



The impact of effective educational videos on maximising student participation: An action research

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Abstract. Online learning environments have become an essential part of higher education and video content plays a crucial role in enhancing the learning experience of students. The effectiveness of using videos as a teaching tool in higher education is still not certain in the Maldives, specifically at higher education. Without additional research, the effectiveness and impact of educational video, will never be documented with proper evidence. This is an action research that involves 3 stages, that assesses the impact of using effective educational videos on the students' participation. Total 22 students from different faculties, centres and schools at The Maldives National University were participated. A questionnaire with open questions were used to collect the participants' opinions. Additional data was gathered from observations and interviews. The findings have shown that using educational videos has a positive impact on students' participation in the classroom. It also revealed that the students' engagement increases when they are given opportunities to select or create videos for themselves. It also discloses that the students' active engagement increases by asking questions, giving opinions, and let them discuss about topics delivered through videos in the lectures. The findings of this research provide substantial recommendations for the teaching colleagues/staff regarding the effective educational videos and its use as a teaching and learning pedagogy to increase and maximise student participation.

Keywords: Action Research, Educational Videos, Higher Education, Impact of Videos, Student Participation.

1 Introduction

1.1 Background

Rote learning pedagogy being implemented in the Maldives over decades ^[1]. Assumptions of videos in teaching may not necessarily bring much changes to the way

teaching are practised by lecturers regardless of any teaching contexts or disciplines. Keen to investigate lecturers' existing use of videos, their use of the selected videos and the impact on students' learning. Range of different challenges that are inevitable to digital technologies and its use in the teaching and learning context of the Maldives [1]. None of the literature herein discussed a specific digital tool such as video and how its impact on student learning or teachers' or lecturers' pedagogical practices. Potential benefits that the use of videos can offer for teaching and learning contexts [2], [3], [4]. Crucial to explore its uses by Maldivian lecturers, more specifically, in the higher education context, where no research has been carried in relation to this video pedagogy focus.

Centre for Educational Technology and Excellence (CETE), MNU, has introduced a range of online courses at MNU since early 2000s. The principal researcher has experience working at CETE as an academic lecturer, which offered her opportunities to observe and receive anecdotal evidence on how students and lecturers use videos in the teaching and learning context. Some of these courses combined with video teaching materials, online real time videos or Skype or other forms of video conversations. During the last few years, MNU across all faculties has adopted blended learning mode in the offered programmes. This research may open a door for the interested academic staff to build their capacity in creating, customizing and using educational videos in their teaching. Additionally, the findings of this study may contribute to write-up the guidelines and relevant policies of MNU. It will provide recommendations for the instructional designers to take into considerations when designing up the lessons for online or block mode learning environments.

1.2 Research Objectives

While the project aims at investigating lecturers' use of video in teaching and learning of different disciplines at Maldives National University (MNU) and enhance their capacity of using educational videos in teaching and learning. To attain this aim, the project was focused on developing best practice of using video-pedagogies in teaching and learning, in the meantime, helping lecturers enhance their student learning through their use of videos in teaching. For this purpose, the research team invited two lecturers from each faculty to work collaboratively with the team, who could later design some workshops at their respective faculties on best practices of using video in teaching. The research is expected to:

- offer ways for lecturers to better implement video pedagogies in teaching and learning;
- allow lecturers to evaluate their own use of videos in teaching and reflect on the impact of their use on student learning; and
- assist lecturers to create their own videos, design better learning for students and seek new ways to manage and implement video pedagogies in teaching and learning.

Since the project was focused on enhancing the capacity of academic staff in using educational videos in teaching and learning, the research team focused on the impact

afterwards. Therefore, an additional study was conducted to aiming at analysing students' perspectives. Thus, this research tried to achieve the following objectives.

