

## Chapter 54

# Blended Learning at Ajman University of Science and Technology: A Case Study

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### **ABSTRACT**

*Over the past few years, there has been a rapid increase in the development of technology-based learning and teaching. Professors have become more pragmatic in their approach to technology-based media by using it to supplement or to replace traditional face-to-face teaching. Blended learning, which combines both electronic and face-to-face interaction, has gained more ground as midway between distance and face-to-face teaching approaches. Thus, opportunities for both educators and learners have been created. The teaching and learning approach adopted at Ajman University of Science and Technology (AUST) combines an equal balance of traditional face-to-face and videoconference learning, complemented with the use of a learning management system (Moodle). Student and instructor satisfaction is considered the most important factor in measuring the quality of blended learning. The purpose of this chapter is, therefore, to examine student and instructor satisfaction of blended learning at AUST. The chapter demonstrates that the majority of students and instructors hold positive views but are still attached to the traditional face-to-face learning and teaching. They also show that the level of satisfaction may depend on individual experience as well as on the major studied/taught.*

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## **INTRODUCTION**

Ajman University of Science and Technology (AUST) was founded in 1988 as the first private institution of higher education in the United Arab Emirates and Gulf Cooperation Council States. The university has two campuses, at Ajman and Fujairah. It offers 26 accredited undergraduate programs and six accredited master's programs. In observance of social norms for certain communities, AUST has from its inception adopted an education system of segregation by gender. Each course is taught in two separate sections, one for male and the other for female students. Traditionally, the instructor in charge teaches both sections and thus the same lecture is delivered twice.

Like businesses, universities face pressure to do more and better with less. As a consequence, videoconferencing becomes a way to reduce unnecessary duplication of effort. Drawing on the experience of AUST, this chapter presents a new approach to course delivery that combines traditional face-to-face methods with modern technology. The goal of this blended delivery approach is to provide a virtual environment as close to the face-to-face approach as possible.

In order to assess the effectiveness of the blended learning approach adopted in AUST, students and instructors from different colleges at AUST were asked to complete surveys conceived to gauge whether the nature of courses being delivered using the blended learning model affects the student learning process. The respondents' feedback was used to introduce further improvement.

In other words, the purpose of this chapter is to evaluate the level of student and instructor satisfaction with blended learning, and to explore whether satisfaction differs according to time-related and/or college-related factors.

This study is essential to ensure that high quality learning is achieved when instructors and students are physically separated. The results obtained reveal that even though the majority of students and instructors make positive observations regarding

blended learning at AUST, they still prefer the traditional face-to-face model. Results also show that the level of student satisfaction depends on the major being studied, while the level of instructor satisfaction depends on teaching experience.

## **BLENDED LEARNING AT AUST**

Blended learning, also called hybrid learning, is a flexible term which lacks a unified definition. A variety of definitions thus exist, addressing different aspects of instruction:

- A combination of teaching strategies,
- A combination of delivery media,
- A combination of online and face-to-face instruction.

Due to gender segregation at AUST, course instructors have to deliver each lecture at least twice. Instructor office hours are also divided according to gender. The blended learning at AUST combines an equal balance of traditional face-to-face and videoconference learning, complemented with the use of a Learning Management System (LMS), namely Moodle. In this blended delivery approach, the two sections of the course are scheduled to be offered in separate classrooms at the same time. The classrooms are connected using videoconferencing equipment which allows interactive real time video and audio communication between the two rooms. Students may also communicate with their instructor as well as with their classmates at any time using the LMS adopted at AUST.

A videoconferencing classroom features the following:

- Cameras fixed to the ceiling allowing the transmission of a live color video of the instructor in the other classroom and simultaneously transmitting a video of the

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