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## Utilising Research 'Praxis' to Enhance Teaching Practice in the Domain of Apprenticeship Education: a Report on a Research Capacity Building Pilot Project Run in the School of Construction Skills, Technological University Dublin, Ireland in 2008.

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2009-02-01

# Utilising research 'Praxis' to enhance teaching practice in the domain of apprenticeship education: a report on a research capacity building pilot project run in the School of Construction Skills, Dublin Institute of Technology, Ireland in 2008.

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**A working paper by the Skills Research Initiative:**

***Accepted by the INTED conference, Valencia, Spain, March 2009.***

Title:

**Utilising Research 'Praxis' to Enhance Teaching Practice in the Domain of Apprenticeship Education:**

A report on a Research Capacity Building Pilot Project Run in the School of Construction Skills, Dublin Institute of Technology, Ireland in 2008.

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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 22,000 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. While the Institute's traditional mission<sup>1</sup> was focused on teaching and learning in the field of advanced technical vocational education and training (TVET), over the last decade the importance of developing a research informed culture has become prominent in the strategic policy development of the Institute. Within this new emerging research agenda substantial achievements have been made in specific fields such as; science, engineering, ICT, tourism & food. However the research potential of a large portion of staff who work in the apprenticeship and craft area has been underdeveloped.*

*This paper reviews some contextual information relating to the emerging research agenda as expressed in documents produced by the Institutes of Technology in Ireland and the DIT. It sign-posts significant Irish national strategies and notes some European Union initiatives that have relevance to research policy in this sector of higher education. The research then applies a 'single case study' (Yin 1996) to describe a new initiative which seeks to unlock the research potential of staff in the apprenticeship and craft area in DIT. Reporting the findings from a pilot Research Capacity Building project, which was run in DIT in 2008. This was a collaborative project between the Head of Department of Construction Skills and the Project Manager of the Skills Research Initiative, offered to Assistant Lecturers in the Wood Skills area. The paper details the emergence of this project and utilises '4<sup>th</sup> generation evaluation' methodology (Guba & Lincoln 1986) to access the effectiveness and future potential of this type of initiative. Further by adopting a participatory 'insider' research approach the 'lived experience' and 'voice' of staff who participated in the project is captured through in-depth ethnographic interviews.*

*The research demonstrates a willingness of staff working in the apprenticeship and craft area to engage in, and develop skills, competencies and knowledge relating to research 'praxis'<sup>2</sup>. However there seems to be a 'cultural gap' and mismatch between the high level national and sectoral research policy narratives, and the direct research capacity and capability needs of apprenticeship and craft staff. The research recommends that in order for this staff cohort to gain a footprint in the research domain, there is a need for localized and flexible research capacity building initiatives. This type of proactive research capacity building intervention can facilitate the unlocking, production and dissemination of the rich expert knowledge<sup>3</sup>, experience and skills inherent in the apprenticeship and craft areas.*

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<sup>1</sup> Duff et al (2000) locate the establishment of the DIT in the 1887 meeting of the Artisans and Craft Guilds meeting held in Dublin, since then vocational education and training has been a central mission of the colleges that eventually merged into DIT under the 1992 DIT Act.

<sup>2</sup> The use of 'praxis' here relates to the notion of forging theory and practice together in order to develop a new type of action.

<sup>3</sup> Expert knowledge here can be associated with Gibbon's et al 'mode 2' knowledge production, in this approach applied research, experience and know how can contribute to the formation of new forms of knowledge.

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## Introduction

Within European<sup>4</sup> and Irish<sup>5</sup> national policy there is a clear drive towards the development of a knowledge economy/society, investment in ‘human capital’<sup>6</sup> through a Lifelong Learning paradigm is emphasised as a key strategic factor towards meeting this end. Further the policy narrative identifies research development as crucial to the advancement of knowledge which can have a real impact in the areas of innovation, commercialisation and entrepreneurial activities> All contributing to economic development. Institutes of Higher Education (IHE) are noted as the principal primers for new knowledge production, playing a central role in the development of human capital within student populations. The expert knowledge and skills inherent in disciplines or ‘academic tribes, (Becher, Trowler2001), in IHE provides the pedagogical dynamic for knowledge and skills transfer, production and recognition of human capital accumulation. Within each discipline there is a unique ‘knowledge stock’ embedded in the traditions, culture and norms, which inform the emergence of ‘praxis’. Some disciplines are emerged in theoretical domains such as mathematics, physics, nanoscience; other disciplines engage with culture literature, fine art, drama and some focus specifically skills development such as apprenticeships which is the focus of this paper.

