



# **The Contribution of a Personal Response System to Enhanced Engagement and Learning**

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## **Keywords**

Personal response systems, large classes, student engagement.

## **Activity**

This case study provides an example of the use of a Personal Response System (also sometimes known as an electronic voting system) in large first year lectures on sport programmes at UWIC.

## **Group**

The PRS was used in one first year sport module comprising a large cohort of students (approximately 300 students).

## **Aim**

The aim was to evaluate the extent to which use of the PRS would encourage students' learning and engagement in large lecture sessions.

## Example

The module comprises a number of delivery methods including lead lectures, small group practical laboratory sessions/workshops, and guided self-study. The PRS was integrated into the lead lectures for one block of teaching for a sustained period of 12 weeks. Due to the large numbers enrolled on the module, a repeat lecture was delivered each week with half the students attending the initial lecture and the other half attending the repeat. While exactly the same content was delivered in both sessions, the method of delivery differed slightly with the PRS being used consistently in the second of the two lead lectures each week. The first of the lead lectures acted as a control group.

During the lectures the PRS was used to prompt students to respond to questions at appropriate intervals. Their responses were displayed anonymously to encourage engagement by overcoming fear of failure and humiliation in front of peers. The class responses were displayed to students as a chart, graph or rolling text providing the students with instant feedback and an opportunity for further discussion and an accompanying explanation from the lecturer.

Using the PRS required a considerable amount of preparation:

- The equipment needs to be installed in lecture theatres and be made easily accessible.
- Staff training was required (and a greater input of time from the start) but it was easy to use once they were familiar with the equipment.
- Question design is the key to engagement and learning. The level of difficulty of the questions posed is important. Students are more likely to engage when they are challenged and unsure about the answer. They are more likely to want to listen to the accompanying feedback/explanation as a result.
- Use of text responses provokes a limited number of inappropriate responses but this can be minimised by asking students to enter their student ID at the start of the lecture. Responses are still displayed anonymously but the lecturer can later trace individual responses.
- PRS may lead to a reduction in lecture content. Compensation strategies need to be considered. It is important to develop a balance between quality and quantity in lead lectures.

## Results/Feedback

The feedback on use of the PRS has been positive. Overall 84% of the student comments were positive and their comments support the view that PRS provides a tool for interactive learning and helps with concentration, interest, motivation and engagement. Importantly, use of the PRS created a positive atmosphere in the lecture theatre.

## Staff views

- 1) It was possible to check the students' understanding as the lecture goes on and tailor feedback to meet their needs – it provides a very immediate form of formative assessment that is useful to both staff and students. Students responded more readily because answers their answers were anonymous.
- 2) PRS can be used to prompt additional peer/class-based discussion. Encouraging students to engage in discussion and develop a justification for responses facilitates the development of critical thinking. However, discussion can be so engaging that it forces lecture content to be reduced and therefore it is necessary to consider whether quantity of information or quality of interaction is more important at a particular point in time.
- 3) Attendance has increased and the lecturer knows who is present as students need to log on. Students agreed that use of the PRS would influence their attendance positively if it is used as part of a blended approach to learning.

## Student views

- 1) The PRS is user-friendly and the unavoidable need for interaction can help the lecturer to build rapport with the class.
- 2) The system helps to engage students in learning and stimulates thinking. In addition to immediate feedback (which can be tailored to the needs of the class), it helps students to identify what they have actually learned.
- 3) Students recognised that they had both engaged more (due to the anonymity of responses) and received more feedback through the use of PRS systems (due to instantaneous results) than in other lectures.
- 4) PRS provides continuous formative assessment as students see how well they are doing throughout the year.
- 5) Students also like to be able to place themselves in relation to the rest of the class.

## Further Information

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