

A flipped-classroom blended approach to teaching of pharmacology

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Introduction

Current and future cohorts of university students are demanding greater flexibility in their learning environments.

The dilemma: how to address this flexibility and maintain student engagement and satisfaction.

We describe the development of a 'flipped-classroom' (FC)-blended learning design implemented in Year 3 pharmacology teaching

AIM

To design, implement and evaluate a FC-blended learning approach and compare this to a traditional mode

METHODS

Traditional	3hrs Lectures	2 hrs Wshop/tutorial
FC-Blended	1hr 'Lectorial' + Videos	2 hrs Wshop/tutorial

Weeks 1-5 of a 12 week semester were taught in the FC-blended mode.

Lectures replaced by a series of videos complemented by face to face lectorials.

Prior to attending the lectorials, the students watched the videos and completed a **Student Video Concept Form (SVCF)** based on their understanding of the key concepts.

The SVCF provided feedback on difficult concepts and was used to direct the learning in the lectorials.

The remaining 7 weeks of the semester consisted of traditional, face-to-face lectures and workshop/tutorials.

Evaluation of the project included student perception questionnaires, focus groups.

Student Video Concept form (SVCF)

NAME. _____ ID. _____

WEEK: (type in week number)

As you are watching the videos, perform the following:

A. Write down short phrases (dot points) that interested you from the content,

B: Identify a least 3 key concepts you have understood from the content.

C: Identify at least 3 key concepts you are having difficulty with.

*Type them into this form and upload this form to blackboard as a **WORD DOCUMENT** no later than the **14.00hrs Friday preceeding** the Monday class. Everyone must do this and it will form part of **your participation mark** for the workshops/tutorials.*

Save the document in the following format:

Surname-student ID-week number-video concepts.

For example. Badoer-123456-week number 1-video concepts

RESULTS

Overall Student Satisfaction Index (OSI) = 85.7%

Class of 40 students

In response to the questionnaire at the end of semester:

- 90% of the students found the new teaching approach interesting.
- 93% found the approach helped their learning.
- 83% of the students indicated the new approach addressed their conceptual difficulties vs 36% for the traditional mode.

RESULTS

- Student attendance in the lectorials (71%) was markedly higher than in the conventional mode (28%).

In written responses students indicated:

- That the short videos (15-20 minutes) helped them focus on key concepts,
- The FC-model increased flexibility, particularly their ability to view and review videos using mobile devices of their choice;
- Most importantly, students reported increased retention of pharmacology concepts as a result of the changed teaching approaches.

CONCLUSION

FC-blended learning model

1. increased student engagement,

2. assisted student learning

3. increased student satisfaction with the course.

CONCLUSION

Most importantly,

- The students were able to revisit the learning material and consider their difficulties before the lectorials and reinforce their understanding during the lectorials
- The SVCF was a valuable tool for both students and staff and critical to the success of this initiative.
- Course content was not reduced, but direct contact time for the lecturer was reduced.