This short paper will provide some contextual information on the emerging policy agenda relating to research capacity building emanating from Europe, Irish national policy, the Institutes of Technology Ireland (IoTI) and the DIT. Utilising Yin (1998) ‘single case study’ the paper will describe a small scale project developed by the Skills Research Initiative which sought to address an identified ‘research gap’ located in an apprenticeship area in DIT, by providing a short Research Capacity Building course run during September and October 2008. This course sought to demystify the research process by stimulating thinking about research in a discursive space. The course was delivered in the School of Construction Skills; the participants were Assistant Lecturers from the Wood Trades area. The main objectives of the course were;

- . To try to create a change in staff’s perceptions of research.
- . To improve the research capability of staff in trade areas.
- . To give insights on the efficiency of the research processes.
- . To improve the knowledge of existing research tools, materials and techniques which have relevance within the Wood Skills trade areas.
- . To maximise the benefits to be gained through the effective use of evidence, information and networking.

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<sup>4</sup> The European Commission’s Lisbon Strategy (2000) seeks to make Europe the most competitive knowledge economy by 2010, the strategy calls for member states to invest 5.6% of GDP into education and training.

<sup>5</sup> The Irish Government National Develop Plan 2007-2013, Chapter 9, Human Capital commits 25 billion euro for education and training during the lifecycle of the plan.

<sup>6</sup> The OECD (1998, p8) defines human capital as, “the knowledge, skills, competences and other attributes embodied in individuals that are relevant to economic activity”.

The paper then details the ‘research strategy’ (Blaikie 2007) utilised to explore perceptions, attitudes and understandings that participants of the course had about research before and after completing the course. A ‘non-numeric’ (Loxley 2008) research approach is applied during the research this was informed by ‘critical ethnography’ (Thomas1993) in an effort to develop meanings from the field of practice in the learning environment. The preliminary findings from the first round of semi structured interviews with participants who completed the first course are presented. The findings are clustered using components of Guba and Lincoln’s (1989) 4<sup>th</sup> Generation Evaluation, claims, concerns and issues’. The new researchers provide insights by using ‘reflective practice’ (Evans 2002) from the perspective of an ‘insider’ (Loxley, Seary 2008) working in a IHE. The paper concludes by identifying possible scenarios for what happens next.

## Context

The movement towards the knowledge economy/society is reliant on human capital accumulation, strategic investment in people’s knowledge, skills and competences is pivotal to creating success factors to achieve the desired outcomes. The facilitation of high level advanced ‘knowledge production’ (Gibbons et al 2005), is a key component of European and Irish national policy strategies. Within this context ‘tertiary’<sup>7</sup> education and training is identified as a central producer of human capital accumulation<sup>8</sup>. Research is identified as a crucial area for development in order to stimulate innovation, knowledge transfer and the commercialisation of knowledge products and services. At a macro European level The European Commission in Lisbon (2000) adopted a strategy for the establishment of the European Research Area (ERA) the intent is to develop a world class research area with excellent infrastructure, an appropriate supply of researchers, effective knowledge sharing and coordinated research projects. The Green Paper on the ERA (2007) notes that over 35% of Europe’s research and development emerges from both the higher education and public sector, and calls for increased investment to stimulate further growth in research activity in this sector, the benchmark set for member states to invest in R&D is 3% of GDP. The EU Commission (2009) report notes that ‘research is a key competitive asset in a globalised world’, member states have increased investment in research and development (average GDP 1.84%) however private sector investment in R&D has decreased since 2005. The report also states that while the ‘pool of researchers’ in Europe has double since 2000, researchers active in the labour force is lower than competitors (Japan, USA). Two out of the eight targets set by the Lisbon Strategy (2000) to achieve by 2010 will assist the process of increasing the ‘pool of researchers’ these are (1) Increase the number of Mathematics, Science and Technology Graduates (MST) to 748,000, (2) Increase Lifelong Learning participation rates to 12.5%. The Irish

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<sup>7</sup> The usage of ‘tertiary’ education is developed from the OECD (1998, p12), which refers to tertiary as a level or stage beyond second level up to university and non-university. The usage in this paper refers to the Irish context and the ‘Institutions of Higher Education’ (IHE) which are listed in the 1971 Higher Education Act (Amended in 2006), the paper specifically focuses on the Institutes of Technology, DIT and the universities

<sup>8</sup> Some key European and national policy initiatives that make this claims are; Bologna Declaration 1999, Lisbon Strategy 2000, Irish National development Plan 2007-2013.