- Ascertain how the students use educational videos in their learning
- Identify the types of videos that could increase students' engagement and active participation in the learning process.
- Determine how the students perceive the use of educational videos in terms of learning support and active participation in the classroom

1.3 Research Questions

The research explored the students' use of videos in their learning of different disciplines at MNU. It was hoped that with the guidance provided to the academic staff on using and designing teaching with video pedagogy could help lecturers enhance their students' learning. In order to achieve the objectives, the researcher tried to find the answers for the overall research questions below:

1. In what ways students at MNU are currently using videos in their learning?
2. What types of videos can increase students' engagement and active participation in the learning process?
3. How do the students perceive the use of educational videos in terms of learning support and active participation in the classroom?

2 Literature Review

2.1 Use of Videos in Teaching and Learning

Video is also considered as one of the most effective teaching tools to make learning more engaged and exciting for learners to maximize the learning experience of the students [1]. Instructors can create their own videos or use existing resources from open educational resources such as YouTube, Vimeo, and Khan Academy. However, it is important to ensure that the videos are of high quality, relevant, and accessible for all students. Interactive videos can be used from the platforms such as Edpuzzle and PlayPosit to create engaging and personalized learning experiences. These platforms allow instructors to add questions, quizzes, and feedback within the video to promote active learning and assess student understanding. Incorporating videos in teaching and learning can help to create an effective and engaging learning environment for your students. Hence, the instructors and academics can explore the various ways in which videos can enhance their teaching strategies and promote better learning outcomes for their students [2], [3], [4].

Video is also considered as one of the most effective teaching tools to make learning more engaged and exciting for learners [4], [3]. It is important for lecturers to use videos not just as a tool for presenting information, but also as a means of engaging students and making learning more relevant and exciting for them [5]. By using videos in creative ways, lecturers can enhance their teaching methods and help their students develop a deeper understanding of the subject matter [6], [7]. This can lead to better academic outcomes and a more enjoyable learning experience for everyone involved. As

mentioned before, it would certainly be interesting to see how Maldivian lecturers are currently using videos in their teaching and the impact that this is having on student learning.

The literature presents three key reasons for the developing reliance on videos in higher education and professional development. It's true that videos have become an increasingly popular teaching tool in higher education and professional development due to the benefits they offer^[8]. By providing learners with greater access to classroom events, videos can bridge the gap between theoretical education and practical application^[5]. Furthermore, advancements in technology have made it easier than ever to create and use instructional videos^[9]. Institutional reforms are another factor contributing to the growing use of video-based teaching. By using videos to document classroom events, educators can analyze teaching practices and identify opportunities for improvement^[10]. This can help to legitimize educational reforms and ensure that they are implemented effectively. Overall, it's clear that videos are a valuable tool for that could enhance the teaching and learning in higher education context and professional development^{[11],[12]}. It also supports learners and educators as they explore new ways of using videos to achieve their educational goals.

Learning is the transfer of sensed, perceived and attended data into long-term memory^[13]. It is important to select appropriate audio-visual materials that can greatly enhance the learning process^[14]. By examining instructors' decisions regarding their use of video instructions and identifying the media devices used to deliver them, the instructors can gain valuable insights into how video instruction is being utilized in the classroom^[15]. With this information, instructors may be able to make recommendations for improving the video-based instruction to further enhance students' learning experiences. Since the aim of educators and instructional designers is to amplify the process of learning, the selection of the audio-visual materials for teaching has to be considered.

The devastating majority of video instruction was created for submissive, receptive viewing of lecture slides. However, videos created to teach complex medical procedures and skills were designed to guide learners through a step-by-step process, providing clear visuals and detailed explanations that allow for active engagement and participation in the learning process^[16]. When creating video presentations, it's important to consider the learning objectives and design content that encourages active learning and problem-solving. This can be achieved by using visual aids such as diagrams, animations, and simulations to demonstrate complex ideas or procedures^[17]. Additionally, incorporating interactive elements such as quizzes or discussion prompts can help to reinforce learning and facilitate deeper understanding of the material^[18]. Furthermore, it's important to consider the accessibility of the video content. Providing closed captions, transcripts, and alternative formats can ensure that the material is accessible to a wide range of learners with different learning needs. Designing video presentations that encourage active learning and incorporate elements of observational learning, instructors can create more effective and engaging content that helps learners acquire and retain knowledge and skills^{[19],[20]}.

