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Working towards an inclusive model of practice: E4 project training in an institute of technology.

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Abstract

The paper hypothesises that third level tutors are not required to and do not generally possess teaching or disability awareness qualifications and that the institute of technology involved would benefit from a collective approach towards more inclusive practice. The collected data confirms the hypothesis whilst also highlighting recommendations to be incorporated into future planning. The aim of this paper is to examine the effectiveness of a Continuing Professional Development Module on inclusive teaching and learning in a third level institute of technology; it is then intended to derive appropriate lessons for future development of such training. The E4 Project builds on the learning of previous projects examining the learning behaviours of students with a range of needs. The Inclusive Learning through Technology Project used e-learning and Assistive Technology to develop skills in the classroom. The Partners Collaborating in Training for Individuals with Specific Learning Difficulties provide awareness raising training to teachers and employers and offered multi-disciplinary assessment and support to individuals who had issues around Dyslexia, Dyspraxia, Asperger’s Syndrome and AD(H)D. The differentiated instruction methodologies used in the E4 Project include the de Bono six Thinking Hats and Cognitive Research Trust Thinking Tools. The training sessions were offered to staff who might be working with students in the E4 project in September 2006. Lecturers contributed to a research questionnaire and evaluated the training. This data was incorporated in the discussion and formed part of the recommendations for further training.

1. Introduction and Context

The aim of this paper is to examine the effectiveness of a Continuing Professional Development Module on inclusive teaching and learning in a third level institute of technology; it is then intended to derive appropriate lessons for future development of such training. The framework for the paper is as follows:-

- Set the context for this CPD within the E4 project
- Explain the methodologies used
- Describe the training process
- Evaluate the outcomes of the training
- Determine recommendations
The paper hypothesises that third level tutors do not generally possess teaching or disability awareness qualifications and that the institute of technology involved would benefit from a collective approach towards more inclusive practice. The collected data confirms the hypothesis whilst also highlighting recommendations to be incorporated into future planning.

**Legend**

CAF: Consider-All-Factors: one of the CoRT Thinking Tools  
CPD: Continuing Professional Development  
CoRT: Cognitive Research Trust (Edward de Bono)  
CRC: Central Remedial Clinic  
DIT: Dublin Institute of Technology  
DP: Development Partnership (of E4)  
E4: Education 4 Employment: an Equal 11 EU funded collaborative project  
HEA: Higher Education Authority  
ILT: Inclusive Learning Techniques: A Differentiated Teaching Approach EU Project  
ITB: Institute of Technology Blanchardstown  
KIFE: Killester College of Further Education  
NLN: National Learning Network  
OPV: Other-Peoples-Views: one of the CoRT Thinking Tools  
PACTS: Partners collaborating in Training for individuals with Specific Learning Difficulties: an Interreg 3a EU funded initiative between Ireland and Wales.  
PMI: Positive-Minus-interesting: one of the CoRT Thinking Tools

Having passed five pieces of legislation focussed on access and equality in the past eight years, the Republic of Ireland is still in the process of creating frameworks, structures and systems for the implementation of these acts. The five acts are:-

- 1998 Education Act  
- 2000 Equal Status Act  
- 2002 Employment Equality Act  
- 2004 Education for Persons with Special Educational Needs Act  
- 2005 Disability Act

The passing of this legislation has contributed greatly to increased social awareness of the education and employment of members of society belonging to marginalised groups including people with disabilities.
Recent progress in higher education can be traced back to 1996 when, in a report commissioned by the Higher Education Authority (HEA), Professor Malcolm Skilbeck identified educational barriers met by members of nine marginalised groups (Skilbeck and O’Connell 1996). While the HEA acted on Skilbeck and O’Connell’s report with a consultative process leading to an action plan for funding for under-represented individuals (HEA 2005), the progress of such initiatives is always slow, and there remains a present and continuing need for an infrastructure to re-address the inequalities identified by the legislation of the past decade. The pressing need for implementation in respect of the two most recent acts, the Education for Persons with Special Educational Needs Act 2004 and the Disability Act 2005 is most keenly felt in the area of transition; second level students who may have experienced a variety of supports and intervention in their education to date now find themselves back at the beginning of the identification of needs process when applying for further and higher education courses.

As a result of this legislation there is an increasing social awareness around the individual’s right to continuing and lifelong education and third level institutions are now experiencing applications from a far broader spectrum of learning than previously (HEA 2005).

2.0 Education for Employment Project (E4): Project Description

The Education for Employment (E4) Project (www.E4.com) is an EU funded initiative and builds on the development of the inclusive learning methodologies developed by specialist and mainstream service providers. The E.4 application was commenced in 2004 by Dr Ger Craddock who is the head of Client Technical Services in the Central Remedial Clinic. Craddock’s own research work focuses on user-friendly assessment of needs in the area of assistive technology for the purposes of transition (Craddock 2003).

The project’s aims and objectives (see Appendix 1) focus on the fact that many individuals are passing through Irish education institutions without being able to demonstrate or achieve their optimal potential. Consequently, in seeking subsequent progression there is difficulty both in finding employment and in securing employment at an appropriate level.
Despite the fact that the socio-economic conditions which have prevailed in Ireland in recent years have greatly increased employment opportunities, many marginalised populations including people with disabilities continue to find it difficult to achieve access to and progression within the labour market.

In attempting to redress this imbalance the E4 Project aims to create pathways through further and higher education with the aim of increasing access to employment for members of marginalised groups. The following extract from the Development Partnership Agreement lists the six partners:

The members of the E4 Development Partnership (DP) have not previously worked together as a group although some have been in collaboration on other projects previously. The development partners are:

- Central Remedial Clinic
- Killester College of Further Education CDVEC
- Institute of Technology Blanchardstown
- Dublin Institute of Technology Kevin Street
- National Learning Network
- Centre for Independent Living

2.1. E4 Tutor and Lecturer Training

Learning from historic projects, PACTS and ILT, has shown that the effects on the individual from marginalisation, disability and social disadvantage cannot be addressed by working solely with the individual in terms of identification, intervention and support; the environment must also be considered as must the types of teaching and learning methodologies employed.

Two of the E4 objectives focus on this specifically by addressing teaching and learning methodologies and by supporting teaching and lecturing staff with CPD:

To develop new teaching and learning methodologies that will facilitate the learning process for students from the target groups.
To enhance the teaching and training skills of educators and trainers in the partner organisations by providing them with training in these teaching and learning techniques.

It in addressing these two objectives that the E4 Development Partnership created a training module for lecturers and tutors who will be implementing the programmes of study undertaken by the students in their educational institutions admitted to the E4 project.

This module was first trialled in an initial continuous professional development training session with Killester College staff in Year 1 of the E4 project in September 2005. The learning from this first trial enabled the DP to tailor and adapt the initial CPD module for delivery in the Institute of Technology, Blanchardstown. It is this adapted CPD module which is the subject of this paper.

Having now set the context for this paper and subsequent research study, it will be useful briefly to describe some of the methodologies utilised by the project.

