Dublin Institute of Technology
ARROW@DIT

Conference papers | School of Real Estate and Construction Economics

2011-07-01

Encouraging Attendence in Tutorials for Quantity Surveying Studies Through Assessment

Dermot Kehily
Dublin Institute of Technology, dermot.kehily@dit.ie

Follow this and additional works at: http://arrow.dit.ie/beschreccon

Part of the Construction Engineering Commons, Curriculum and Instruction Commons, Educational Administration and Supervision Commons, Educational Assessment, Evaluation, and Research Commons, and the Teacher Education and Professional Development Commons

Recommended Citation
Kehily, D.:Encouraging Attendence in Tutorials for Quantity Surveying Studies Through Assessment. EDULEARN 2011, Barcelona, Spain, July 4-6th, 2011

This Conference Paper is brought to you for free and open access by the School of Real Estate and Construction Economics at ARROW@DIT. It has been accepted for inclusion in Conference papers by an authorized administrator of ARROW@DIT. For more information, please contact yvonne.desmond@dit.ie, arrow.admin@dit.ie.

This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License

ENCOURAGING ATTENDANCE IN TUTORIALS FOR QUANTITY SURVEYING STUDIES THROUGH ASSESSMENT

Dermot Kehily

Dublin Institute of Technology (IRELAND)
dermot.kehily@dit.ie

Abstract

Construction Economics and Management in Dublin Institute of Technology (DIT) educates and prepares students to become Quantity Surveyors (Construction Economists) in the Construction Industry. Arguably the most important subject on the course and the cornerstone of the profession is the ability of the students and graduates to carry out a technical function called 'measurement' or 'take off' from construction plans and drawings. Graduates of Construction Economics and Management may spend up to two years carrying out measurement for their employers before they progress to the more professional practices of Quantity Surveying. The importance of measurement and take off in the profession cannot be overstated and thus the subject is included in all four years of the Construction Economics and Management Degree in The School of Real Estate and Construction Economics in DIT. The functions outlined above are delivered in the second year of the course in Quantity Surveying Studies 2A in semester one and Quantity Surveying Studies 2B in semester two. Both modules are five ECTS credits delivered in two hours of lectures and two hours of tutorials.

Students do appreciate the importance of the module and interest and attendance on the module is high. However, teaching the module in second year the author observed that attendance at the two hour tutorials was significantly lower than the lecturers. The subject matter is practical in nature and really only can be learned and understood through continuous practice. The tutorials provide an environment for the students to carry out measurement in a small group under the tutors supervision and direction thus simulating the working environment. Attendance on these tutorials is paramount to the successful completion of the learning outcomes of the module. The paper investigates an assessment strategy implemented in Quantity Surveying Studies 2B to encourage attendance and participation in the tutorials.

This paper outlines how part of the modules continuous assessment into the tutorials, giving formative feedback on a weekly basis to the students and at the same time increasing attendance on the tutorials and understanding of the subject matter.

Keywords: Construction Economics and Management, take off, measurement, quantity surveying, tutorials.

1 INTRODUCTION

The Bachelor of Science Honours Degree programme in Construction Economics and Management in the School of Real Estate and Construction Economics in Dublin Institute of Technology is designed for those who wish to work as quantity surveyors and economic advisors/managers in the construction industry or as building development co-ordinators and managers. The programme provides a sound general education in the different aspects of this field with emphasis on practical construction economy and, in consequence, the programme incorporates much project work. The author graduated from this course in 1997 and worked as a construction project manager and quantity surveyor both in the United States and Ireland. Arguably the most important subject in the course and the cornerstone of the profession is the ability of the students to carry out a technical function called 'measurement' or 'take off'. Graduates of Construction Economics and Management may spend up to two years carrying out measurement for their employers before they progress to the more professional practices of quantity surveying [1]. Throughout their career quantity surveyors call on this technical ability continuously. It also underlines many of the professional and managerial practices in the profession. Its importance in the profession cannot be overstated and thus it is included as a module or part of a number of modules in all four years of the Construction Economics and Management Honours Degree. The author delivers Quantity Surveying 2A in second year of the course which seeks to extend the students ability to prepare take-off solutions for more complex building elements. It is a challenging subject to teach as students must have a good grasp of construction technology to

interpret drawings and take measurements from the details on the drawings. The module is a five ECTS credits delivered in two hours of lectures and two hours of tutorials.

The module content and assessment strategy has not changed a great deal since the author was a student on the course fifteen years ago. Students do appreciate the importance of the module and interest and attendance on the module is high. However teaching the subject last year the author documented that attendance on the two hour tutorials was significantly lower than the lecturers. Tutorials are very important in the module as it provides the students with a platform to ask questions and address any problems they may have understanding the lectures. The subject matter is practical in nature and really can only be learned and understood through continuous practice. The tutorials provide an environment for the students to carry out measurement in a small group under the tutors supervision and direction.

2 ASSESSMENT

The assessment method in the module is continuous and is carried out in three parts, as shown in table 1 below. The first is a mid semester measurement submission allocated with forty percent of the overall mark. The second part of the continuous assessment is an open book exam on the 'Buildsoft' measurement software used extensively in the Irish construction industry and is worth forty percent of the overall grade. The third part is an open book two hour measurement exam in the last week of the semester worth twenty percent. The table below is an extract of the module assessment in the modular descriptor.

