# Reflecting on our teaching practice to bring about a more student-centred approach to learning and promote "deeper" learning by the students

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**Abstract**

*The Dublin Institute of Technology is one of the largest multi-level higher education providers in Ireland, catering for over 22000 students annually. Under the 1999 Qualifications (Education and Training) Act, DIT became an awarding body in its own right. Programme provision covers apprenticeships, short continuous professional development courses, taught undergraduate and postgraduate, research MPhil and PhDs. The Institute's traditional mission has always been focused on teaching and learning in the field of advanced technical vocational education and training (TVET), and one of its current agendas is to foster and encourage changes in teaching practice and methodology in order to enhance the student learning.*

*The current teaching of the Carpentry and Joinery apprentices appears to be flawed, as it is shaped by the assessment system. In the written theory papers, these assessments promote a surface learning approach and the student has 'slipped into' the characteristics of this surface learning. A sole aim is to pass exams, recall given notes, passively accept notes given out and focus on the important elements only. A culture of expectancy has developed among the students where there is too much dependency on lecturer help. The current lecturer pedagogic practice shapes itself towards the assessment. We feel a change in teaching practice is required to promote learning to higher levels in each domain of learning.*

*Our aim was to ensure that any new teaching methods employed, improved and moved our teaching to a more student centred approach, and that there was a mechanism for student feedback, something which the current system does not particularly allow for.*

*Through our research we hope to be able to highlight our concerns to the relevant authority and help bring about a change in Apprentice assessment system that will stimulate the current pedagogy from its current closed state.*

## 1 Introduction

The current training of apprentices in Ireland involves many people, such as apprentices, employers, educators, industry stakeholders, government bodies and unions, from the students' induction through to completion. The aim of the apprenticeship is to develop high quality craft workers with skills and knowledge to apply in industry. The trade of Carpentry and Joinery is one such trade that the institute provides and is the focus of our research. In an effort to improve standards, we are going to reflect on our teaching and the learning for the students, with a view to opening the pedagogy and promoting a student centred approach to learning. This study focuses on the theory elements of the course

## 2 Rationale

This paper is written in conjunction with a research project carried out on assessment in the carpentry and joinery area. Identifying a change in assessment, as a key to promoting deeper learning, is but one part of the puzzle. It was important, that as well as looking at external factors to improve the student education, to reflect on the teaching and learning taking place.

With alternative assessments as the focus of the research, volunteers were recruited to work towards these assessments. The idea of the alternate assessments was to remove the emphasis on memorising for an exam and to examine how this influenced the teaching and learning.

## 3 Methodology

We have examined the theory elements of the Carpentry and Joinery programme with a view to finding a viable alternative assessment to the current format. To enable this, it was necessary to try out different forms of learning and teaching, and then assess which forms of learning worked more effectively for the students or promoted a greater understanding of the knowledge.

The project was conducted over two semesters involving 110 students from phase 4 and phase 6 of the Carpentry and Joinery program. Within each semester there was a focus group of one class (approximately 16 students per class) with which we applied controls and sampled differing learning and teaching methodology. It was primarily within the focus groups, outside of normal structured lessons, that we sampled the differing teaching and learning.

We attempted to examine the depth of this learning by offering two alternative summative exams at the end of term, an open book exam and multiple choice exams, and also by a problem-based task within the term.

With the three assessment options, the students were presented with quality assurance questionnaires, feedback and mini-interviews in relation to assessment, learning and teaching.

### 3.1 Strategy

A four point strategy was developed to move the teaching towards a student centred focus.

1. to make the student more active in acquiring knowledge and skills
2. to make the student more aware of what they are doing and why they are doing it
3. to increase the interaction of the student in class
4. to develop core transferable skills

#### *3.1.1 Strategy one*

The first strategy was to make the student more active in acquiring knowledge and skills. A problem based task was offered to the focus groups. The student set about with their peers in sourcing and developing the information required for a task they could face in their future work. The students were introduced to differing books and sources of information, encouraged to collaborate and work in teams. However the end product was the students' work and formative feedback was provided on this work. No assessment grade was given.

