CHALLENGES OF MONGOLIAN E-LEARNING AND AN IMPROVEMENT METHOD OF IMPLEMENTATION

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ABSTRACT

The Internet has brought about, a revolution in education, more precisely with regards to online learning. Online education has helped remove many barriers which traditionally hindered access to education due to its relatively low price and high flexibility in how and when courses and paces courses are taught.
In this study, we carry out a survey of the need of e-learning for students at the Mongolian University of Science and Technology to find out about their learning preferences.
E-learning, if used effectively can help address the many short-comings of the traditional education methods as well as the inherent problems the classroom teacher is faced on a daily basis with a classroom of learners with different learning. We therefore propose a model for e-learning that provides adaptive tutoring using technology-enhanced learning. An important aspect of Learning Management Systems is their ability to offer collaboration tools to build a community of learners.
The aim of this document is to provide support for the cost-effective use of e-learning technology and content in education and training by setting out a national framework for the education system.

KEYWORDS

e-learning, challenges of e-learning, readiness of students for e-learning, an e-learning framework

1. INTRODUCTION

Mongolian higher education system currently has 101 universities, 15 state universities and 81 private own universities. Every year, about a thousands of students apply to enroll into these universities now the number of students are 173 000 [1].

Over the past 10 years the number of higher education institutions has increased to 178, of which 135 are private. Enrollment at private higher education institutions has more than doubled over the past 4 years. According to data provided by the Ministry of Education, Culture and Science of Mongolia, the national education system benefitted US$110,000,000 in grants during the period of 1997-2008 and US$55,000,000 in loans for 1997-2011.

2. THE CURRENT ISSUES OF E-LEARNING IN MONGOLIA

E-Learning in Mongolia began in the late 1990s and since that time has accumulated a lot of experience. Several projects developing e-learning in Mongolia were implemented with support from UNESCO in 1992 – 1997, 1997 – 2001.

Given Mongolia's relatively small population of 2.7 million people and with US$ 165,000,000 in external aid, the national authorities should be able to ensure adequate learning opportunities for all citizens. However, during a Conference of educational methodologists from remote aimags (provinces) raised concerns about the lack of text books, especially those required in minority languages, lack of infrastructure and pointed out discrepancies between the investment in high-tech, consultant services and the outcomes at the grassroots level.

The National Center for Non-formal Distance Education had an estimated value of US$300 million from the central budget from 2002-2010.

There was no meaningful link found between schools and industry, nor was there adequate financial support in place for the implementation of e-Learning systems, simply because many universities failed to allocate sufficient funds for e-Learning.

E-learning initiatives in Mongolia are being undertaken mainly by universities, colleges and business enterprises. The main players of e-learning are private and public institutions of higher education as well as local and multinational corporations.

The main challenges we are currently facing are:

- Lack of specialists
- Insufficient financial aid
- No standards
- Incomplete common learning management system
- Insufficient preparation of e-tutors. There is a strong requirement to develop e-learning framework suitable for specific country to solve the problems. E-learning frameworks are developed by a number of specialists adapting their country's condition.

The main objective of our research is to propose an e-learning framework for Mongolian higher education system according to the universities based on the e-learning development and implementation training program developed by the German International organization GIZ and Inwent.

In this paper, we carry out surveys with students at the 10 different branch schools of Mongolian University of Science and Technology to find out about their readiness for e-learning according their own preparation, and their perceptual styles that help them learn best.

700 students responded to the survey over a two-week period at the end of May 2011 from 10 branch universities.

1st grade students – 231, second grade -166, 3rd grade 183, 4th grade – 93, 5th grade - 21

Students have permanent internet connection made up 79.2% of the total respondents. Of these, the different types of connection available to students were: home 42%, university 19%, internet café 32%.

48% of respondents were aware that it is now possible to use a internet connection 1-2 hour a day, 24% of them use 3-4 hour a day.

Which subject will you learn online?

History and social study-190, Computer- 284, **Physics and mathematics**-85, **Special course-**252, **Foreign language-**304

	Strongly disagree	2	3	4	5	Strongly agree
I think I would be able to read and learn, or follow the direction on a computer screen to accomplish a task	56	61	96	111	279	5
I would able to take notes while watching a video on the computer and would able to have read online or in books	28	40	127	135	257	2
I think that I would be comfortable having several discussions taking place in the same online chat even though I may not be participating in all of them	31	65	106	148	231	1
I think that I would be able to use online tools (e.g email, chat) to work on assignments with learners who are in different time zones	36	49	125	156	204	1
I would rather listen to a lecture than read the material from a computer screen	38	44	98	68	133	2
I would rather find out information using a computer than from a teacher or lecturer	74	94	72	74	59	2
I cannot learn using only computers, I need the teacher/student contact	49	58	95	107	269	4

Would you like to learn online instead of face to face training via the internet?

