

# Evaluation of a Study Programme for the Implementation of Blended Learning at the Maldives National University

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**Abstract.** Little research addresses the adoption of Blended Learning (BL) as a strategy for supporting Higher Education institutions' transformation. The purpose of the study presented below was to evaluate a teacher development Study Programme (SP) focused on the implementation of BL at the Maldives National University (MNU), as part of its digital shift towards becoming a bi-modal institution. This article examines the SP through the lens of Kirkpatrick's model in terms of satisfaction and learning gains. The sample comprised 45 lecturers and data were collected using online surveys and focus groups. The results provide insights into the quality of the SP and its relevance for lecturers adopting BL in their courses and as part of a contribution to a whole institutional strategy.

**Keywords.** blended learning, digital transformation, Kirkpatrick's model, capacity building

## 1 Introduction

### 1.1 Blended Learning in Higher Education

Universities are increasingly adopting BL as part of their educational offer. Studies have demonstrated its benefits for students and lecturers (Vaughan, 2007; Bohle Carbonell, Dailey-Hebert & Gijsselaers, 2012). Previous research has analysed the use of differentiated instruction in BL to address students' individual needs (Boelens, Voet & De Wever, 2018). Research also has examined the decision-making processes behind the adoption of BL programmes and courses as well as the alignment between BL and the institutional strategy (Galvis, 2018).

A BL approach has many advantages, widening access to education, providing new opportunities for career development, optimising teaching and learning time, and it is a successful strategy to promote transformational changes and development in universities (Kaur, 2013). However, staff resistance to

change may constitute a major obstacle to the implementation of BL in institutions (Vaughan, 2007; Bohle Carbonell et al., 2012). The adoption of BL demands a high level of organisation and commitment (Garrison & Vaughan, 2013), especially on the faculty and lecturers' side.

For this reason, it is important to provide guidance for the adoption of BL at institutional level and to facilitate a successful transition (Porter, Graham, Spring & Welsch, 2014; Porter, Graham, Bodily & Sandberg, 2015; Graham, Woodfield & Harrison, 2013).

### 1.2 Kirkpatrick's Model in Educational Settings

It is essential for lecturers to receive adequate training in order to be able to perform their tasks effectively (Rienties, Brouwer & Lygo-Baker, 2013) in BL. Similarly, it is equally important to evaluate the training process itself and its outcomes (Alsalamah & Callinan, 2021) to monitor and improve the action.

Much of the research has highlighted the relevance of Kirkpatrick's model (2006) in the educational field for evaluating both training programmes (Alsalamah & Callinan, 2021; Dewi & Kartowagiran, 2018; Masood & Usmani, 2015; Wu, Hu, Gu & Lim, 2015) and BL environments (Embi, Neo & Neo, 2017). Kirkpatrick's model comprises four levels:

*Reaction.* This focuses on the initial reaction the training provokes in the participants, and it measures their level of satisfaction. Engagement, motivation and attention are usually indicators and trainees are given questionnaires to analyse the initial impact of the training programme through perceptions of the learning experience and content (Alsalamah & Callinan, 2021; Dewi & Kartowagiran, 2018). Previous authors (Brown, 2007; Alsalamah & Callinan, 2021) have adopted broader categories for this level and have considered it as a multidimensional facet, embracing several aspects of the training process

(learning content, materials, tools, delivery methods, etc.).

*Learning.* This level refers to “the extent to which participants change attitudes, improve knowledge and/or increase their skills as a result of attending the program” (Kirkpatrick & Kirkpatrick, 2006, p. 22). It takes into account the new skills and knowledge that have been acquired by the participants in the training, through which they have changed their attitudes. In the literature, this level can be assessed by means of self-evaluation surveys (Alsalamah & Callinan, 2021; Ruiz & Snoeck, 2018; Pineda, 2010). This level considers not only the new skills acquired, but also cognitive and attitudinal outcomes connected with the objectives of the training programme (Alsalamah & Callinan, 2021; Mohamed & Alias, 2012).

The third and the fourth levels, *Behaviour* and *Results*, respectively, refer to aspects of actual change and impact in the medium and long term that will be evaluated in a post-project phase some time after the training.

### 1.3 Purpose of the Study

The aim of this article is to evaluate a Study Programme (SP) designed in the AMED project — *Advancing Higher Education in Maldives through E-learning Development*— using Kirkpatrick’s model. One of the main objectives of the AMED project was the co-creation and piloting of a SP for professional development focusing on the implementation of BL. The idea was to contribute to the professional development of MNU academic staff for the transition to becoming a bi-modal university by providing the foundations of e-learning and BL approaches, and training lecturers in the design, planning and implementation of competency-based BL.