Also, part of this strategy was working towards the summative exam. An open book exam was proposed. The exam focus was on acquiring knowledge and skills in a wider context than previously taught, as there was less focus on the memorizing. The teaching of theory leaned toward the wider understanding and application of the knowledge and where to source it. Tutorial questions were asked of the student in class. The student would have to research the answer and study the broader context of the subject. It is important to note that no answers were directly attainable from the text, but could only be answered by demonstrating a broad understanding and application of the knowledge. A multiple-choice exam was introduced also as a summative exam option. This was a diversion from the original plan, but the students were willing and wished to explore alternative exam options.

### *3.1.2 Strategy two*

The second strategy was to make the student more aware of what they are doing and why they are doing it. This was introduced through reflective practices. The students were encouraged to analyze and correct their own work in the problem based task. The problem was presented in a fashion that allowed the student to interpret the task and use their own input, in deciding the key areas required to carry it out. The key elements were then mapped to the learning outcomes for the unit.

### *3.1.3 Strategy three*

A third strategy is a focus on interaction. This was brought about by the use of tutorials and other discussion groups. Buzz groups were formed with them continuing the discussion into the larger group. Peer instruction was cultivated with a guideline – ask a peer first before the lecturer. Reflective writing was encouraged with short questions after each task or discussion. A few students were willing to talk about their work completed to the rest of the class. Our research has looked at established theory such as setting up the learning experience in the classroom (Gardner 1993) and the increased inter-action and engagement of students in learning.

### *3.1.4 Strategy four*

The final strategy is the focus on transferable skills. The combination of the first three strategies was to develop the student in this area. (Ball, S .1995) asserts that transferable skills can be enhanced by broadening the learning environment. Also, a structured reflective cycle based on the experiential learning cycle, (Kolb and Fry, 1975 et al Boud, D, Keogh, R and Walter; D, p12 ) was offered again to the student. This time they were asked if the differing learning and teaching added to their personal development for their working career.

### 3.2 The Lecturer Strategy

Within each of these strategies our teaching improvised to try and promote the student centred learning. A reflective diary was kept and the experiences logged in a structured manner, using Gibb's reflective cycle (Gibbs 1998), for a future reference. We wished use reflective practices to aid our own development. (Loughran, J, 1996; Campbell, A, and Norton, L, 2007). The various models of reflection (Kolb 1984, Gibbs 1998) all refer to a cyclical pattern of learning whereby you complete an experience, think about what you did, and then think about how you would do things differently and start again. In this way you are constantly challenging established ideas to try to come up with a "best practice".

## 4 Limitations to the research

The research is based largely on the feedback forms and interviews of two focus groups from different semesters. The wider assessment research had a larger sample, but it was within the focus groups that we experimented with different teaching styles. The findings are based largely on the opinions of the authors and draws upon writings from their reflective log.

It is also relevant that much of this teaching was conducted towards an alternative assessment, and that this alternative would not in any way influence the prescribed exam format.

The primary limitation of the research is the time constraints. The apprentice students attend the institute, full time, for a period of ten weeks, having worked in industry for a period of a year or more. The student attends classes 35 hours in the week, combining taught subjects such as theory, maths, technical drawing and practical work. The course content is very large, always leaving the delivery of the subject matter tight for time. The student has very little time for self learning and indeed imposed a strain on the project volunteers. Volunteers for the project attended extra tuition and sat extra exams outside of class time.

Also, the curriculum is prescribed by an outside national body for which we are the providers. As such we are unable to change the curriculum and assessment at local level. The ultimate goal of the student was to pass these prescribed exams. This consideration must be taken into account when reflecting on the learning and teaching taking place outside of normal structured lessons.

## 5 Moving from lecturer-centred to student-centred

When we initially reflected on the current teaching and learning in the theory elements of the Carpentry and Joinery programme, and with compiled student feedback, we found the approach to teaching and learning is lecturer-centred.

### 5.1 Lecturer-centred

There is an emphasis on specific information and how it can be asked in a question. There is a concentration on cognitive learning outcomes. The students' goal is the memorisation of information most likely on the exam. Students expect lecturers to teach them what's required to pass the test and became the passive recipients of information. A summative examination is used to assess students learning. The lessons taught are group-paced, designed for an 'average' student. The information is organised and presented by the lecturer. There is little or no facility for formative feedback within the theory teaching. While this is highlighting the elements of teacher centred learning reference, it by no means suggests that it was the only pedagogy being employed by lecturers. Blended mixes of differing strategies are used; but the curriculum, the timescale and the assessment lean towards this model.

