Reaching the Unreached through Blended Learning: A Case Study from the Maldives National University

Ramiz Ali
Centre for Open Learning
The Maldives National University
Male', Maldives
E-mail: ramiz.ali@mnu.edu.mv

ABSTRACT

With the advancement of interactive technology, many educational institutions have opted for blended learning as a modern higher education model to reach disadvantaged groups in societies. This paper explores how the Maldives National University approached the dispersed community of the Indian Ocean archipelago through adaptation and application of blended learning. It also focuses on how the University introduced and developed flexible learning, the delivery model being used, challenges faced and the strategies being used to overcome them. The barriers include perceptions of general public about flexible learning, learning habits and styles of the learners, the internet speed and bandwidth and limited staff capacity. However, statistics of the recent years shows that this learning model is appropriate in Maldives as flexible learning courses are quite popular among the dispersed island community. In the last six years the student enrollment has stayed steady and thousands of working adults are studying at various levels of blended learning programs up to postgraduate level. Our success, despite the challenges indicates that blended learning is an effective mode of delivery for the people who live in this small island nation.

KEYWORDS

Blended learning, flipped classroom, block sessions, flexible learning, learning management system

1. INTRODUCTION

Maldives is a small island nation located in the Indian Ocean which consists a total of 1192 islands clustered in 26 natural atolls. These are considered as 20 atolls for administrative purposes and there are a total of 188 inhabited islands with another over 110 islands as tourist resorts. The remaining islands in the archipelago are uninhabited and a few are being used for industrial purposes. According to the National Bureau of Statistics (2015), the population of the country is just over 338,000 in 2014 and one third of the country's population lives in the capital city Male'. The islands are spread over approximately 900,000 square kilometers with just about 1% of land area. The remaining 99% are varying levels of sea which necessitates a reliable mode of transportation to travel among the islands. Even though currently there are ten airports for domestic travelling, the main form of transportation among the islands is sea transport. At present there is no reliable, regular inter-atoll public ferry service for the islanders.

Universal primary education is available and mandatory in all the 188 inhabited islands, however, secondary and higher secondary education is limited in many islands for various reasons. In 2015, just 25 percent of the 88,341

student population was studying at secondary (grades 8-10) and higher secondary levels (grades 11 and 12). According to the World Bank (2015), the country's higher secondary education gross enrollment is just 35% which is very low compared to other middle-income countries. The average higher secondary education gross enrollment for middle-income and upper-middle income is 61 and 76 percent, respectively (World Bank 2015, p.89). The World Bank ranks the Maldives as a middle-income country.

The country has only two universities; The Maldives National University and The Islamic University of Maldives; both public universities founded in 2011 and 2015, respectively. However, there are a number of private colleges and higher education providers in the country. Even though the public universities and few other colleges have established their campuses and learning centres in the atolls, most of the higher education providers are mainly located in the capital city, Male'. Due to the fragile economy of the country and the small population of the island community, it is not feasible for any of the higher education provider to build a university/college campus in every atoll, let alone every island. Hence, providing higher education to the island community is a huge challenge for the country which raises the need for an effective distance education model for the country.

The country's telecommunication infrastructure has developed remarkably in the recent years. It is a goal of the Maldives to become one of the ICT developed countries in the SAARC region (Communications Authority of Maldives, 2014). Significant efforts and investments to reach this goal have resulted in a fairly developed internet and mobile phone infrastructure. This includes providing 3G/4G/LTE internet access to all of the 188 inhabited islands. According to the Communications Authority of the Maldives (2016), in March 2016, there were 761,325 registered mobile phone users (almost double the country's population) and over 260,000 registered fixed and mobile internet users.

This paper outlines the current distance educational situation in the Maldives and how the Maldives National University (MNU) caters to the disadvantaged remote island community through blended learning.

2. DISTANCE EDUCATION IN THE MALDIVES

A system of non-formal adult education was developed in the country since 1959 (UNESCO, 2006). However, distance education officially started in the Maldives in 1987 by then Centre for Non-Formal Education, a branch of Ministry of Education. The main work of this institution was to provide basic literacy education to the rural island community and later conducted short awareness programs for the citizens who lived in the atolls (UNESCO, 2006).