3.0 Methodologies Utilised by the E4 Project

The innovative overall methodology proposed by the E4 DP attempts to create a paradigm shift from historic uni-dimensional teaching methodologies to more inclusive methodologies. The historic model of teaching is one where the teacher stands at the front and talks and the students listen and take notes. This traditional teaching method is successful for those students who have good auditory processing skills but does not address the diversity of learning channels and styles that are naturally found within the social spectrum. This is particularly relevant to students with specific learning difficulties (SPLD) such as Dyslexia, Dyspraxia, Asperger’s Syndrome, or ADHD who represent about 10% of the population. These categories of students have been documented as failing in education (Skillbeck and Connell 1996, HEA 2005, McCarthy 2004).
3.1 Prior Research

The E4 project DP brought research on learning diversity to the project from three past projects:

1. Disability: Central Remedial Clinic Inclusive Learning through Technology (ILT)
2. Learning Styles : DIT Damian Gordon PHD research
3. SPLD : National Learning Network Partners Collaborating in Training for Individuals with Specific Learning Difficulties (PACTS)

It will now be useful to give a brief summary of each of these three projects.

3.1.1 Inclusive Learning through Technology (ILT) Project

Differentiation instruction is the basis of a project, the Inclusive Learning through Technology (ILT) project, underway in two special and two mainstream schools in Ireland for the past three years. ILT has harnessed the convergence of educational technology, technical infrastructure and Edward de Bono’s Cognitive Research Trust (CoRT) thinking techniques to generate a student-led collaborative project. One of the core aims is to develop models of classroom practice that teachers and educators can identify with and incorporate into their pedagogical practice. Results of the project have shown evidence of significant gains in students’ higher-order thinking skills, self-awareness and motivation (E4 DP agreement 2005)

The six CoRT Thinking Tools were designed to develop lateral thinking skills and have been extensively used in the ILT project with great success. The three tools presented in this training module are:

- PMI: Positive-Minus-Interesting
- CAF: Consider-All-Factors
- OPV: Other-People’s-Views

3.1.2 Learning Styles

Many people have used instruments to identify different learning styles and channels; the doctoral thesis of Damian Gordon (DIT) documents the range
and effectiveness of available instruments and describes their use in third level teaching methodology. His work identifies that learning diversity exists naturally in society.

Gordon has also further explored the Edward de Bono Six Hats Thinking Techniques (Gordon, Craddock and Lynch. 2004) as a learning styles model as described below:

*A large number of learning styles models exist to assess the strengths and weaknesses of the individual learner. Many models share a common origin, for example, some can trace their origins to the work of Carl Jung, others to Kurt Lewin’s Learning Cycle, still others are based on models of hemispheric dominance. This paper looks at a new model of learning styles based on the work of Edward de Bono and his thinking technique called “The Six Thinking Hats.” This technique was developed to facilitate harmonious communications within groups and identifies six ways of thinking which are necessary for solving problems by allowing the problem to be viewed from a number of perspectives. The technique is adapted easily to a learning styles model where the six roles become the six dimensions of a learning styles model. These dimensions can be viewed as strengths and weaknesses that can be visually represented on a hexagrid.*

Gordon, Craddock and Lynch 2004 p.1

De Bono’s CoRT have now been re-examined in an educational context in this project and Damian Gordon has contributed the results of his research on learning styles to the development of the ILT teaching methodologies by including the examination learning styles that have led to such improved outcomes for participating students.

### 3.1.3. PACTS Project

This Interreg 3A cross-border EU funded project([www.pactsproject.com](http://www.pactsproject.com)) brought partners together from the east coast of Ireland and the west coast of Wales to collaborate in service development and training around the area of specific learning difficulties.
Dr Amanda Kirby had set up the Dyscovery Centre in Wales, which provides collaborative interdisciplinary teams for SPLD identification, support and intervention. The National Learning Network and the Institute of Technology Blanchardstown joined with the Dyscovery Centre to set up the first adult assessment centre for identifying specific learning difficulties in Ireland. In addition accredited training on SPLD was developed for the Republic of Ireland.

As part of the project the newly set up National Learning Network Assessment Service, profiled individual students for learning styles and preferences as well as for potential difficulties with SPLD in one of the main four areas: Dyslexia, Dyspraxia, ADHD and Asperger’s Syndrome. The Assessment Service also profiled students and tutors from course groups which were felt may attract individuals with unidentified SPLD. This led to the development of teaching and learning strategies which would best meet the learning preferences and strengths of an identified group. It is this area of continuing research that the PACTS project brings to the E4 Project (ref McCarthy and Duffin 2004, McCarthy 2005).

3.2. Development of an Inclusive Model of Education
It has been the traditional view that people with disabilities have learning problems. The E4 project, in light of the research highlighted above, chose instead to perceive people with disabilities as possessing ‘learner difference’. In this inclusive model professionals are required to make a paradigm shift in their teaching methods; to view of disability as part of the natural continuum of learner difference within society and to acknowledge that it is the teacher’s responsibility to address learner difference in the classroom as a whole, rather than just in respect of those students with disabilities.

3.3. Lessons learned about tutor training from year 1 of E4
The progress of the E4 project during year one is extensively documented in the E4 annual report (ref) and contains reference to: E4 students enrolling on the FETAC level 4 course in Killester College, supports and accommodations required by the students, staff training in the college, and the manner and nature of support offered to students and tutors by the project. During the
first year of the project a number of lessons were learned about the original tutor training module. It became apparent over time that incorporation of new methodologies into teaching delivery was not something that could be accomplished speedily. While tutor feedback showed that the underlying theoretical perspective of the training was welcomed, it emerged that practice, support and teamwork was needed to integrate the learning tools into daily teaching practice. With this in mind the initial training module was restructured (see appendix 2) to focus, consecutively, on the following three elements of the training:

1. Cognitive Information Processing
2. Teaching Tools
3. Practical Application in Lesson Planning

This revised training module was delivered to the staff of ITB over two days in May 2006.

4. CPD Module Delivery in ITB for E4 23rd and 24th May 2006

The Institute of Technology Blanchardstown opened in September 1999 with a brief to accommodate ‘non-standard students’ and since then has been working in a number of inclusive planning initiatives to encourage the broadest possible spectrum of entry. These include:

- Student Access Services
- Student Support Services
- Assessment Services
- Access Programmes
- Equality Assessment Procedures
- Examination Accommodations

The three strand framework timetable described above was developed from the feedback and experiences of the PACTS training and of specific training days in order to enable participants to move from theory to implementation in the classroom.

4.1. Hypothesis

Whilst many individual lecturers in third level are delivering good practice methodologies as a collective group they are not articulating an overall
organisational policy of inclusive education. It is hypothesised now that the majority of third level employees may not have benefitted from specific training in teaching or in addressing disability in the classroom. Three research questions were addressed in order to support the hypothesis:

1. What percentage of third level lecturers possess specific teaching qualifications or have completed part-time courses related to developing teaching skills and methodologies?
2. What percentage of third level lecturers possess specific qualifications related to disability or diversity?
3. What do third level lecturers believe to be the most critical influence they bring to their students?

In posing question these questions the research study attempts to determine the lecturers qualifications and to identify their personal perception of the lecturers role in terms of student interaction. This paper will also describe the two day training and will discuss the lecturers’ evaluations of the components of the training as well as their evaluation of the overall module after they had completed it. It is intended to return to the lecturers at a later date for request feedback on the subsequent impact of the module on their teaching.

