

Enterprise: the Academic's Challenge

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DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used, the extent and nature of the correction is clearly marked in a footnote(s).

Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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Abstract

The role of academic staff in Higher Education is complex and ever changing. The notion of the 'entrepreneurial university', a move towards diversifying a university's funding base has been instrumental in the transformation of this role. Role expectations are often confused by the interchangeable use of the terms 'enterprise', 'third mission' and 'innovation and engagement'. This can be compounded by a limited understanding of social enterprise and resistance to commercialising knowledge. This study is concerned with a critical exploration of engagement with enterprise in the Cardiff School of Education and was undertaken between 2009-2013 at Cardiff Metropolitan University.

A case study approach was adopted using quantitative and qualitative methods for data collection. All sixty-three academic staff were invited to complete an on-line questionnaire that was provided in English and Welsh and forty-five responses were collated. Twenty-four staff were interviewed gathering viewpoints of academic staff, support staff, managers and senior managers.

Results showed that the longer academic staff were employed at the university, the more likely they were to engage with enterprise. That is, there was an increasing awareness of the contribution of the skills of the entrepreneur to the University's strategic imperatives. Staff had a narrow understanding of enterprise, primarily focussing on income generation. Project managers, whilst supported in their role, often lacked an awareness of appropriate skills. Effective engagement required a marrying of enterprise projects to academic expertise and staff sought incentivisation.

Themes that emerged from the data analysis led to the creation of an original model for enterprise, S⁴E. This has been based on four essential components which are: Strategic significance for Enterprise, Support for Enterprise, Synergy for Enterprise and Success for Enterprise. The recommendations have potential to inform practice in other academic schools and schools of education regionally, nationally and internationally.

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Secondly, I need to thank my family and friends. They have helped push the 'boulder of research' up my Mount Everest in many different ways.

Finally, and most importantly, I need to thank my current supervisory team, Emeritus Professor Janet Laugharne and Professor Scott Fleming; they have been phenomenal throughout. They have encouraged me and challenged me to improve my research skills; they have laughed with me at my mistakes and given me reason to be content with my achievements. If ever I am given the opportunity to supervise doctoral study, I would want to model their practice.

For me 😊

Abbreviations and Acronyms

APR	Annual Programme Report
BERA	British Education Research Association
Cardiff Met.	Cardiff Metropolitan University
CSE	Cardiff School of Education
DBIS	Department for Business Innovation and Skills
EILT	Enterprise Informed Learning and Teaching
ELTC	English Language Training Centre
HE	Higher Education
HEFCW	Higher Education Funding Council for Wales
L	Lecturer
MEP	(Welsh Government's) Masters in Educational Practice
OLC	Outdoor Learning Centre
PDP	Personal Development Portfolio
QAA	The Quality Assurance Agency for Higher Education
P4C	Philosophy for Children
PDR	The National Centre for Product Design and Development Research
PGCE	Post-Graduate Certificate in Education
PISA	Programme for International Student Assessment
PL	Principal Lecturer
REIF	Research and Enterprise Investment Fund
RES	Research and Enterprise Services
REST	Research and Enterprise Support Team
RILT	Research Informed Learning and Teaching
RQ	Research Question

S1	Strategic Significance for Enterprise
S2	Support for Enterprise
S3	Synergy for Enterprise
S4	Success for Enterprise
S ⁴ E	Strategic Significance for Enterprise, Synergy for Enterprise, Support for Enterprise, and Success for Enterprise
SIP	Strategic Insight Placement
SL	Senior Lecturer
SME	Small and Medium Enterprise
TDF	Training and Development Fund
UWIC	University of Wales Institute, Cardiff
WAG	Welsh Assembly Government
WG	Welsh Government

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Chapter One: Introduction

1.1 Contextual Background

The focus of this research is enterprise and the move to encourage academic staff to be entrepreneurial in their role, using the skills and attributes of the entrepreneur. It is based on the enterprise practices of staff in the Cardiff School of Education, one of the academic schools of Cardiff Metropolitan University. The research covers a four year period, 2009-2013, during the time when I was Director of Enterprise in that school. (See Appendix 1: Role Description-Director of Enterprise, page 278).

The identity of the organisation and academic school is identifiable from information that is publicly available (see Section One: Introduction of the Professional Development Portfolio (PDP), page 385 and PDP Appendix One: Internet Search, page 420) and therefore has not been anonymised. However, the identities of individual members of staff have been protected throughout. The success of strategies used to maintain participant anonymity was tested prior to final reporting and found to be robust; this is discussed in the Methodology chapter.

Cardiff Metropolitan University is a post-1992 university. It is the fourth largest university in Wales with 17,000 students across five academic schools (Cardiff Metropolitan University, 2014). The academic schools are supported by administration departments/units such as 'Communications, Marketing and Recruitment', 'Student Services', 'Learning and Teaching Development Unit', 'Academic Registry', 'Research and Enterprise Services', 'Finance', 'Human Resources' and the 'Welsh Language Unit'. It also

includes a world renowned design and innovation consultancy centre, PDR (The National Centre for Product Design and Development Research, 2011). As an educational institution, it has been an integral feature of the city of Cardiff since 1865 (Cardiff Metropolitan University, n.d. a). In 1976, merger of four separate colleges created the South Glamorgan Institute of Higher Education. It was incorporated as the Cardiff Institute of Higher Education in 1992 and gained Teaching Degree Awarding Powers in 1993. The institution adopted the name of the University of Wales Institute, Cardiff in 1996. It gained Research Degree Awarding Powers in 2009 and became Cardiff Metropolitan University in 2011 (Cardiff Metropolitan University, n.d. a). Following a rationalisation of the estate between 2009 and 2014 (Cardiff Metropolitan University, 2014), the university is now consolidated on two sites, at Llandaff and Cyncoed.

A Board of Governors is charged with ensuring that Cardiff Metropolitan University fulfils its strategic objectives, with regard to learning, teaching, research and related activities. Additionally it has oversight responsibility so that the university is well managed and remains accountable to its stakeholders. It has responsibility for governance as well as the educational character, mission and strategic vision of the university. The Board of Governors delegates authority for the estate to the Vice-Chancellor and members of the Vice-Chancellor's Board. The Vice-Chancellor's Board has responsibility for corporate strategic planning in relation to academia, finances, resources and staffing. Whilst the Board of Governors consider and approve the corporate strategic plans, it is the academic schools and units that have responsibility for strategic planning at school/unit level (Cardiff Metropolitan University, n.d. b).

Based on the Cyncoed campus, the Cardiff School of Education is one of five academic schools in the university. In 2012-2013, the School employed 63 academic staff and 29 support staff. There were approximately 1600 student enrolments annually across eleven academic programmes that led to 72 different academic awards. The annual financial budget at this time was £12m.

The Cardiff School of Education is led by a Dean of School who is supported by a Business Support Manager, and at the time of this research, a Director of Learning and Teaching, a Director of Research and a Director of Enterprise (see Figure 1: School Senior Management Structure, page 17). The latter three posts have since been retitled: Deputy Dean - Learning and Teaching; Associate Dean – Research; and Associate Dean - Enterprise. These three roles reflect the three missions of the university, detailed in both corporate and School strategic planning. With reference to the period of the research, the Director of Enterprise held responsibility for the strategic direction of enterprise activity across the School (see Appendix 1: Role Description-Director of Enterprise, page 278).

The Director of Learning and Teaching was supported by three Heads of Department, the Head of Department for Teacher Education and Training, the Head of Department for Professional Development and the Head of Department for Humanities. There were also Deputy Heads of Department for Teacher Education and Training and Humanities (see Figure 1: School Senior Management Structure, below).

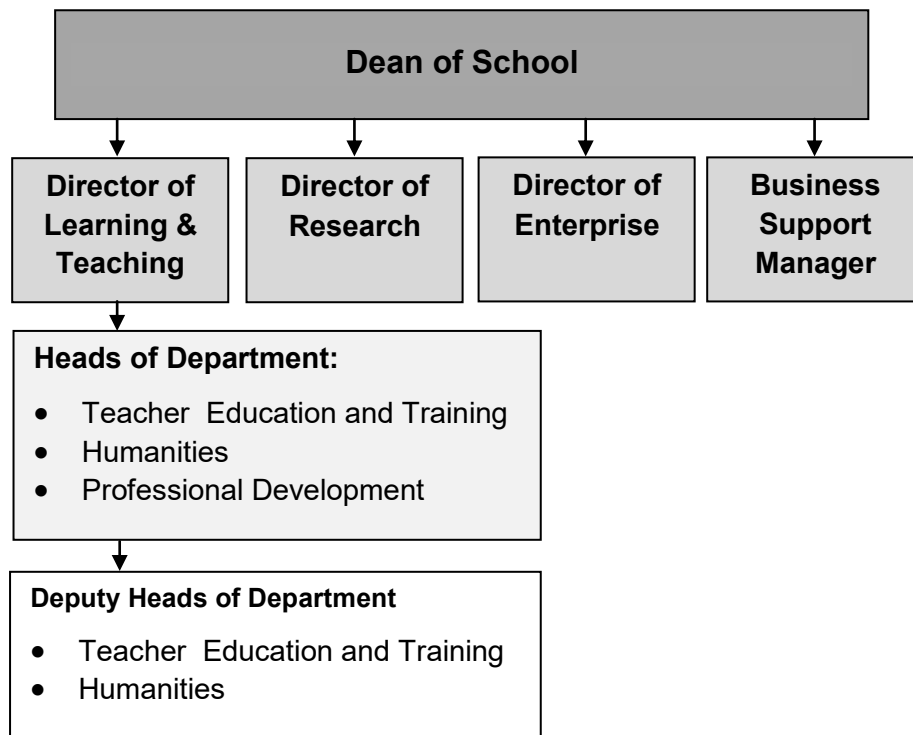


Figure 1: School Senior Management Structure

As Director of Enterprise, I led the School's Enterprise Support Team, facilitating engagement with enterprise activity. The team included an Enterprise Support Manager and an Enterprise Administrator. Additionally, the role carried responsibility for the School's commercial 'units' which at the time of the research included the English Language Training Centre, the Cardiff Metropolitan University Press, the Outdoor Learning Centre and the School's recruitment agency, Educational Specialist @ Cardiff Metropolitan University (see Figure 2: Management Structure for Enterprise Activity, below). The English Language Training Centre had its own administrative infrastructure of support, while in contrast, the recruitment agency and publishing house, were supported by the Cardiff School of Education Enterprise Support Team.

