The Perfect Computer Teaching Lab?

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Introduction

Finding the perfect design for teaching computer courses is no easy feat. Different environments suit different people, Teachers have different methodologies that require particular needs in the layout of the room.

This is not a new problem. As technology advances the necessity to alter environments is increasing with the change of needs. van den Blink(2009)investigated this issue, and discovered that a need to review the environment often as the technology and needs change.

"Building the smart classroom of the future is not just insufficient; it is a wasteful misallocation of scarce university resources" (Strauss, 2002, p.1). The article goes on to state it is more about the learner than the environment.

The need for a new design was also researched by Unitec when they had the opportunity to create a new classroom environment (Young, A., Huggard, G., 2003, p.463). This study was revisited at Otago Polytechnic and agreed with the new design (Young, A., Mann, S., 2004, p.540).

This poster paper appeared at the 2nd annual conference of Computing and Information Technology Research and Education New Zealand (CITRENZ2011) incorporating the 24th Annual Conference of the National Advisory Committee on Computing Qualifications, Rotorua, New Zealand, July 6-8. Samuel Mann and Michael Verhaart (Eds).

The Current Situation at CPIT

School of Computing has been given the opportunity to overhaul the current computer labs. The current teaching staff have multiple subjects, needs and methodologies, and this presented a problem in how to design the labs.

Findings

A short survey was conducted to assess the needs of the teaching staff. From the data collected a number of needs were found. 66% wanted to see the students faces to check if they were engaged. 66% stated the students should be able to see the whiteboard/projector and their own screens without too much disruption. 33% wanted the ability to engage with the students without screens.

The survey also identified other issues that need to be addressed prior to development.

Access to students and computers easily.

Spaces for group work, and/or books and notes.

Number of machines in a room.

Flexibility of furniture.

There were more problems not indicated above as they were identified as in relation to engaging the students.

The initial survey did not include the Unitec design. Instead a range of standard classroom layouts were given and an option to draw a new concept if needed.

Young, A., Mann, S. (2004). Computers facing the Wrong way: New Labs One Year on. 17th Annual NACCQ. P.540

Conclusion

Other needs and issues that were particularly interesting is the ability to walk around the desks to see what the students are engaged in. The distance the teacher is from the students. The ability to have computer desks and noncomputer desks in the same room. Flexibility to change the layout around as needed.

Further discussion is to commence prior to making the alterations.

References

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