Distance education in a more systematic way was introduced in 1999 with the establishment of the Tertiary Institute for Open Learning (currently named as Centre for Open Learning) under then Maldives College of Higher Education (currently named as The Maldives National University). After inauguration of the Centre for Open Learning (COL), it was given the mandate for developing and conducting distance education programs to the island community.

Through a partnership with Open Polytechnic NZ, the COL conducted two undergraduate programs as its very first distance education programs (Hashim, 2014). However, the programs were largely unsuccessful due to many factors such as lack of learning support, poor level of students' educational background and lower number of enrollment. With this experience it was decided that COL would conduct its own programs so that they can be more tailored to the students' needs. In 2002, a certificate level teacher education program was developed and offered mainly to the untrained teachers of the island community. The program was faced out in 2007. In addition, a foundation level English language program was offered in 2004 with the goal to open a pathway to prospective students who may wish to pursue higher education. Both the programs were conducted by using conventional distance education methods. The foundation level English language program was offered until 2011, and since then the program has been revised and is now offered as a blended learning program.

3. INTRODUCING BLENDED LEARNING PROGRAMS

E-Learning was introduced to the COL in 2008 (Hashim, 2014). Under this project a learning management system (LMS) was adopted and tested in 2009 by using Moodle. Initially the LMS was used by some of the conventional face-to-face students of the University as a supplementary learning tool.

Blended learning for the distance learning students was introduced in 2010. In the first semester of the year, students of three different programs; Advanced Certificate in Human Resource Management, Diploma in Early Childhood Education and English for Further Studies, officially used the LMS as their virtual

learning platform. Since then, an enormous effort has been made by the Centre to strengthen its blended learning programs to cater the higher educational needs of the disadvantaged community. As a result, the learning approaches have been applied more effectively in various educational disciplines and in more levels and programs.

4. WHY BLENDED LEARNING?

Blended teaching is an instructional approach which combines a portion of conventional face-to-face teaching and online teaching (Pima et al., 2016; Means et al., 2014; Azizan, 2010). This approach is also referred to as "hybrid-learning" (Means et al., 2013; Lee et al., 2013). Daniel (2016) described that most of the writers and institutions consider 'blended' and 'hybrid' learning under the same denotation, although conceiving hybrid learning as a particular type of blended learning is more meaningful. According to Christensen Institute (2016), blended learning is a formal education program in which students study at least part of their learning through online. This is a fairly recent mode of course delivery among the higher education providers around the globe.

Blended learning has several advantages, especially in a country like the Maldives. Owston et al. (2013) stated that institutions see blended learning model convenient as it makes efficient use of classrooms while the faculty benefits by increasing flexibility in their teaching schedules. As a result, it allows students learn more independently outside the classroom and reduces classroom face-to-face learning hours (Means et al., 2014; Azizan, 2010; Köse, 2010). Blended learning gives control to the students over the time, place, path

and pace with regard to their learning activities (Christensen Institute, 2016; Lee et al., 2013). In the Maldives where higher educational resources are limited, students are dispersed in small islands, and a large proportion of the prospective students are working adults, it is clear that blended learning model would be more efficient and effective. Not only the geographical landscape of the country and availability of sufficient facilities, the diverse groups of the students are also taken into consideration in selecting the learning model. By combining face-to-face and other teaching approaches, blended learning allows students to access knowledge anywhere until they meet their teachers and enhances their academic achievements (Köse, 2010; Azizan, 2010).

Most of the COL's prospective students are a diverse group of mature adults who are already working in both public and private sector. For such a group of students, more individualization and flexibility has the potential to meet the learning challenges and enable them to succeed in their studies (Bates, 2015; Means et al., 2014; Azizan, 2010; Köse, 2010). From nearly a decade of experience MNU have had thus far, it is evident that the delivery model is convenient, appropriate and effective for both to the students and to the institution.