Government has also development policy initiatives aimed at enhancing research & development activities, one initiative that correlates with the EU policy agenda is the Strategy for Science Technology and Innovation (2006-2013), this strategy seeks to build research capacity in Ireland and develop a world class research infrastructure by 2013. A principal target set in this document for IHE's is to double the number of PhD output by 2013<sup>9</sup>. The IoT's<sup>10</sup> and the DIT (2008) responded to the research capacity building challenges by producing a 'Framework for the Development of Research', strategic document. The Framework document notes that the IoT's and DIT cater for 44% of the registered undergraduates in the state, there are approximately 1100 postgraduate research students and 1000 members of staff engaged in research. The targets set for 2013 are to double the number of staff engaged in research and double the PhD output. The Framework document makes recommendations for Capacity Building measures for staff in the IoT sector such as; develop new recruitment and employment policies, widening R&D participation by existing staff, create multidisciplinary teams and effective research structures. DIT's origin goes back to 1887, it was legally constituted under the DIT Act 1992 and was sanctioned full degree awarding powers in 1998. It is one of the largest IHE in the state. DIT comprises of 6 Faculties, 26 Schools, serviced by 2000 staff, making provision for 85 full time programmes, 200 part time programmes. As a multi level higher education provider it caters for; 3,000 apprentices, 11,000 full time undergraduates, 1236 full time postgraduates and 7,200 part time students. The DIT strategy for Research and Scholarship draws on two documents; The DIT Strategic Plan- A Vision for Development 2001-2015 and DIT Policy on Research & Scholarly Activity, 12<sup>th</sup> January 2000. In this strategy DIT decided to define 'research and scholarship' in quite broad terms and therefore with this in mind the DIT has two primary goals with regard to research and scholarship;

- *To advance research and scholarship within DIT, including technology and knowledge transfer, whilst developing the expertise of its staff and students and positively impacting upon and improving the Institute's educational programmes.*
  - *To support Ireland's requirement for a knowledge-based society by engaging in research and scholarship, including knowledge transfer and thereby making a direct contribution to the needs of Irish industry and the economy while enhancing DIT's position as a leading higher educational institution.*
- (DIT Strategy for Research and Scholarship 2001-2015, p3)

To help achieve these goals the DIT has and will be running a number of initiatives to help promote a culture of research and scholarship within the DIT. The DIT has recognised the need to support and value academic staff who wish to engage in research by providing appropriate training and facilities. Some other proposals are;

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<sup>9</sup> The SSTI (2006, p 30) sets out the present and projected output of PhDs in Science Engineering and Technology ranges from 543 (2005) to 997 (2013), in the Humanities and Social Sciences, 187 (2005) to 315 (2013) also during this period it is expected that 1815 Postdocs will have received four year training.

<sup>10</sup> IoT's come under different legislation from the DIT, mainly the RTC Act 1992 and the IoT Act 2006 there are 13 IoTs listed in schedule 2 of the 2006 Act. DIT operates under a separate legislative framework, its function and objects are similar to that of the seven universities in Ireland as detailed in the University Act 1997.



- to emphasise research and scholarship in HR policies and practices including recruitment,
- dedicate more time to these activities,
- achieve a target of 30% of academic staff participation in research and scholarship,
- enterprise activities to be increased by 10% per annum.

Schemes to support and recognise research and scholarship achievements include; time release, career and promotional opportunities, staff development, support funding, research training, mentoring, rewards for academic excellence. The support mechanisms are categorised into four major groups; infrastructure, recognition and reward, improved management systems and training. To enable the growth of a research and scholarship culture in DIT it is proposed to set up multidisciplinary groups, research centres, and a small number of ‘research institutes’. The DIT Research and Scholarship Committee has the remit to oversee the implementation of this strategy. While DIT has made substantial progress in enhancing research capacity and capabilities since 1992. And in many cases it is the national leader in specialised areas. However there has been limited research activity in the apprenticeship area, the Skills Research Initiative sought to address this emerging gap by implementing an intervention strategy through the Research Capacity Building course.

## Research Capacity Building course

The Skills Research Initiative was established in 2007 by a high level group which included the President and several Directors in the DIT. The primary concern was to stimulate research activities in the apprenticeship areas in DIT. The apprenticeship area was perceived as an untapped resource in terms of research. The apprenticeship area in DIT has an international reputation for excellence, academic staff in the apprenticeship area are regularly nominated by international peers as Chief and Deputy World Experts for the World Skills Competition. Apprentices educated and trained in DIT have achieved numerous, Gold, Silver and Bronze medals at the World Skills Competition. Staff also sit on many professional and industry related panels and expert groups. While there is practical evidence of the high level of expertise, knowledge and skills staff in the apprenticeship area have, this has not been realised in the research domain. The Skills Research Initiative was directed to explore why this was the case and to endeavour to promote and stimulate research activity in the apprenticeship area. In 2008 the Institute was awarded 11 million euro under the Higher Education Authority (HEA), Strategic Innovation Fund<sup>11</sup> (SIF II). The Skills Research Initiative received partial funding from the Institute’s SIF project, to explore ways to enhance research in the apprenticeship area. There was a difficulty here, as research *per se* is not an integral component in apprenticeship education and training, and it is not part of the culture within this discipline area. Although this is not to say that research does not occur, rather research in the form of problem solving, the development of new, ways of working, tools, techniques