I will study online if it available	I think face to face learning would be rather than online	I'd like, but I am not able to use internet everyday	I'd like, but I don't have own computer	I will not attend online training because of weak computer literacy	I will not attend online training because of weak usage internet
318	179	143	82	24	22

What kind of learning materials do you prefer?

Learning material	Strongly disagree	2	3	4	5	Strongly agree
Printable book, learning materials	22	61	73	61	120	257
CD, DVD materials	74	60	84	105	87	113
Handbooks and reading books	28	40	83	86	120	192
Downloadable materials	62	48	72	72	70	238

Do you think the lecture is most important tool of training?

Training tools	Strongly disagree	2	3	4	5	Strongly agree
I prefer the online training rather than lecture	153	65	74	88	47	101
Lecture is very important tool of training	19	38	75	74	92	238
Lecture would be efficient with workbooks	26	33	76	88	103	184
I think the blended learning would be efficient	35	34	79	65	97	213

Do you complete the task on time during face to face learning? Yes -165, sometimes – 449, no - 65

3. A FRAMEWORK FOR E-LEARNING DEVELOPMENT AND IMPLEMENTATION

In recent years there has been significant progress in the development of technology to support education and training. This has included not only the development of simulators and interactive e-learning products to support learning, but also new learning management tools to test, record and report individual progress.

The purpose of the e-Learning Framework is to help organizations to take the next steps in developing e-learning. The adoption of e-learning is a key element in improving the delivery of quality education.

The aim of this paper is to provide support for the cost-effective use of e-learning technology and content in education and training by setting out a national framework for the education system. The e-learning Framework for education sets out:

- The national vision for the development of e-learning;
- How users can find details of current products and those which are being developed;
- How organizations, professional bodies and individuals can participate in identifying future priorities for product development; and
- The roles and organizations at different levels of the education which play a role in supporting the development of e-learning.

The Eight component framework for e-learning is global instructional design method designed by Badrul H. Khan. This framework is more complex, convenient for whole education system.

Design, development, implementation and evaluation of open and distributed learning systems require thoughtful analysis and investigation of how to use the attributes and resources of the Internet and digital technologies in concert with instructional design principles and issues important to various dimensions of online learning environments.

3.1 Stage 1

E-Learning management refers to the management of eLearning projects. From a business studies point of view, it refers to guidance and control. As for eLearning, ‘management’ is mostly concerned with the **planning, implementation and assessment** of eLearning projects.

This statement, one of the core features of a project as it states the importance in project management of defining a clear objective. It is paramount, however, that the overall goal is **clearly defined and communicated** to everybody from the very beginning.

3.2 Stage 2

In this stage the necessary steps to draft the concept for a course from vaguely formulated educational needs to be developed..

The process of instructional design should result in a course that enables the learner to reach a certain objective. Methods and media have to be planned to support the objectives in the best-possible way.

3.3 Stage 3

This stage will develop eLearning material for eLearning courses and need answer following questions.

- How to develop added value (multimedia, animation, graphics, interactive audio, video, simulation units) for eLearning content?
- How can learning progress be checked in an eLearning course?
- How can you give learners helpful feedback and keep a record on the learning objectives individual learners have reached at any given time?
- How the designs of technical sheet look like?

