# Better engagement of off-campus students through the use of virtual classroom

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## Structured abstract

### BACKGROUND
More students are opting to enrol in distance-learning programs. This arrangement works well for the self-motivated students. However, the absence of physical stimulation, lack of moral support from peers and limited contact with the lecturer poses substantial challenge to others. As a result, some students may feel disengaged and consequently fail to achieve all or some of the intended outcomes or even withdraw from the course.

### PURPOSE
This paper describes how virtual classroom and online technology were used to create a sense of belonging and engage students in activities to achieve the intended learning outcomes.

### APPROACH
Three online virtual classroom sessions were conducted during the second, fifth and tenth teaching weeks. During the first meeting, students were encouraged to form groups to work on the major project. Students were then assigned to 3 levels of communities; class community, off-campus community and group community. To facilitate collaboration and create a sense of community belonging, discussion forums as well as other communication channels were provided at different levels of group associations.

### RESULTS
Comparing the results obtained from the course offering before and after the introduction of the changes revealed that students were more engaged in learning. This was manifested in higher retention; improved students' satisfaction in the course; and achievement of the course objective of 'Working effectively in groups'.

### CONCLUSIONS/RECOMMENDATIONS/SUMMARY
Creating a sense of belonging and engagement may improve the overall outcome of the course offering. Virtual classroom environment and customised communication channels at different levels can be used to help off-campus students create a sense of community belonging.

### KEYWORDS
Online mode, student engagement, virtual classroom

# Introduction

An increasing number of students are opting to enrol in distance-learning programs. There is a strong direction by universities to offer more courses via distance-learning to meet the increased demand and attract non-traditional students.   However, teaching off-campus students can be challenging, not the least because of the physical disconnects between the lecturer and students.  Moreover, many of those students are mature-age students who are returning to 'classes' after a significant absence from study, thus lacking contemporary student experience (Goldfinch, Carew et al. 2008).  Furthermore, many of them are in fulltime or par-time employment and facing the challenge of balancing competing priorities.  Duff et al. (2007) stated that up to a third of students report difficulty in meeting the demands of their academic work and struggle with independent work. As a result, they require significant adjustment to 'fit-in' the role of being a student.

The challenges, mentioned above, are further compounded by the lack of peer support and the absence of physical stimulation which may lead to a sense of disengagement and dissatisfaction with the learning process. According to Chickering and Gamson (1987), contact between students and teachers as well as fostering a collaborative relation among students are important factors in keeping students motivated in learning. On-line tools such as virtual classrooms, discussion boards, wikis and blogs, can play an important role in creating a personalized connection between the lecturer and off-campus students.  They can also contribute towards creating a 'student bond' with a simulated physical classroom experience.  If used appropriately, they can also encourage collaboration and team work.  Nonetheless, it has been noted that mature-age students are less likely to make use of web-based resources and tend to collaborate less with their peers (Krause 2005). This paper describes how on-line tools were used to enhance off-campus students' experience by fostering a more collaborative environment and closer interaction between students and the course convenor.

# Methods

Wimba™ /Collaborate™ is an online (virtual) classroom tool that has video conferencing capability.  It allows the lecturer to deliver a traditional style lecture to a group of students.  But more importantly, it allows students who are in different geographic locations to engage in discussion and interact with each other as well as with the lecturer.

'Groups' is a facility in Blackboard that allows the convenor to create dedicated sites to support students' groups and facilitates their interaction.  Each group can have a dedicated discussion board, a file exchange, collaboration tools such as virtual Lecture Hall and email list and wiki.  The convenor can assign rights or disable any of the facilities of the group as well as moderate the group.

### Case description

Environmental Management Systems is a subject taught by Griffith School of Engineering in Mixed Mode delivery format.  It has on-campus as well as off-campus enrolment.  Students enrolled in the subject come from varying backgrounds and are enrolled in various graduate programs taught by the Engineering and Environment schools.  Off-campus students are usually mature-aged working professionals who are seeking to advance their knowledge, upgrade their skills or gain formal qualification in the field of Environmental Management.   In most case, students had to juggle between study, career and family commitments.

### *Course delivery mode 2011 offering*

At the beginning of the semester off-campus students are furnished with a comprehensive study package.  Students were expected to go through the reading material and submit the assigned work according to the timetable provided in the course profile.  Consequently, students had limited contact with the course convenor and perhaps more significantly little opportunity to engage with other students. This arrangement worked well for the self-

motivated students who are able to organise their study time around their busy daily schedule.  Nevertheless, it proved challenging to other students because they are away from the university scene with no physical stimulation to keep their interest and focus on the subject.  Although, lecture capture was used, the only direct contact between students and the convenor was via email or phone call. Contact among students was limited to the discussion board.

Group work is an integral component of the course assessment.  On-campus students are expected to work in groups of 3-4 to produce a major assessment item.  Off-campus students had the option to work individually or in a group.  In previous years, off-campus students opted to do their assessments individually.  This clearly meant that some of the course objectives were not fully realised.  Furthermore, the added load contributed to students' dissatisfaction in the course.  Consequently, the number of students who withdrew from the course was significant.