This article reports on the results of the pilot that took place at the MNU with a main focus on the perceptions of a group of lecturers. Of the four levels of the model, two are examined: reaction and learning. The guiding research questions of the study were:

RQ1. How do lecturers react to the SP in terms of satisfaction, engagement and relevance?

RQ2. How do lecturers perceive their learning gains, skills and attitudes towards BL after the SP?

In the SP, the lecturers’ learning pathway consisted of the following modules:

1. *Foundations of e-learning.* This core course introduced the students to key concepts, principles and practices of e-learning.
2. *Designing digital learning:* Participants of this module were asked to put into practice course design models and principles for technology enhanced and enabled learning, flexible and open learning, and networked learning.
3. *The networked teacher:* In this course, participants explored new forms of educational relationships enabled by technologies: the changing roles of teachers, learner empowerment strategies,

collaborative approaches in action, learning scaffolding techniques, e-assessment methods and instruments.

The SP concluded with capstone projects (CP), directly connected to the modules. The CP required lecturers to design a BL activity/experience blueprint together with a learning facilitation plan and, when possible, the development of a prototype. The SP total workload was 140 hours and the Virtual Learning Environment adopted was Moodle.

## 2 Research design

The pilot took place between March and December 2021. It involved the participation of 45 lecturers.

Different data were collected according to the *reaction* and *learning* levels of Kirkpatrick’s model (2006). A survey, designed to evaluate both levels, gathered information regarding the participants’ satisfaction, engagement and the relevance of the SP (Dixon, 2010; Hamid & Pihie, 2004). In addition, it enquired about the participants’ perceptions of their learning outcomes regarding knowledge, skills and attitudes towards BL. The survey was answered by 43 lecturers after completing the SP, using a Likert Scale of 1-4 (1= strongly disagree and 4= strongly agree). Surveys were analysed through descriptive statistics.

With the aim of gaining insights into the lecturers’ perceptions of their satisfaction, acquired knowledge and skills, and what they foresaw for the future in terms of BL, two focus groups with five lecturers each were conducted. The design of focus group protocols was carried out according to Kirkpatrick’s (2006) model and the Specific Review Standards from the Quality Matter Higher Education Rubric (2020). A qualitative content analysis (Schreier, 2012) was applied to the corpus of data, using a deductive approach based on the preconceived theoretical concepts and dimensions. *Atlas.ti* was used for coding and analysis.

## 3 Results

The results indicate the participants’ perceptions of the SP and of improvements in knowledge, increased skills and attitudes. Because of the practical approach of the SP, carried out through the CP, perceptions of changes in learning include perceptions of short-term changes in behaviour.

### 3.1 Reaction

Lecturers valued the SP as a positive experience and found it useful for their professional development. One of the participants stated: “*It was really helpful. I have learnt a lot about Blended Learning*”. Overall, participants reacted favourably to the SP, which can be

evidenced in expressions such as the following: “*I really liked it in every sense*”. Moreover, the survey showed that lecturers were satisfied with the quality of the SP (67% agree; 16% strongly agree).

Lecturers agreed that the programme structure was clear and helped them gain a better understanding of what was expected in terms of activities. Elements such as flexibility and module progression were considered adequate, particularly task distribution and sequence: “*The task progression was very helpful in each module*”. Also, the connections between modules and CP were perceived as a continuum: “*The design and how it was presented to us was developed continuously*”.

Participants were satisfied with the materials provided (70% agree; 21% strongly agree). Lecturers found the readings relevant and applicable to their teaching practice: “*I liked the readings. I learnt how to incorporate them into my classes, giving precise and short readings rather than lengthy ones*”. However, some participants manifested that they felt overloaded and experienced time constraints due to their regular teaching responsibilities. When asked about their ability to keep up with the workload on the SP, 16% strongly disagreed and 23% of the participants disagreed.

Regarding learning activities, 67% of the lecturers agreed to being satisfied with them (16% strongly agree), concurring that the activities were relevant, engaging and promoted the achievement of the learning outcomes. Similar results were reported for assessment activities (70% agree; 16% strongly agree). In this regard, quizzes allowed lecturers to track their progress: “*they told us how much we know and where we were confused*”.

Lecturers also appreciated the guidance and support offered by facilitators (47% agree; 42% strongly agree). The suggestions and examples provided in templates and other methodological instruments were beneficial for their learning processes. However, some of them pointed out that more guidance would have been needed.

In terms of engagement, the survey indicated that most of the lecturers were motivated to learn the content (60% agree; 16% strongly agree). Some of the participants highlighted that they were committed to the SP, commenting that they read the study material (74% agree) and self-organised study groups as a strategy to discuss and clarify ideas.