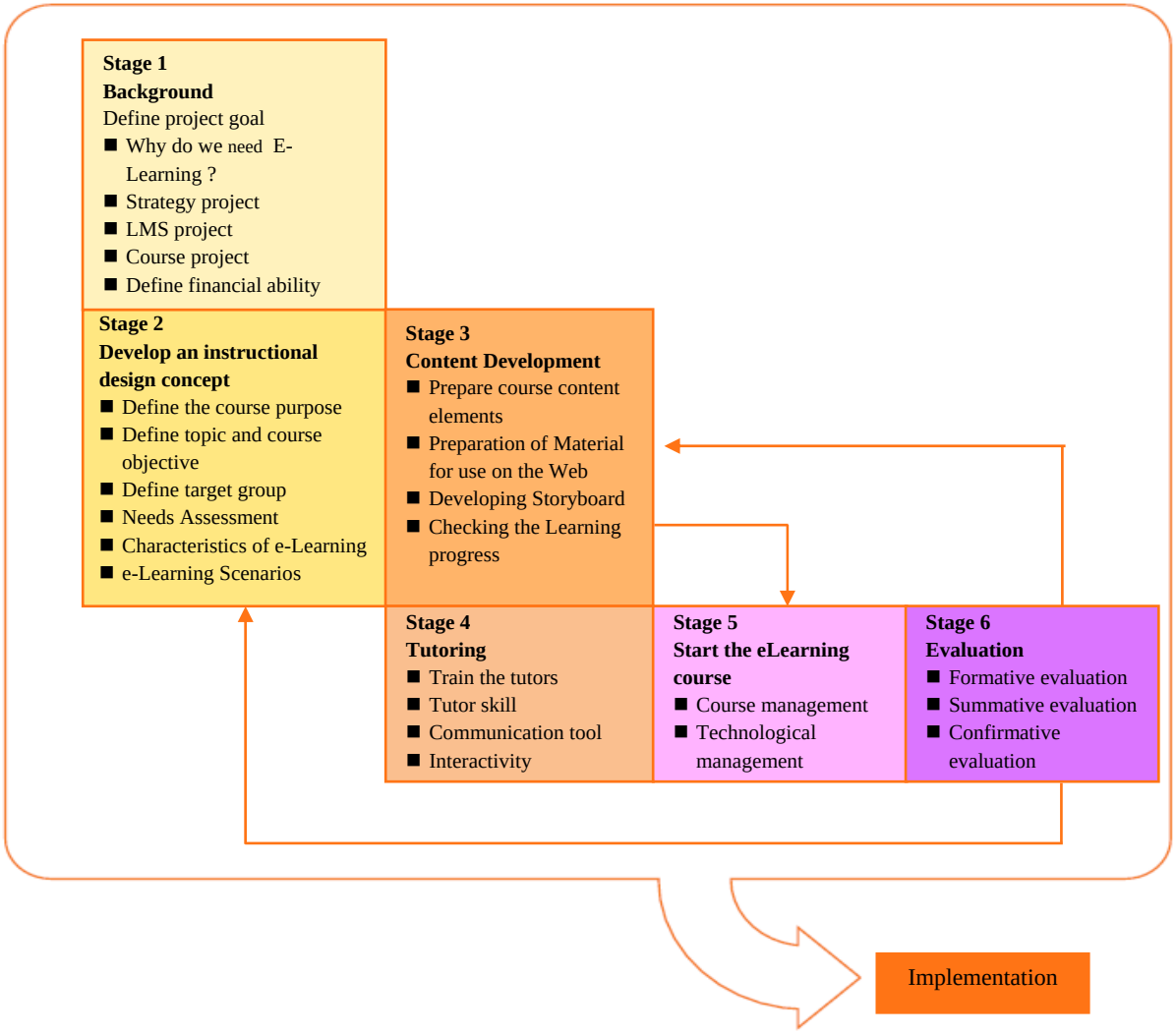

Figure1. A model for e-learning development and implementation

3.4 Stage 4

- What possible interactions can be integrated in eLearning and what should you be aware of while planning interaction in an eLearning package?
- Why is tutoring an important tool of eLearning, and what are the requirements and tasks a tutor needs to fulfill?
- What are the tools a tutor can use to fulfill these tasks? What are their specific features, and how can they be used?

- What forms of feedback are there, and what rules do tutors need to bear in mind when writing feedback?
- What are the factors defining a culture, and what are distinguishing features of cultures?

The idea of using e-learning systems was focused around the ability to connect with external and distance education students and provide greater access and flexibility to these students. However, e-learning has now become a core component of the education experience for many students in higher education and an ever-increasing combination of face-to-face (F2F) learning and e-learning is now occurring. This learning, referred to as blended learning, uses technology to expand the physical boundaries of the classroom, providing access to learning content and resources and enhancing the instructor's ability to receive feedback on learners' progress.

The most significant factor in the study was that of structure and user experience. It highlights the need to design computer supported collaboration tools that encourage student interaction to produce collaborative knowledge building through communities of practice.

The new generation of LMSs will not focus only on learning content creation, delivery and assessment, but will try to include collaborative learning and teaching methods. This new approach guarantees the rise of students' motivation for learning and leads to the better results. All learners taking an LMS-based course, regard-less of their knowledge, goals, and interests, receive access to the same educational material and the same set of tools, buffered with no personalized support. Students passed the exam from the first try with quite high average mark.

4. CONCLUSION

It's indisputable that the e-learning is the most efficient and sufficient learning method based on technology.

Now our immediate problem is how to get it accustomed correctly to our learning environment.

E-learning framework we present you is based on the most efficient and expedient e-learning practice organized worldwide. German organization "Invest" is conducting learning in this direction uninterruptedly since 2005 and has prepared many tens of specialists.

We carried out a study of 700 students from University of Science and Technology and intended to show that our learners are disposed or not for e-learning. And now it's important to study our purposed group before introducing e-learning to expose which learning method is suitable for present education organization.

Collaborative online learning is successful, because it requires continuous active participation during the academic year and more personal responsibility and concentration when learning. In that way, this approach to learning reduces the time needed for preparing the exam, contributes to successful passing of the exam and ensures deep level learning.

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