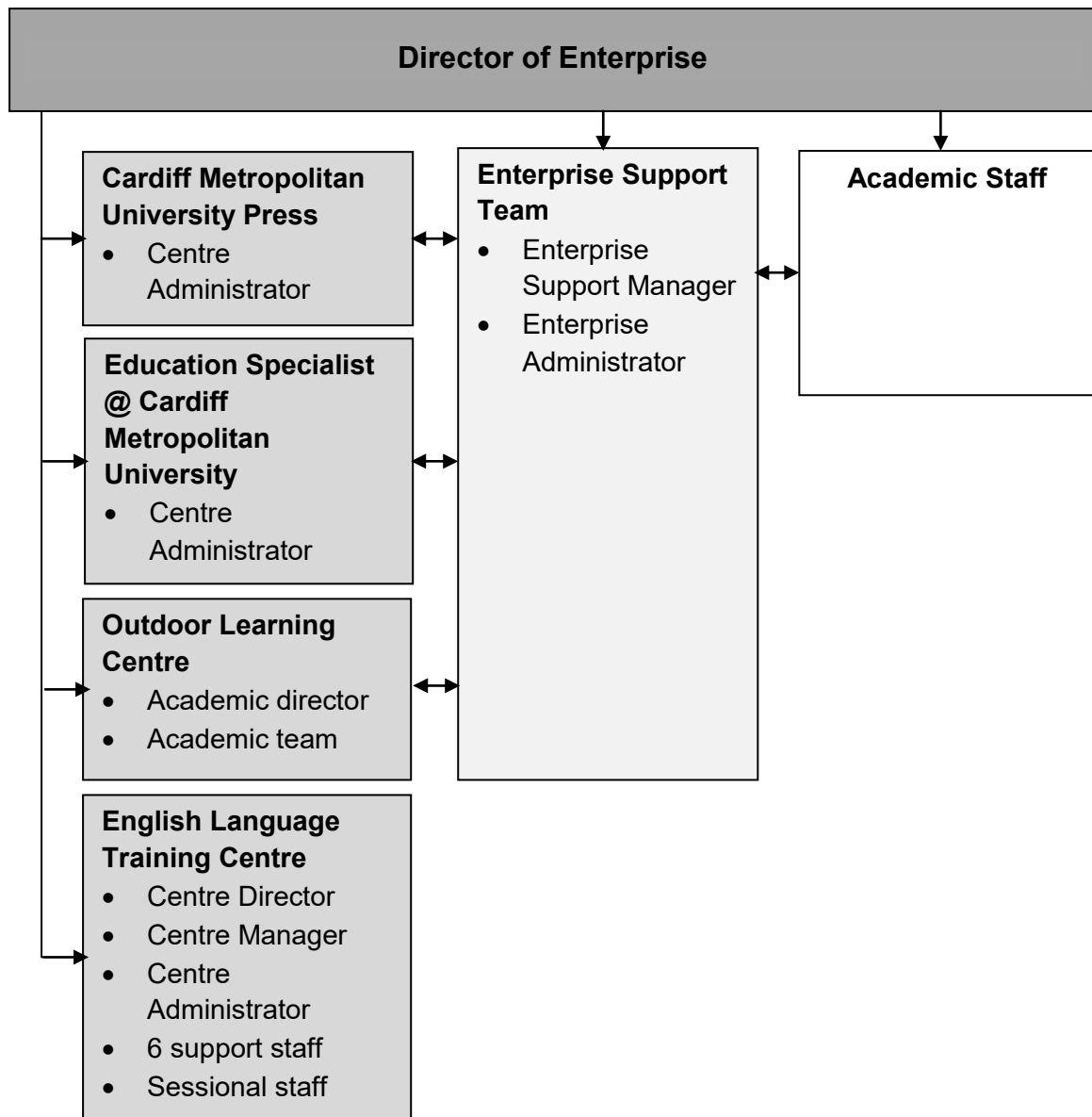


Figure 2: Management Structure for Enterprise Activity

The timespan of this research included the end of one planning period (2007-2011) and the start of the next (2012-2017), with the strategic direction being informed by the strategic plans for the university and the Cardiff School of Education. During this period, the Cardiff School of Education restructured the administrative support provided for enterprise to incorporate responsibility for research, creating the Research and Enterprise Support Team (REST). In addition, in 2012, I re-applied successfully for the

rotational post of Director of Enterprise. Later, in 2013, I applied for, and was appointed to the role of Deputy Dean – Learning and Teaching.

The findings of the research are significant and make an original contribution to knowledge. The key outcome is a model for enterprise activity in the Cardiff School of Education, S⁴E, which is based on four essential components for effective engagement with enterprise. They are: Strategic significance for Enterprise, Support for Enterprise, Synergy for Enterprise, and Success for Enterprise. The outcomes of the research and resulting recommendations have potential to inform practice in other academic schools within the university and, in a wider context, within other schools of education regionally, nationally and/or internationally.

1.2 The Thesis Structure

The thesis is presented in five chapters with relevant material included in the appendices. The professional development portfolio is included, with its own appendices, at the end of the thesis.

Following this account of the substance of the thesis, the remainder of this chapter examines the difficulties in differentiating between ‘enterprise’, ‘third mission’, and ‘innovation and engagement’; terms often used interchangeably in the context of enterprise. The chapter presents the rationale underpinning the research to gain a better understanding of the support required for staff to engage in enterprise activities as a

means of informing strategy, allocation of resources and action planning. The research aim and research questions are offered in the final section.

Chapter Two presents an analytical and evaluative scrutiny of relevant literature and internal documents/reports. Key terms relevant to the research are explored such as 'enterprise', 'entrepreneur', 'academic entrepreneur' and 'social entrepreneur'. The concept of the knowledge economy and the phenomenon of the entrepreneurial university are examined as a means of contextualising the university's initiatives to promote staff engagement with enterprise. The skills set of the entrepreneur is scrutinised and the role of the intrapreneur (Bridge, O'Neill and Martin, 2009) is examined for its relevance to academic staff in the Cardiff School of Education. Models of support have been considered, particularly the model presented by Bridge, O'Neill and Martin (2009) for enterprise needs and Wickham's (2006) model for motivation. The conceptual model I created to support research and enterprise in the Cardiff School of Education is also presented in this chapter. It is based on a central core of support and is a synthesis of Wickham's (2006) notion of intrapreneurship, the hierarchical approach adopted by Bridge, O'Neill and Martin (2009) in relation to enterprise needs, and the stepped, progressive style for project management advocated by Newton (2005). The chapter culminates in an exploration of the value given to engagement with enterprise and the challenge of developing a metric that measures it.

Chapter Three provides the research methodology and conceptual framework for the research along with the rationale that underpinned the choice of research methods to

collect primary data. According to Braun and Clarke (2013) the framework for research relies on ontology (the nature of reality) and epistemology (the nature of knowledge). My ontological position was that of relativism and the epistemological perspective, interpretive. The methodological approach has been based on an interpretivist case study, as the research is focused on the enterprise practices within one academic school at Cardiff Metropolitan University. The methods used for data collection included a bilingual (English and Welsh) on-line questionnaire and semi-structured interviews. The chapter discusses the design, development and release of the on-line questionnaire and the approach used for sampling and implementing semi-structured interviews. The process of attaining approval from the School's Research Ethics Committee is also incorporated into the narrative. The final section of this chapter provides an analysis of the effectiveness of the research methods used for data collection.

Chapter Four presents the results and analysis of the data. It includes informed discussion related to the findings of the research and its relevance to the research questions. This section of the thesis is presented using the previously mentioned S⁴E Model for Enterprise that has emerged from the data analysis. It discusses the appropriateness of the model in providing strategic direction for enterprise in the context of Higher Education. The findings are based on a need for enterprise to be of strategic significance (S¹), both corporately and at School level, to academic staff in the Cardiff School of Education. The enterprise culture needs to be supportive (S²) with appropriate systems in place to make engagement with enterprise straightforward. Synergy (S³) is

required between the knowledge and skills sets of academic staff and the enterprise activities proposed. Finally, success (S^4) needs to be acknowledged and celebrated.

Chapter Five reviews the study in relation to the research aim, the research questions and its contribution to the field of knowledge with regard to academic engagement with enterprise activities. The limitation of the research, as a case study relating to one academic school in one university is discussed. The chapter concludes with a set of recommendations that have been presented to inform future practice in the Cardiff School of Education and Cardiff Metropolitan University.

The final section of the thesis is the Personal Development Portfolio entitled, My Doctoral Journey. This section of the work reflects on the personal and professional growth made as part of the professional doctorate. It includes an autobiographical account of my career to date and explains the ways in which I learned from the process of researching as well as the research findings. The narrative explains the ways in which the research has been shared with the wider community, regionally, nationally and internationally. It also incorporates a reflective diary and an audit of my research skills using the Researcher Development Framework (Vitae, 2011). Most importantly, the section culminates with a set of personal, short, medium and longer term goals.

1.3 Enterprise in Higher Education

The task of defining 'enterprise' in the context of Higher Education is complex; terms such as enterprise, third mission, and innovation and engagement, are often used interchangeably (E3M, n.d.). In 1999 research undertaken by Burniston, Rodger and Brass, for the Department for Education and Employment, linked the practice of enterprise within universities to preparing students for working life. Rae (2007; 2010) also made this association writing about the challenge of connecting enterprise and graduate employability. More recently, this theme was taken up by the Quality Assurance Agency for Higher Education (2012) with the publication of its guidance document for Higher Education providers, '*Enterprise and entrepreneurship education*', which emphasises a need to equip students/graduates with the ability to generate ideas and bring them to fruition; skills suitable for employment/self-employment.

The Director of Enterprise worked with the university's Research and Enterprise Services. The Research and Enterprise Services had responsibility for securing *Third Mission Funding* from the Higher Education Funding Council for Wales (HEFCW). This funding was based on strategic objectives linked to Innovation and Engagement, supporting activities that contributed to the economic and social wellbeing of Wales (HEFCW, 2012). From one perspective, 'enterprise' was linked to 'employability'; whilst from another, it related to the university's HEFCW Innovation and Engagement strategic objectives.

In the university's Corporate Strategic Plan 2007-2011, learning and teaching and research retained their academic identity whilst enterprise was expressed under the banner of 'Third Mission':

We will seek to consolidate our position as a top Welsh HE institution engaged in Knowledge Transfer Partnerships and will aim to achieve a tangible increase in interactions with the private and voluntary sectors (UWIC, 2007, p.16).

The corporate strategic focus of the university for the planning period 2007-2011 was Knowledge Transfer Partnerships and increased interaction with public, private and voluntary sectors. This stance resonates with HEFCW's definition of third mission activity as a means to "stimulate and direct the application and exploitation of knowledge to the benefit of the social, cultural and economic development of our society" (HEFCW, 2006, p.2). This nomenclature of 'third mission', however, often led to the perceived status of 'third priority' (Mollas-Gallart, Salter, Patel, Scott and Duran, 2002) and something that opened debate for academic priorities and workload management in the Cardiff School of Education and elsewhere in the university.

1.4 Enterprise as a Role for Academics in Higher Education

Financially, for some universities, learning and teaching is the core business (Temple, 2009) however, the role of academics is complex and ever changing (Knight, 2002; D'Andrea and Gosling, 2005; Hughes, 2007). Nonetheless, very few authors writing about learning and teaching place enterprise within the core role of academics. For example, Cannon and Newble (2000), Race (2001), Armitage, Bryant, Dunnill, Flannagan, Hayes,

Hudson, Kent, Lawes and Renwick (2007), and Fry, Ketteridge and Marshal (2009) omit an awareness of enterprise from the core competencies of lecturers in Higher Education. In comparison, Penaluna, Penaluna and Jones (2012) discuss the concept of the 'pracademic', likewise, Thorp and Goldstein (2010) highlight the role of the entrepreneurial scholar with Gibb (2010) suggesting a need to recruit entrepreneurial staff and embedded entrepreneurship education. These authors extol the benefits of enterprise education, the capitalisation of knowledge, and being an entrepreneurial university.

