Multimedia and ICT – the challenges of creating creativity

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ABSTRACT

In 2004, a Multimedia Application Development paper was delivered for the first time as part of the Bachelor of Information and Communications Technology (applied) degree at UCOL, Palmerston North.

The Multimedia Application Development paper endeavoured to provide students with the knowledge and skills to develop and incorporate multimedia components into websites and applications developed for other papers within the degree. The paper utilised Macromedia Flash as its main development tool and focused on both animation and scripting.

It was intended that students would develop high quality applications and identify the benefits of utilising multimedia components in their IT studies. The outcome however was very different. While students understood and could apply the scripting component of the paper, the visual element of finished applications was poor.

It appears on reflection that many students did not see the connection between multimedia and IT and instead believed that the topic belonged more in the realms of graphic design and art.

Upon discussion with a graphic design lecturer from the School of Art and Design, it appears that the art students, while able to produce the visual impact, were not exposed to the scripting capabilities of Flash.

This paper will discuss in more depth the issues identified from a lecturers perspective and investigate the proposed collaboration with the graphic design school for future deliveries.

1. INTRODUCTION

In 2004, I290 – Multimedia Application Development was established within the Bachelor of Information and Communications Technology (applied) degree. It endeavoured to provide students with the knowledge and skills to be able to develop and implement multimedia elements into web sites and applications.

The BICT degree has a thread related to programming and application development. It was envisaged that I290 would support the design and development aspects of these papers in regard to good design practice, but also exist as a paper in its own right, providing an overview of multimedia and its components.

While multimedia development papers are common place in computing courses, it appears that there is a wide divide between graphic design and development abilities from students completing these papers.

This paper outlines the experience and reflections of the author in the delivery of multimedia application development. It discusses a proposed new approach to delivering this content including cross departmental co-operation and project driven classes to develop students with a wider range of skills.

2. THE PAPER

In its first delivery in semester two, 2004, I290 – Multimedia Application Development had good enrolments. Almost half the enrolled students were active in the development thread of the Bachelor of Information and Communications Technology (Applied) degree. When asked why they had enrolled in this paper, the majority of the students stated that they wanted the paper to assist them in web design.

The paper descriptor stated that students were required to:

1. Design a multimedia application.

2. Develop a fully functional multimedia application for a moderately complex scenario including interaction, animation, sound and graphics and

3. Test and publish an application for distribution.

The assessment for this paper required that students propose a project of their own (usually fictional) and develop the associated application from design through to implementation.

Tools utilised were Macromedia Flash MX, Macromedia Freehand MX and MatchWare Mediator Pro.

3. OBSERVATIONS & REFLECTION

Projects submitted by students ranged from the development of animated children's books, educational software, kiosk based informational sites, promotional applications and websites.

Generally the quality of work produced for this paper was poor. Much of this seems related to the assessment itself. On reflection, the author believes that:

• By proposing their own projects, students only had to live up to their own expectations rather than those of an actual client.

• There was a wide variation in the content and use of the projects meaning that the class as a whole was fractured and unable to share ideas and resources.

• An atmosphere of 'culture clash' existed in which some students believed that the scripting and coding was more important than visual appeal.

I290 was run at the same time as T270 – Interactive Web Solutions, a paper in which students are required to design and develop a fully functional eCommerce website for a business. A number of students were enrolled in both papers. An agreement was made between the lecturers and students that they could incorporate the animations and graphics components of I290 into the final deliverable for T270. At the conclusion of both papers it was discovered that only one student had actually taken this option, surprising considering that it provided for the distinction option of T270.

While students who completed this paper had enrolled in an IT degree rather than a course within the field of art and design, it seems odd that those who stated at the outset of the paper that they wanted to better develop their web design skills failed to consider the 'design' element of this paper, focusing instead on scripting and functionality.

