

## **Background**

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Mid Kent College IT students, studying for a BTEC Level 3 Extended Diploma in IT or BTEC Level 3 Diploma in IT are recruited from local secondary schools and from the college's BTEC Level 2 Diploma in Information and Creative Technologies. Entry criteria for the Level 3 Extended Diploma in IT are five or more GCSE grades at A\* to C including both mathematics and English language. For students progressing from the college's level 2 course, an improvement in level of English and maths, in line with the opportunities offered by the college is a requirement, along with a minimum merit grade for the level 2 course. These students, for the current cohort, were automatically placed on the Diploma course to allow time for them to further develop their English and mathematics attainment levels.

The level 3 course is studied for two years and the current second year cohort, involved in this study, started their course in September 2012. At the end of the first year a small number of students moved from the extended diploma to the diploma having struggled with the work on the first year. These students have effectively moved from a three A level equivalent course to a two A level equivalent course. Two students have moved in the opposite direction, having progressed from the college's level 2 course and having achieved well in the first year and expressed a desire to extend their studies to gain enough UCAS points for places at university. The study group for this action research project was taken from one group of extended diploma students and the one group of diploma students. The study group includes all students who have transferred across courses in this year.

Students on the BTEC Level 3 courses study a variety of units and in the second year of the course will complete a project unit through which they will learn to plan, monitor and review a project of their choice. Additionally, students will study website development, computer animation, software design and development, human computer interaction and ANOTHER UNIT. Through this combination of units, students develop skills in designing systems for users and developing systems using available software. One aim of this research project was to target and strengthen the design and website development skills of the two groups of students without requiring technical coding skills at more than a beginner level. Although aspects of design had been taught there had not up to this point, been a link between the design and development skills learnt and any form of real life project.

There is an assumption that students on a BTEC vocationally related course will study subjects in a way that is more relevant to the workplace than they would if they were to follow an academic route in the same subject area. Students choose to come to college because they have an expectation that the work will be relevant to the current workplace and that the teachers will have recent industry experience. This is a theme that is reflected in students' reasons for applying for our courses, as cited in their interview responses (anecdotal).

In reality, staffing logistics dictate that a member of staff may be required to teach a unit connected to an area in which they don't have any industry experience. He/she may teach a unit connected to an area in which they have industry experience but not recent experience. In a fast changing industry this might not be too far removed from having no industry experience at all in this area. Relevance to the workplace is therefore difficult to attain.

I have had the opportunity to run a few projects with students developing websites for local charities, schools and small businesses. This has worked well and has seemed to motivate students. To complete the projects, students generally have to move out of their comfort zone, to learn things outside the classroom and things that their lecturer may not herself know. Consequently, these projects are hard work for one member of staff to manage.

Projects run in the past include:

- a group project for students to produce a working website for a local primary school. The students created the website in HTML/CSS, which they had learned in college. I liaised with the school on what they wanted, then we had a meeting, at the school, with the head teacher, for all students and myself. When a product had been completed, with students each working on a different part of the website and me putting it all together. The website went live and was used by the school. I know that students referred to this experience in their CVs.
- a small group of students worked on a web based app that was turned into a mobile app. This was for a local group campaigning on women's safety. Three students worked on this and, again, taught themselves some new skills to enable them to complete a more useable product. There was an initial meeting with the students, a session in local office space for development and three further meetings.
- a class group have been working on a website for Medway Dyslexia House. This is a recreation of an existing website so has the advantage of having ready-made content (this is a sticking point with many website projects where the client hasn't thought through what they would want on their site). As with the school project, the work was divided up between the students who used skills they had learned in college to create small sets of pages using HTML/CSS/Javascript. I liaised with the lady who had made the original site, I then set the brief for the students and they started to come up with some designs. Then Anne came into college to look at some prototype designs that the students had produced. She gave feedback and the students worked on second prototypes, following her suggestions. Once sufficient progress had been made for her to see the sites again, Anne came to college for a second meeting. Again, she gave feedback to the students and, from that point, the students were able to complete their own parts of the site. There are some issues still to be dealt with, such as putting the various parts of the site together. The plan now is to get some professionals to work with the students to produce a finished working site.

The projects have a common set of features:

- a real client with a fairly solid brief
- initial liaison between me and the client
- meetings with the client at various points during the life cycle of the project

My observations are the students have difficulty with motivation at the beginning of the project when they have difficulty understanding the brief, they have no experience of the client's needs. I have difficulty with the planning of the project and the brief due to my inexperience of developing websites for real clients. After some hard work and some progress the meeting with the client where the client gives feedback directly to the students is productive and motivational. This later

meeting generally helps the client and me to develop our understanding of where we want the website to go, this improves the feedback and, with targeted feedback at a time when the student's understanding is at its best, the student will start to fly.

My hypothesis, for this action research project is that if a professional were to work with the students at significant points in the project, this would overcome the perceived difficulties. The first sticking point is at the start where students are unable to understand the brief, the client's needs and standard features of websites that they can evaluate for their relevance to this project. This is, in part, a strategy to compensate for my lack of experience in developing from a real client brief.

The second significant point is after the client has given feedback, next steps for students are confirmed, and students are motivated to move towards completion. At this point a professional might be able to help students with the skills they need to maintain their motivation levels. Again, this compensates for any holes in my knowledge or experience.

I would like to confirm my belief that real client feedback on a real client brief with student ownership of the work done so far, is highly motivational and worthy of allocating resources for someone to have time and responsibility for liaising with clients and working with teaching staff to vet the brief for its suitability for the students. This, I think, needs to be someone who has knowledge of the vocational area. For example, an employer engagement champion attached to a teaching department, a system used by South Downs College (McCoshan & Otero, 2003).