4.2 Preparation for the Module
A few weeks prior to the one and a half day training module, a meeting was held in ITB for all staff who might be involved in the E4 project and then, in the week before the training information regarding time table and the techniques was sent to all staff; this included two papers (Gordon and Craddock 2004 and Gordon, D., Craddock, G. and Lynch, B, 2004).

4.3. The Aim and Objectives of the training module
Aim: To enable participants to continue to move towards an overall best practice inclusive model of teaching for curriculum delivery

Objectives:
1. To allow third level lecturers to reflect on their own practice and experience
2. To establish that diversity in learning occurs naturally
3. To demonstrate that learning styles can be useful in understanding individuals’ approaches to learning
4. To demonstrate that multidimensional teaching approaches are the most effective response to diversity in learning
5. To identify learning and teaching tools for individuals to incorporate into their teaching and lecturing delivery
6. To create the opportunity to practise using these tools in lesson and curriculum planning.
7. To create a forum for discussion on inclusive teaching and learning

4.4. Description of the Training Module
It has already been stated that in my own experience in providing training on facilitating students with disabilities and diverse needs, that the best methodology for working in this area is a combination of theoretical input, practical tools and pragmatic workshops. I have found that this allows participants the opportunity to frame or reframe their perspectives on teaching and learning. The process of moving into a model of differentiated instruction is slow and needs time for reflection; the tutor also requires tools to apply in the classroom or lecture theatre.

As the majority of lecturers do not possess domain expertise in education they often do not perceive the benefit of the theoretical element until some time has been spent in the process of application. This presents a challenge in presenting the theoretical materials when lecturers have correctly identified the need for strategies. Without the theory to frame the practice the lecturer is unable to apply the tools to his or her own teaching and lecturing and is only able to use the tools as they have been demonstrated rather than taking from them what is needed. Consequently the timetable for the one and a half day training was structured to include presentations and discussion on the following topics:

**Day 1. Theoretical Element:**
- Completion of questionnaire
- General Discussion on teaching and learning
- Interactive presentation on cognitive information processing.

**Day 2. Practical Tools Element:**
Presentation on learning styles in respect of student and lecturer

Presentation on Introduction to De Bono’s Teaching Tools:
CoRT and 6 Hats (with practical examples).

Pragmatic Element:
Lesson Planning in discipline group
Group workshop
Individual feedback

During the workshop, participants were introduced to three of the six CoRT Thinking Tools (PMI, OPV and CAF) which are used in developing critical thinking. There was a group practical exercise on each of the three tools.

4.4. Construction of Questionnaire
The questionnaire (see appendix 3) was developed by the author in collaboration with the E4 DP. The aim of the questionnaire was to collect both qualitative and quantitative data so the design included the following devices:

<table>
<thead>
<tr>
<th>Method of Data Collection</th>
<th>Objective of Data Sought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick boxes:</td>
<td>to collect accurate and specific data on qualifications and role</td>
</tr>
<tr>
<td>1-10 scale:</td>
<td>to capture the individual perception of job satisfaction</td>
</tr>
<tr>
<td>Closed question:</td>
<td>to investigate motive for working in higher education</td>
</tr>
<tr>
<td>Open ended question:</td>
<td>To elicit personal perspectives on lecturer impact on students</td>
</tr>
</tbody>
</table>

Table 1: Rationale for Construction of Pre-Training Questionnaire

It was difficult to construct the open ended question to capture most accurately lecturer perceptions on the efficacy of their student interaction. It was important to use a neutral construction to allow participants to respond openly. The questionnaire was accompanied by a consent form which stated the collected data would be used anonymously but would be recognised as having come from the training coded E4 2324. It was important that the questionnaire be completed before any training began so that the results would not be adulterated by the content of the training.

5. Results

5.1. Results of Questionnaire
On day one of the training, participants were invited to complete a questionnaire (see appendix 3) before the training began; out of 22 participants 13 completed the questionnaire and signed the accompanying consent form. Of the 13 participants 11 described their roles as that of ‘lecturer’ and two as ‘administration’. A total of 15 participants returned for day two of the training and of these, 8 completed the final evaluation form (see appendix 4). Eight of the lecturers have a Masters Degree, two have PhDs and one has a primary degree. Two lecturers have additional specific qualifications in teaching and one has an additional specific qualification in the area of special education. When asked to reflect the current level of job satisfaction on a scale of Number 1 to 10 (10 representing the highest satisfaction), it was clear that most people were enjoying high levels of job satisfaction. Six participants gave a score 8, two gave 9 and one gave 10. Only one lecturer expressed current job dissatisfaction by giving a score of 3.

The responses to the question on ‘Motivation for working in Higher Education’ varied as can be seen from the following summary (Table 2).

<table>
<thead>
<tr>
<th>Motivation Identified</th>
<th>Includes</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching</td>
<td>Fulfilling</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>Subject</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Lifestyle</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Most suited job</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Hours</td>
<td></td>
</tr>
<tr>
<td>Working with students</td>
<td>Convey knowledge and skills</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Help others to enjoy education</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Help others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Enjoy dynamic in labs/lecture theatre</td>
<td></td>
</tr>
<tr>
<td>Lifestyle</td>
<td>Teaching</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>People focused</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>Continue own education</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Interested in education</td>
<td></td>
</tr>
<tr>
<td>Research</td>
<td>Computer supported learning</td>
<td>2</td>
</tr>
<tr>
<td>Dissatisfied with previous work</td>
<td>Computer supported learning</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>Commercial industry</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2: Responses from participants to Pre-Training Questionnaire Q6:**

*What was your primary motivation in first applying for a career position in Education?*

Collectively the tutors identified 20 separate items of motivation. The identification of ‘teaching’ as a primary motivation was high (7), especially
when added to the number of people who identified ‘working with students’ (4). An interest in education and research was also identified (2). One lecturer identified the choice of teaching as a career as being directly related to the ‘hours’. When lecturers were asked to describe their ‘contribution to student success’, responses fell largely into two categories:

- Their interaction with their students
- Their delivery of the curriculum

The factors which emerged are set out in the following table (Table 3):