Table 1. Extract of Modular Descriptor

Learning Outcomes	**Assessment Method**	**Proportion**
Demonstrate an understanding of the structure and common features of the Buildsoft Estimating software package.	End of semester Buildsoft software assessment.	40%
Demonstrate the ability to prepare take-off solutions for more complex building elements.	Mid semester measurement submission	40%
	End of semester in-class 2 hour exam	20%

The two general purposes of assessment in this module are to measure the student's knowledge on the subject matter and enhance their learning – these purposes are often referred to as summative and formative assessment [2]. The assessment methods outlined in the module descriptor above whether intentionally or not solely measured the student's knowledge of the subject matter rather than helped them learn and understand the knowledge while doing so. The author hoped to increase attendance in tutorials and he determined the best way to achieve this was to incorporate a formative assessment strategy into the tutorials. The author felt out of the three projects, the mid-semester submission lent itself to formative assessment more than the other two. The mid semester submission was traditionally carried out in the review week mid way through the semester. In previous years the students were given a measurement task in the review week on Tuesday at 9.00am and they were directed to hand up the task on Thursday at 4.00pm. The students were encouraged to carry out this task together in class but their submission was to be individual. This encouraged peer learning during the three day project but there was no feedback from the lecturer while the students were carrying out their task. After observing the dynamic within the classroom while the students carried out their project, the author noted the students were working in groups and learning from each other but many of them carried out the exercise without understanding the calculations involved and their relevance to the drawings. The author devised a strategy to incorporate the mid semester project into the tutorials. The review week is usually in the fifth or sixth week of the semester. Tutorials don't usually begin until the second week of the semester as the students have not covered sufficient material in lecturers; therefore there are four tutorials before review week. Instead of handing out the mid semester project

in review week, the project was given to the students in the second week of the semester. The project incorporated almost forty calculations. The class was divided into six groups of eight students and forty minutes per week was allocated to each group during the four hours of tutorials per week. The author completed the task himself and asked the students to do 10 calculations each week before they came to the tutorials. The majority of the students who attended the tutorials completed their calculations each week and the author looked at their results and gave them feedback on each calculation. The results themselves formed the basis of feedback during learning [3]. This way the students could see if they were getting the right results and following the proper methodology and the author could determine if they understood the subject matter. The hand up date was the same as the previous year but many students had the project completed prior to this date. Those few students who did not attend tutorials had the opportunity to complete the project in review week and hand it up on the designated date but they did not get any formative feedback from the lecturer..

3 ANALYSIS

The students were evidently pleased with this process, not only were they getting continuous feedback on their calculations, they could also determine if their results were correct. For those students that did not attain the correct result the author had the opportunity and time to look at their calculations and show them where they made errors. A student was not shown how to complete the calculation unless they first attempted it themselves. After completing all the tutorials the students had a good idea of the mark they would receive prior to handing up the project. The author was careful during tutorial sessions not to hand out the solution so that students could not circulate the solution to others in the class that were not attending. Light et al. [2] points out the major advantage of small group teaching is to ensure what the teacher is covering in lecturers is understood by the students. The author was pleased with the process as he could determine the module content he was addressing in class was been implemented in practice. It was also particularly evident in the quality of the final submission that this process worked significantly better than the method employed the previous year. For the purposes of this paper the author compared the year's documented attendance to the previous year and noted that attendance in tutorials increased by almost fifty percent after formative continuous assessment was employed. However it must be stressed that these statistics were just one year compared to another year and other variables and externalities were not be taken into account. The trend of results also indicated that those that attended tutorials achieved better marks than those who did not.

The calculations in the assessment are either right or wrong and therefore it is difficult to stop a student attending the tutorials handing over his or her project to a student that is not attending. There is no way for the author to determine that the project is the students own work. However the author is fairly confident that a student who has spent the time to carry out the project themselves and attended the tutorials is likely not to cheat their time invested in the project by handing it over to one of their colleagues. But unfortunately it only takes one individual willing to impress a fellow student for the good project and correct results to proliferate throughout the class.

4 CONCLUSIONS

The marking of this assessment is too important to get wrong. In order to get it right there should be a number of guiding principles. First and foremost it must be fair to the students. They will perceive that it is unfair if they believe some of their colleagues are getting high marks by copying from those who are getting positive feedback in tutorials. However this is no different than the old system. The old system also provided free loaders with an opportunity to copy from their colleagues. I believe this assessment method encourages greater understanding of the subject matter as it provides the students with more time to digest the task and plot their course of action. Donnelly and Fitzmaurice [4] point out that the continuous feedback students receive in formative assessment allows them to address any gaps in their knowledge or skills. I believe the process of assessment I have employed here is best described by Brown & Knight [5] where they advocate a process of assessment which is done with and for the students rather than too the students. However the assessment strategy is not all formative, the final submission is assessed on a summative basis evaluating the students final performance but the procedure was formative.

REFERENCES

[1] Ashworth, A. Hogg, K. (2007). *Willis's Practice and Procedure for the Quantity Surveyor*, 12th Edition; Blackwell Science.

[2] Light, et al. (2000) Learning and teaching in higher education: the reflective professional. London: Paul Chapman.

[3] Biggs, J. (2007). *Teaching for Quality Learning at University*. Berkshire: SRHE & Open University Press.

[4] Donnelly, R. and M. Fitzmaurice (2005). Designing Modules for Learning. In S. Moore, G. O'Neill, and B. McMullin (Eds.), Emerging Issues in the Practice of University Learning and Teaching. Dublin: AISHE .

[5] Brown, S. and Knight, P. (2002). *Assessing Learners in Higher Education.* London; Kogan Page.

LIST OF TABLES

[6] Table 1. Extract of Modular Descriptor.