Course on Creating Effective Asynchronous Learning Units for Teachers in Higher Education

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Abstract

The techno-pedagogical skills that higher education teachers developed during Covid-19 did not always yield effective, long-lasting online teaching. One reason lies in the differences between Emergency Remote Teaching and online learning. While many higher education teachers learned how to use the same teaching materials remotely, they did not learn how to adapt these materials to fit online instruction. This paper presents a post-Covid training program for higher education teachers on how to build effective blended or asynchronous teaching units. The program includes asynchronous as well as face-to-face components, addressing teachers' techno-pedagogic skill gaps. It was designed to provide the higher education teachers with a method for preparing effective videos for teaching using simple tools.

Following Mayer's principles of multimedia teaching, we demonstrated how to transform an existing PPT presentation, created for in-class teaching, into effective online material. Each participant prepared a video for teaching and a joint assignment.

A pilot program was conducted at the Hebrew University of Jerusalem in August 2021 with three pilot groups. We concluded that it is critical to have technical and pedagogical knowledge, but we must also address the motivational issues associated with changing working habits and beliefs about learning that are part of moving into online teaching.

Keywords: *digital teaching and learning, online teaching, blended teaching, teacher training, Higher Education*

Introduction

This paper describes the structure and content of a blended training program for higher education teachers aimed at preparing them to develop and teach asynchronous academic units. With this training program we aimed to provide participants with the necessary knowledge and skills in a short time, and with simple tools readily available to them.

During Covid-19 Faculty learned very quickly how to do Emergency Remote Teaching but it did not always yield effective, long-lasting online teaching [5]. While many higher education teachers learned how to use the same teaching materials remotely, or to apply very few changes in teaching, they did not learn how to adapt these materials to fit online instruction [3]. To fit online instruction, teaching materials and teaching behavior require substantial changes and new skills must be acquired.

Adjusting the teaching material to the asynchronous format

Asynchronous online learning and campus learning are two different types of learning environments that offer students a variety of educational experiences. Each type of learning environment has its own advantages and disadvantages. Thus, building asynchronous effective course or course unit, should minimize the disadvantages and maximize the advantages of this format. When converting an on-campus course unit to an asynchronous course unit, it will often require rewriting parts of the course material. I will present few examples for the adjustments that are needed in creating an effective asynchronous online course units or courses.

A key characteristic of online leaning is its flexibility in terms of time and location [2],[10]. This is considered as an advantage of online learning. However, it may be also a disadvantage for effective learning since flexibility could also mean a lack of clear guidelines about when and where and even how long to study. This could lead learners to allocate not enough time for learning or to postpone learning altogether. Similarily, flexible locations can lead learners to choose an unsuitable place for studying, hindering their progress. To prepare asynchronous units for their courses, teachers must take into account that the weekly timeframe of the course no longer exists, and find new ways to create a framework that assures continuous learning. Changes to the structure of course assignments could serve as both a tool for practice as well as an alternative timeframe for learning.

In spite of this, online learning should not be considered inferior to campus learning, and adapting a course to online learning does not imply merely minimising or eliminating its disadvantages, but also maximizing or enhancing its advantages. Online learning has also considerable advantages compared to campus learning. For example, students learning schedule in campus often consists of several lessons in different topics, one after the other. The practice and rehearsal of the material is often not planned directly after a new material is presented. If students learn new concepts in one subject and then, instead of practice these new concepts they learn another set of new concepts in another subject, they could forget what they have learned e.g., [1], [9] . Thus, the structure of higher ecucation scheduls on campus often delayes the opportunity to practice new material, which hinders learning. In online learning this problem could be eliminated for example, by presenting a practice assignment with several trials and instructing students when to take the first trial after learning and how it is recommended to space the different trials.

The existence of good learning videos does not guarantee effective learning if assignment structure and timing aren't appropriate and learners aren't provided with clear instructions. Due to the fact that most teachers in high education learned on campus, they often lack the necessary experience to instruct their students how to become effective online learners. Therefore, they will need to be trained.