5. THE DELIVERY MODEL

The Maldives National University is a dual-mode university. Distance education programs are offered at the COL where blended learning has been applied for all the programs of the Centre. Figure 1 illustrates the delivery model applied by the Centre.
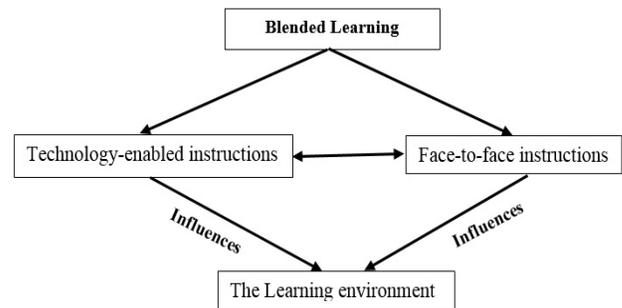
Figure 1: The delivery model

As figure 1 shows, the learning model comprises of two main components which are technology-enabled instructions and face-to-face instructions. Each semester begins with technology-enabled instructions through E-Learning at MNU (GEM), the Learning Management System (LMS) of COL.

At the beginning of the semester, study materials with necessary study instructions are provided to the students through the LMS where they are asked to start online learning from the first week. Students usually spend the first three or four weeks for self-studying to get familiarized with the content by reading the scheduled chapters/modules of the course, watching videos, interacting with fellow students and tutors, and doing weekly activities. It is similar to Flipped Classroom approach.

The flipped classroom is an instructional model in which the face-to-face teaching and self-studying components of a course are reversed (Baepler et al., 2014; Bishop and Verleger, 2013; Educause, 2012) and it engages students with the content outside the formal classroom (Butt, 2014). Bishop et al. (2013) defined flipped classroom as an educational technique where interactive group learning activities occur inside the classroom while individual direct learning instructions are given outside the

classroom using a computer-based environment. In such a context, class room time is dedicated to tutorial activities where students mainly engage with group activities, discussions, and lecturer feedback, etc. (Baepler et al., 2014; Verleger, 2013). Many studies have shown that the flipped classroom approach is an effective pedagogical method in different higher education contexts (Baepler et al., 2014; Butt, 2014; Bishop and Verleger, 2013; Berrette, 2012).

This model was chosen for the blended learning students of MNU as almost all the target students are fulltime working and traveling students. We agree with Roehl et al. (2013) and Tucker (2012), that flipped classroom model allows instructors to find more time for classroom learning activities while students engage with the main content outside the class. This is suitable for MNU where usually one-third of the direct contact hours of each course are covered face-to-face for the blended learning students. At MNU, blended learning students are expected to spend three to four weeks of self-learning by using carefully designed instructions and study materials prior to the face-to-face weekend classes. Students usually attend two block sessions each semester where they spend 8-10 hours of tutorial time for each course. These block sessions are utilized to carryout intensive learning activities, clarify students' queries and doubts, to conduct controlled assessments such as mid-term exams and presentations. This approach helps to maintain the quality of the teaching and learning and increases student retention as well.

6. CHALLENGES

The University faces a number of challenges in conducting blended learning programs in the country. Negative attitude towards flexible learning among both the general public and even educators in the academia can be identified as one of the biggest challenges. Many individuals believe that fully face-to-face teaching is superior and more learner-friendly than blended or online classes. Due to this perception, getting adequate support for faculties is challenging. This perception is not unique to the Maldives and can be seen in the academia around the globe. However, in a country like the Maldives where the learning models are relatively new and the facilities are limited, the impact is substantially more significant.

Secondly, although 3G/4G/LTE broadband mobile internet is accessible in all the inhabited islands, the internet bandwidth hinders the quality of the service provided by the University. Fixed home internet is not accessible in all the islands where the students use USB dongles to access the internet. This is a major concern of many of our students and teaching staff. This also hinders the use of our electronic materials effectively in blended learning courses.

Furthermore, the number of instructors who have studied e-learning/instructional design is very limited at MNU. Most of the teaching staff delivering blended learning courses have only conventional teaching background with no or very limited knowledge of e-learning or instructional design. Upon joining COL, they are given a short and an unofficial induction program to familiarize with our LMS. The limited knowledge of instructional design of the academic staff affects online teaching design and the delivery.