<table>
<thead>
<tr>
<th>Student Interaction</th>
<th>Manner of Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approachability</td>
</tr>
<tr>
<td></td>
<td>Support students (inc those with difficulties)</td>
</tr>
<tr>
<td></td>
<td>Availability</td>
</tr>
<tr>
<td></td>
<td>Guidance and Advice</td>
</tr>
<tr>
<td></td>
<td>Feedback</td>
</tr>
<tr>
<td></td>
<td>One to one contact</td>
</tr>
<tr>
<td></td>
<td>Empathy with students</td>
</tr>
<tr>
<td></td>
<td>Communication skills</td>
</tr>
<tr>
<td></td>
<td>Listen to students</td>
</tr>
<tr>
<td></td>
<td>Interacting</td>
</tr>
<tr>
<td></td>
<td>Enabling self-learning</td>
</tr>
<tr>
<td></td>
<td>Understanding needs</td>
</tr>
<tr>
<td></td>
<td>Good instruction</td>
</tr>
<tr>
<td></td>
<td>Interest in student learning</td>
</tr>
<tr>
<td></td>
<td>Developing strengths</td>
</tr>
<tr>
<td></td>
<td>Encouragement for students</td>
</tr>
<tr>
<td></td>
<td>Supply of teaching materials</td>
</tr>
<tr>
<td></td>
<td>Good relationship</td>
</tr>
<tr>
<td></td>
<td>Make sufficient and appropriate learning resources available</td>
</tr>
<tr>
<td></td>
<td>Sub-Total of Contributions involving Student Interaction</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Delivery</th>
<th>Manner of Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Differentiated instruction</td>
</tr>
<tr>
<td></td>
<td>Presenting material in a straight forward and commonsense manner</td>
</tr>
<tr>
<td></td>
<td>Teaching/lecturing</td>
</tr>
<tr>
<td></td>
<td>Small group contact</td>
</tr>
<tr>
<td></td>
<td>Supply of teaching materials</td>
</tr>
<tr>
<td></td>
<td>Facilitator</td>
</tr>
<tr>
<td></td>
<td>Well planned relevant lectures and practical sessions</td>
</tr>
<tr>
<td></td>
<td>Emphasis on making practical work correspond closely to theoretical work and visa-versa</td>
</tr>
<tr>
<td></td>
<td>Make learning outcomes required for assessment clear and applicable</td>
</tr>
<tr>
<td></td>
<td>Link to industry</td>
</tr>
<tr>
<td></td>
<td>Enthusiasm for subjects</td>
</tr>
</tbody>
</table>
Table 3. Responses from participants to Questionnaire Q7: *At the interface of tutor and student what do you believe are the main ways in which you contribute to student success?*

5.2 Results of Group work on Applications of CoRT Thinking Tools

5.2.1 PMI: Positive-Minus-Interesting
This exercise aims to prevent the taking up of a positional view and develops lateral thinking. Two minutes is given to recording thoughts, factors or elements of a topic in each of the three areas in the sequence of PMI. Participants may only write under the heading currently being considered. The participants produced the following applications of a PMI in lecturing:

<table>
<thead>
<tr>
<th>First class of year (After training)</th>
</tr>
</thead>
<tbody>
<tr>
<td>After lecture – Practical exercises PMI relating to theory covered</td>
</tr>
<tr>
<td>Determines existing knowledge</td>
</tr>
<tr>
<td>Expectations – Do they relate to real world</td>
</tr>
<tr>
<td>Learning temperature gauge</td>
</tr>
<tr>
<td>Evaluation of services/resources</td>
</tr>
<tr>
<td>Assignment planning</td>
</tr>
<tr>
<td>Assessment /End of Semester</td>
</tr>
<tr>
<td>Individual view</td>
</tr>
<tr>
<td>Student’s can use for their own planning</td>
</tr>
<tr>
<td>Peer Review</td>
</tr>
<tr>
<td>In the teaching of Sorting Algorithms</td>
</tr>
</tbody>
</table>

Table 4: Responses from participants to use of PMI CoRT Thinking Tool

5.2.2. CAF
Consider-All-Factors is a method of developing an elliptical perspective on a particular subject by identifying all possible elements. This is done by
The participants produced the following applications of a CAF in lecturing:

- Factors in Choosing final year project
- Making a decision on a sorting algorithm
- What are the critical success factors in your own learning
- Get student’s to do it
- Justify what programming language to choose, product, service, technique

**Table 5: Responses from participants to use of CAF CoRT Thinking Tool**

### 5.2.3. OPV

Other-Peoples-Views is a tool for developing lateral and elliptical thinking skills and encourages empathy with different perspectives by considering what perspective different individuals may have on a topic. The participants produced the following applications of a OPV in lecturing:

- **E4 Project:**
  - Management committee
  - Organisations involved
  - Tutors
  - Students
  - Employers

- **Continuous Assessment**

- **Final Project:**
  - In Peer review context

- **Review of Services**

- **Report writing**
  - Use in class OPV
  - Lectures, students own group public

- **Web Design**
  - Organisation, staff, linkage to computers

**Table 6: Responses from participants to CAF CoRT Thinking Tool**
These tools were also included in the lesson planning session in the afternoon of Day 2 and the work produced by the participants in groups included further development of the CoRT tools applications (Appendix 5).

5.3 Result of Group Feedback on Lesson Planning Session

After the group sessions for lesson planning feedback was given on a number of areas where the CoRT tools might be used in lesson planning and is summarised below:

- Overlapping issues being a computer college (Global Issue)
- Student Motivation
- Passing from year to year
  - C. A. and exams
- Problem based learning System:
  - Looking at incorporating technology
  - Looking at learning styles to create group dynamics
  - Show advantages of methodologies
  - Use for assessing group progress
  - PMI – give student framework
  - PMI – from tutor to give feedback
  - Algorithms
  - General discussion about techniques
  - Use PMI
  - Create samples

Table 7: Feedback from participants on group workshop sessions

5.4. Result of Group Exercise on the Day 2 Group Workshops.

The two days finished with a PMI group exercise on the group workshops:-
Table 8: Responses from participants to PMI CoRT Thinking Tool on the two day CPD training

5. 5. Results of Participant Final Evaluation Forms
Eight participants completed the evaluation form and a summary of all comments can be found in Appendix 4. Some of the significant responses to the questions are listed below:

‘Did you gain new knowledge?’
All 8 participants who completed the evaluation found the training sessions of interest and said that they had gained new knowledge. One person wrote in answer to the question ‘Some, but much of the material has been covered previously’.

‘If you have gained new knowledge, how relevant is it to your work?’
The responses were all very positive save one ‘haven’t tried it yet’ and ranged from ‘Very relevant’ (5) to ‘reflect on how we teach and what can do better’ (1). The Cort Techniques and 6 thinking hats techniques were positively identified as bringing new knowledge (1).

‘Factors that encouraged your contribution?’
Two participants expressed a desire to improve existing skills; one person specifically mentioned the lack of training in teaching and learning techniques and one person mentioned lack of knowledge. Two participants named their forthcoming participation in the E4 project as
a factor. Two people indicated that the HOD had instructed them to participate.

‘Factors that inhibited your contribution?’
Four participants answered ‘no’ and two identified the fact that it was exam week. One person was unclear about his/the ITB involvement in the E4 project and one person found it ‘sometimes difficult to get a word in edgeways’.

_Do you think the materials will be useful to you in your work?_
One person identified the fact that although the materials covered some known ground it gave the opportunity to reflect by putting ‘formality on it’. One person said ‘Yes’ and two said ‘Yes hopefully’. One participant thought ‘some (of the materials) will be of use’, one participant said ‘not sure, probably’ and one was ‘not clear of our involvement in the project’.

_Overall facilitation of training?_
Two participants gave ‘excellent’, one gave ‘good’, one gave ‘fine’, one gave ’instructive’ and two gave ‘ok’, one of whom added ‘but I feel I have done this before. More specific less theory’.

_Would you suggest we do anything differently?_
One person said ‘no’, one person felt more time was needed, ‘3-4 days’, and one person felt the scheduling should be at a less busy time. Another participant felt more staff should have been included and acknowledged this was a HOD issue.

