Student Engagement in Learning and Teaching

By Daniel Boase-Jelinek

What is student engagement?

Student engagement is a diffuse term that encompasses a diversity of measures of the interactions between students and their learning environment (Chapman, 2003). These measures may include:

- time and effort spent performing learning tasks;
- interest and motivation demonstrated in engaging with learning tasks;
- compliance with teacher specifications of learning tasks; and
- cognitive strategies employed in addressing learning tasks.

Student engagement may also be expressed in terms of the steps universities take to foster desired student learning experiences. A survey developed for the National Survey of Student Engagement in the USA (Kuh, 2004) is a good example of this. This survey measures the:

- amount of contact between students and their teachers;
- degree of cooperative behaviour amongst students;
- availability of active learning opportunities presented to students;
- provision of prompt feedback to students on their work;
- time spent on learning activities;
- the expectations of teachers relating to student work; and
- respect for the different ways in which students learn, and the individual talents of each student.

Another approach to the challenge of defining student engagement involves focussing on student responses to their learning environment (Bangert-Drowns & Pyke, 2001). Such responses have been put into seven categories:

1. disengaged;
2. unsystematic engagement;
3. frustrated engagement;
4. structure-dependent engagement;
5. self-regulated interest;
6. critical engagement;
7. literate thinking.

This set of categories has a hierarchy that suggests a theoretical construct underlying the idea of student engagement; that it is the involvement of the whole person in developing the behavioural, emotional and cognitive resources students require (Woodward & Munns, 2003).

Current models of student engagement

Engagement Theory (Kearsley & Shneiderman, 1999) describes the external factors that need to be put in place to foster engagement. The authors of this theory argue that successful collaborative and meaningful teamwork motivates students to remain engaged with their learning. To achieve this outcome the activities must involve:

- development of skills in communication, planning, management and social interaction;
- opportunities to create something new;

- production of a useful outcome.

The challenges in implementing this approach in class involve:

- defining a project that is sufficiently specific for students to know what to do, but not so specific that there is no scope for creativity and individual contribution;
- allocating students to collaborative groups that will allow each student to contribute to the group effort;
- supporting students to enable them to work together despite various difficulties that might arise;
- providing an authentic learning environment - eg a workplace. The complexity of the workplace provides many learning opportunities for students - the challenge is to ensure that the placement is structured in a way that students learn things that are relevant to their course.

Addressing these challenges involves consideration of the idea that student engagement involves cognitive, emotional and behavioural components (Munns, 2004). Behavioural components contribute to empowering students by giving them activities that they can successfully perform. Emotional components involve engaging students and teachers in conversations reflecting on the learning activity they have just performed. Cognitive components involve intellectual challenge and stimulation. The tasks should not be trivial, and should involve cognitive effort just beyond the student's current comfort zone and within the student's ability.

The three components of this model all interact with each other, and all are important components of engagement. A lack of emotional involvement means that the student is bored and disinterested in the activity. This will impact negatively on student motivation and subsequent learning outcomes. Lack of cognitive challenge means that students are denied an opportunity to learn and will not feel a sense of achievement. Lack of activity means that learning is passive and superficial.

Developmental aspects of student engagement

There is a strong developmental component to student engagement (Marks, 2000). Young children and infants are strongly driven by curiosity about their world. For various reasons their level of engagement declines during the primary school years. Some of the factors associated with declines in engagement of students in primary and secondary school include intrinsic forces such as sense of self-efficacy, and extrinsic forces such as supportive parents, teachers, and peers.

The extrinsic forces may not all be acting in the same direction (Marks, 2000). Parental and family support is strongly associated with student engagement with learning. Where students lack that support, they may be more subject to peer pressure acting in another direction, resulting in declining student engagement.

When students lose a sense of self-efficacy at school through lack of academic success, they lose motivation to engage with their learning activities (Marks, 2000). This may be made worse where students perceive learning activities to be meaningless or irrelevant to their lives. Authentic learning activities based on problems that students see as meaningful to their lives help improve students' sense of self-efficacy, motivation and engagement in learning.

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Ultimately, the aim of all schooling is to foster intrinsic forces such as curiosity about the world and a sense of self-efficacy so that students become self-directed learners (Marks, 2000). Self-directed students welcome the cognitive effort of learning new things (rather than avoiding it) and this effort brings its own rewards and builds student confidence and competence to continue as engaged students.