Finally, the learning habits of the students, especially the more recent graduates of GCE

O/A Level hinder the effectiveness of the learning model. It is not just the younger students, some older students also expect more conventional teaching approach where "everything is taught" at the classroom. This mindset appears to be changing lately and it is evident that many students, particularly more mature students enjoy blended learning using the concept of *flipped classroom.*

7. THE SUCCESS

Since MNU introduced courses through blended learning in 2010, it is evident that the model has been effective to cater the higher educational need of the dispersed island community. The numbers of students enrolled in the programs of COL indicate that the isolated populations need a flexible mode of study to enhance their knowledge and attain higher qualifications while they live and work in their islands. Figure 2 shows the total enrollment of the University and the number of blended learning students studied at COL.
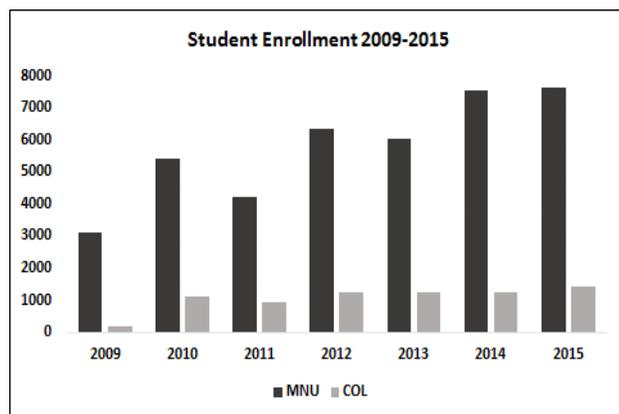
Figure 2: The student enrollment (Source: MNU Annual Reports 2011- 2015)

As shown in figure 2 the number of students enrolled in blended learning programs increased sharply in 2010 which was the year of introducing the mode of delivery. Since then the student enrollment has plateaued at about 18 percent of total population of the University. The rest of the student population is conventional face-to-face students who belong for the remaining eleven Faculties/Centres.

According to the MNU annual report 2011, in 2009 there were only 187 students as distance learning students and all are enrolled in one program which was a foundation level English language program. However, with the introduction of blended learning, the numbers of programs and students have remarkably increased and a total of over 7100 students have been enrolled in flexible learning programs in the last six years. Table 1 indicates the number of students enrolled in different levels of programs of COL from 2010 to 2015.

Table 1: Number of students enrolled in levels of programs (2010-15)

Level of Program	No. of Students
Foundation	3154
Certificate	835
Diploma	2316
Bachelors	418
PGC	406
Masters	47
TOTAL	7176

Source: MNU Annual Reports 2011 – 2015

Another factor worth highlighting is the course completion rate of the blended learning programs. According to the MNU annual report (2014) the blended learning course completion rate has stayed above 66.4 percent in recent years while the average of face-to-face courses are 72.7 percent. This shows that the model is

pedagogically sound and suitable for the context.

8. CONCLUSION

Since the introduction of blended learning at the Maldives National University, it has reached a vast majority of the learners who live in the island community. Due to the geographical features and economic status of the archipelago, blended learning has been utilized as an effective tool to deliver various levels of the programs from certificate to postgraduate level. Despite the challenges faced by the MNU, high enrollments and the course completion rates show that the blended learning model applied at the University is pedagogically sound for different disciplines and levels of programs of studies. The Flipped Classroom model helps the fulltime working students, especially the island community to pursue higher education programs which were unavailable for them for many years. The learning programs have opened pathways for many individuals in their careers in terms of reaching higher education or increasing prospects of new job opportunities. Hence, the blended learning model applied at the University is seen as an effective model for reaching the unreached community of the Maldives.

REFERENCES

Azizan, F. Z. (2010). *Blended Learning in Higher Education Institutions in Malaysia.* Proceedings of Regional Conference on Knowledge Integration in ICT 2010. P. 454-466.

Baepler, P., Walker, J.D, Driessen, M. (2014). *It's not about seat time: Blending, flipping, and efficiency in active learning classrooms.* Computers and Education 78. P.227-236.

Bates, A. W. (2015). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning.* Retrieved 18 June 2016. https://opentextbc.ca/teachinginadigitalage/

Berrett, D. (2012). *How 'flipping' the classroom can improve the traditional lecture.* Retrieved 1 August 2016 http://chronicle.com/article/How-Flipping-the-Classroom/130857/.