The literature discussed above is likely to be useful to understand what lecturers do with videos when using and what purposes they use them. However, a question could

ask is whether or not the categories highlighted by these researchers could be identified within the context of the Maldives. One of the aims of this research is to explore what lecturers do with their use of videos and what do they see out of their uses of videos. However, none of these researchers have discussed a similar context like the Maldives to help us better understanding of how videos could integrate within the teaching and learning contexts of higher education at MNU. More importantly, in a context, where traditional teaching being imprinted for decades, it could argue the use videos and reasons behind the uses perhaps could be different in the Maldivian contexts.

Lecture-based videos can be a useful tool for providing students with access to course materials when they cannot attend in-person lectures. They can also be helpful for students who learn better through auditory or visual learning styles, as they have the opportunity to revisit the lecture multiple times if needed. Conversely, it is vital to note that lecture-based videos may not engage students as effectively as other types of videos, as they lack interactivity and may not take advantage of the full potential of online learning platforms ^[21]. As its name suggests, enhanced video can also include the use of graphics, animations, and other visual aids to help clarify complex concepts and theories. Additionally, interactive features such as quizzes, polls, and assessments can be integrated into the video to engage students and provide immediate feedback on their understanding of the material. It proves a dynamic and engaging approach to learning that can help students better understand and retain information ^[22]. By providing additional explanation and context, instructors can help students develop a greater understanding of the material and apply it in real-world scenarios. Use of enhanced video as a valuable tool for educators to enhance student learning experiences ^[14].

Conducting research on how videos can be integrated with different teaching philosophies and pedagogical thinking in the Maldives would indeed be a valuable contribution to the education field. It is also essential to understand the cultural and pedagogical context of the region so as to effectively utilize technology in teaching and learning. Seeking to understand the use of videos by lecturers, particularly, with a focus on different disciplines could be an important area to conduct research in the Maldives, which can contribute to address the gaps highlighted in the literature.

3 Methodology

3.1 Research Design and Approach

An innovative research approach mixed with both quantitative and qualitative paradigm was used adopting the action research model for pursuing research aims. The action research techniques and strategies were used for this research in order to enable participants' involvement and engagement in the learning journey of creating and using videos for teaching. The students from 6 faculties, 3 schools, and 3 centres of the MNU; two from each faculty consists of a total of 26 participants were invited to take part collaboratively in the project. However, 22 participants took part in the project.

3.2 Data Collection

A baseline study was conducted to begin with the project. That was begun with a survey across the faculties, schools and centres of MNU, and analysed the current situation of using videos in their teaching to promote students’ learning. With the help of the survey, the research team was informed the areas where the lecturers need support. Thus, some workshops were organized by hiring the experts from the field. These workshops were conducted after developing a training pack that could provide the lecturers with opportunities to learn new ideas and creative ways for using videos in teaching and learning.

Two circles of action research design, in each circle, the four elements of action research were carefully implemented and integrated within, so that each element feeds each other, as shown in Figure 1.

