This document aims to provide an overview of the potential uses of EVS to enhance student learning. The benefits and considerations associated with their use have been identified although these are not exhaustive. The use of voting systems is recognised as having the potential to enhance learning through student engagement and increasing the motivation to learn (Draper & Brown, 2004)
Using EVS for assessment to administer ‘In-class testing’

The students are advised that there will be a number of ‘in-class tests’ that will take place over the Semester. These are usually drop quizzes (i.e. take place without warning) and will be set as either formative or summative assessments. The summative element may be either a single low stake assessment (i.e. carries a relatively low number of marks) or a series of low stakes assessment. Some or all of these may count towards the overall module mark. The aim of this is to encourage students to engage in the module content both during and outside the lecture time, for the entire semester.

**Benefits:**

- **Student can have instant, individualised feedback**
- **Students will be given immediate feedback why a particular answer is right or not**
- **Class performance is identifiable to the academic**
- **Academic can provide additional support if necessary ‘Just in time’ teaching can be identified.**
- **Extra support can be targeted to students who need it.**

**Consideration:**

- **Need to be conversant with using EVS for formative work before moving on to using it for summative assessments.**
- **Allow adequate time for the students to answer the questions.**
- **Feedback must be provided to the students in a timely manner if it is to be beneficial.**
- **Inclusive practice needs considering.**
To facilitate peer assessment

EVS can be used for students to assess their peers on an assessment task, either formatively or summatively. The assessed task could be something like a presentation, debate or poster. Students use their handset to vote on their peers. Academics must set the grading / marking method that will be used beforehand and clearly articulate this to students.

Benefits:

- Students engage with the marking criteria

Considerations:

- Peer assessment must be for the benefit of the student and their learning so clear guidance on the task is required.
- EVS does not capture qualitative feedback from students.

To track individual or class progress

When students have answered either formative or summative EVS questions in a lecture or tutorial, it is possible to track progress of both the student and entire class. The electronic voting handsets can be set to ‘Anonymous’ (not linked to a handset), Automatic (provides handset number) or to a class list downloaded from StudyNet which will include the name and handset number. When tutors are ready to generate reports they can simply launch the Reports Wizard from the TurningPoint tool bar and can generate a report through Excel or Word.
Benefits:
- This will help the lecturer identify how much the class understands and which questions they found difficult.
- They can also offer support to individuals who are not performing well or engaging in the EVS questions.
- Lecturers can provide additional support e.g. ‘just in time teaching’ if necessary.

Consideration:
- Interactive teaching does not guarantee an active learner but will encourage learning.
- Use of EVS should not distract from content.
- Not completely anonymous in some situations.

To facilitate a revision class
Revision classes or difficult topics may be covered by using MCQ’s that can test content knowledge. Students can ‘lead’ the class and produce their own MCQ’s that can then be used at a later date.

Benefits:
- The lecturer can gauge the level of input required to support the students. Students can plan their learning immediately.
- Students can help develop questions that may be used in future sessions.

Considerations:
- If students have revised prior to the class, they may find EVS uninteresting or not detailed enough and lose motivation so careful question design is essential.
To maintain student engagement

Questioning via EVS can be interspaced throughout the lecture/seminar to maintain the attention of the students. The EVS questions can test prior knowledge of the subject, understanding of what has been presented or knowledge gained from the lecture/seminar.

Benefits:
- It raises the attention level of students and provides them with instant feedback on whether they understand a topic, it also gives immediate feedback to the lecturer so that they can clarify or add ‘just in time’ teaching.

Consideration:
- ‘Good’ questions need to be developed.

To deliver prompt feedback

EVS may be used for formative assessment at the beginning, middle or end of a session. Students have immediate feedback so can identify further learning needs and plan their learning accordingly.

Benefits:
- Students can identify their level of learning against peers giving them focus and direction in seeking academic support.

Consideration:
- Student may not seek academic support so academic needs to be aware of this.
Different ways of using EVS

Contingent teaching – use student answers to questions to direct the lecture.

You might ask a question covering a specific subject area to assess whether the students understand the subject. If most of the students respond correctly, you can skip ahead to the next section of material.