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<sup>11</sup> The HEA SIF scheme is a competitive funding stream for the IHE sector in Ireland, aimed at reform, modernisation and new innovative initiatives, which demonstrated strategic planning and collaboration within the IHE sector.

and skills are common practice in the apprenticeship area. However a systematic research process is not utilised to access, evaluate, record and disseminate solutions to problems. The pedagogical process is the main interface for transfer of solutions, a form of learning by doing. The expert passes on knowledge to the novice through social interaction and engagement with materials, technologies in a process of theory and practice in action. Staff in the apprenticeship area demonstrate a unique knowledge expertise, grounded in what could be termed *technical scholarship*<sup>12</sup> a mastery and cognitive understanding of materials, technologies, technical data, and their application to real work problems. This technical scholarship is applied in nature, informed by experience, drawn from the rich depth of ‘stock knowledge’ which is facilitated by the reciprocal culture of knowledge sharing or what’s sometimes termed ‘swapping stories’. Also within the apprenticeship areas there is a strong sense of identity located in the traditions and heritage of the specific trade areas. For the research capacity building course to be effective and stimulate research activity in the apprenticeship area, an understanding of the positionality of apprenticeship within IHE is necessary. The term research from an apprenticeship perspective has connotations of elitism and high level theoretical work. Hillier, Jameson (2003, p6) make reference to the research divide between practice orientated research and theoretical focused research, particularly in the context of further education and higher education. Dealing with this perceived divide between research for practice and research for theory was central to the development of the research capacity building course.

‘Praxis’ a form of theory and practice in action became the main approach utilised in the development of the course. The course sought to present relevant theory that had usability for practice within the learning environment. The intent was to create a discursive ‘learning space’ (Savin-Baden 2008) to stimulate thinking and begin a dialogue on the research process and its application. The course was run over nine lunchtime sessions in a classroom in the Department of Construction Skills. Participation was on a voluntary basis. The first six sessions dealt with the research process theory and practice, including discussions on research, questions, types of data, gathering data, analysis approaches, ethics and research as part of scholarship. The research process was explored in terms of a toolkit, the appropriate usage of different research tools in different settings. In order to assist this process and demystify the perception of research as an elitist activity guest lecturers from the School of Education Trinity College Dublin were invited to attend. Dr Loxley presented the case of the research process in action and Dr Seary delved into philosophical assumptions and research from the inside. The final session was presented by Dr Murphy from the Academic Registrars Office DIT, who explored research writing from the perspective of the practitioner (see programme schedule in appendix 1). The delivery of the course was facilitated by co-operation from both the Head of the Department of Constructions Skills and the Assistant Head of Department. The first course proved successful, interest was expressed for a similar course to be run for those working with apprentices in the engineering area. Some outcomes from the first course include a collaborative ethnographic evaluation project of the first course and other courses which will be run over the next academic term. Other participants agreed to get

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<sup>12</sup> Technical scholarship could also be associated with some of the characteristics of what Gibbons et al (2005) term as Mode 2 knowledge production.

involved in a European Commission funded Leonardo Di Vinci project entitled SENSAS, a collaborative project with partners from five EU member states, this project explores Apprenticeship and the Entrepreneurial Spirit. The Skills Research Initiative remains in contact with participants offering continuous support and encouragement.

## Research strategy

The Research Capacity Building course was designed to be delivered to a number of different groups working in the apprenticeship areas, over a period of twelve months in line with the SIF II funding period. In order to evaluate the effectiveness of the programme and gain an in-depth understanding of the perceptions that staff in the apprentice area hold in relation to research a mixed methodology research process was designed. This consisted of applying components of Guba and Lincoln (1989) Fourth Generation Evaluation and Thomas (1993) Critical Ethnography, the intent is to give ‘voice’ to the ‘claims, concerns and issues’ of the participants who have completed the course. The method consisted of carrying out in-depth semi-structured interviews with participants at the end of each course and then carrying out two cycles of follow up interviews in six month periods. The approach utilises ‘insider’ research, two members of the research team were participants in the first research capacity building course. The intent here is to gain access to the sample groups who can identify with the new researchers. Building on the localised knowledge and expertise that the new researchers have of the culture, norms and values of the staff in the apprenticeship area. This approach is located in the constructivist paradigm (Blaikie 2007, Crotty 2005, Guba and Lincoln 1989) where social actors seek to ‘make sense’ and develop ‘understandings’ of the real world around them by engaging in social action. By adopting this type of approach the intentions are both, to develop practical research knowledge, skills and competence with the new researchers and gather valuable data from the sample groups to gain insights into their perceptions, attitudes, values and use of research. This type of approach can also be associated with the ‘professionalisation’ process where staff in the apprenticeship area engages in higher level and systematic inquiry into their own field of practice and knowledge claims, in order to enhance understanding and develop new ways of thinking and doing. The research framework utilised to inform the preliminary analysis of the findings is presented in Table 1.