Academic roles within Cardiff Metropolitan University, as in most universities, are hierarchical: lecturer, senior lecturer, and principal lecturer. Each of these roles is categorised as either 'Teaching and Scholarship' or 'Teaching and Research'. Within the role profile for each of these categories, duties and responsibilities include: teaching and learning support; research and scholarship; communication; liaison and networking; managing people; teamwork; pastoral care; initiative, problem-solving and decision making; planning and managing resources; sensory, physical and emotional demands, work environment and, finally, expertise. (See Appendix 2: Job Description-Teaching and Scholarship, page 280; and Appendix 3: Job Description-Teaching and Research, page 284).

The primary mission of the institution is embedded in duties listed under 'Teaching and Learning Support'; the secondary mission, likewise, is reflected in the 'Research and Scholarship' section. There are no duties and responsibilities endorsed under the nomenclature of 'enterprise'. This reflects Shattock's (2003) perception that academic

roles are aligned to learning, teaching and research. However, further analysis of the 'Planning and Managing Resources' section of the aforementioned job descriptions, indicates that academic staff are required to participate 'in developing ideas for generating income'.

The focus of income generation echoes the notion of business and the importance of an enterprise culture (Beardsaw, Brewster, Cormack and Ross, 2007). However, McCaffery (2004) challenges the concept of treating education as a business, drawing attention to the potential dichotomy of putting profit before the quality of the student experience. Further, he highlights the tensions that may exist between academic freedom and commercial confidentiality.

1.5 Research Rationale

The rationale underpinning this research was to gain an in-depth and evidence-based understanding of engagement with enterprise activity in the Cardiff School of Education. The intention was to enable the School to compare its performance with other academic schools and inform its operational and strategic planning, thereby ensuring the longevity of its success in contributing to the university's enterprise imperative.

Prior to this study, whilst there was formal monitoring and reporting of progress towards the School's annual Research and Enterprise financial targets, no information was gathered in the School to garner the perceptions of academic staff with regard to

enterprise, engagement with enterprise projects or the professional trajectories of those choosing to engage with enterprise.

At the outset of this research, in 2009, the enterprise objectives detailed in the corporate strategic plan 2007-2012 required academic schools to:

- 1 Increase the volume of enterprise activity, and the contribution that this generates;
- 2 Develop a portfolio of attractive, flexible Continuing Professional Development provision;
- 3 Play a leading role in supporting the Welsh Assembly Government's health agenda; and
- 4 Gain wider recognition for our cultural and social contributions to the city of Cardiff and the wider region.

These objectives were cross-referenced within the strategic plan 2007-2011 for the Cardiff School of Education, under the category 'third mission' - see Appendix 4: Cardiff School of Education Strategic Plan (Third Mission) 2007-2011, page 288. Targets for enterprise activity were predicated on change; change that was pre-determined, measurable and involved academic engagement with enterprise activity.

A number of external factors influenced engagement with enterprise. The Higher Education sector in the UK expanded from the stable, state-funded system of the 1960s and 1990s. It saw the emergence of post-1992 universities and experienced the loss of free Higher Education with the introduction of student tuition fees (Deem, Hillyard and Reed, 2007). It also heralded the concept of the 'entrepreneurial university' and the knowledge-based economy. This created interaction between universities, industry and government, with universities becoming more business-like and recognising the value of its resources (Etzkowitz, 2008).

The concept of the entrepreneurial university is not recent. It was first highlighted in the work of Clark (1998, pp.4-8) who described the entrepreneurial university as one that was actively seeking to "innovate how it goes about its business [seeking to create a] substantial shift in organisational character to arrive at a more promising position for the future". He offered five collective elements for purposeful transformation: (i) "a strengthened steering core" (managerial capacity); (ii) "an expanded developmental periphery" (university/departmental infrastructure to support enterprise); (iii) "a diversified funding base" (accessing diversified sources of income); (iv) "a simulated academic heartland" (academic acceptance of enterprise); and (v) "an integrated entrepreneurial culture" (a culture that embraces change).

Clark's work was acknowledged by Shattock (2009, p.3) when he wrote about universities being "critics of society" and the potential for that to be compromised by a deepening engagement with industry, as it can be difficult to criticise potential

customers/collaborators. Likewise, Williams (2009a) considered that having an assured income that met its needs, universities were less likely to be motivated to undertake what he described as “risky innovations”. More importantly, from the perspective of enterprise, he talked of the income generated from third mission activities being as widespread as research even if more routine/commercial in nature (Williams, 2009a). These changes signified an increased focus on enterprise activities and entrepreneurialism corporately, strategically and operationally.

During the period of this study, it was recognised that the emergent outcomes of the research informed enterprise practices with the School and influenced its strategic direction. This provided a basis for on-going financial planning, resource allocation and informed workload modelling, enabling academic staff from the Cardiff School of Education to substantially exceed the targets set in the School’s Strategic Plan 2007-2011. For example, the target to raise staff engagement with enterprise from 12% in 2007 to 22% over the planning cycle was exceeded with the school reporting 65% of staff engaged with enterprise activities in the School’s 2011-2012 Research and Enterprise Annual Report. Likewise, making a contribution to the school’s financial target was exceeded by £9,000 in the academic year 2008-2009, £69,000 in 2009-2010, and £33,000 in 2011-2012 (see Table 1: Research and Enterprise Targets, below). In the subsequent planning cycle, in 2012-2013, levels of staff engagement were reported as 78% and the financial target of £200,000 was exceeded by £161,000, with an overall contribution of £361,000.

Table 1: Research and Enterprise Targets

Academic year	% Staff Engagement with Enterprise	Target Financial Contribution	Actual Financial Contribution
2008 - 2009	19%	£80,000	£89,000
2009 - 2010	54%	£95,000	£164,000
2010 - 2011	61%	£120,000	£133,000
2011 - 2012	65%	£130,000	£163,000
2012 - 2013	78%	£200,000	£361,000

My research holds potential relevance for other academic schools and departments/units within the university because enterprise remains one of its three core missions or functions. Centrally, there has been a shift to increased integration of learning, teaching, research and enterprise. In 2005-2006, the university established a Task Group to audit current practice with regard to research-teaching integration. To augment this approach and contribute to quality enhancement activity, joint meetings of the Learning and Teaching and Research and Enterprise Boards were initiated in 2006. More recently, academic schools were charged with replicating this at school level with joint meetings of their Learning and Teaching Committee with the Research and Enterprise Committee. This was implemented in the Cardiff School of Education in 2012-2013. Other academic schools actioned this in 2013-2014. Likewise, there has been a move towards a more explicit recognition of engagement with enterprise as a viable career option. Whilst previously implicit, the university updated its Academic Handbook (Section 13: Academic Titles) in November 2013 to include explicit enterprise criteria for applications for 'Reader' and 'Professor'. At School level, in the academic year 2013-2014, External

Examiners' reports and Annual Programme Reports from the Cardiff School of Education made mention of the impact enterprise activities were having on the student experience. Whilst centrally, there were aspirations to develop a learning, teaching and research nexus and Research Informed Learning and Teaching (RILT), Cardiff School of Education used its Annual Programme Reports to highlight Enterprise Informed Learning and Teaching (EILT) in relation to the School's strategic objectives 2012-2017.

This present study has potential relevance for other Schools of Education. Enterprise continues to be one of the three primary drivers for universities and Higher Education institutions and adopting business practices in the Higher Education sector can be challenging.

1.6 Research Aim and Research Questions

This study has been a detailed and systematic enquiry to discover new, evidence-based knowledge that adds to existing understanding of academic engagement with enterprise activities in the Cardiff School of Education (Menter, Elliot, Hulme, Lewin and Lowden, 2011; Coe, 2012). The research aim has been the driving force of the research (Dawson, 2009). The research questions defined the focus of the investigation, set the boundaries/parameters of the research, provided direction, informed the design of the research methods, and acted as a frame of reference steering the course of the research (O'Leary, 2005; Menter *et al.*, 2011).

RESEARCH AIM:

To undertake a critical and analytical exploration of engagement with enterprise in the Cardiff School of Education between 2009 and 2013.

RESEARCH QUESTIONS:

- i) How have the types of enterprise practices that currently exist within the Higher Education sector evolved?
- ii) In what ways has the university promoted enterprise activities and how effectively are academic staff supported strategically and operationally to engage with them?
- iii) How effective is the support available to Cardiff School of Education staff in achieving 'impact' in the wider community with the enterprise activities undertaken?
- iv) How can the findings of the research inform change/s to future strategic planning within the Cardiff School of Education?

The research questions as they are now presented were honed and fine-tuned over a period of time. Research question two was originally presented as two questions: 'In what ways has the university promoted enterprise activity?' and 'How effectively are academic staff supported strategically and operationally to engage with enterprise activities?' As separate questions it was felt that there was potential for a disconnection between the strategic approaches of the university/school and the types of activity

academic staff would consider relevant. Conjoined, the research question had greater focus on the activities relevant to the academic role.

Whilst the overall function of the research questions was to achieve the research aim, each question had a distinct role. For example, research question one provided the impetus to establish what others were doing and what other researchers had already found, thus informing the research design. Research question two promoted scrutiny of internal strategic approaches for engagement with enterprise, it also provided a focus for garnering staff perceptions to measure the relevance and extent of success of these strategies. The role of research question three was twofold. It intended to establish the success, or otherwise, of the model of support implemented to support engagement with enterprise. It also had the function of establishing the extent to which others, in the wider academic community, were aware of the range and types of enterprise activities undertaken. The final question was purposeful; intended to ensure that the outcomes of the research were utilised with the Cardiff School of Education.

1.7 Undertaking Research in my own Organisation

The professional doctorate is based on professional practice. An advantage of undertaking research within my own organisation was having existing knowledge, insight and experience that could be applied to the study (Coghlan and Brannick, 2010). I had information about the culture of Cardiff Metropolitan University and the Cardiff School of Education that would be difficult for someone outside of the university to gain. Trowler

(2011) refers to this as 'endogenous research'; conducting research in one's own organisation.

In the preface of their publication *Doing action research in your own organization*, Coghlan and Brannick (2010) highlight the challenge of balancing the organisational role with the role of enquirer and researcher. As an 'insider researcher' (Dandelion, 2000) I had the advantage of access; being able to undertake my research in the Cardiff School of Education. I was also 'culturally literate' and therefore able to make sense of the day-to-day workings of the university (Trowler, 2011). However, Coghlan and Brannick (2010) differentiate between primary access, working within an organisation and being permitted to undertake research, and secondary access, being able to access parts of the organisation that are relevant to the research. As an insider researcher, in a senior management position, I was afforded secondary access to information and data relevant to this research.