Benefits:

- Lecturers do not need to cover material that students already understand. However, they can track the students who did not understand and provide support for these students.

Consideration:

- Ensure students are not voting randomly as this will mislead the lecturer and then the content.
Conditional branching

Conditional branching allows the academic to control the order of slides in your presentation based on the responses received from the audience. For example, at the beginning of your presentation you may have an ethical debate on ‘who gets the liver, patient A or patient B? Depending on the results of the vote, the presentation will skip ahead to the slides for patient A or patient B. Students would not need to be tracked individually.

Benefits:
- Allows for debate or discussion on the choice made.
- The academic can give directed/appropriate feedback instantly and clarify any misunderstanding of the class as a whole.

Considerations:
Needs to be clear what they are voting for and why.

To check pre-sessional preparation

The academic can give students preparatory work before the lecture and then check if students have engaged with the work.

Benefits:
- This allows the academic to check the knowledge level of the group.
- It embeds good practice by clearly setting the expectations required of the students
- It extend learning beyond the classroom.

Consideration:
- Ensure this activity is taken into account when calculating student load on a module
To enable students to discuss conceptual questions in-class with their peers.

Question(s) may be posed to the students requiring them to select an answer that they then need to discuss with peers before the correct answer is revealed. This could be used for achieving group consensus.

**Benefits:**
- This encourages dialogue between students and the sharing and forming of opinions.

**Considerations:**
- Time allocated to discussion needs to be realistic and managed effectively.

**To do a calculation.**

The academic can devise a series of calculations and the next steps involved in the calculation process by using EVS to demonstrate the correct answers at various stages in the calculation process.

**Benefits:**
- This gives the student the capacity to practice in a safe environment as it is non-threatening so the less confident students should benefit from this.
- This provides instant feedback to the student about their ability and to the academic about the students understanding.

**Considerations:**
- Potentially able students may find it tedious if too many calculations are set.
To facilitate small group work.

Small group work may be set and EVS used to obtain a collective/individual view from the group.

Benefits:

- The benefits of this are that it creates group discussion; students can identify how their own responses relate to others in the group which may then generate further discussion and learning.

- Students who may not contribute in a large group are more likely to work better in a smaller group as they feel ‘safe’ to express an opinion.

- Feedback is fast and students can then act on this.

- Group learning may be measured if this has been a feature of module learning e.g. enquiry based learning.

Considerations:

- Groups may not work effectively which may lead to reduced quality work.
To challenging and identifying pre-existing views, values and beliefs.

Students’ perception of a topic/concept may be ascertained by seeking their opinions/views on a topic through a series of questions. The answers can then generate discussion and form the focus of the session.

Benefits:
- This can lead to identities being formed within the group which can enable students to identify where they are in relation to their peers and challenge their own presumptions which may lead to learning.

Considerations:
- Students need to be clear about why they are being asked this question as they will need to give careful consideration to their answer.

To make presentations more interactive and engaging.

EVS may be used in a presentation at various points to engage the audience in a range of activities such as quizzes, obtaining feedback or checking pre-existing knowledge.

Benefits:
- Allows active involvement from all. Facilitator is aware of the distribution of responses and this can support feedback to the group.

Consideration:
- Novelty value versus pedagogical value needs considering. Needs to be informed by good teaching and learning practices.
Electronic Voting Systems - Enhancing learning and teaching practices

**UH Assessment for Learning Principles**
- Engages students with the assessment criteria
- Supports personalised learning
- Ensures feedback leads to improvement
- Focuses on student development
- Stimulates dialogue
- Considers student and staff effort

*(UH Knowledge Exchange, 2012)*

**Good practice in Undergraduate Education**
- Encourages contact between students and lecturers
- Develops reciprocity and cooperation among students
- Encourages active learning
- Gives prompt feedback
- Emphasises time on task
- Communicates high expectations
- Respects diverse talents

*(Chickering and Gamson, 1987)*
Electronic Voting Systems - Enhancing learning and teaching practices


Russell, M (2008) "Using an electronic voting system to enhance learning and teaching" *Engineering Education* vol.3 no.4 pp.58-65


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