<b>Constructivist paradigm</b>	
(Making sense, defamiliarisation, interpreting: Attitudes, perceptions, understanding of research).	
Four thematic clusters (see page 10)	
<b>Claims</b>	<i>Are favourable assertions made by stakeholders, this is a positive position where agreement can be reached and the negotiated process of inquiry can be finalised</i>
<b>Concerns</b>	<i>Are unfavourable assertions made by stakeholders, this is a negative situation where negotiations are contested and there is strong disagreement expressed</i>
<b>Issues</b>	<i>Are disagreements between stakeholders, in this position disagreement is acknowledged, and there is reasonable room for manoeuvring</i>

**Research Capacity Building course 2008:**  
*Table 1, Framework for the preliminary findings.*

## Preliminary findings

These preliminary findings are based on seven in-depth semi-structured ‘research interviews’ (Gillham 2005) carried out with the participants of the first research capacity building course. The profile of the sample group consisted of; seven new career academics (three to eight years in the job), they are all on the entry grade ‘Assistant Lecturers<sup>13</sup>’, at various points of the 8 levels in this grade. They are all male, age range from 28 to 39; they all hold a National Craft Certificate in their trade area, each having a minimum of four years experience in industry post trade apprentice. Two of the participants taught at Secondary School level, all of the participations have engaged in further studies, from professional awards to diplomas and degrees. They work in the DIT, Department of Construction Skills teaching the Standard Based Apprenticeship<sup>14</sup> programmes in the general Wood Skills Areas namely, Carpentry and Joinery, Wood Machinists, and Cabinet Making. One of the participants was a National winner in the Irish National Skills Competition. The interviews were recorded, carried out by the Skills Research Initiative, full anonymity and confidentiality were catered for in the code of ethics utilised for the research (see appendix 2). The Skills Research initiative had full access to the audio recordings, the full text transcripts cleaned of any personal identities will be made available to the whole research team (transcripts were not completed at the time of submitting this paper). The interview schedule consisted of 11 questions grouped into four thematic areas which were;

- (a) Reflections and evaluation of the course (two questions, three sub questions).
- (b) Personal experience, opinion and attitude to research (three questions).
- (c) Professional practice and career (three questions).
- (d) Research culture, area, faculty, Institute (three questions).

This section details the preliminary findings based on audio analysis only and for the sole purpose of meeting the deadline for this conference. The findings are therefore tentative; they are clustered under the four thematic areas stated above. This is not an analysis of the full content of all the questions asked during the interviews, rather it provides provisional insights frame around the thematic areas. Within each thematic area, items are clustered in terms of ‘claims, concerns and issues’. The full analysis will utilise NVivo 8 qualitative analysis software package (this will be finished in March 2009).

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<sup>13</sup> Assistant Lecturer was the new entry grade for academics recruited into the IoT sector and DIT; this was agreed under the Programme for Competitiveness and Work (PCW) 1998. There are eight incremental levels in the AL grade, when AL’s reach the top of the AL grade they must apply for progression to move onto the Lecturing Grade which is the main academic career grade.

<sup>14</sup> The National Standard Based Apprentice system was phased into all designated trade areas during 1994-1996. It consists of seven phases, comprising of both on the job training (Phases 1,3,5,7), FAS training (Phase 2) . The education, theory, practice and national assessment which is carried out in the IoT’s and DIT for ten week blocks (Phase 4 and 6).