The other feedback comments from the remaining 4 participants were as follows:

‘less list of techniques, more on actual teaching, provide comprehensive document about techniques’
‘more practical work’
‘Pace of certain aspects could be increased’
‘include more sessions on practical examples with Damian’
All the training sessions were interactive and excited much discussion. Throughout the two days it became clear that, in addition to the fact that all participants were already committed to marking exam scripts and carried heavy workloads, a number of participants had neither heard of the E4 project, nor were aware that they may be teaching students in the project in the forthcoming academic year.

6.0. Discussion of Results from Training Module

6.1 Introduction
Overall the results from the two-day training event demonstrate that a number of environmental as well as individual factors must be taken into consideration in attempting to provide this type of training. I will first discuss the results individually before identifying common themes or factors, and then I will use one of the tools, the ‘OPV’, to illustrate the perspectives of all the different individuals involved before going on to draw conclusions and make recommendations to be taken into consideration before planning further training.

6.2 Pre-Training Questionnaire
Although the lecturers who responded to the questionnaire (11) were all highly academically qualified, only two lecturers had qualifications in respect of teaching and one lecturer possessed a qualification in respect of special education. This is a higher result than expected as the over-riding criterion in the employment of lecturers is domain expertise. This means that the majority of participating lecturers would not have been given any training or support in how to teach or lecture, manage laboratory work, manage classes, develop inclusive curricula or presentation skills. If further data collection of this nature in the E4 project provides results consistent with these, it will conclusively demonstrate that third level lecturers do not generally undergo formal training in their chosen career. The majority of the group (9) expressed a level of job satisfaction of 8 or above. The number of people (5) who identified lifestyle as a part of the primary motivation in first applying for a career position in education was surprisingly high.
The responses to the closed question, *What was your primary motivation in first applying for a career position in Education?*, identified 20 different items as being primary motivators in first applying for a career position in education. Teaching came out as the top motivator (7), followed by working with students, lifestyle, and one’s own education and research (4 each). Only one person expressed the choice of teaching from a default point of view in terms of dissatisfaction with previous work. In general the lecturers say they are happy with the career choice they have made and are clear about their reasons for making it.

In responding to the question, *At the interface of tutor and student what do you believe are the main ways in which you contribute to student success?*, lecturers collectively provided 59 responses 35 of which related to student interaction and 22 of which related to teaching delivery. The other two responses identified were working hard and having flexibility with staff. It is not surprising that the responses grouped as *student interaction* formed the largest group as the question referred to students specifically but what is surprising is that only one person included the first person (I) in the reply and that the questions appeared to be answered in passive voice in terms of acknowledged good practice and not in particular overt references to their own practice.

A large number of noun forms were used such as: empathy, encouragement, guidance, advice, feedback, support, and explanations. Only one verb appeared in these responses (make) and one adjective (available). In the teaching delivery section I would have expected more active verb forms and found only: presenting (1), make (3), making (1), give (1), link (1) and setting (1) none of which is very specific to teaching. Interestingly, one very important noun in inclusive practice, ‘flexibility’, was applied to relationships with staff but not to interaction with students.

### 6.3. Participant Evaluation

#### 6.3.1 Introduction

The participant evaluation falls into two categories; comments on the materials and teaching tools and comments on the training itself. The comments on the teaching tools themselves were centred on the potential use
of the CoRT techniques by ITB lecturers. Two types of evaluation of the training itself were used; one was given by the participants as a PMI from the group after the lesson planning sessions and is reproduced in full in the results section (Table 6: Feedback from participants on group workshop sessions) and the other is the participant evaluation form which is summarised in Appendix 4.

6.3.2 CoRT Thinking Tools Group Examples

The lecturers were very specific in the group CoRT tools exercises where, after an explanation and example of each of the three tools (Positive Minus Interesting, Consider All Factors and Other People’s Views) the lecturers were invited to call out possible applications in their own discipline. Here, with all three CoRT tools there was a balanced mixture of general and specific applications. This was also reflected in the feedback from the group work in the afternoon of day two.

6.3.3 Feedback

The **Positive** feedback here indicated that the training had been well received and was considered relevant. In the context of E4 the most pertinent comments for the DP are: ‘opportunity for change’, ‘awareness raising’ and ‘informative’ which demonstrate not only that new information has been received but that its application can be perceived as extending beyond the confines of the project.

The **Minus** feedback also highlighted the need for inclusive practice in a larger context and perhaps reference to ‘organisational lack of awareness’ and the’ time constraints’ reflect a growing awareness of the large body of work the institution will need to do in the future. The feedback also contains a reference to a lack of ‘table of contents the timetable had been circulated but possibly was not received by all. Another point also raised was that the two days were not practical enough even though it had been explained that a certain amount of theory was not only necessary but essential.

The **Interesting** feedback also raises the desire for ‘practical’ as well as identifying the ‘opportunity for change’ and, most importantly, highlighting the ‘shared’ and ‘common’ views.
6.4. Evaluation Forms.
The evaluation responses demonstrate whether the participants found the module of relevance and value both in terms of E4 and in terms of future overall planning. It is clear that all participants found the sessions of overall benefit and that the one person who already had considerable previous knowledge in the area found that ‘formalising’ the process gave the opportunity to reflect on practice. This theme of reflection on practice leading to future improvement was also echoed by other participants.

The evaluation analysis also shows that the communication received by individuals about the E4 project was not homogenous and that their understanding of how it related to their next year’s teaching load varied from having no knowledge at all to having a good understanding of the project’s intentions. Two particularly useful items of feedback highlight the perception that attendance was not voluntary and that the timing of the training delivery in the academic calendar was not optimal and these two factors impacted on the delivery of the training in a number of ways. This will be discussed further in the findings section.

At the beginning of the session the trainers assumed that all participants were aware of the E4 project and it soon became apparent that this was not the case. One of the administrative staff arranged for the Head of School to come in at the start of the next day and speak to the participants. This duly took place and went some way towards re-framing the second day. Twenty two people arrived on the first day and 13 of these voluntarily completed the questionnaire. On the following day there were 15 participants but a few needed to leave early and did not complete evaluations.

6.5 Inclusive policy
One of the most difficult tasks in delivering inclusive training is trying to contextualise the training within the current climate of the educational institution in question where a number of variable factors exist. In this instance, the perspectives of the E4 project DP members, the trainers, the participants and ITB administrators all tended to differ and each stakeholder, whilst articulating the overall aim of student achievement, had a different experience of lecturing, training in lecturing and of equality issues. Ideally
the inclusive ethos of any institution should be stated and implemented from the top down, but the resources required including all staff members are significant both in terms of the finance and time required.

### 6.6. Stakeholder perspectives
I have used one of the CoRT tools, Other People’s Views, to demonstrate a possible range of perspectives within this current environment.