### 5.2 Moving the focus

From the strategies that were developed, the teaching moved towards a student centred focus.
The rationale to change the assessment was to promote a broader range of knowledge and skills. The proposed change was to promote higher order thinking skills like problem-solving, where the student had to demonstrate a greater understanding and application of knowledge than the current prescribed exam format.

### 5.3 The problem-based task

From the problem based task that was undertaken by the focus groups, our reflections and student feedback have determined our observations.

The learning was an engaging process, where the lecturer worked alongside the student in developing the learning opportunities. The students had to work on the task individually, but the realisation of the need to collaborate in small groups became apparent. Peer learning was developing and there was a greater sharing of experiences. The classes became less formal around the task, with the students working with teachers to define the overall outcome. The students were active in their self-learning, a greater responsibility for learning was in evidence, where the lecturer was the facilitator of learning. The problem-based task was not given an assessment mark, but was used for formative feedback purposes. Feedback was structured around good principles identified. (Juwah et al. 2004). The students along with their peers were involved in the analysis of each project.

### 5.4 The summative exam

With the open book exam the focus was on acquiring knowledge and skills in a wider and deeper context than previously taught. The teaching of theory leaned toward the wider understanding and

application of the knowledge and where to source it. The student was encouraged to engage with the notes and books more to achieve this.

Feedback indicated that this exam was more relevant to their work life than the current assessment format. Exploring the knowledge was encouraged, with lecturer acting as facilitator, to help students access and process information.

The students were willing volunteers and sat another multiple-choice assessment. This was outside the scope of the original project but generated good information for comparison of summative assessment types for the students.

### 5.5 Awareness

Another of our aims was to make the student more aware of what they are doing and why they are doing it. There was engagement at an early stage in the problem-based task, and discussions around the key learning points. The student became more aware of why we were teaching certain elements. The student was involved and felt they had ownership over their learning. Reflections on these classes noted that the students were highly motivated and eager. Feedback indicated a high level of interest and desire for similar tasks as a continuous assessment.

### 5.6 Interaction

The promotion of interaction, collaboration, discussion and reflection were widely applauded by the students in the feedback. Reflections on the class interaction noted a greater participation and energy from the class. The alternative assessments set the student free from their primary tutor questions "is this on the exam". The class worked closely together in the majority and there was peer mentoring in evidence.

> Reflection is indicative of deep learning, and where teaching and learning activities such as reflection are missing… only surface learning can result.
>
> (Biggs, J 1999)

Many discussions headed towards debates. It was one of those few moments whereby you see the students actively passionate about their chosen career path. It is worthy of note, that lecturer control and moderation were required, but at no point was the class out of control.

### 5.7 Transferable skills

The final strategy about the transferable skills was to aid in the lifelong learning of the apprentice. There was no real way of measuring this, but feedback indicated that the learning was more relevant

and enshrined a greater confidence among the student. The first three strategies combined, shaped the student learning experience and thinking, but the transferrable skills extend beyond the immediate course requirements to add other benefits to the student in later employment.

### 5.8 Student-centred

On reflection, the findings of the research are positive. The student groups reacted positively to the teaching and learning. The lecturers felt a deeper learning was in evidence in what was very much a student-centred environment.

## 6 Conclusion

The current prescribed assessment of learning in the Irish apprenticeship has it roots in 'traditional' education. The assessment is a simple structure. It has been tried and tested, and is what the student has become accustomed to in previous learning. Logistics and administration are simple. It is an assessment for selection and certification. The lecturer is the provider of knowledge and the student is the recipient. The learning is teacher centred.

However the employment landscape is moving and changing. Employers are looking for a higher standard of trade worker that is knowledgeable, creative, and inventive, can work in a team and has good communication skills. The current theoretical assessment does not offer development in creativity, inventiveness, teamwork and communication. As such the current pedagogy is not focused in these areas. A change in the nature and type of assessment could open the pedagogy from its current closed state and move the teaching to a student centred approach.

## 7 Further discussion

There is a strong case, from lecturer reflection and student feedback, for a change in our teaching practice to promote deeper learning and move towards a more student oriented pedagogy. It is an opinion, that within the current curriculum an assessment change could promote these changes in practice, without a major overhaul of the curriculum.

Is the desire for change and the identification of the learning and teaching issues, reason enough to change what has become an established 'traditional' assessment or will it be a case that regardless of changes, the pedagogy is still entirely dependent on the individual lecturer in class?

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