### ***Reflections and evaluation of the course.***

<b>Claims</b>	<b>Concerns</b>	<b>Issues</b>
<ul style="list-style-type: none"> <li>· All participants gave positive feedback about the course; they perceived it as a useful process for introducing the basic tools and concepts of the research process.</li> <li>· Participants appreciated the guest lecturers giving up their time to come to the course; they particularly enjoyed the dialogue that occurred during the guest lecturer's sessions.</li> <li>· The content of the course was considered to be user friendly and very relevant.</li> <li>· Participants considered the course gave a different perspective on how research could be used in their work areas, offering systematic and analytical tools that could assist them in the development of teaching notes and information assessment.</li> </ul>	<ul style="list-style-type: none"> <li>· Some participants wondered why this type of course was not run before.</li> <li>· Some expressed the opinion that the Institute did not really view the apprenticeship area as important particularly in a research sense.</li> <li>· Some participants wanted to know what happens next will there be ongoing support or is this just a once off show of interest.</li> <li>· Participants stated they needed time to develop research skills and competences.</li> <li>· Some participants wonder what type of support the faculty and school were putting into the course. Some questioned how could the course be embedded into the activities of the school and faculty.</li> </ul>	<ul style="list-style-type: none"> <li>· Some considered the course delivery was too short, one hour during lunch left very little time for follow up discussion.</li> <li>· Some participants felt under time pressure having just come from a class and then going back to take another class directly after the course.</li> <li>· Participants proposed that there was a need for follow on sessions on specific thematic areas, with longer chunks of time.</li> <li>· Some participants wanted to move onto actually doing research projects with mentoring and support services in place to facilitate this process.</li> <li>· Some participants wondered whether the course could receive some kind of award recognition like a CPD.</li> </ul>

*Table 2, Preliminary claims, concerns and issue relating to the course*

### ***Personal experience, opinion and attitude to research.***

<b>Claims</b>	<b>Concerns</b>	<b>Issues</b>
<ul style="list-style-type: none"> <li>· While participants viewed research as necessary and a good activity, they felt that research was really the</li> </ul>	<ul style="list-style-type: none"> <li>· Some participants questioned whether research was appropriate for their work; time is in short</li> </ul>	<ul style="list-style-type: none"> <li>· Participants expressed a willingness to engage in research but they need appropriate support services, some</li> </ul>

<p>domain for other academics. Some participants noted how they developed practical solutions to real problems but they did not consider this to be research. Some participants noted that after the course they reconsidered their perception of research, suggesting that it is an activity they could now consider using.</p> <ul style="list-style-type: none"> <li>Some participants noted their only previous experience of research was undergraduate work; however this type of course was more applied and relevant to their area of work.</li> </ul>	<p>supply, doing notes for new courses, testing new techniques and equipment, extra administration workload.</p> <ul style="list-style-type: none"> <li>Some questioned the attitude that research meant academic writing and publishing, where as research could also be applied problem solving developing new products and techniques.</li> <li>Some participants noted an academic or intellectual divide, this was based on a perceived valuing of professional programmes over trade courses.</li> </ul>	<p>workload relief.</p> <ul style="list-style-type: none"> <li>Participants were uneasy with the idea of doing research on their own; they would prefer to work as part of a team or small group.</li> <li>Some proposed that small teams should be formed and linked into mentors to assist the teams in actually carrying out research; a form of learning by doing.</li> <li>Some participants asked whether a menu of research projects could be developed and staff could choose which projects to participate in.</li> </ul>
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*Table 3, Preliminary claims, concerns and issues in relation to perceptions and attitudes.*

### ***Professional practice and career.***

<b>Claims</b>	<b>Concerns</b>	<b>Issue</b>
<ul style="list-style-type: none"> <li>Participants considered that they were using an applied form of research in their teaching practice, mainly through engagement with industry, assessing new products and techniques and then updating course notes and material.</li> <li>The research process was perceived as a useful method which could assist this method of updating</li> </ul>	<ul style="list-style-type: none"> <li>There were some concerns raised about the research divide in terms of elite academic research and their perceptions of applied research.</li> <li>Participants felt that their understanding of research was not valued, and the use of Research activities as an item to judge whether someone got progression from Assistant Lecturer to Lecturer disadvantage</li> </ul>	<ul style="list-style-type: none"> <li>Participants stated that teaching was their main focus; most of their time was targeted at developing processes and information that assisted students understanding, learning and skills development.</li> <li>Some participants suggested that this emphasis on teaching was not fully appreciated or valued, and that the research agenda was been given a higher status.</li> </ul>

<ul style="list-style-type: none"> <li>notes.</li> <li>Some participants suggested that while research was not part of their traditional practice they were willing to assess its application and usability in their own work practices.</li> </ul>	<ul style="list-style-type: none"> <li>staff in the trade area.</li> <li>The applied nature of research in the apprenticeship area (problem solving) was not giving the same status and other forms of research.</li> </ul>	<ul style="list-style-type: none"> <li>Some participants felt teaching was the primary focus and that they were being forced into developing research activities.</li> </ul>
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*Table 4, Preliminary claims, concerns and issues relating to practice and career.*