Dandelion (2000) is realistic in acknowledging the constraints of insider research. For example, noting that as an insider it can be difficult to achieve analytical distance. Likewise, the responses of participants may be swayed when the researcher holds a position of influence. This aspect is addressed in the British Education Research Association (BERA) ethical guidelines. As a researcher, I needed to consider the tensions inherent in being a senior manager and the potential impact these dual roles may have

on my participating colleagues (BERA, 2011). This was covered in the ethics approval process and is discussed further in Chapter Three.

There are competing rights when undertaking research. The right of the public to know, verses the right to participant privacy and not be harmed (Williams, 2009b). My mother, with her 88 years of wisdom, has always held the view that you should treat others as you would like to be treated yourself. This approach is conceptualised philosophically by McFee (2006), supported by Maylor and Blackman (2005) and referred to as ethical responsibility by Gorard and Taylor (2004).

Chapter Two: Literature Review

The chapter begins with an in-depth analysis of key terminology linked to enterprise activity in the Higher Education sector. It then moves on to examine the ways in which the knowledge economy has brought about the phenomenon of the 'entrepreneurial university'. This is followed by an exploration of the drivers, theoretical, strategic and operational, that have moulded enterprise within Cardiff Metropolitan University. The final section considers the way in which academic staff in the School of Education are encouraged and incentivised to engage with enterprise activities. The intention has been to gain an in-depth understanding of the field of study that formed the basis of this research project and respond to the research questions.

The review of literature includes policy documents/circulars of the Welsh Government and the Higher Education Funding Council for Wales as well as relevant publications and peer refereed journal articles. More specifically, there has been critical review of organisational documents at university and School level.

2.1 Introduction

Arroyo-Vazquez, van de Sijde and Jimenez-Saez (2010) in their interestingly titled research '*Alice in entrepreneurland*' highlight the Higher Education sector's responsiveness to change. They describe how universities have moved from learning and teaching to embrace research and more recently, enterprise. While they welcomed the transformation with universities undertaking what they termed 'business activities', they

questioned the extent to which they are ready to face the challenge of the entrepreneurial world. To support 'business activities' academic staff need to be able to articulate:

1. The products or services they have to sell
2. Who the potential customers are
3. What the unit cost of products and services is
4. What price the market will stand.

These four aspects, if considered by academic teams and programme committees, have the potential to transform academic perceptions of knowledge and skills they possess, making them valuable marketable commodities rather than altruistic gifts. Whilst staff should be able to identify the knowledge and skills that they have to offer and potential customers for services, with some undertaking market research to explore price, very few would be able to fully cost them. From personal experience as a business woman and in the role of Director of Enterprise (see PDP: 2.1 Career Background, page 389; PDP: 4.1 The Enterprise Lens (Researcher Development Framework), page 410; and PDP Appendix Two: Me and Understanding Me, page 422), I recognised that most staff were unaware of the need to factor in on-costs such as pension, National Insurance and holiday entitlement. Likewise, very few were aware of resource costs such as room charges and equipment hire. Further, very few had an awareness of centralised top-slice arrangements whether for learning and teaching, research or enterprise.

Consultancy and research account for a large percentage of a university's external enterprise income. In 2006-2007, Gilbert (2008) reported that it amounted to £2.6 billion. Although some universities are reticent to appear business focussed, the University of Warwick had no such inhibitions. The vision of the university included the generation of income and a strategic "wish [to be] enterprising and outward looking" (University of Warwick, 2009, p2). It also set a target of securing "extra investment of £200 million over the next five years", incorporating an incentive scheme for academics (University of Warwick, 2009, p1). Likewise, the University of Derby has developed a policy and procedure for income generation as a means of diversifying its income; "the university has as one of its key aims, to engage proactively with businesses [and] to increase its income from non-funding council sources, so that it is less reliant on grant funding" (University of Derby, n.d., p.1).

2.1.1 The Entrepreneurial University

In his publication *'Creating Entrepreneurial Universities'*, Clark (1998) highlighted the challenge of expansion in the Higher Education sector. He talked of "changing professional markets", "more students" and "more different types of students", but most importantly he indicated that Governments had become "unreliable patrons" of universities (Clark, 1998, p. xiii). His notion of the entrepreneurial university model is based on five components. Firstly, that universities must, through their managers and academic departments, have the capability to steer themselves, which he refers to as "strengthening the steering core". Secondly, that universities need to network and develop links with external organisations and the wider world, which is referred to as

“the expanded developmental periphery”. Thirdly, that by widening their portfolio and pursuing other sources of income, universities are “diversifying their funding base” and become less reliant on government funding. Fourthly, that academic departments embrace an enterprise culture, which Clark refers to “stimulating the academic heartland”. Finally, accepting that change is a continuous process whereby academic values are reconciled with managerial values; “the integrated entrepreneurial culture”.

If Clark’s (1998) model for the entrepreneurial university is applied to Cardiff Metropolitan University and the Cardiff School of Education, a ‘strengthening the steering core’ has been achieved through its organisational infrastructure. The role of the Pro-Vice-Chancellor - Enterprise is to drive the corporate strategic vision for enterprise. This is supported centrally through the university’s Research and Enterprise Services unit and the Directors for Enterprise (now Associate Deans - Enterprise), with academic schools reporting through the Research and Enterprise Board. At School level, enterprise is the strategic responsibility of the Director of Enterprise, with activities reported via the School’s Research and Enterprise Committee and the School’s Senior Management Planning Team. To develop links with the wider world, ‘the expanded developmental periphery’, the university uses its Research and Enterprise Services unit. In addition, it has a centralised Alumni Office and a Centre for Work-based Learning. At School level, external links are based on professional networks and engagement with initiatives such as the Strategic Insight Programme funded by the Higher Education Funding Council for Wales. This scheme facilitates interaction between academic staff and the public, private and voluntary sectors (Strategic Insight Programme, n.d.).

'Diversifying the funding base' is an important facet of enterprise activity and academic schools play an important role in achieving this. The Cardiff School of Education engages with external consultancy and external tendering to attract external income. That said, it is its commercial centres such as the English Language Training Centre (ELTC) and the Outdoor Learning Centre (OLC) that provide the greatest source of external income. Embedding enterprise at School level and 'stimulating the academic heartland' is grounded upon sound leadership and effective support to develop the blending of traditional academic values with those relevant to managing entrepreneurial units. Leadership from the Director of Enterprise encourages academic staff to use their professional networks, and the assistance of the Research and Enterprise Support Team enables staff to engage with enterprise. Additionally, the School has been effective in using the university's Staff Performance Review scheme to set enterprise related targets. The final component of Clark's model, 'the integrated entrepreneurial culture', holds something of a challenge for the School. Whilst a number of staff have excelled in their entrepreneurial endeavours and been able to reconcile business and education, they have also needed to maintain the core values of learning, teaching and assessment. As a School of Education, professional standards have to be role modelled and cannot be compromised in enterprise activities.

Clark's model is not without criticism. Gibb, Haskins and Robertson (2009, p.17) noted that no conceptual argument was offered for universities to have a greater focus on innovation, to take risks or deal with uncertainty. They further suggest that the key

concepts of 'entrepreneurial organisation' and 'entrepreneurial leadership' were omitted from his model.

Contextualising the work of Gibb, Haskins and Robertson (2009) in relation to 'leading the entrepreneurial university', the Cardiff School of Education has both areas for development and areas of strength. For example, Gibb, Haskins and Robertson (2009) suggest there is a need to develop students' entrepreneurial skills to enhance their employability; this would have implications for the School in terms of staff development. Whilst there is strong engagement with enterprise activity, academic staff have differentiated levels of understanding with regard to the skills and attributes required of an effective entrepreneur; this would need greater consistency. In terms of strength, Gibb, Haskins and Robertson (2009) discuss globalisation and a commitment to internationalisation. Here, Cardiff Metropolitan University has a strong international portfolio (Cardiff Metropolitan University, 2014) which is replicated in the Cardiff School of Education. The income generated from the School's English Language Training Centre and the International Summer School represented 70% of its externally sourced income in 2012-2013 (£252,000 from an externally sourced income of £361,000), which augmented the School's operational budget of £12m. Additionally, Gibb, Haskins and Robertson (2009) place entrepreneurial leadership at the heart of the entrepreneurial organisation. They suggest that an entrepreneurial organisation is characterised by a shared vision that provides incentives to innovate and rewards success along with its capacity to facilitate autonomy, provide opportunity and encourage external relationships, along with its willingness for flexible strategic thinking and delegating

responsibility. A key challenge at Cardiff Metropolitan University is the rigidity of the corporate and School strategic planning cycle which is subject to the annual scrutiny of the Vice-Chancellor's Board and overseen by the Board of Governors. Annual action planning permits an element of flexibility; but this flexibility is limited because it needs to relate to both Corporate and School Strategic Plans. Likewise, the need for consistency and transparency with regard to rewards and incentives is challenging; some academic staff undertake enterprise activities as part of their workload, others engage with enterprise activities in addition to a full teaching schedule/workload. To address this in the Cardiff School of Education, workloads were audited in relation to engagement with enterprise. In 2012-2013, 78% of academic staff were reported as enterprise active, all with very differing needs in relation to remission against formal scheduled teaching and additional payments.

The entrepreneurial leader has a pivotal role in the framework for an entrepreneurial organisation presented by Gibb, Haskins and Robertson (2009). They highlight essential characteristics for the role, suggesting that entrepreneurial leaders need to be strategic, highly proactive and role model engagement with enterprise. They need to be able to identify the capacity of team players to engage with enterprise, and empower them to do so. The approach is based on transformational leadership style (McCaffery, 2004) that infuses departments with entrepreneurial values, removes barriers and drives forward an enterprise culture. In the context of the Cardiff School of Education, this leadership role has been undertaken by the Director of Enterprise acting as the conduit between external stakeholders and internal administration departments and/or academic staff.

In contrast to the concept of the entrepreneurial university presented by Clark (1998) and the conceptual framework for the entrepreneurial leader operating within an entrepreneurial organisation offered by Gibb, Haskins and Robertson (2009), Etzkowitz (2004; 2008) extolled interactions between university, industry and government. He illustrates how they can work together to form a 'triple helix', creating a knowledge-based economy, that relies on capitalising knowledge and managing university-industry-government interdependence. Etzkowitz (2008) suggests universities drive the triple helix by increasing their entrepreneurial activities in relation to the commercialisation of their research. He did, however, note that some universities do not fit the model because they are more interested in excellence in teaching or research and less interested in commercialising discoveries or participating in schemes for social improvement, such as widening access initiatives.

There are elements of similarity in the practices of the Cardiff School of Education with the observations made by Etzkowitz (2008). Endeavours have been made to engage with enterprise activities that bring about social improvement. For example, whilst not a great success commercially (income £460), the *Building Bridges: Community-University Partnerships for Social Justice* conference held in 2013, created an opportunity to work with community providers in south east Wales to showcase best practice in community regeneration. Likewise, in the same year, teachers from secondary schools were invited to the *Developing Literacy Through Drama* short course (income £654) which provided the opportunity to address the Welsh Government's priority for literacy. This activity

achieved wider impact in terms of social improvement with teachers implementing strategies to develop their pupils' literacy through drama. Nonetheless, one of the challenging factors has been commercialising research that is linked to the core business of the School, education and training. This is something also noted by Tabberer (2013) in his review of Initial Teacher Education in Wales. The recommendations of the report charged providers of Initial Teacher Education to improve performance in schools by improving research within provider universities.