<table>
<thead>
<tr>
<th>Role</th>
<th>Perspectives</th>
</tr>
</thead>
</table>
| **E4 DP**             | • Responsible for meeting project objectives  
                        • Needs to keep project on schedule  
                        • Fully aware of gap between needs and resources  
                        • Concerned about E4 student success |
| **ITB Administrator** | • Concerned about student retention and success rates  
                        • Desires best practise ethos  
                        • Constrained by resources |
| **Head of School ITB**| • Wants project to perform well in his department  
                        • Wants staff to benefit from training module  
                        • Knows individual staff members well |
| **Head of Department**| • Responsible for project in ITB  
                        • Wants staff to benefit from training module  
                        • Wants project to perform well in ITB  
                        • Wants students to succeed |
| **Trainer**           | • Has expertise in inclusive education, both theoretical and practical.  
                        • Wants training to be meet its objectives  
                        • Wants participants to enjoy the experience  
                        • Wants participants to gain new and relevant knowledge |
| **Participant**       | • Wants to gain new and relevant knowledge  
                        • Has heavy exam workload  
                        • Did or did not volunteer to attend  
                        • Has considerable lecturing expertise  
                        • Wants students to succeed |
| **E4 Student**        | • In new environment  
                        • Fearful of failure  
                        • Excited about progression  
                        • Past experience of education negative |

*Table 9: OPV: CoRT Thinking Tool to show different perspectives toward CPD 2324 in the E4 Project.*
7.0. Findings
The findings relate to the three areas described in this paper:

- The two objectives identified by the E4 project
- The three research questions to meet the hypothesis
- The aim and objectives of the training module

7.1. E4 Objectives
The two identified objectives concern the implementation of some of the teaching and learning methodologies brought to the E4 project by previous project research:

- To develop new teaching and learning methodologies that will facilitate the learning process for students from the target groups.

This objective has been met by combining the collective outcomes from the projects described in Section 3. The training module described in this paper is a prototype for this and other work in third level colleges and institutions and was generally well received as a vehicle for enhancing classroom delivery as can be seen by the feedback given by participants:

- To enhance the teaching and training skills of educators and trainers in the partner organisations by providing them with training in these teaching and learning techniques.

The participant feedback indicated that there are applications for the CoRT tools in ITB and also identified the fact that there were a number of external pressures on the lecturers at the time the module was scheduled.

7.2. Research questions to meet the hypothesis
The findings in respect of the hypothesis are as follows:

1. What percentages of third level lecturers possess specific teaching qualifications or have completed part-time courses related to developing teaching skills and methodologies?

2. What percentage of third level lecturers possess specific qualifications related to disability or diversity?
82% of the participating lecturers had no qualifications in teaching skills and methodologies and 91% had no specific training in special needs or disability. As this was a small group of 11 lecturers further data will need to be collected to reach a definitive conclusion.

3. What do third level lecturers believe to be the most critical influence they bring to their students?

The participating lecturers responded in terms of teaching and lecturing skills that were either student or delivery focussed. In light of the finding that most of them had no training in this area there was a very positive response to the value of the skills identified. What is significant though, is the fact that all these responses are based on the individual's notions of what teaching and lecturing entail. It is possible that tutors teach the way they were taught themselves or the way they would like to be taught (that is, in sympathy with their own learning styles). There is no homogenous link between the skills identified by individuals and the manner in which they are collectively delivered within the institution.

7.3. The Aim and Objectives of the training module

**Aim**
To enable participants to continue to move towards an overall best practice inclusive model of teaching for curriculum delivery

**Objectives**
1. To allow third level lecturers to reflect on their own practice and experience
2. To establish that diversity in learning occurs naturally
3. To demonstrate that learning styles can be useful in understanding individuals’ approaches to learning
4. To demonstrate that multidimensional teaching approaches are the most effective response to diversity in learning
5. To identify learning and teaching tools for individuals to incorporate into their teaching and lecturing delivery
6. To create the opportunity to practise using these tools in lesson and curriculum planning.
7. To create a forum for discussion on inclusive teaching and learning
The above objectives cannot easily be met in a single training event and a considerable amount of follow up has be done to verify whether or not there is a move towards best practice of teaching delivery. The training module did provide a forum for discussion and did give the opportunity to use new tools and practise new skills. Feedback indicated that participants were also reflecting on their practice. It will not be possible to answer the other questions until further feedback is gained to determine what application has been made of the information and materials given out at the training module. Notwithstanding the difficulties involved in longitudinal data collection studies, a number of general observations can be listed under two categories: those relating to planning and policymaking at an organisational level and those relating to the support and development of lecturing staff.

1. Planning and policy making
   - There was poor communication about the E4 project and which lecturers would be involved
   - The lecturers attending the training were under exam marking pressure at the time of the training and could not give a full time/attention commitment to the training
   - All the lecturers had different perspectives regarding their lecturing
   - The participants had little expertise in disability or equality issues
   - The lecturers’ perception of the value and relevance of the training was diverse

2. Training and development of lecturers
   - Lecturers are largely domain experts not teachers
   - Teaching and lecturing skills were varied and largely experiential
   - Understanding of teaching methodologies was diverse
   - Knowledge around diversity in learning was fragmented

7. Conclusions

The conclusions also relate to the three areas described in this paper:
   - The two objectives identified by the E4 project
   - The three research questions to meet the hypothesis
The aim and objectives of the training module

The two objectives identified by the E4 project
Although the feedback was generally positive this is too small a cross section of lecturing staff from which to draw any definitive conclusions and a great many similar studies must be undertaken for confirmation. The response and workshops concerning the CoRT tools were evaluated positively as was the training module in general. There is a need for a follow up questionnaire to determine what impact the training module may have had on teaching delivery.

The three research questions to meet the hypothesis
Overall, the results of the questionnaire show that although the teachers have made specific choices to go into education primarily to teach and interact with students it does not seem to appear anomalous to them that their primary qualifications are not specifically in these fields. It is possibly because of lack of overt reflection on this situation that we met some resistance from the participants initially, although it cannot be denied that the majority of lecturers acquired skills in teaching experientially.

The aim and objectives of the training module
One important preconception that emerged from the overall feedback is the idea that the training should have been more practical with less theory, and the idea that the practical element is the important one to focus on is a common mis-perception amongst educational professionals. In the classroom the difficulty always comes to matching a strategy to a particular student and it is the lecturer’s theoretical knowledge around processing and learning that distinguishes whether a good match will be made between the way the student learns and the types of strategy required. This is as opposed to having a hit and miss approach, hoping that one of a long list of strategies will work. It is certainly true that there is a need for further and continuing practical sessions where theory and tools are applied to individuals, firstly in hypothetical case studies and secondly in terms of actual practice, but this can only be done, in my view, by allowing sufficient time for a programme of CPD that will develop teaching and lecturing skills in situ.
In conclusion, I wish to state that individual student or environmental supports are not fully effective without lecturers and all staff being fully informed, involved and committed to the process of inclusivity and that it is essential for E4 to continue research institutional, departmental and individual teaching and learning profiles and to consider the perceptions of all involved. It is critical to the project that lecturers are informed and committed and that the training developed for this project’s move into third level institutions should in no way imply that the project is bringing techniques and tools to replace current practice, but rather that it is offering an opportunity to enhance and develop it.

8.0. Recommendations

8.1. Recommendations to the E4 Development Partnership:

1. Continue to collect data from 3rd level lecturers and staff as the learning from this is essential to both the E4 project and to the development of best practice models of inclusivity in third level institutions.