### ***Research culture, area, faculty, Institute.***

<b>Claims</b>	<b>Concerns</b>	<b>Issues</b>
<ul style="list-style-type: none"> <li>Participants noted the emergent research status of DIT, the amount of funding generated and the number of specialised and high level research centres.</li> <li>They also noted that faculties had developed research committees and strategies that were leading to excellent research work.</li> <li>Participants agreed that the Institute was actively establishing a research culture in some prominent areas.</li> <li>Participants were generally supportive of the national research agenda proposed at national policy level.</li> </ul>	<ul style="list-style-type: none"> <li>Participants were concerned that there seemed to be a growing divide between the high level research direction of the Institute and their own experiences in the trade area.</li> <li>They did not perceive that there was a research culture in the trade area, and they were unaware of any strategy to develop or support a research culture forming in the trade area.</li> <li>Participants noted that research activities were limited in the area, there were no research peers that they could approach or work with.</li> </ul>	<ul style="list-style-type: none"> <li>Participants suggested that for a research culture to develop in the trade areas there needs to be a more proactive support processes developed.</li> <li>Participants considered the establishment of research teams could assist this process.</li> <li>Participants also cautioned that the definition of research needs to be reassessed and should include a more applied approach to research which would include their continuous engagement with industry.</li> </ul>

*Table 5, Preliminary claims, concerns and issues relating to research culture.*

## **Reflections**

The research team that produced this paper consisted of the Skills Research Initiative and two participants from the first Research Capacity Building course. These two new

research active staff members provide some reflections on their experience of engaging actively in a research project, this is done to provide an additional insights into the praxis of research on from experience (the identity of the new research active staff members reflections is confidential and the labels X & Y are used below instead of their names):

### **Reflections from new research active staff member X,**

*‘When I was asked to take part in this paper I felt daunted by the prospect because I had never undertaken anything like this before. The extent of my research experience was of a practical nature in preparation for my own lectures and would not be viewed by other people. The fact that I was part of a team gave me some confidence and once the process had started I found myself enjoying it. I felt that I was increasing my own knowledge base, not only in the polices towards research at DIT, National and European level but also in how the research process works and why it is so important. I gained an insight and respect for what it would be like to be a full time researcher and the amount of work that goes into producing a paper. I have to say it was not all a positive experience. The mass of information I had to deal with was definitely a problem. Trying to identify and find source documents for referencing in particular. How to deal with this is something I hope will come with more experience in the area. Due to the time constraints of the deadline I found myself under a lot of pressure both at work and in my family life. Do I think I would be able to undertake a paper on my own? Probably not at this stage. I wouldn’t have confidence in my academic writing and feel I would need a supervisor / mentor not only to proof read but to be able to bounce ideas off and seek advice. I did notice during the process that the apprenticeship area seems to be under represented compared to other areas of education with regard to the body of knowledge out there. I would look forward to contributing to the body of knowledge in this area in the future’.*

### **Reflections from new research active staff member Y,**

*‘One of the main purposes of research is that it is supposed to generate knowledge. However perceptions of knowledge vary greatly. Perceptions of research also vary greatly and by participating in the research building capacity workshops my understanding of research changed. I got a better understanding of what research is about. The fact that there are various types of research and various schools of thought within research was and still is lost to me, but at the very heart of it all, research is the quest for knowledge. Starting out I found it very daunting as I was getting engaged in a process that I know nothing about and was yet supposed to give my opinion as an expert in the field. I was constantly second guessing myself, to me this was all academic, a breed of people that I avoid at all costs, who speak a different language and have an entirely different point of view to me. My research colleague from the Skills Research Initiative kept reassuring me that this was exactly why I was being involved in the research process, due to my points of view and background, and that was what made this research so unique.*



*Half the time I think that the research project is actually on me – “if we can get him to do research then anyone can do it”, and that this paper is only a forerunner to next years when the outcome of the experiment on me will be revealed. While going through the process I realised that I do have opinions on most of it, and most of the time the opinion is that I’m not really bothered. All these papers and publications are literally just somebody’s opinion about something else or worse still, somebody’s opinion about somebody’s opinion. This leads to another key thing I learned. You must have an interest in whatever it is you are researching or the research becomes pointless as there is no drive for knowledge involved. So basically, the research has to be relevant to the researcher; if you want to know about something and there is information available on it you will probably read it, but if you have no interest in it the whole thing becomes irrelevant. The outcome of it all is that I will still read through trade journals for articles that I find interesting and I will still try and pass on this new knowledge to my students as part of a lesson in class, but I don’t see myself getting engrossed in the publishing of papers for a widespread dissemination of my opinion as the time commitment required for this is too great. In summary, what I have learned is that research is the quest for knowledge, that anyone has the ability to do research and that research will only be beneficial if you have an interest in it’.*