Theoretical models and conceptual frameworks aside, despite some resistance to the commercialisation of knowledge (Rinne and Koivula, 2009), universities are making strategic decisions to generate new income (Clark, 1998). Without this, universities imperil their future (Christensen and Eyring, 2011). Industry-university collaborations contribute to economic growth which has seen the emergence of 'the knowledge economy' (Shattock, 2003).

2.1.2 The Knowledge Economy

In 1987 and with a budget of £100 million, the Enterprise in Higher Education Initiative was introduced to "enable every person in HE [to develop] competencies and aptitudes relevant to enterprise" (Armitage *et al.*, 2007, p.255). This encouraged debate with regard to the purpose of universities, with Deem, Hillyard and Reed (2007) suggesting that academics are 'knowledge workers', who, though engaged in teaching, are part of a knowledge economy. An economy in which knowledge is treated as a commodity with

capital worth and universities important players in wealth creation, economic growth and competitiveness (Vorley and Nelles, 2009).

2.2 Key Terminology

This emergence of a knowledge economy has been accompanied by the use of terms such as 'enterprise' and 'entrepreneur' within the Higher Education sector. For some academic staff, their use has been an uncomfortable shift. However, contextualising key terminology provides increased clarity, particularly with regard to 'academic entrepreneurs' and 'social entrepreneurs'.

2.2.1 Enterprise

In the Higher Education sector, enterprise is often referred to as a function. It is one of the three core functions (or missions) of the university, the other two are learning and teaching, and research. Despite its status as a core function, there are varying definitions put forward by differing authors. However, neither Cardiff Metropolitan University nor the Cardiff School of Education incorporates a definition of enterprise in its current strategic planning documentation.

In his recent report *Enterprise for All*, Lord Young (2014) defines enterprise as an attribute, rather than a function explaining that it is:

... more than just the ability to become an entrepreneur. It is [a] quality that gives an individual a positive outlook, an ability to see the glass as half full rather than half empty, and is a valuable attribute for the whole of life. (Young, 2014, p.1)

The report (Young, 2014) is bursting with ideas that will enable schools, colleges of Further Education and universities to develop lifelong skills for enterprise and entrepreneurship. It suggests that pupils should have digitally enabled enterprise passports that record relevant activities undertaken. There is a clear intention for everyone to have the opportunity to develop skills and knowledge that would enable them to become entrepreneurs, should they wish. Of particular relevance for the Higher Education sector is the introduction of an Enterprise Star Award. This is accompanied by guidance to embed enterprise into the accredited curriculum with a move to undertaking applied research that has commercial application.

The Quality Assurance Agency for Higher Education (2012, p.8), in its guidance for *'Enterprise and entrepreneurship education'*, also defines 'enterprise' as an attribute. It suggests that 'enterprise' is "the application of creative ideas and innovations to practical situations" distinguishing its relationship from business ventures.

The emergence of terms such as 'small and medium enterprises' (SMEs) has heralded the definition of 'enterprise' as a noun linked to business (Bridge, O'Neill and Martin, 2009). The concept of 'enterprise' as a 'business activity' has an element of symmetry with the university's drive for income generation. However, according to Bridge, O'Neill and Martin (2009), this creates a narrow meaning of the term 'enterprise'. A differentiated

definition of 'enterprise' is offered by Bridge, O'Neill and Martin (2009, p.39). The narrow view, described as the "economy school", resonates with the needs of the economy, business, wealth creation and jobs. A wider meaning, described as the "education school", relates to a set of personal qualities that enable people to seek solutions, solve problems, requiring individuals to act in an enterprising manner (Bridge, O'Neill and Martin, 2009).

Political importance is given to instilling an enterprise culture in the Higher Education sector (Beardshaw *et al.*, 2007), although this is challenged by McCaffery (2004) who says that treating education as a business and putting profit before quality, compromises academic freedom and the students' learning experience. My own experiences would indicate that in order to establish and maintain a strong reputation for enterprise activity, the quality of the product is of paramount importance. This view is supported by Sallis (2002) who lists four imperatives of quality in the context of education: moral, professional, competitive and accountability. He says educators have a professional duty to ensure the quality of educational services that have measurable outcomes and that morally, customers deserve the best quality possible, suggesting that this provides an element of competition amongst providers of similar services. Within the Cardiff School of Education enterprise projects have enhanced and enriched the student experience. For example in 2012 the School hosted a '*Triple Laureate Event*' that included Julia Donaldson, the *Gruffalo* author and Children's Laureate, Eurig Salisbury, the Welsh Children's Poet and Catherine Fisher, the Young People's Laureate for Wales. This was the first of its kind in Wales, a collaborative event between the School, Literature Wales

and the Booktrust. The event focused on using books as educational tools in the primary school classroom.

For the purpose of establishing a working definition for this study, reference is made to the 'Enterprise Lens' of the Researcher Development Framework (Vitae, 2011). The framework was utilised in the PDP (Section Four: Professional Future, page 408) to audit my knowledge, behaviour and attitude in relation to research and enterprise. Within the lens, 'enterprise' is described as:

... the application of creative ideas and innovations to practical situations [by using] a set of skills and attitudes that can enable a culture of innovation, creativity, risk taking, opportunism... that underpins employability, enables entrepreneurship, intrapreneurship and facilitates knowledge exchange (Vitae, 2011, p1).

My own definition takes account of the strategic drivers of Cardiff Metropolitan University. It describes 'enterprise' as:

... an activity of the university that enables academic staff with a set of personal qualities and skills to act in an enterprising manner. It enables them to identify opportunities (which could be income generating) and, through innovations and creativity, bring them to fruition, achieve impact and complement the business of the university.

Whilst my definition refers to enterprise as a function that incorporates the skills and attributes of the entrepreneur, it fails to link enterprise activities to research and the need to develop an enterprise-research nexus.

2.2.2 Entrepreneur

As with 'enterprise', the term 'entrepreneur' is mostly aligned to the starting or running of a business (Wickham, 2006). Recognising that business owners may not be effective entrepreneurs, Bridge, O'Neill and Martin (2009) discuss the notion of 'stellar entrepreneurs', individuals with inborn talent. This holds particular relevance for academics operating in a School of Education. If, as is suggested by Bridge, O'Neill and Martin (2009), stellar entrepreneurs are 'born' and not 'made', it is difficult to create suitable support mechanisms that develop the skills relevant to engagement with enterprise. It implies that academic staff would be 'born entrepreneurs' working within academia rather than learning the skills and capabilities of the entrepreneur and applying them. Indeed, Henry, Hill and Leitch (2005a) question whether it possible to teach someone to be an entrepreneur. They recognise the need for entrepreneurship education and training but highlight the challenge of applying taught entrepreneurship knowledge to a live enterprise activity. Whilst I agree that some individuals in the Cardiff School of Education have a seemingly natural predisposition to be entrepreneurial, there are also a large number of staff who are "always bursting with new ideas; highly enthusiastic, hyperactive and insatiably curious" (Barrow, Burke, Molian and Brown, 2005, p.23). Academic staff also possess general business skills such as time management, leadership, communication and delegation which they use on a day-to-day basis. However, outside the context of enterprise, they have little opportunity to practise skills for marketing, finance, project management or negotiation (Wickham, 2006).

Wickham (2006) characterises the effective entrepreneur as someone who is hardworking, resilient, assertive, motivated and confident, someone attuned to opportunity, eager to learn and receptive to new ideas. Many of these attributes are applicable to academic staff. However, they do not necessarily make academic staff entrepreneurs. Wickham (2006) also notes that effective entrepreneurs have a 'commitment to others'. Whilst he suggests that a commitment to others might compromise a business venture, in an educational context, it has merit. He talks of the impact the entrepreneur has on the lives of others and the need to ensure that staff have the support they require to undertake jobs successfully. Developing and sustaining an enterprise culture in the context of Higher Education requires enterprising academic staff who are valued and supported for being entrepreneurial with the knowledge and skills they possess.

Universities are able to transform knowledge into capital and become entrepreneurial (Etzkowitz, 2008). However, they are not in a position to take risks with audited, public funds or damage their institutional reputation. Enterprise projects require good risk management (Cobb, 2012) that starts from the point of initiation through to completion. The likelihood and impact of risk needs to be established so that measures can be put in place to mitigate it (Lewis, 2009). Universities are not in the position of being able 'to take a gamble' (Bessant and Tidd, 2011, p.185). They recognise a need to consider key elements of risk such as project value, profit margin, length of contract, and ongoing availability of project staff (Lewis, 2009). This is particularly the case for enterprise ideas in the Cardiff School of Education where activities are carefully costed to ensure there

are sufficient funds to sustain them through to successful completion. This resonates with increased accountability and hard quality indicators such as league tables (Sallis, 2002). There is, however, a delicate balance between risk and stability (Bessant and Tidd, 2011), if institutions are risk-averse, staff will think their ideas are not valued, impeding creativity and innovation.

Undoubtedly, the work of Etzkowitz (2008) highlights an emerging trend in education; whereas universities and Government had historically operated within a bilateral interaction, there has been a move towards a trilateral interaction involving universities, Government and Industry. This 'Triple Helix' model is based on universities being more entrepreneurial, striving for greater integration between enterprise, research and learning and teaching (Etzkowitz, 2008). In an evaluation of the Triple Helix model, Gibb, Haskins and Robertson (2009) argue that universities play a strong developmental role locally/regionally. This is certainly reflected in the Cardiff Metropolitan University's Corporate Strategic Plan 2012-2017, where there is a focus on providing high quality services that meet the needs of the city (of Cardiff) and add value to the region.

In an attempt to understand the role of the entrepreneur in more depth, Wickham (2006) cites and analyses Landau's classification of entrepreneurial types: the gambler; the consolidator; the dreamer; and the entrepreneur. The entrepreneurial types are presented in a framework that illustrates the interrelationship between risk taking and innovativeness. Of the four entrepreneurial types, the 'gambler' manages a venture that is high risk and has a low degree of innovation; the 'consolidator' manages a venture that

is low risk and a low level of innovation; whereas the 'dreamer' manages a venture that is low risk, with high levels of innovation and the 'entrepreneur' manages a venture that is high risk and has a high degree of innovation. (See Figure 3: Landau's Classification of Entrepreneurial Types, below).