2. Revise the questionnaire in an attempt to elicit more specific responses related to the individual lecturer’s perception of how his or her specific skills impact on individual students.

3. Focus more overtly on a good relationship with the heads of the 3rd level institutions. In the CDVEC/NLN Disability Support Service, a partnership collaboration between the National Learning Network and the City of Dublin Vocational Education Committee (www.nln.ie), the colleges where the greatest success in terms of identification and self-referral of students needing supports, were those where there was a clear policy set by the Principal to commit his or her support through the resourcing of staff, resulting in a college wide ethos of inclusivity that puts students into a community where it is ‘normal’ to identify either short-term of long-term support needs in education.

4. When working with established professionals in education it is essential that the training experience is a contributory one; one that allows the reframing of existing knowledge in the context of inclusivity.
and offers information, tools and broader contexts to support what is already known and enhances the good practice that already exists.

5. Where training is provided for a group of staff, create a good communication structure so there is better sharing of information in all areas: from the raising of awareness on the E4 project through to circulating the information and timetable prior to the event.

6. Timing of training should involve seeking optimal periods in the academic year when lecturers can give full attention.

7. Alternative models of delivery should be considered, for example:
   - Launch a comprehensive Information and Resource Handbook to provide support and direction to lecturers when they wish to seek it.
   - Present materials as being tools that may be useful in general teaching as well as to some of the E4 curriculum.
   - Provide training sessions on request in response to invitation from groups or departments.

8.2 Recommendations to Third Level Institutions.

In promoting strategic planning towards inclusive policies two main areas are identified: overall planning and policymaking and continuing professional development for all staff. Key points under each heading are listed below for information and interest.

1. Planning and policy making
   - Overall policies leading to embedded inclusive practice
   - Ethos of inclusive practice
   - Effective communication system
   - Structure to free staff for development
   - Equality training for all staff

2. Training and development of lecturers must address
   - Teaching and lecturing skills
   - Teaching methodologies
   - Diversity in learning
   - Practical solutions
   - Lecturer support
Bibliography
ILT Project: http://www.atireland.ie/inclusive/
McCarthy S 2004: A Collaborative Model of Service Delivery for Individuals with Specific Learning Difficulties ITB Journal: No.10
National Learning Network: www.nln.ie
PACTS Project: www.pactsproject.com
Appendix 1

E4: Project Aim and Objectives

The aim of the E4 Project is to increase the employability of people from marginalized groups (people with disabilities, educationally disadvantaged, ex-offenders) by training them to work as Technical Support Officers in Information & Communication Technologies (ICT) and Assistive Technologies (AT) through the development and implementation of new innovative educational programmes. The objectives of the E4 project are:

- To develop a new and innovative partnership which will build on the success of the regional learning partnership created by the Institute of Technology Blanchardstown (ITB).
- To expand this partnership to incorporate rehabilitation service providers (Central Remedial Clinic (CRC) and the National Learning Network (NLN)), support organisations, Centres for Independent Living (CIL) and Industry (through the Irish Business & Employers Confederation (IBEC), DELL, Microsoft, Delcran, Quinn Direct and others).
- To establish a lifelong learning pathway to employment for participants through the development and provision of foundation courses at the CRC and Killester College, progression to NQF Level 5 and 6 programmes at Killester College of further education (St Peter's College, Killester) and on to NQAI Level 7 at Institutes of Technology (ITB and DIT Kevin Street).
- To develop new teaching and learning methodologies that will facilitate the learning process for students from the target groups.
- To enhance the teaching/training skills of educators/trainers in the partner organisations by providing them with training in these teaching and learning techniques.
- To lobby for the adoption of these new teaching and learning techniques throughout the training/education sector.
- To provide internships and work experience placements for participants at critical periods during their training/education through partnership with industry (DELL, Microsoft, Delcran, Quinn Direct and liaising with IBEC).
- To include the sustainability and development of the Re-use Technology concept as a means of providing technology to students and organisations and to provide employment for graduates of the above mentioned educational programmes as Technical Support Officers in ICT and AT.
- To provide supports to students both in the area of learning (including the use of Assistive Technology, organisational skills, study skills etc.) and more personal areas. This support will ultimately focus on supporting the student while in the learning environment and preparing them for the workplace through the development of work related social skills and pro-active job seeking behaviours. This support will be available to students during internships, work experience placements, on to employment where appropriate.
Appendix 2

E4 Teaching and Learning : Training in ITB. Dublin.

24th and 25th May 2006

Timetable - Day 1

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
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<tbody>
<tr>
<td>13.45</td>
<td>Coffee</td>
</tr>
<tr>
<td>14.00 – 14.45</td>
<td>Teaching, Lecturing, Tutoring and Training</td>
</tr>
<tr>
<td></td>
<td>Exercise and Discussion</td>
</tr>
<tr>
<td></td>
<td>Dawn Duffin</td>
</tr>
<tr>
<td>14.45 – 15.00</td>
<td>Break Tea and Coffee</td>
</tr>
<tr>
<td>15.00 – 16.30</td>
<td>Processing in the Context of Learning</td>
</tr>
<tr>
<td></td>
<td>Dawn Duffin,</td>
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</table>

Homework

PMI

Timetable – Day 2

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>09.00</td>
<td>Tea/Coffee</td>
</tr>
<tr>
<td>Collect in homework</td>
<td></td>
</tr>
<tr>
<td>9.15- 10.15</td>
<td>Learning Styles (understanding oneself and others and applying that knowledge to teaching)</td>
</tr>
<tr>
<td></td>
<td>Damian Gordon</td>
</tr>
<tr>
<td>10.15- 11.15</td>
<td>Learning Diversity within the Social Spectrum</td>
</tr>
<tr>
<td></td>
<td>Dawn Duffin</td>
</tr>
<tr>
<td>11.15 – 11.30</td>
<td>Break</td>
</tr>
<tr>
<td>11.30 – 12.45</td>
<td>Teaching Tools: Cort and 6 Hats</td>
</tr>
<tr>
<td></td>
<td>Georgina Lawlor</td>
</tr>
<tr>
<td>12.45 – 13.45</td>
<td>Lunch</td>
</tr>
<tr>
<td>13.45 – 14.30</td>
<td>Lesson Planning</td>
</tr>
<tr>
<td></td>
<td>Georgina and Grainne</td>
</tr>
<tr>
<td></td>
<td>Examples</td>
</tr>
<tr>
<td></td>
<td>Template</td>
</tr>
<tr>
<td>14.30</td>
<td>Practical Session on using CoRT Tools for lesson planning</td>
</tr>
<tr>
<td>15.00</td>
<td>Break (working break)</td>
</tr>
<tr>
<td>15.45</td>
<td>Practical Session cont’d</td>
</tr>
<tr>
<td></td>
<td>Individual Feedback</td>
</tr>
<tr>
<td>16.15 – 16.30</td>
<td>Evaluation and Close</td>
</tr>
</tbody>
</table>
Appendix 3

E4 Tutor Questionnaire 1      Code 23240506

Information supplied in this questionnaire will be treated under the ethical guidelines outlined in the consent form you have signed.