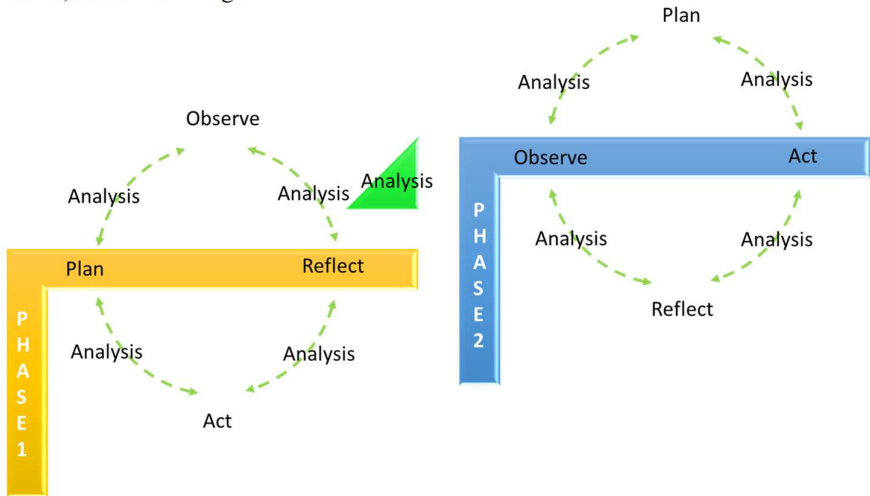


Fig. 1.

After completion of two cycles of the project, the research team was interested on finding impact of the training workshops conducted for the academic staff of the MNU. This was done at three stages; before the training, during training and after the training. Separate analyses were done for the data collected. After a one whole semester, the research team focused their interest on analyzing the impact of effective educational on maximizing students’ participation from the student perspectives. A comprehensive approach was taken to collect data on student participation and the use of educational videos in the classroom through observation, a questionnaire and interviews on students’ perspectives with regard to the use of educational videos supports their learning and participation in the classroom as well as its impact on their learning.

3.3 Data Analysis

For this research, the qualitative data was gathered from the observations, interviews and open-ended responses in the surveys. A checklist was used for the observations, while the open-ended responses from the survey and interviews were transcribed. The responses were thematically analysed to identify emerging trends.

4 Findings

Analysing the students' responses, the researcher came up with the ways that lecturers at MNU are currently using videos in their teaching. Mainly two different ways were highlighted and they are:

- to deliver course information in the class time.
- allowing students to view content outside of class, and providing students with additional resources to supplement core materials

Based on the analysis, the following themes were identified as the types of videos that could increase students' engagement and participation in the learning process.

- Short videos with informal talking,
- Tablet drawings, like Khan-Academy are much more engaging

From the students' responses, it was identified that the use of educational video has an unwavering and positive impact on students' engagement and active participation in the classroom. Based on the analysis, it is more when opportunities are given for the students to select their choice of videos. Giving assignments that includes creating videos would increase the students' participation as well as their motivation. It also reveals that the students' active engagement increases by posing questions, providing opinions, and let them discuss about the contents that were delivered in the form of videos. Additionally, students suggested to provide them with demonstration videos to bring about active learning and flexibility using videos. Students also conceded video as a resource that helps them to recall the lessons, map progression, and participation in critical reflections. Students also reported that they feel nervous while creating their own videos, specifically when they talk in the videos and it was identified as the only constraint in this research.

5 Conclusion and Recommendations

Students perceived that the lecturers at MNU are currently using videos in their teaching to deliver course information in the class time. The videos use by the lecturers at MNU allows students to view content outside of class, and provide students with additional resources to supplement core materials. However, short videos with informal talking, and tablet drawings, like Khan-Academy are much more engaging.

Since the video pedagogy has a positive impact on students' learning, that can be used for active and flexible learning at MNU by providing them with demonstrative videos. Since the videos are considered as a resource that helps learners to recall the

lessons, engage in critical reflection, and map the progression, lecturers could embrace the video pedagogy.

Ways to eliminate the nervousness needs to be identified that was reported by the students while creating videos as it was the only constraint the students identified in the research.

The instructional designers and academics who became the ambassadors by completing training workshop and their expertise can be used at their respective faculties to help and scaffold their fellow colleagues., that would ultimately contribute to the lecturers' personal and professional growth.

The entire training pack used in the project is gifted to the Centre for educational technology and Excellence (CETE), MNU, which it the in-charging body of facilitating teaching learning at the faculties, centres and schools of MNU, so that the short trainings for each module in the training pack can be conducted in collaboration with Training Development Unit (TDU) and CETE throughout the two semesters of every academic year.

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