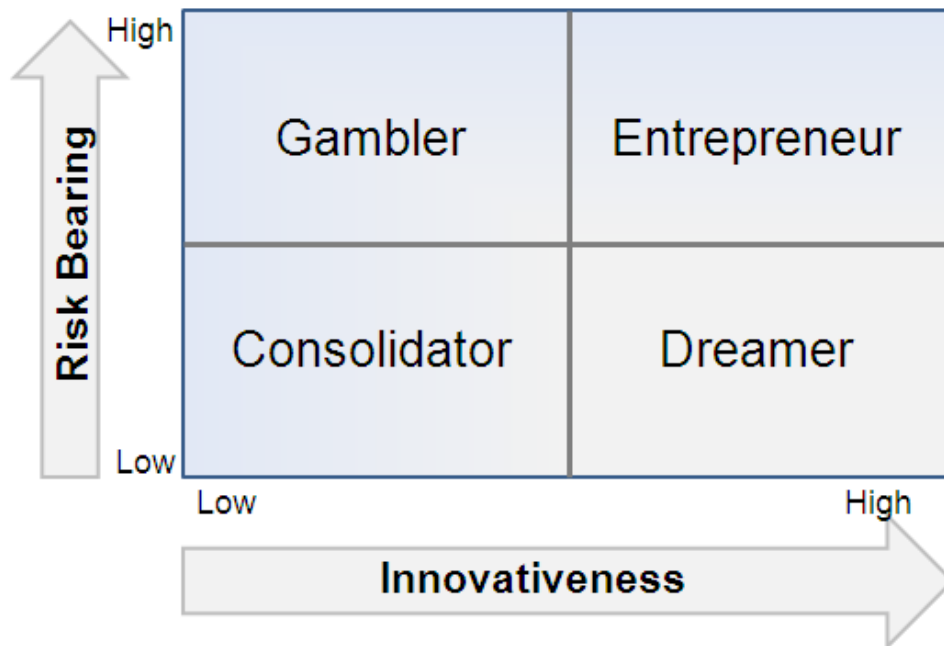


Figure 3: Landau's Classification of Entrepreneurial Types

The lack of innovation for the 'gambler' in the context of Higher Education is risky, as a competitor may be able to deliver a better product/service. If the university were to only engage with enterprise activity categorised as 'low risk', then it would need to look towards ventures managed by a 'consolidator' or a 'dreamer'. In the context of the 'consolidator', profits would be insignificant as the intention is to maintain marginal advantage over competitors. Landau's model (cited by Wickham, 2006) suggests that entrepreneurs would prefer to operate in the 'dreamer' quadrant, with low levels of risk

and high levels of innovation. He goes on to argue, however, that risk is an inherent component of innovation and that therefore, the 'dreamer' classification is unrealistic to achieve, leaving the 'entrepreneur' quadrant where entrepreneurs operate. Having an understanding of entrepreneurial types would enable the Cardiff School of Education to deploy academic staff to project teams in a focussed way. The model indicates that the more significant the risk, the greater the potential for profit. The need to minimise risk taking in the Cardiff School of Education potentially consigns academic entrepreneurs to the role of 'consolidators' or 'dreamers', which limits the potential for greater profit.

2.2.3 Academic Entrepreneur

The current job description and person specification for academic roles at Cardiff Metropolitan University places a responsibility on staff to contribute to income generation. However, enterprise and entrepreneurial behaviours extend very much further than the creation of income. The skills and attributes of academics and entrepreneurs are not mutually exclusive. Academic staff can, and do, possess/develop entrepreneurial behaviours. To this end, there is clearly a mind-shift occurring within the sector. Universities are nurturing enterprise activities outside traditional business schools, with academic staff challenged to turn ideas into successful enterprises. The Quality Assurance Agency for Higher Education is also promoting entrepreneurial effectiveness through: enterprise awareness, an entrepreneurial mindset, and entrepreneurial capability (QAA, 2012). To meet this challenge, staff working in the Higher Education sector will require subject specific knowledge and an understanding of the entrepreneurial skills-set. The notion of the 'academic entrepreneur' is highlighted by

Gibb, Haskins and Robertson (2009). The academic entrepreneur, whilst based within academia, is outward looking; someone who gathers and uses stakeholder information effectively.

For the purpose of establishing a working definition, the terms 'academic' and 'entrepreneur' have been conjoined, and the following is offered for an academic entrepreneur operating in an educational context:

An academic entrepreneur is someone who achieves financial, social and/or cultural impact through activities that complement the business of the university; using professional networks, creativity and a capacity for innovation to identify opportunities and to bring them to fruition.

2.2.4 Social Entrepreneur

In the Cardiff School of Education, the types of enterprise activities undertaken are varied. Some activities have financial outcomes, some have cultural outcomes and others have societal outcomes. There are also those which have integrated outcomes, for example, making a cultural impact and a financial return. There are also staff whose focus is creating positive social change rather than profit, which Wickham (2006) relates to the emergence of the 'social entrepreneur'. He places social enterprise on a continuum, with 'not-for-profit activities' activities at one end of the spectrum, through to the 'creation of a better world' at the other. This resonates with the work of Lord Young (2014) and his suggestion that those with ambitions to succeed in business often incorporate social benefits into the outcomes of projects. In the Higher Education sector and in the Cardiff

School of Education, the characteristic elements of social enterprise are used to address issues of social justice. Both the Corporate and School Strategic Plans 2012-2017 include targets that make a contribution to the 'social justice' imperative.

Whilst the classic entrepreneur seeks to maximise wealth, the social entrepreneur considers social value and community development. The classic entrepreneur is interested in him/herself, whereas the social entrepreneur helps and inspires others. The classic entrepreneur puts him/herself at the top of an organisation whereas the social entrepreneur regards him/herself as a coordinator and facilitator. The classic entrepreneur perceives authority to be a hindrance, whereas social entrepreneurs perceive those in authority to be a potential provider of resources (Wickham, 2006; Bridge, O'Neill and Martin, 2009).

There are elements of this approach that resonate with the university's priorities for widening access (Cardiff Metropolitan University, n.d c), whereby academic staff undertake the role of the social entrepreneur to raise the aspirations of local communities and provide fair and equal opportunities to study.

For the purpose of establishing a working definition for the 'social entrepreneur' operating in an educational context, the following is offered:

A social entrepreneur is someone who uses his/her professional networks, creativity and capacity for innovation to achieve impact with activities that have social value and bring about positive social change and/or community development, complementing the business of the university.

In summary, in this section of the thesis, the key terms of 'enterprise', 'entrepreneur', 'academic entrepreneur' and 'social entrepreneur' have been critically examined. In part, this has contributed to research question one, 'How have the types of enterprise practices that currently exist within the higher education sector evolved?'

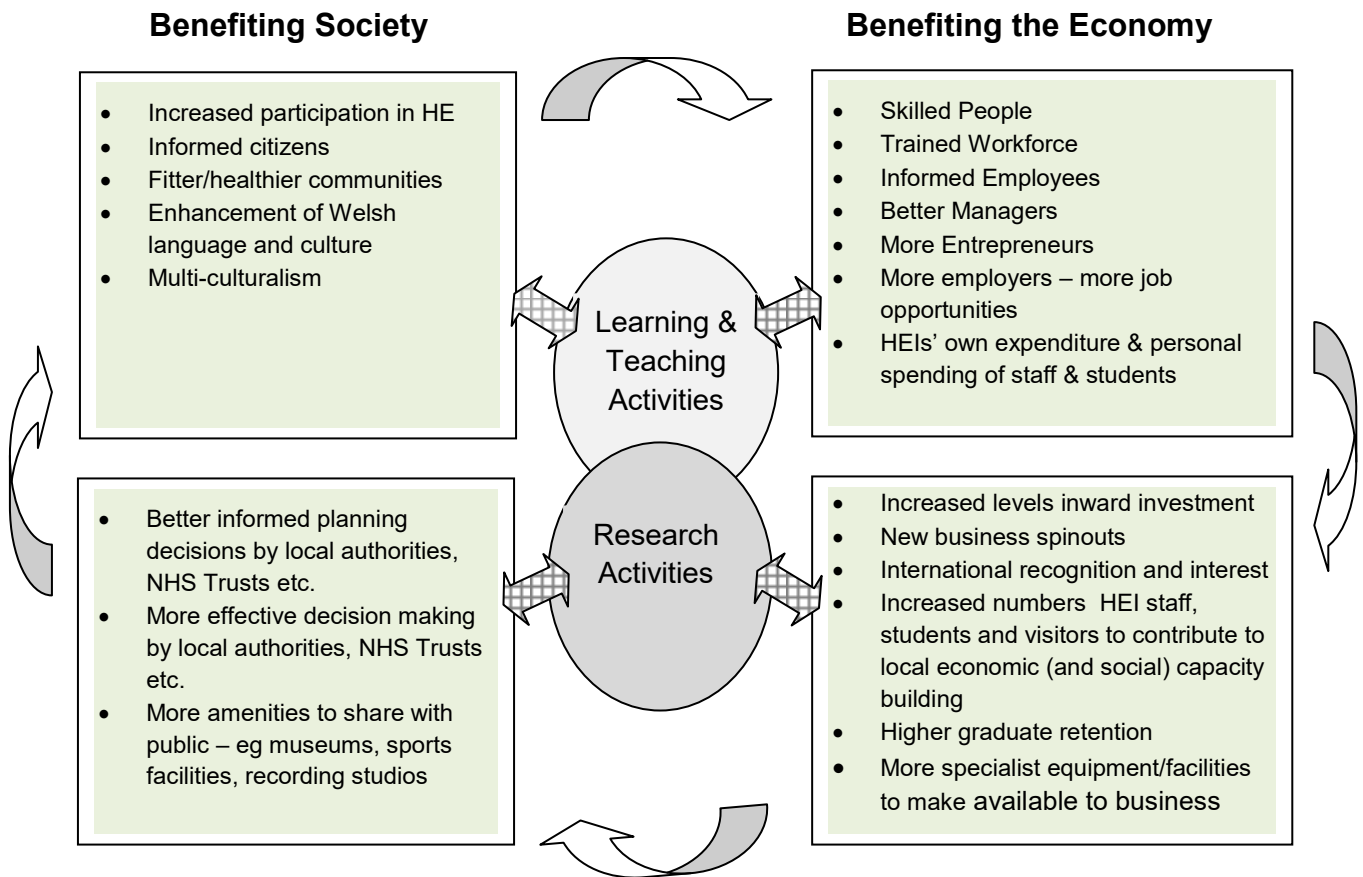
2.3 Enterprise in Higher Education

Historically, post-1992 universities were funded for their teaching activities and only received funding for research after they had attained university status (Deem, Hillyard and Reed, 2007). In 1998, the Government expanded the traditional foci of learning and teaching and research within universities, incorporating a third mission, wealth creation (Klein, 2002).

2.3.1 The Third Mission

The Higher Education Funding Council for Wales (HEFCW, 2004; 2006; 2012) was charged with distributing funding through block grants via its Third Mission Funding stream. This was based on an institutional core grant fund of £100,000 with additional funding allocated on past performance. Funding was intended to support and develop knowledge exchange activities and contribute towards the needs of business and the community, ultimately benefiting Wales and the UK. The Funding Council perceived the benefits of

engagement with Third Mission activity as both economic and societal. (See Figure 4: HEFCW's Third Mission, below).



Adapted from HEFCW (2004)

Figure 4: HEFCW's Third Mission

The benefits to society of Third Mission activities included having informed citizens and healthier communities, along with more effective planning and decision making. The benefits to the economy from these activities included having a skilled workforce, better managers and increased job opportunities alongside increased investment, international recognition and the creation of spin-out companies.