This finding is apparently not uncommon. Ward (1997), states that

> Computing people are archetypal planners who try to specify precisely what is to be developed before development begins, and have at their disposal various devised methods and techniques for managing this process. Art, design and media people, on the other hand, often work through discovery and exploration as illustrated in the phrase "How do I know what I want to do until I've tried to do it?" Their output cannot be pre-planned through development methodologies. (Ward, 1997)

4. NEW DELIVERY APPROACH

Based on the findings and student outcomes, the author has chosen to approach this paper in a new manner for the 2005 delivery.

Firstly it has been proposed that there be cross departmental co-operation between the School of Information Systems and Computing and the School of Art and Design. It has been suggested that this co-operation be in the form of guest lecturing in which a lecturer in art and design deliver lectures to I290 students. The content of these lectures would relate to design, graphic and colour theory. In return the IS lecturer would deliver content related to scripting in Flash in order to allow graphics students to incorporate scripted interactivity.

It is hoped that this approach will not detract from the overall philosophy or content of the programmes that the students are enrolled in but will result in the students being able to develop skills in both technology and design.

Another initiative is to provide students with a real world project in which they will be required to design and develop a fully functional, web-based application for an existing client. The client will provide information and participate in user needs analysis and Joint Application Development (JAD) sessions from which students, as part of small groups, will be required to design a suitable application.

The team approach to this is hoped to provide groups with members of differing strengths and

skill sets. The team approach to assessment is also relevant to industry in which "multimedia design is by its very nature multi-disciplinary usually requiring a team effort. An important teaching method employed therefore is the use of group projects some of which are live. Through this approach … they also learn how to deal with real project management issues" (Higgett & McNamara, n.d.)

The final application will then be marked jointly by the lecturer and the clients.

The lecturer's focus will also be adjusted. The 2004 delivery of the paper placed a high focus on scripting, assuming that students would be able to carry their knowledge of design from the prerequisite paper. While scripting and the related multimedia technologies must, in the opinion of the author, account for the majority of teaching time to ensure the philosophy of the course is not undermined, a greater focus will be placed on design and artistic appeal.

If programmes in computing departments are going to incorporate subject matter that involves a discovery mode of working and perhaps requires students to demonstrate some degree of creativity and originality, it has to be recognised that discovery and exploration can be very time consuming. It can easily take several hours to create a title logo for an information screen, or as one student put it, "you can spend all day perfecting a squiggle". We are unused to assessing this kind of effort in computing departments. (Ward, 1997)

Also under consideration is a potential change in the time spent in class. Currently there are three hours scheduled per week in which lectures, demonstrations and exercises are provided. With a new approach to the delivery and assessment of this paper, the manner in which students participate in class is likely to change from one of passive participant to project team member in which groups identify their own learning needs and act accordingly.

One teaching approach that proved to be a positive learning experience in 2004 and will be continued in 2005, was that of evaluating existing multimedia applications and websites. Students were able to observe the capabilities of the tools they were using and see both the positive and negative impact that multimedia can have.

5. CONCLUSION

The first delivery of I290 – Multimedia Application Development in 2004 proved to be problematic in regard to pinpointing a focus. It appears, from the research, to be a point of contention amongst facilitators as to which realm multimedia belongs to – art and design or computing.

As this paper is delivered as part of a computing course it seems obvious that the technology related to multimedia must be the focus, not however, at the cost of good design practice.

To overcome the observed gap between scripted functionality and visual appearance, the author intends that future deliveries of this paper be in co-operation with the School of Art and Design.

Another approach to improve the quality of work undertaken by students is to make the assessment a real-world project in which students participate in project teams. This will impact on how classes are structured. A more constructivist, project/student driven environment is likely to exist in which students identify their learning needs based on the deliverables required for the project.

Finally, while this paper focuses mainly on the perceived negatives and new approaches to delivery, it should be noted that students and the author enjoyed the process of learning the applications and observing the impact that multimedia can have on its users.

REFERENCES

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