a range of reasons for this including: schools not accepting migrant children, lack of a nearby school, livestock-hering duties and the costs of schooling.

2.2 out-migration may be contributing to declining educational opportunities in rural areas as resources available to schools fall and with high poverty levels among those left behind, meeting educational costs may not take priority

2. 3 education is a system under pressure

A number of recommendations are made as to how migrant and non-migrant children's educational opportunities may be enhanced in budget allocation, implimenting programs to enable the poorest and most marginalised to get an education and plan for the future generation: economic and social policy that benefits children.[6]

As we see the following table, the pre-primary enrollment rate is quite high in Mongolia showing 84% for girls and boys respectively.

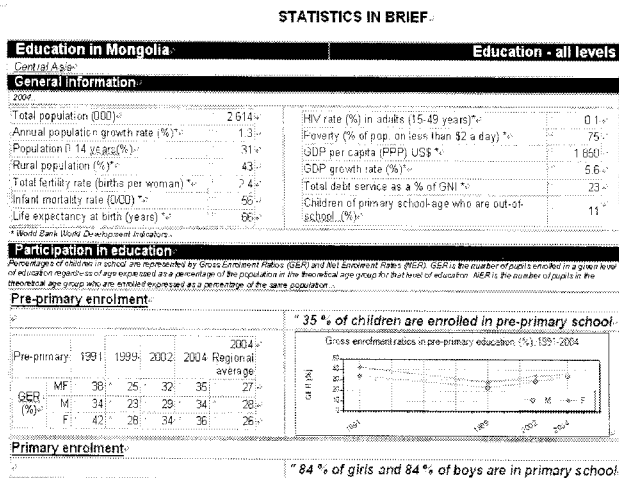6) Migrating for more:;Children's access to education in Mongolia, 2005.

STATISTICS IN BRIEF

Figure 3. Statistics in Brief[7]

7) World bank from "Education in Mongolia"

The second generation of children, post transition, Is now growing up in Mongolia. Their access to education and their poverty status are inherently linked. Income/consumption poverty can prevent children getting a good education, for example, when families can't afford to pay the costs of education or related costs, such as administrative fees. A lack of education is an important dimension of children's(and adult's) poverty. Poor access to education could be due to a lack of(public)provision of services for children or the particular needs of specific children/adults, for example a boy child may be education -poor for cultural not economic reasons. Failure to obtain a good education when you are a child increases your chances of growing up in poverty - and even passing that poverty on to your children. Investing in this generation of children is a critical investment in the future of Mongolia.[8].

8) Children on the move:: Rural-urban migration and access to education in Mongolia, 2005

3. The devices, preparations and the future to develop the e-learning in suburban area.

3.1 The devices

The main topics to develop the e-learning in Mongolia especially in rural area will be the expansion of computers and informatics teachers. According to the statistics of the Ministry of Education, Culture and Science(MOECS) there were 3100 computers in 613 schools or 5 PCs per school in average. Students per computer ratio are 1:80. The ratio should be increased up to 1:10. The MOECS should find the outer organizations to get help ICT training for the teachers. For example , Huree university trained for non-informatics teacher Darhang U

The next one is to expand the number of the informatics teachers and educate them. Without educating the informatics teachers, even if many computers are supplied to the rural area schools, they are not available for the students.

3. 2 Preparation

The following preparations are necessary to achieve the e-learning for the rural area students in Mongolia

1)Technological solution investigate assess and adapt core technological platform(WebCT and ext.), and find most appropriate one for Mongolian educational environment.

2)Web based coursewares- initiate research, development and experimentation with web based instruction methods and technologies for distance education in English language, gender education in English language, Information Technology and grade 4 to 10 math classes.

3)manuals and instructional materials-Develop manuals for teachers on web based instructional methodology

3.3 The future plan

1) Infrastructure

(1)Internet conducted either synchronously or asynchronously
-Information and communication backbone network of Mongolia has been fully converted in digital technology by last year.
-Now in Aimag center level, the backbone network capacity is considered as same as in UB.
-next step will be level.
-In 2008, ICTA is planning to lay down fiber optic links to more than 30 Soums.
-In the near future 50 more Soums will be connected through high speed digital links(most likely in 2009)
-By 2010 all Soums will be connected through high speed digital links.

(2)Tele-course/Broadcast where content is delivered via radio and television

  -There are 4 TV channels, and 4 FM's broadcasted in the air through the satellite system.

(3)Increase of the ratio of computer utility

  -By 2012 every 10 student in a high school will have a PC. By 2012 every teacher will have a PC(10% of them notebook)[9]

9) The infrastructure and policy of Mongoilan e-learning and distance learning, Batsuren Amgalanbat, Amgalanbat, ICTA, Mongolia

4. Conclusion

Mongolia is located in the northern of Asia with the population of 2,608,000. The literate rate is 97.87%. The Information Communication and Technology(ICT)_were introduced to Mongolian education sector late.

On ICT Education, 44.7% of students do not have opportunities for informatics education, and 23.8% of informatics teachers do not have computers

for themselves[10]Therefore the expansion of informatics teachers are necessary. the number of graduated students majored in ICT were 378 in 2002, 443 in 2003, and 523c in 2004.[11] The number of the students are short of to meet the necessary teachers.

On computer ratio, as the government plan, by 2012 the ratio should be 1:10 %.

On software, Mongolia should strive the effort to get some help from advance countires

10) Some suggestions to enhance E-learning in Mongolia", Shim Jaehwa, 2006. pp.97

11) The usage of ICT for secondary education in Mongolia

5. References

[1] The current status of e-learning in Mongolia, Dr. S. Baigaltugs. Dec. 16. 2004

[2] IAU, World High Education Database(WHED), 2006

[3] Literacy country study:Mongolia, Dr. Bachuluun Yembuu, 2006.

[4] Education for All Global Moniroring Report 2006.

[5] Migrating for more:;Children's access to education in Mongolia, 2005.

[6] World bank from "Education in Mongolia"

[7] Children on the move:: Rural-urban migration and access to education in Mongolia, 2005

[8] The infrastructure and policy of Mongoilan e-learning and distance learning, Batsuren Amgalanbat, Amgalanbat, ICTA, Mongolia

[9] Some suggestions to enhance E-learning in Mongolia", Shim Jaehwa, 2006. pp.97

[10]The usage of ICT for secondary education in Mongolia