Ieuan Wyn Jones, then Deputy First Minister in the Welsh Government, acknowledged the economic benefits of Third Mission activity in his forward to the Knowledge Economy Nexus (Welsh Assembly Government, 2008), indicating that the key to economic prosperity was predicated on strong links between business and academia. This theme was also explored by Professor Philip Gummett, Chief Executive of HEFCW (The Information Daily, formerly eGov Monitor, 2010) when discussing the broader role of universities in supporting economic growth. He suggested that the creation of new knowledge via research was the key function of universities, with those which were less research intensive, applying existing research to new contexts, such as consultancy and staff development. One of the interesting aspects of this discourse was his assertion of the need for specialist staff to undertake this function, “rather than relying on academic researchers who may well lack the necessary skills or inclination” (The Information Daily, 2010, p.2). The proposed need to utilise specialists is flawed. Separating the functions lacks connectivity between learning, teaching, research and enterprise. Further, engagement with enterprise in the Cardiff School of Education/Cardiff Metropolitan University is based on the application of knowledge/research to consultancy and/or staff development, with proven levels of staff inclination and relevant skills.

The first cycle of Higher Education Funding Council for Wales’ Third Mission funding commenced in 2004 (HEFCW, 2009). Universities were required to present third mission strategies to release third mission fund allocations (HEFCW, 2006; 2009). The 2011/12 – 2013/14 cycle redefined the funding. Institutions in the Higher Education sector were

tasked with developing 'innovation and engagement' strategies for innovation and engagement fund allocations (HEFCW, 2011).

Using varying names in connection with enterprise has been detrimental to its overall development. Through my own experiences of encouraging academic staff in the Cardiff School of Education to engage with enterprise, some found it difficult to differentiate between 'enterprise', 'third mission' and 'innovation and engagement'. Likewise, they often found difficulty in connecting the three. This made it complex to promote enterprise activities as viable staff development opportunities. To a certain extent this aspect has been reflected in the present study. The initial title for the study was *'Innovation and Engagement: the academics' challenge'*. When releasing the on-line questionnaire, I made the decision in September 2012, to adopt the terminology used by the university for its directorate, 'enterprise'. Interestingly, in a review of the university's Innovation and Engagement strategy, presented in June 2014 to Academic Board, a need for a discrete strategy for enterprise, as one of the university's missions was highlighted. This will provide clearer links between the strategic planning for enterprise and other university strategies and objectives.

2.3.2 The 'Intrapreneur' in Higher Education

'Enterprise' became a buzz-word in the 1980s (Ahier, Cosin and Hales, 1996), with 'enterprise' and 'entrepreneurship' becoming popular labels with cachet (Bridge, O'Neill and Martin, 2009). Enterprise is often described as a core competence of any Higher

Education qualification linked to employability; developing enterprising graduates who will work with employers/industry (Bridge, O'Neill and Martin, 2009). However, it is less often used in the context of academic engagement with enterprise; this may be because external organisations perceive a university's focus to be learning, teaching and research and have a limited understanding of its desire to generate income and diversify its funding base using its internal resources.

Wickham (2006) highlights the role of the 'intrapreneur'. Explaining that intrapreneurs work within an organisation to develop and communicate the organisational vision, identify new opportunities and facilitates/encourages change. Differentiating between the role of the 'entrepreneur' and the 'intrapreneur', Maier and Pop Zenovia (2011) explain that the 'entrepreneur' has the freedom to make decisions and has responsibility for the success or failure of the business. In contrast, the 'intrapreneur' operates in an enterprising manner in someone else's business. The 'intrapreneur' may require approval from management before taking action. However, unlike the 'entrepreneur', 'intrapreneurs' are able to utilise the good name of the organisation and are free from personal financial risk. Given this distinction, academic staff in the Cardiff School of Education would be categorised as 'intrapreneurs', academic intrapreneurs.

Considering the role of the intrapreneur, Wickham (2006) presents a hierarchy of intrapreneurial activity, extending from the management of specific projects (level one),

through to reinventing the business' industry (level four). (See Table 2: Wickham's levels of Intrepreneurial Activity, below).

Table 2: Wickham's levels of Intrepreneurial Activity

Level One	The Management of Specific Projects <i>Engagement with new projects/new opportunities that are managed in an entrepreneurial way.</i>
Level Two	The Setting up of New Business Units <i>A particular part of the business operates with a distinct character of its own and with a degree of independent</i>
Level Three	Reinvigorating the whole Organisation <i>Flexibility can be lost as an organisation grows and attention may focus on internal concerns, rather than the wider picture with a need to re-introduce the inventive spirit and overcoming resistance to change</i>
Level Four	Reinventing the Business's Industry <i>The most successful entrepreneurs do not just enter the market – they reinvent the industry thereby highlighting the capacity to 'win' by changing the rules.</i>

(Wickham, 2006)

Academic staff in the Cardiff School of Education engage in a wide range of enterprise activities. These include secondments, consultancy, staff development, commercial short courses, bespoke short course development, conferences and external tenders. In addition, staff have been successful in their applications for internally funded opportunities such as training development funding, strategic insight placements, and seed funding. More strategically, the School successfully applied for funding to establish internal businesses. This included New Enterprise Funding to support the development of the School's recruitment agency, Educational Specialists @ UWIC (renamed Educational

Specialist @ Cardiff Metropolitan University in 2011), and Research and Enterprise Investment Funding to support the creation of the School's Outdoor Learning Centre.

If Wickham's (2006) interpretation of intrapreneurial activity is applied to enterprise projects undertaken within the Cardiff School of Education, the majority of projects fall within Level One. These are projects such as the Train the Trainer and Professional Presentation Skills short courses and the International Summer School that are delivered and project managed in an entrepreneurial way by academic staff. The enterprise activities operating at Level Two, are managed in a distinctly different way to those at Level One. Cardiff Metropolitan University Press - the Cardiff School of Education's publishing house, the English Language Training Centre - a language school for international learners for whom English is not their first language, Education Specialists @ Cardiff Metropolitan University - the School's recruitment agency, and the Outdoor Learning Centre are all business units that have a degree of independence and a distinct character of their own.

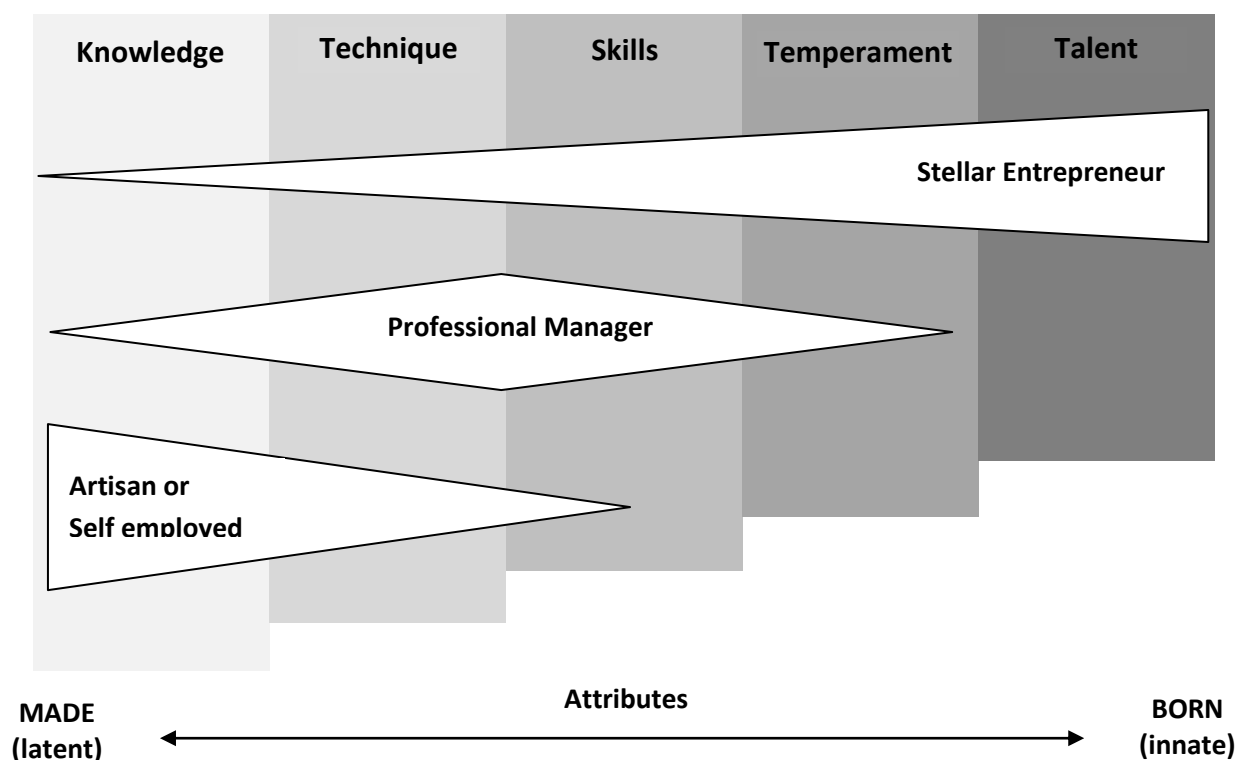
It is difficult to see where the School would have the autonomy to progress further in the hierarchy, as reinvigoration, at an organisational level (Level Three), would require approval from the Board of Governors (Cardiff Metropolitan University, n.d. b), and reinventing the industry (Level Four), a change in direction at Governmental level.

2.3.3 The Skill Set of the Entrepreneur

As intrapreneurs (Wickham, 2006) undertaking enterprise activities in an entrepreneurial organisation led by an entrepreneurial leader (Gibb, Haskins and Robertson, 2009), it is important to consider whether staff who engage in enterprise, are predisposed to do so because they possess certain characteristics. If entrepreneurs are born with a natural, innate talent, it would be difficult to grow capability from an existing pool of staff. However, if the characteristics are latent and can be nurtured, staff development opportunities provide a mechanism to develop a capability for enterprise; the nature versus nurture debate (Bridge, O'Neill and Martin, 2009). Whilst accepting that the achievements of some entrepreneurs are founded on their own skills and abilities, it does not mean that those without similar capabilities could not develop such attributes.

When exploring the nature versus nurture debate, Bridge, O'Neill and Martin (2009) place the attributes of the entrepreneur along a continuum, extending from those attributes which are latent, and perhaps yet to be discovered, to those which are innate. They include: knowledge, technique, skills, temperament and talent. The self employed individual has the knowledge, technique and skills of the entrepreneur, whereas the stellar entrepreneur possesses knowledge, technique, skills, temperament and talent. The placement of the professional manager in this continuum is interesting, as this reflects the role of academic staff working in the Higher Education sector. This suggests that academic staff will have the temperament of the entrepreneur but are unlikely to have the inborn talent of the stellar entrepreneur (Bridge, O'Neill and Martin, 2009). (See

Figure 5: The Nature Nurture Continuum, below). This research did not seek to establish whether or not entrepreneurial talents were inborn or learned. There is much debate whether the skills to engage with enterprise can be taught (Henry, Hill and Leitch, 2005b) or the outcomes of learning effectively measured. Nonetheless, academic staff from the Cardiff School of Education need to be sufficiently equipped with knowledge and skills (enterprise competencies) that enable them to recognise the knowledge resource they possess. Appropriate training develops and enhances enterprise competencies (Henry, Hill and Leitch, 2005b).