Careful inspection of students' feedback in the course evaluation further revealed that students felt disengaged because they did not have the moral support of their peers.  Some students also pointed out that email contact with the course convenor, although convenient, did not provide enough motivation to engage them in the deep learning required by the course.   In response to these concerns, in the 2012 offering, I decided to include more engaging communication channels for the students and move away from the 'printed material' mode to an 'on-line' mode of delivery.

### *How the course was delivered in the 2012 offering*
A dedicated virtual group that included all off-campus students was created in Blackboard. The group has access to a dedicated discussion board in addition to the more general discussion board which was open to all students.

Off-campus students received a welcome email a week before the semester started.  In the email, students were informed that the convenor wishes to introduce himself in person to the students via a video conferencing session (Wimba/collaborate).  The email included suggested times for the session (in the second or third teaching week) and students were encouraged to select a session via responding to the email. In the first week of teaching, a follow up email with the proposed agenda for the session was sent to encourage response. In total 19 out of the 25 students responded.

The session included formal welcome to the course, introduction of the course convenor, students were encouraged to introduce themselves to their colleagues and state their motivation for enrolling in the course.  The course profile was discussed in detail. The session also included a guided tour of the course website on Blackboard and highlighted the available communication channels which students can use to contact each other and the course convenor.  Assessment items were explained and group work was highlighted. Students were also given an opportunity to ask questions and discuss among themselves. At the end of the session, 5 groups (15 students) were formed and in the subsequent days another 3 students joined 3 groups with on-campus students.  Each group was offered a dedicated 'group page' on Blackboard to facilitate students interaction.

A second Wimba session was suggested to the students.  The suggestion was welcomed by the students.  An initial discussion with the students indicated that a third session should take place towards the end of the semester.  Students were contacted in the seventh week to arrange for a session in the ninth or tenth week.  The third session was dedicated to answering questions about the major assessment item.

### *Further changes to the 2013 offering*
Encouraged by the success of the 2012 trial, I decide to make group work compulsory for off-campus students.  Furthermore, I pre-scheduled 3 virtual classroom sessions to be run during the 2nd, 8th and 11th weeks of the semester.  I also required that all assessment should be submitted via 'turnit in' in order to facilitate easy return and timely feedback to students.

# Results and discussion

The changes to the mode of delivery had positive impact on students' experience and achieving the course objectives and learning outcomes.   Inspection of students' comments and feedback on the course evaluation revealed that students appreciated the added support and many commented that they felt a sense of belonging.  Consequently, retention rate increased from 50% in the 2011 offering to 88% in 2012, as can be seen from table 1.  This feeling of belonging was further reflected in the students' attitude towards participating in the course evaluation, for example in 2012, 72.7% (16 students) completed the course evaluation compared to 36.6% (4 students) in 2011.

In response to the statement 'Overall I am satisfied with the quality of this course, 75% of the respondents stated that they either agree or strongly agree compared to 50% in 2011.  This is a clear indication that the sense of belonging and engagement contributed positively to the overall satisfaction in the course.  Interestingly, in 2012 75.1 % of the students' responded that they agreed or strongly agreed with the statement 'This course engaged me in learning' compared to 50% in 2011 which is a strong indication that sense of belonging leads to better engagement in deep learning and as a result better satisfaction with the course outcome.

**Table 1: Retention rate**

| Year | Enrolment at the start of the semester | Students who sat for the final Exam |
|------|----------------------------------------|-------------------------------------|
| 2011 | 22 | 11 |
| 2012 | 25 | 22 |
| 2013 | 18 | - |

**Table 2: Number of groups formed by off-campus students**

| Year | 2011 | 2012 | 2013 |
|------|------|------|------|
| Number of groups | 0 | 8 | 6 |
| Number of students involved in groups | 0 | 18 | 18 |

**Table 3: On-campus/off-campus student interaction (group formation)**

| Year | 2011 | 2012 | 2013 |
|------|------|------|------|
| Mixed groups | 0 | 3 | 3 |
| Number of off-campus students | 0 | 3 | 4 |

Although, the majority of students were of mature age, age did not seem to be a hindrance to the use of technology.  This is particularly evident from the 2013 offering.  Despite the fact that many of them were first time users, hardly any problems were encountered in convincing them to adopt and use the online tools.  For example, a short tutorial prepared with screen capture was all that is needed to guide students on how to use collaborate.  As evident from tables 2 and 3, the successful use of online technology has motivated students to be more engaged and interactive.

# Conclusion

Use of online technologies such as virtual classrooms and group communication tools successfully improved off-campus students' satisfaction in the course and helped them engage in more meaningful ways in the learning.  Despite the fact that the majority of off-

campus students are of mature age, they were open to the use of technology. The use of the online tools also helped off-campus students to engage with on-campus students who are typically of younger age.

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