



# “Sorry about this, I can’t draw” – The Role of Design in Computing Education

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People working in computing often find themselves being required to have design skills. Web designers, games programmers and software developers are examples yet we fail to address these needs in most computing programmes. The capstone projects we see are usually well executed and well designed from a functional point of view but the aesthetics are often lacking. Too often we hear from such people, “sorry about this, I can’t draw”.

The Certificate in Information Technology (CIT) is run as a six month programme, acting as a transition into the Bachelor in Information Technology degree (BIT). Design Fundamentals was introduced for the first time this year into the CIT, aiming to assist the students in their overall presentations of projects and future careers. The ability to be able to design is required throughout the CIT and BIT, in areas from designing web pages to giving computer aided presentations. The design course has emphasised the need for the students to the importance of planning and designing work.

The six week (30 contact hour) course was developed in conjunction with our School of Fine Arts and taught by them.

## Course components

### Aim

- To develop an understanding and appreciation of drawing practices in the context of design processes
- To develop a range of perceptual and conceptual drawing skills
- To develop an understanding of visual language

### Learning Outcomes

- Determine appropriate drawing strategies in response to a range of design problems.
- Using drawing as a process of exploration development and communication of ideas.
- Demonstrate observational skill using a variety of media.

### Content and Process

Investigative/interrogative drawing in the context of problem solving

- Observational drawing, media and materials
- Developed from the project briefs based on: ‘Body, space and object’ explored in 2D and 3D ‘Natural and constructed spaces’ - ‘Manufactured and natural objects’

### Outcome

Student feedback to Design Fundamentals was polarised. Half the class loved it, the other half hated it although even they saw its benefit. On a likert scale in agreement that the course met the learning outcomes the results were positive. One student reported that “many students had little or no art background and found the idea of drawing with pen and paper to be intimidating. Those who pushed their boundaries and gave this course an honest attempt enjoyed the challenge”. Another reported that they had a “defeatist attitude towards drawing”.

Students reported enjoying “being able to be creative”, “realising I could draw”, and “finding sculpting fun”. They all enjoyed making a short film. This element was introduced in response to feedback that several students were struggling to relate the design to their overall programme. Initially the students were to plan out a movie. The students had to pick a phrase and song to include in the movie, draw up story boards of the movie and create a set design in 3D. The small use of technology greatly increased the interest of the students and the resulting work was impressive with the realistic 3D models.

The design has started to get the students to think outside the computer box and start to look at the big picture. We are now considering implementing design skills in the BIT, enabling the students to further their skills in relation to the overall implications of design within computing, which is so often overlooked. We conclude that design is a worthy component of a computing curricula, even where the programme content is not explicitly one of “web design”. The trick lies in selling the benefits to sometimes sceptical students.