Bishop, J. L., Verleger, M. A. (2013*). Flipped Classroom: A Survey of the Research.* Conference Proceedings of 120th ASEE Annual Conference & Exposition. American Society for Engineering Education.

Butt, A. (2014). *Student views on the use of a flipped classroom approach: Evidence from Australia.* Business Education and Accreditation. Vol.6. No.1 P.33-43.

Christensen Institute (2015). *Blended Learning.* Retrieved 18 June 2016. http://www.christenseninstitute.org/blended-learning.

Communication Authority of Maldives (2014), *National Broadband Policy 2014-2018.* (written in Dhivehi language) Retrieved: 30 May 2016. http://www.cam.gov.mv/docs/policy/National_Broadband_Policy2014_2018.pdf

Communication Authority of Maldives (2016). *2016 Monthly Figures.* Retrieved 30 May 2016. http://www.cam.gov.mv/Statistics_monthly2016.htm

Daniel, J. O.C (2016). *Making Sense of Blended Learning: Treasuring an Older Tradition or Finding a Better Future?.* Retrieved 18 June 2016. http://teachonline.ca/tools-trends/blended-learning-successful-design-delivery-and-student-engagement

Educause (2012). *Things you should know about flipped Classroom.* Retrieved 25 June 2016. https://net.educause.edu/ir/library/pdf/eli7081.pdf.

Hashim, A. (2014). *COL: A historical Perspective. COL 15 Years of Service.* Centre for Open Learning. Male'.

Köse, U. (2010). *A blended learning model supported with Web 2.0 technologies.* Procedia Social and Behavioral Sciences. Vol. 2. No.2. 2, P. 2794–2802.

Lee, G., Fong, W.W, Gordon, J. (2013). *Blended Learning: The View Is Different from Students, Teacher or Institution perspective.* Hybrid Learning and Continuing Education. Conference

Proceedings, 6th International Conference, ICHL 2013. Toronto. Canada.

Means, B., Toyama, Y., Murphy, R., Bakia, M. (2013). *The Effectiveness of Online and Blended Learning: A Meta-Analysis of the Empirical Literature.* Teachers College Record, Vol.5, P. 1-45.

Means, B., Bakia, M., Murphy, R. (2014). *Learning Online: What Research Tells Us About Whether, When and How.* Routledge. New York.

Ministry of Education (2015). *School Statistics 2015.* Retrieved 29 May 2016. http://www.moe.gov.mv/assets/upload/STAT_BOOK_2015.pdf

Maldives National University (2014). *MNU Annual Report 2014.* The Maldives National University. Male'.

Owston, R., York, D., Murtha, S. (2013). *Student Perceptions and Achievement in a University Blended Learning Strategic Initiative.* Internet and Higher Education. Vol.18. Retrieved 18 June 2016. http://dx.doi.org/10.1016/j.iheduc.2012.12.003.

Pima, J. M, Odetayo, M, Iqbal. R, Sedoyeka, E. (2016). *Assessing the available ICT infrastructure for collaborative web technologies in a blended learning environment in Tanzania: A mixed methods research.* International Journal of Education and Development using Information and Communication Technology. Vol. 12, Issue 1, pp. 37-52.

Roehl, A., Reddy, S. L., Shannon, G. J. (2013). *The Flipped Classroom: An Opportunity To Engage Millennial Students Through Active Learning Strategies.* Journal of Family and Consumer Sciences. Vol.105. No.2. P. 44-49.

Tucker, B. (2012). *The flipped classroom: Online instruction at home frees class time for learning.* Education Next. Retrieved 2 July 2016. http://www.msuedtechsandbox.com/MAETELy2-2015/wp-content/uploads/2015/07/the_flipped_classroom_article_2.pdf

UNESCO (2006). *World Data on Education: Maldives (Sixth Edition).* Retrieved 1 June 2016. http://www.ibe.unesco.org/Countries/WDE/2006/ASIA_and_the_PACIFIC/Maldives/Maldives.pdf

World Bank (2015). *Maldives: Systematic Country Diagnostic.* Retrieved 1 June 2016. http://www.finance.gov.mv/v2/uploadedcontent/posts/Post1702-October_2015.pdf