The benefits and challenges of team projects and how Web 2.0 tools can help

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Introduction

In order to introduce a more authentic, student-centred learning experience for final-year students in the Innovation North Faculty, we redesigned the second semester for all Level 3 students to include an integrated team project. The project includes modules that cover planning and product development as well as course-specific modules. Our aims were:

- to move away from exams to more continuous assessment

- to introduce authenticity through 'live projects' and team work and to introduce more employability features into the course

- to examine Web 2.0 tools that enable team projects to function more effectively for large cohorts of students.

The initial concept is shown in Figure 1.

Figure 1: Initial integration of modules

Integration of assessment

The idea behind the integration was to enable students to engage with just one project in the final semester of their final year. All elements of the project could then be synoptically assessed from the one product that they produced. The degree for which they were studying had its own specific module that served as additional content for the project, and all the other elements from planning to product design to enterprise could be assessed via a variety of methods from reflection and evaluation to presentations at a final-year showcase. In the past, large double modules were used for the project; however, it is more prudent to divide projects up into 15-point elements to give students the opportunity to retake elements if they fail one part.

Authentic learning

Weller (2002) states that the many benefits of collaborative working include reflection, active learning, the development of communication skills
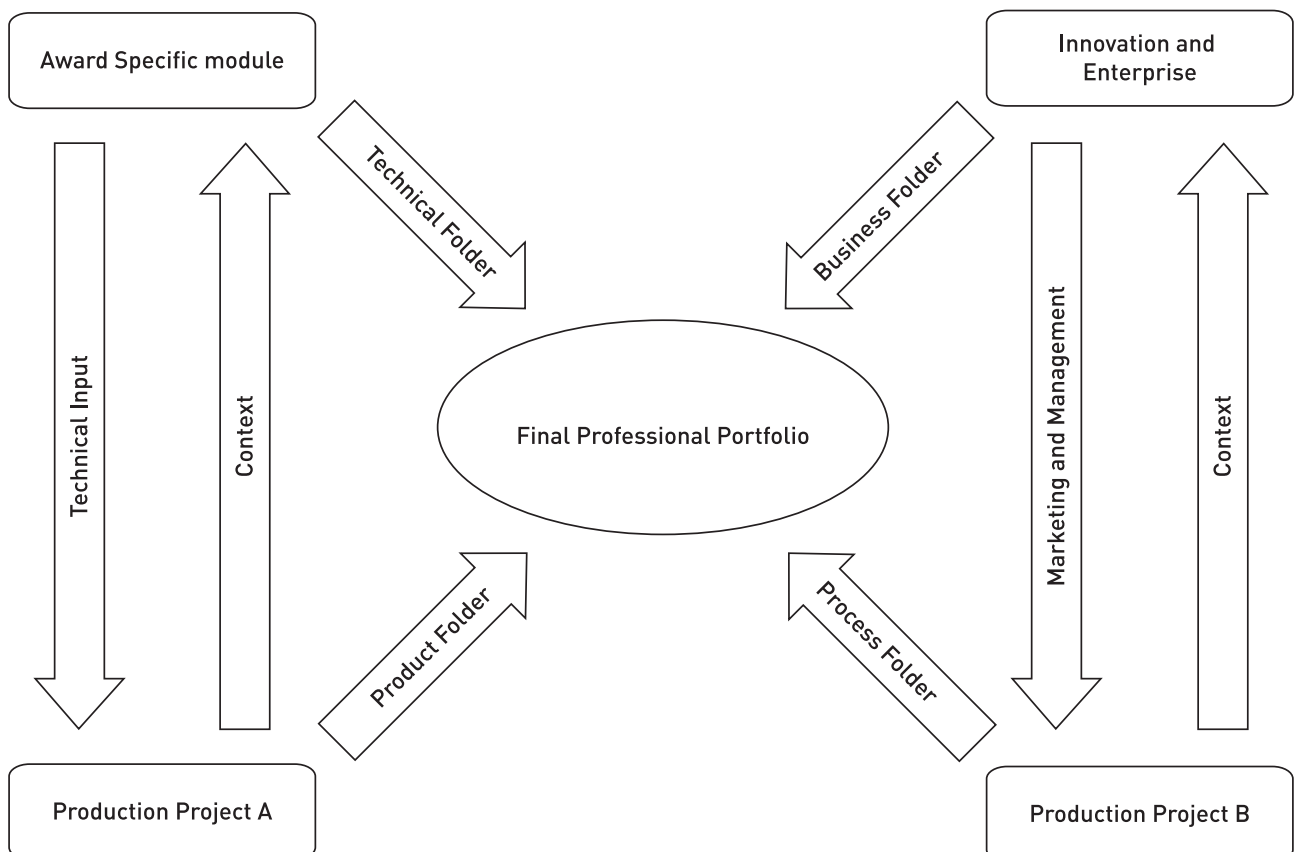
and deeper understanding. Teams or groups of students working together on a product simulate real working in the creative technology industry. The term used in the industry is 'the production pipeline', in which a product is produced in stages: an example would be pre-production such as specification definition, initial concept designs, then the main production and post-production stages. Finally, the final product is tested against the original specification. The tutor's role within team projects should be to inspire, guide, encourage and monitor progress.

How can Web 2.0 tools help?