The technology of student engagement

The greatest potential for student engagement occurs where there is no technological barrier that mediates (and limits) what can happen between teachers and students. The absence of technology in the face-to-face lecture means that potentially anything can happen there. Whether anything actually happens in the face-to-face lecture depends entirely on the confidence and skill of the teacher, and not at all on technology.

The scope for student engagement is much more limited by technology in the online environment. But this is changing with the advent of web 2.0 technologies (such as discussion boards, blogs, wikis, and social networking) that is all about engagement on a global scale. Time and distance no longer prevent people from engaging with each other in ways they have always done at a local scale. A useful way of looking at the role of technology in student engagement is provided by the ways museums try to engage the public (Simon, 2007a). Museums tend to engage their visitors at a number of levels:

- Level 1: Individual reception of content - involving transmission of information to passive recipients (traditional museum displays);
- Level 2: Individual interaction with content - visitors are encouraged to actively engage with the content (push buttons, vote on their perceptions of the display), but they do it alone (there is no interaction with other visitors who preceded them or follow them);
- Level 3: Individual networked interaction with content - visitors are encouraged to actively engage with the content (push buttons, vote on their perceptions of the display), and they are able to see what others have done (eg voting on their perceptions of a display, and able to see how others have voted), but still they do it alone and without interaction with other visitors;
- Level 4: Individual networked social interaction with content - visitors are encouraged to actively engage with the content (push buttons, vote on their perceptions of the display), and they still do it alone, but they are able to interact with what others have done (eg voting alone, but able to see and comment on other's votes);
- Level 5: Collective social interaction with content - visitors are encouraged to actively engage with the content (push buttons, vote on their perceptions of the display), simultaneously interacting with others and the content (eg voting in the company of others).

These levels of interaction are familiar in a traditional online learning context. Thus:

- Pure content such as lecture notes and power-point presentations correspond with Level 1;
- Pure content illustrated by flash animations and quizzes corresponds with Level 2;
- A quiz where students can compare their scores with those of other students corresponds with Level 3;
- A discussion board where students can comment on other student's work corresponds with Level 4;
- Chat room discussions (text-based and video-based) correspond to Level 5.

The aim is to present tasks that are challenging to students; beyond their current level of performance, but within their level of capability. The online environment allows students to be given tasks individually tailored to them.

In terms of the (Munns, 2004) model of student engagement described in this article, technology can support student engagement in a number of ways. The emotional component of student engagement requires a reduction in the power differentials between students and teachers. Traditional classrooms imply a strong power differential through the physical layout. In the online environment this power differential is not so visible, and can be further reduced by encouraging student input into the learning and teaching processes. The behavioural and cognitive component of student engagement can be tailored to each individual student to match their capabilities. The aim is to present tasks that are challenging to students; beyond their current level of performance, but within their level of capability. The online environment allows students to be given tasks individually tailored to them.

Some examples of the ways in which current technologies can support student engagement include using:

- blogs to encourage student self-assessment by providing opportunities for students to reflect their learning process, and evaluate it;
- discussion boards to foster a community of reflection by encouraging students to share ideas, shift the focus of learning activities from 'compliance' to 'task completion and evaluation';
- chat rooms (text and video) to reduce power differentials within the classroom, which can provide a venue for teachers to consult with students about classroom processes and move away from asking students questions towards engaging students in conversations about the topic; and
- blogs to give students formative feedback and provide opportunities for students to benefit from their learning experiences, and encourage them to give themselves and each other feedback..

Conclusion

The challenge of engaging the students of 2015 is essentially no different from the challenge facing teachers of today. Technology provides many tools for meeting that challenge at a global scale, but the basic principles are the same, and revolve around cognitive, emotional and behavioural aspects of the learning environment.

While most teachers are comfortable with the cognitive aspects of the learning environment, there is much work to do to encourage teachers to attend to the emotional and behavioural aspects as well. For example, the emotional component of engagement depends heavily upon reducing the power differentials between teacher and students to remove the coercive aspect of learning activities. This is not an easy thing for teachers to do. In addition, giving (and receiving) formative feedback is difficult for both teacher and students because we are not used to it and have to learn how to do it well.

Fortunately, there are some people doing exciting work in this area. For example, a number of museums are exploring ways to engage visitors at deeper levels (Simon, 2007b), and there is much that we can learn from their explorations.

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Daniel Boase-Jelinek *is an educational designer at the Centre for Learning and Development at Edith Cowan University. His research interests include the cognitive foundations of learning and expertise and the role of formative feedback in student learning. Email:* ***d.boase_jelinek@ecu.edu.au***.