1. What level of post-secondary education qualification have you achieved?
   Please tick all that apply.

   No post-secondary qualification
   Third level
   Primary degree
   Masters
   Ph. D.
   Other: Please say which

   ____________________________

2. What (if any) teaching, training or tutoring qualifications do you have?
   Please tick all that apply.

   Certificate of Education. (B Ed).
   H. Dip or PGCE
   Diploma in continuing Education
   Other: please say which

   ____________________________

   None
3. What (if any) qualifications do you have in Special Education
   Please tick one.
   
   SEN diploma
   
   CATA
   
   DATA
   
   Other: please say which
   __________________________
   
   None

4. Which of the below best describes your present job?

   Teacher
   
   Lecturer
   
   Head of Department
   
   Head of School
   
   Researcher
   
   Other: please say which
   __________________________

5. On a scale of 1 (very dissatisfied) to 10 (very satisfied) please indicate the level of satisfaction you experience in doing your current job?

   _________________________
6. What was your primary motivation in first applying for a career position in education?

7. At the interface of tutor and student what do you believe are the main ways in which you contribute to student success?

1.

2.

3.

4.

5.
### Appendix 4

**E4 Tutor Training IT - National Learning Network Assessment Service**

#### Summary of Participant Evaluation - 23rd - 24th May 2006

<table>
<thead>
<tr>
<th>Did you find the session interesting?</th>
<th>Did you gain new knowledge?</th>
<th>If you have gained new knowledge, how relevant is it to your work?</th>
<th>Factors that encouraged your contribution</th>
<th>Factors that inhibited your contribution</th>
<th>Do you think materials will be useful to you in your work?</th>
<th>Overall facilitation of training</th>
<th>Would you suggest we do anything differently?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Very relevant</td>
<td>Improve my work practices as a lecturer</td>
<td>No</td>
<td>6 hats very useful in teaching methodology and understanding student profile better</td>
<td>Satisfactory</td>
<td>Include more of staff in sessions (dept. head issue)</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>v. relevant as I am beginning my lecturing career</td>
<td>Improve lecture presentation</td>
<td>No</td>
<td>Yes hopefully</td>
<td>instructive</td>
<td>no</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Some, but much of the material has been covered previously</td>
<td>Participation in E4</td>
<td>Exam corrections</td>
<td>some will be of use</td>
<td>Ok, but I feel as if we have done this before. More specific less theory</td>
<td>timetable in too busy period.</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>PMI, critical factors 6 hats etc</td>
<td>Participation in E4</td>
<td>Exam corrections</td>
<td>some will be of use</td>
<td>Ok, but I feel as if we have done this before. More specific less theory</td>
<td>timetable in too busy period.</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>haven't tried it yet</td>
<td>Whip from HOD</td>
<td>Exam marking week should be no meetings</td>
<td>Not clear of our involvement in project</td>
<td>fine</td>
<td>less list of techniques more on actual teaching, provide comprehensive document about techniques</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Very</td>
<td>didn't know anything about E4 until asked to come along by head of school</td>
<td>no</td>
<td>Yes hopefully</td>
<td>good</td>
<td>more practical work</td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Reflect on how we teach and what can do better.</td>
<td>booked on workshop by dept. head</td>
<td>No</td>
<td>Ideas behind method used to a certain extent/things we do already but some formality on it makes on reflect and think what can be done better</td>
<td>Ok, Pace of certain aspects could be increased</td>
<td></td>
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<tr>
<td>Yes</td>
<td>Yes</td>
<td>Extremely</td>
<td>Member of E4 team</td>
<td>Yes</td>
<td>Not clear of our involvement in project</td>
<td>Excellent, more time 3/4 days</td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>Yes</td>
<td>Very</td>
<td>Lack of training in teaching and learning techniques</td>
<td>Not sure probably</td>
<td>Excellent, Include more sessions on practical examples with damian.</td>
<td></td>
<td></td>
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</tbody>
</table>

Completed Questionnaires  8

No. attended workshop
Appendix 5

CAF and OPV examples produced by two participants during and after workshop.

What are the factors involved in choosing Final Year Project? (engineering)?

- How interested am I in the subject area?
- How much prior knowledge have I of this area?
- How accessible is information in this area?
- Have there been previous publications/research in area?
- Do I get on with supervisor?
- Has supervisor published in this area?
- How well thought out is the project brief? If not well thought out this could result in changes at a later date i.e. goal posts moved...
- How much time will project take up?
- How difficult is the subject area?
- How much work is involved?
- What type of output will there be? For example will the output of the project have a more analytical/statistical bent or will I be concentrating on design i.e. on producing a prototype/working model.
- How difficult will it be to write a report/thesis on this?
- How relevant is the project to the area I envisage myself working in when I leave college?
- Is this a ‘cool’ subject area? (peer pressure)
- Can I work on project at home?
- Will I be constrained to specific labs?
- Is the equipment required for project already in college?
- Will I need to start ordering more equipment?


In Engineering on of the key skills is to be able to write technical reports that can be read (and be of value to) may different stakeholders including other Engineering discipline Engineers, managers, sales staff, the wider Engineering community, etc. As an example of using OPV we choose a classroom exercise whereby we would present a complex problem to the class that can be broken down into distinct sub-problems. The class would then be broken into small groups each of which would address a single sub-problem. Each group must then present their results to the rest of the class in the format of a report. Each report will then constitute the class notes for that particular problem/learning outcome. Each report will be graded by the lecturer and the mark achieved awarded to each group member. In writing the report the students are encouraged to identify the key stakeholders whose views they must address in the report. This is effectively PBL (Problem Based Learning) style learning. An example could be:
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Viewpoint</th>
</tr>
</thead>
</table>
| Lecturer                                | • Looking for good content, good presentation and addressing of key topics in terms of a grading structure.  
• Students would be encouraged to try and view the final report as if they were a Lecturer and imagine what the Lecturer might be looking for from the report. |
| The other members of the sub-group      | • The sub-group team are themselves are a stakeholder. They must analyse what they want from the document. They will probably want a good clear record of what they have done such that they can come back in the future and re-create whatever it was the had done. |
| The rest of the class outside the sub-group | • Looking for clear, well structured, carefully constructed description. Students are asked to imagine how they want the reports from the other groups presented and to apply this to their report. The other groups will share some domain knowledge as they are also involved in the umbrella problem so these readers will be somewhat familiar with the technology and will be looking for concrete answers and details. They will also be looking for details and asking questions as to how this sub-part fits into the overall problem and how it might impact the other sub-problems. |
| Next year’s students or students in another class | • The group will be asked to consider how the report reads from the perspective of someone who is not involved in the umbrella problem/project.  
• These people will be looking for a good conceptual description presented with a good description of the over all context. Again they will have some technical background. |
| The public                              | • Finally the group will be encouraged to consider how the report will read to other students or others in general who do not have any technical background.  
• These readers will be looking for a well constructed, well written document including good clear language and perhaps humour or other “interesting” hooks such as “relevance to them” to keep them engaged. |

Student should learn that while it is impossible to meet the needs of all stakeholders simultaneously that it is important to keep these different viewpoints in mind while producing their document. One thing that often occurs in industry is that multiple versions of the document may be required to address different groups of stakeholders.