Despite the fact that the content was new for some participants, they found it interesting, useful and up-to-date (67% agree; 21% strongly agree). Findings indicate that lecturers considered the SP meaningful for their work (63% agree; 30% strongly agree). Also, it contributed to their professional development: “*The AMED project made me open my eyes to the things that I can do. I look forward to improving my teaching subjects. I benefited a lot*”.

Most of the lecturers considered that the SP met their expectations (58% agree; 9% strongly agree), and

they would recommend it to other colleagues (60% agree; 14% strongly agree), as one of the participants stated: “*Since I already have some experience, this was very helpful. I would recommend it to other lecturers*”.

### 3.2 Learning

Lecturers acknowledged the potential of the SP to face the teaching challenges that the COVID-19 pandemic entailed. According to them, learning outcomes were clear, consistent, and helpful in understanding how BL works. After the SP, they reported being aware of the benefits of using BL in higher education (58% agree; 42% strongly agree). Specifically, lecturers expressed that they understood the concept of BL and its implementation in the classroom: “*Through this programme, I learnt a lot about BL and the different models that we can use. It was very helpful and I try to incorporate it in my classroom as well*”.

The participants developed a clear idea of the relationship between competencies and learning outcomes (58% agree; 37% strongly agree). Also, they distinguished the difference between student and teacher-oriented approaches (56% agree; 44% strongly agree).

Participants perceived that not only their knowledge, but also their practical skills in BL improved as a result of undertaking the SP and developing the CP. The survey revealed that lecturers were able to design a coherent BL activity matching the learning outcomes and assessment (72% agree; 28% strongly agree). In addition, lecturers reported that the SP stimulated a better use of technology for teaching purposes, 70% of them agreed that they were able to select the most appropriate technologies to implement in their courses.

They highlighted the role of facilitators in the process of learning how to design and tailor instructional strategies for BL, for instance, the regulation of reading resources: “*they are very good and I'm learning from them the techniques and how I can make it better*”.

Regarding the CP, lecturers explained that it was stimulating and rewarding because they could put into practice what they had learnt by designing or redesigning their courses. The CP allowed lecturers to introduce BL techniques into their courses and progressively change the focus from a teacher-led approach to a student-centred one as shown in the following quote: “*I gave them activities which they could do in their own time after reading the material and then having the face-to-face sessions as discussion or revision time. So, I have changed one of the modules rather than going through the reading material in the face-to-face class*”.

Despite some difficulties experienced due to the COVID-19 pandemic and the fact that there was some resistance to BL among faculty, lecturers plan to support learning activities with increased use of technology (65% agree; 35% strongly agree). One of

the participants claimed: “*I am definitely going to use the techniques that I learnt in the course*”. They are motivated to participate in the e-learning change and expressed their willingness to apply student-oriented approaches (65% agree; 35% strongly agree).

## 4 Discussion

Considering the results, it is possible to answer the RQs. Regarding the first one, lecturers reacted positively to the SP as a teacher development strategy for the adoption of BL in the MNU digital transformation. Lecturers, overall, were satisfied and engaged. Secondly, they enhanced their pedagogical and digital competencies, influencing their teaching delivery approach and willingness to adopt BL. The SP played a significant role in their professional development, stimulating teaching practices that promote accessibility to higher education in the Maldivian context.

As Graham et al. (2013) mentioned, the institutional change begins at the faculty level. This study strengthens the importance of professional development offered to faculty to develop new pedagogical and technological skills to implement BL (Porter et al., 2014), demonstrating that the SP fostered the necessary knowledge, skills and attitudes for digital transformation. Lecturers are aware of BL’s potential to face challenges such as accessibility to higher education, considering it an innovative solution for supporting the digital transformation of MNU. However, alignment among professional development opportunities, policies and support structures is needed to improve teaching practices and progressively reduce the resistance to new teaching approaches associated with BL.

To sum up, the SP had a positive impact on the faculty’s training and professional development, raising awareness of the benefits of adopting BL approaches. It leads to institutional change that may enhance the quality of the teaching and learning in the institution. However, as Garrison and Vaughan, (2013) point out, a transformational institutional change related to BL also requires collaborative leadership and engagement at all institutional levels.

## 5 Conclusion

The results of the study revealed that the SP and its implementation plays a key role in the process of institutional transformation of MNU towards a strategic integration of BL. The results of the study also showed that the Kirkpatrick’s model (Kirkpatrick & Kirkpatrick, 2006) provided a valuable tool to determine the effectiveness of the SP as well as its strengths and improvements for next editions.

Future studies should incorporate the third and fourth levels of Kirkpatrick’s model (Kirkpatrick & Kirkpatrick, 2006), *Behaviour* and *Results*, to evaluate not only the implementation of the next editions of the SP, but also additional institutional strategies enacted by the staff to improve the integration of BL at MNU.

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