## **Final comment**

This paper provides some contextual information on the emerging EU, National, sectoral and DIT research capacity strategies. It then provided descriptions of a Research Capacity Building course developed as an interventionist tool to enhance research capacity and capabilities in an apprenticeship area of DIT. The preliminary findings from the ongoing ethnographic and evaluate research project were described, due to submission deadlines the full depth and richness of the ethnographic research interviews was not presented in this paper. The full report from this research project should be available next September; this will incorporate the findings from the next two research capacity building courses. From exploring the preliminary findings of this small scale research project there seems to be several themes emerging such as; a perception of tension between academic research and applied practical research, questions of identity as workers in tertiary sector, parity of esteem and sense of been undervalued, and the relationship between teaching practice and research. The process of delivering a research capacity building course and the follow up research project seems to have enhanced the confidence of both the new research active staff and the participants in terms of their thinking about research. Whether this is further realised as a form of empowerment and increased research activity is yet to be determined. The Skills Research Initiative is committed to providing continuous support; encouragement and engaging in new applied research projects with colleagues working in the apprenticeship areas.

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## Appendices

### *Appendix 1, Programme schedule.*

<b>Skills Research Initiative, Research Capacity Building Course            Programme schedule 2/10-27/11/2008.            Location Linenhall, Room 209, Time 1-2 o'clock.</b>		
Date	Person	Time
2/10/08	Aidan Kenny, SRI	Introduction to the workshop series, process and procedures. Preparation
9/10/08	Aidan Kenny, SRI	Introduction to the research process, Cycle-1, 'Thinking about research'.
16/10/08	Aidan Kenny, SRI	Introduction to the research process, Cycle-2, 'Research strategies'.
23/10/08	Aidan Kenny, SRI	Introduction to the research process, Cycle-3, 'Carrying out research'.
30/10/08	Aidan Kenny, SRI	Introduction to the research process, Cycle-4, 'Dealing with data'.
6/10/08	Aidan Kenny, SRI	Introduction to research ethics, guidelines and procedures
13/11/08	Dr Andrew Loxley, TCD	The research process in action, descriptions from the field.
20/11/08	Dr Aidan Seery, TCD	Philosophical considerations and dilemmas in research today.
27/11/08	Dr Anne Murphy, DIT	Introduction to the DIT online journal Level 3, submission criteria and guidelines.

## Appendix 2, Code of ethics for interviews.

Research Interview Request and Consent Form		
General Information	Researchers	Aidan Kenny, Aidan Ryan, Niall Delaney, Tel. 402 3757, Mob. 086 1048449, Email, <a href="mailto:aidan.kenny@dit.ie">aidan.kenny@dit.ie</a>
	Project	Skills Research Initiative: Research Capacity Building
	College	DIT
	Purpose	Paper for the INTED conference
	Research title	UTILISING RESEARCH 'PRAXIS' TO ENHANCE TEACHING PRACTICE IN APPRENTICESHIP EDUCATION: A RESEARCH CAPACITY BUILDING PILOT PROJECT RUN IN THE SCHOOL OF CONSTRUCTION SKILLS
Please read the following statement and indicate your agreement by signing below:		

I agree to participate in a recorded interviewed session with the above named research student under the following terms and conditions:

- Consent; the participant may withdraw consent to be interviewed or the usage of recorded material at any stage of the research process.
- Confidentiality; the original recordings will be made available upon request to my supervisor named above and the members of the examination panel.
- Anonymity; the authenticity of research is higher were the identity of the participant is detailed, however it is acceptable for participants to request for their identity to hidden, the researcher may use their own academic judgement to hide a participants identity even if the participant agreed to be named.
- Review; the participant has the right to review the transcription from the interview and insert clarifications or corrections were necessary.
- Purpose; the recorded material will be utilised by the researchers for scholarship and research relating to the production of a paper for the INTED.
- Analysis; the recorded material will be transcribed, coded, categorised and interpreted in accordance with scholarly convents.
- Publication; extracts or the full content of the analysed material may appear in the dissertation, conference presentations, papers submitted to academic journals.
- Availability; extracts or the full content of the analysed material will be accessible from, the INTED, SSRN and DIT Arrow.
- Security; all recorded material will be stored in a secure place in a locked cabinet, the storage of electronic data will be password protected.
- Storage; recordings will be stored for three years post qualification, there upon they will either be deleted or permission for an extension will be sought from the participant.
- Not-for-profit; this is a non-commercial piece of academic research; the researcher will disseminate the findings on a cost neutral basis.

<b>Participants signature</b>		<b>Date / /2009</b>
<b>First name</b>	<b>Address</b>	<b>Tel.</b>
<b>Surname</b>		<b>Email</b>