Web 2.0 encapsulates the idea of interconnectivity and interactivity of the web. The rise of social networking tools such as Facebook is indicative of how such tools can be used: but how can we apply these tools in an educational context?

For example, one of the main difficulties for staff delivering these modules is managing, assessing and tracking each team. Issues for students include how to keep in touch with each other to ensure that team members are each delivering their part of the product. Other issues include inspiring the students and delivering learning material. The following sections explain how Web 2.0 tools can help address some of these issues.

Collaborative tools

Each team requires areas where it can determine agendas, actions, plans, roles, deadlines and goals. Web 2.0 tools such as Facebook, Twitter, MySpace, Wikis and other community discussion areas allow students to work collaboratively. Students already use a variety of synchronous ways of communicating, for example mobile phones, MSN Messenger and Skype.

Building a learning community

At Leeds Met we use X-stream as our Virtual Learning Envionment (VLE): however, no amount of discussion areas, chat rooms and welcome notes will create a community. Goodyear (2003) points out that: "Successful online/networked learning communities emerge and shape themselves" and Kollock (1997) suggests "all you can do is set up an environment that is conducive to the emergence of a community". One solution is to use Nings (a type of social networking website) to help provide learning communities: for example **www.animationclub.ning.com** was set up as an informal area for students to meet and share ideas, and also to receive comment on their work.

Blogs and Wikis

Many of our students have to find part-time work in order to fund themselves through university, and there will be times when members of a group cannot all meet. Therefore a variety of asynchronous methods for communicating must be made available, for example discussion boards, blogs and Wikis.

Prensky (2001) states that years of computer use creates students who think differently from their teachers; they develop 'hypertext minds'. They leap around, as though their cognitive structures were parallel, not sequential. Today's students may not be well-suited to the more linear progression of learning that most educational systems employ. Therefore we need to use ways in which young people collaborate and learn on the web, in other words more asynchronous communication.

Community video

Sites such as YouTube offer a variety of shared content that is a fantastic resource for learning. The ability to search for and find a topic or case study in video format is very useful. Karine Joly's (2007) report on Obadiah Greenberg, an expert on the use of YouTube, states: "The truth is, video sharing online has great educational potential." Greenberg goes on to say that: "YouTube is one of the most popular web sites of all time, you are fitting into your students' existing habits and surrounding, making it easy for them to access your material, and projecting a more updated image for your class or school." Educause (an organisation dedicated to the intelligent use of IT in HE), which examined the benefits of YouTube in an educational environment, commented that:

- "Many educators believe that the act of creating content is a valuable learning exercise
- It has the potential to expose students to new insights and skills, as well as link them to various online communities

- This is part of a trend among Net Generation students to replace passive learning with active participation
- The value lies less in the content itself than in the networks of learners that form around content and support one another in learning goals."

(Educause, 2006)

E-portfolios and individual contribution

A useful tool for assessing an individual's contribution to a team is for individuals to build up their own e-portfolio that can be reviewed by the tutor both to assess progress and whether goals are being met, and for the final assessment. If a student for some reason has to leave the group, an e-portfolio can then form his or her individual project.

Challenges of team-based learning

There are many challenges to collaborative team work; according to Weller (2002), these include:

- reluctance and resistance from some students who prefer to work individually

- groups that do not gel

- excessive time spent deciding upon task allocation

- how to cope with students who drop out of the activity or course

- when it does not work well, the 'failure' of the group can become the overriding concern for students.

Other problems include assessment as there must be some allocation to individual contribution in order to counteract the negative effect of an underperforming group upon a hard-working individual. Weller (2002) states: "This can be achieved by allocating a portion of the marks to the group element, but the majority to the individual contribution, or requiring reflection upon the group work process as the assessed component."

Implementation issues

Problems may arise with allowing group communities to develop themselves; students may prefer to set up their own collaborative Wikis rather than use the University's WebCT Vista tools because they wish to have more ownership of their own learning. Other issues could include the policing of the use of YouTube, for example:

- Will students misuse this resource?

- Will there be appropriate and inspiring examples?

- Can they upload their work there safely?

- Will they be able to give the correct URL for their tutor to be able to view their work?

Results

Experimenting with this type of delivery for final-year students in Innovation North resulted in a significant increase in the success rate at this level. Each student had accumulated a portfolio of work, and their employability should be improved by the experience of working on live projects. The team projects also allowed staff more opportunities to monitor students throughout the semester rather than at a final exam, and students more opportunities to improve work that was not up to the required standard. Web 2.0 tools facilitated the management of a large number of teams and the setting up of communities. For students, the project provided opportunities to work with other students from outside their courses in a synergistic way, and to play to individual strengths within a team within the framework of a supportive but critical network.

Conclusions

This paper shows that there is still much work to do, especially when considering the contribution of the individual within team work and how we allow online communities to develop themselves via technology such as Wikis, Nings and YouTube. It is also apparent that teams of students can be very supportive and will help each other. This in turn may free up staff to help weaker students.

The experience of allowing students to gain simulated learning from real projects provided by real clients is a major step towards providing the right type of assessment, learning and teaching at this level. The advent of more Web 2.0 tools will help in the organisation and delivery of this type of project. Other benefits are that some teams go on to win regional competitions for their product and some continue as real companies. In the current economic climate real employability skills are essential.

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