Improving Student Motivation Using Technology Within The STEM Disciplines

Richard Wilkinson & Thomas Lancaster
Tudor Training Academy & Birmingham City University
HEA STEM Conference 2014
MSc Computing: Final Project Report

How Can Technology Be Used To Motivate Learners In Higher Education?

R D Wilkinson
May 2013
2012-2013 academic year

Richard was Head Of School in Computing at Coventry University College
Coventry University College

“a new concept in higher education that is designed to integrate study into the life that you lead”

http://www.coventry.ac.uk/cuc/study/whats-so-different
The Guardian

No frills university college offers half price degrees

Students at Coventry University College will pay £4,800 or less for degree they can take while working

“no frills”

It is an offshoot of Coventry University, but students at the new institution will not have access to the university's library, IT or sporting facilities.

Computing Courses

HNC/HND/BSc (Hons) Information Technology Practitioner

Information Technology Foundation Year

Total 19 students in 2012-2013
The Challenge

What solutions are needed at Coventry University College to get students motivated and to help them to become employable?
Suggested Solution

Students are motivated through the use of technology that appeals to them
The Survey
Response Rate

209 students, out of approximately 250 enrolled at Coventry University College

97 out of 209 students taking STEM subjects
Technology Owned

89% of students owned a laptop
80% of students owned a smartphone
Technology Motivation

79% of Computing students said that they felt motivated to study using technology

54% of Science and Engineering students said that they felt motivated to study using technology
Where Could More Technology Be Used?

“During my studies I would prefer there to be recorded lectures available”
Where Could More Technology Be Used?

“Have tutors on Facebook instant message”
What Technologies Would Aid Motivation?

“If everyone were to use tablets then we could be paperless and notes will be better organised instead of just loose sheets everywhere”
What Technologies Would Aid Motivation?

“Temporarily blocking Facebook and twitter while doing any work.”
Conclusions

No noticeable differences between STEM subjects and other subjects for this “no frills” cohort

Recommend incorporating use of existing student technology to be used during and between classes
Richard Wilkinson
Email: rdwilkinson@outlook.com
Website: http://uk.linkedin.com/in/rdwilkinson
Twitter: @wilkenstein

Thomas Lancaster
Email: thomas.lancaster@bcu.ac.uk
Website: http://thomaslancaster.co.uk
Twitter: @DrLancaster

Slides Available At:
http://www.slideshare.net/ThomasLancaster