Description of The Training Program

This paper presents a post-Covid training program for higher education teachers on how to build effective blended or asynchronous teaching units and how to use such units effectively. The program includes asynchronous as well as face-to-face components, addressing teachers' techno-pedagogic skill gaps. It was designed to provide the higher education teachers with a method for preparing effective videos for teaching accompained with assignments, using simple available tools. The first stage of development ended in 2022. Now we develop the final version of the training program.

The training course consists of three units, each contains three or four video lectures, each lecture is followed by a quiz and every unit ends with application assignment. During the first unit, higher education teachers learn what types of learning materials are suitable for synchronous online instruction. For example, explanation of basic concepts, demonstration of a worked examples or technical instructions are suitable for asynchronous learning, whereas complex discussion and skills that require interaction between learners, are less suitable. At the end of this unit the teachers choose a presentation from their course material, that they will convert to an asynchronous video, and they justify their choice in writting. During the second unit of the program, higher education teachers are presented with a five-stage model for converting their initial presentation into online videos. The five stages include: (1) choosing the presentation (2) rewriting and adding the script to the notes section, that is, writhing a storyboard (3) deviding the intial storyboard into bite size segments that will later on become the video lectures (4) recording the audio and (5) exporting the presentations to create video files. At the end of this unit the participants submit their storyboard. During the third unit of the program, higher education teachers learn how to review their storyboard according to Mayer's principles of multimedia teaching [7],[8]. Each principle is explained and demonstrated. Among these principles are, for example, the Coherence Principle, of avoiding extranous information and graphics. Another principle is the Personalization Principle, teaching them how to demonstrate Teaching Presence [4],[6] rather than acting as a narrator. At the end of this unit the higher education teachers resubmit their revised storyboard, while pointing out the expression of each principle.

Pilot Program

A pilot program was conducted at the Hebrew University of Jerusalem in August 2021 with three pilot groups. The participants were presenting impressive storyboards and video lectures at the end-session, and their satisfaction was very high. However, they also revealed several difficulties that we did not consider before. One difficulty arises from the changes in their work habits. Many University lecturers are used to work on their teaching during the semesters and to devote most of the time between semesters to research. Preparing an asynchronous course means more work before the semester starts and less work during the semester. This requires adjustment and patience. Other difficulties involve certain perceptions or misconceptions that university teachers have. For example, most teachers interpret low attendance in class as a sign of their ineffectiveness and don't consider that sometimes it indicates that the asynchronous material is adequate. This misconception persists despite indications for effective learning by the students. In addition, many believe that the most effective learning occurs only in campus. Very few higher education teachers gave their students clear instructions of how to learn from asynchronous material. Often the only instruction that teachers gave

to their students was: "it is very important to come to the lessons in campus". We realized that despite spending considerable time preparing the asynchronous material, teachers often discouraged students from using it. Many did not encouraged their online students to contact them when they needed help. We believe that without a change in these perceptions and behaviors, they could serve as a self-fulfilling prophecy.

We concluded that in addition to the technical and pedagogical knowledge that this program adresses, we must also address the motivational issues associated with changing working habits and the perceptions about the possible effectiveness of online learning. As a result we added two topics to the first unit of the course addressing these difficulties and the ways to cope with them to the final version of the course.

Summary

Planning and executing an asynchronous course is not as simple as recording the audio of an existing course, as it was often done during Covid-19 Period. We identified knowledge, skills and perceptions that are needed to be able to develop and conduct a decent asynchronic academic course units. Our blended training program consists of two and a half hours of asynchronous training, practice and feedback, and one synchronous meeting to present the final results. The main goal of the training is that higher teachers could adjust their PowerPoint presentations, and change them into effective asynchronous units, to combine in their courses. As much as it seems reasonable that developing asynchronous learning units will be considered a basic teaching skill in the future, this will not occur without intervention. This training program that we presented throw light on few of the the challenges in training high education teachers as online teachers.

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