Bridge, O'Neill and Martin (2009, p.63)

Figure 5: The Nature Nurture Continuum

Within the context of Higher Education, and particularly at Cardiff Metropolitan University, the criteria for the employment of academic staff is usually based on subject knowledge and research profiles. Entrepreneurial skills and a willingness to engage with enterprise activities are rarely considered in the recruitment process. Whilst Wickham (2006) suggests that anyone is able to become an entrepreneur, he maintains that life experiences are better indicators. My own life experiences have been included in the Professional Development Portfolio (see PDP Appendix Two: Me and Understanding Me, page 422) to show how this encouraged me to undertake enterprise activities and move into the role of Director of Enterprise in the Cardiff School of Education. Wickham (2006) identifies inventors and young professionals as individuals likely to take the entrepreneurial option. However, he also makes mention of the 'unfulfilled manager' who may be unsatisfied with their ambitions, the 'displaced manager' who may have experienced an enforced career change, and the 'excluded' who turn to entrepreneurial opportunities because there is nothing else available to them. With regard to enterprise activity in the Cardiff School of Education it is important to have academic staff who are passionate about their project. Enterprise is not an easy option it is an exciting, alternative one that requires commitment, knowledge and an appropriate skill set.

Given the guidance for '*Enterprise and entrepreneurship education*' provided by the Quality Assurance Agency for Higher Education (2012, p17), the skills set of the entrepreneur will become more explicit for academic staff as a graduate outcome with students required to demonstrate ability to:

- take creative and innovative approaches that are evidenced through multiple solutions and reflective processes (creativity and innovation);
- persuade others through informed opinion and negotiate support for ideas (persuasion and negotiation);
- manage a range of enterprise projects and situations appropriately, for example by proposing alternatives or taking a holistic approach (approach to management);
- evaluate issues and make decisions in situations of ambiguity, uncertainty and risk (decision making);
- use networking skills effectively, for example to build or validate ideas or to build support for ideas with potential colleagues or stakeholders (networking);
- recognise patterns and opportunities in complex situations and environments (opportunity recognition);
- model and propose business opportunities that take account of financial implications, legal implications and issues of intellectual property (finance and business literacy).

The Quality Assurance Agency for Higher Education (2011, p.17)

This has relevance for all academic staff working within the Higher Education sector. Although behavioural, sociological, societal, economic and personal factors have the potential to make some staff more entrepreneurial than others, there are a set of enterprise competencies, personal qualities and skills that are characteristic of an effective entrepreneur (Bridge, O'Neill and Martin, 2009). These are presented in Table 3: Enterprise Competencies, below.

Table 3: Enterprise Competencies

Dedication	Creativity	Technical competencies
Decision making	Confidence	Sensitivity to changes
Goal setting	Innovation	Networking and contacts
Planning	Risk taking	Developing relationships
Responsibility	Insight	Project management

Bridge, O'Neill and Martin (2009, p.82)

In the context of developing enterprise capabilities, these enterprise competences have the propensity to inform staff development initiatives at institutional and School level.

2.3.4 Enterprise Lens on the Researcher Development Framework

The Enterprise Lens on the Researcher Development Framework has been developed to enhance professional and career development in Higher Education (Vitae, 2011). The framework comprises four domains that illustrate the knowledge, behaviours and attributes of successful researchers:

Domain A – knowledge and technical abilities;

Domain B – personal effectiveness;

Domain C – research governance and organisation;

Domain D – engagement, influence and impact.

Of particular importance, with regard to the Enterprise Lens, is the interconnection between research and enterprise. It substantiates an understanding that the knowledge,

behaviours and attitudes of the researcher can be acquired through enterprise activities. Likewise, that the knowledge, behaviours and attitudes of academic intrapreneurs are transferable and can be applied to research:

... the act of undertaking a doctorate is a good training ground for the development of enterprise skills. Research by its nature requires creativity, determination and problem solving. These skills are likely to be useful wherever a researcher's journey takes them (Vitae, 2011, p.1).

As part of the doctoral journey, and to test the aptness of the framework, an audit of my research and enterprise skills was undertaken. This is presented in PDP: 4.1 The Enterprise Lens (Researcher Development Framework), page 410 and in PDP Appendix Ten: Researcher Development Framework Personal Skills Audit April 2014, page 470. What was interesting for me was establishing a clear link between the skills required for research and enterprise. The areas of strength, such as knowledge and intellectual abilities (Domain A), and professional conduct (Domain C) were straightforward. However, I recognised areas for development with regard to personal effectiveness (Domain B), and engagement, influence and impact (Domain D). In both domains, the areas for development were associated with my fledging career as a researcher and an emerging reputation for research, a need to publish my research outcomes and achieve impact through public engagement/global citizenship.

There is clearly an alignment between research and enterprise. In a university that aspires to have 50% of its academic staff with, or studying towards a doctoral

qualification (Cardiff Metropolitan University, 2012) this greater transparency will promote an appreciation of the role research can play in developing enterprise capability.

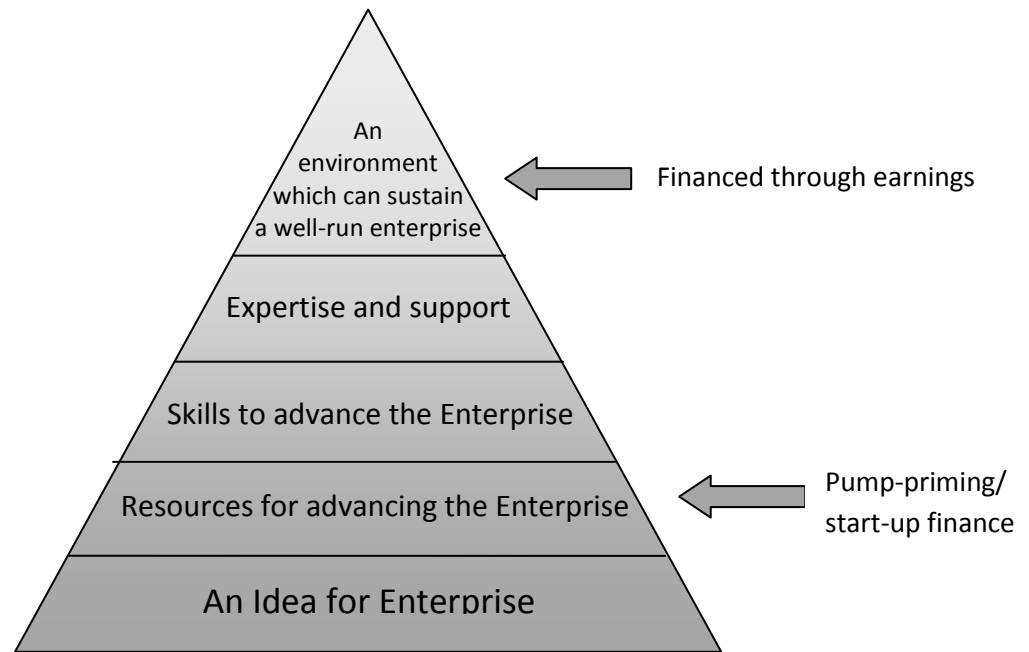
In summary, the varying nomenclature (third mission, innovation and engagement, enterprise) used to represent enterprise activities has caused confusion across the sector. There needs to be a primary focus that forms a strategic thread from the corporate vision, through to School/departmental strategic planning that embraces a corporate strategic plan for enterprise. Academic staff engaging with enterprise within the university are intrapreneurs. They do not have complete autonomy but neither do they have the financial risk of the entrepreneur operating independently. They are able to use the resource of the university and benefit from the good name of the institution when conducting business. With regard to being intrapreneurial, most activity within the Higher Education sector would be representative of level one and two (managing projects and setting up new business units). There is a set of enterprise capabilities, and whilst there is some debate as to whether these capabilities are latent or innate, they have the potential to inform staff development programmes; equipping academic staff and building capacity to engage with enterprise activities. Likewise, engaging with research provides opportunities for academic staff to develop skills that can be used when undertaking enterprise activities.

2.4 Supporting Engagement with Enterprise in the Cardiff School of Education

Being entrepreneurial in the context of Higher Education and capitalising on the commercialisation of knowledge, rest on four 'pillars': academic leadership, control of resources, capability to transfer knowledge and an entrepreneurial ethos amongst staff and students (Shattock, 2003; Etzkowitz, 2008). Part of the success of the Cardiff School of Education has been the development, over time, of capability and capacity with regard to each of the components. However, mindful of the need for longevity and sustainability of engagement with enterprise, this research has offered the opportunity to scrutinise the impact of current practice, reflect, and with the new knowledge gained, adjust School policy, procedures and strategic plans, where appropriate, to improve practice (Moon, 2006).

2.4.1 A Hierarchy of Support for Enterprise Activity

When analysing theoretical models that promote engagement with enterprise activity, Bridge, O'Neill and Martin (2009) have developed a hierarchy of needs, a concept that has drawn on the work of Maslow and his hierarchy of human needs. They sought to find out what it was that individuals most needed to start new enterprises and found that these varied, depending on circumstances. Some needed training, others needed money; however, they found that by categorising needs into a hierarchy, they could see that lower-order needs, as with the hierarchy of human needs, were dominant, until satisfied. (See Figure 6: A Hierarchy of Enterprise Needs, below).



Adapted from Bridge, O'Neill and Martin (2009, p.172)

Figure 6: A Hierarchy of Enterprise Needs

To contextualise this, in the Cardiff School of Education, a member of staff might have an idea for enterprise. S/he would need help in terms of resources to take it forward. Skills development may also be required. Without the skills, the resources cannot be used effectively; without the resource, the idea cannot come to fruition. One of the difficulties with the hierarchy of enterprise needs model, is that enterprise projects and the skills of academic staff vary so greatly. The resource required to project manage an academic conference is totally different to that needed to provide accredited professional development for teachers. Some staff may need project management training to help them achieve the objectives of a large tender, whilst others may need financial guidance to ensure efficiency in resource allocation. My key criticism of the model is that the 'environment to sustain a well run enterprise' sits at the pinnacle of the hierarchy. The

environment needs to be embedded. It is difficult, at inception, to know which ideas will make the greatest impact so without a well-run environment at its core, tentative ideas cannot be nurtured.

2.4.2 Staff Motivation to Engage with Enterprise

New ideas cannot be supported if they are not communicated. Likewise academic staff may not recognise the benefit of engaging with enterprise activities unless clearly articulated. Clear and transparent information can be a motivational driver. Motivation is linked to attitude and is needs related (Armitage *et al.*, 2007). It describes how someone will use his/her energy to satisfy their needs (Pritchard and Ashwood, 2008). Wickham (2006) makes a connection between leadership, power and motivation, describing them as the 'tools of the entrepreneur'. With regard to motivation, he differentiates between self motivation and the need to motivate others describing it as:

... a behavioural phenomenon. Individuals are motivated (or demotivated) by the way people act towards them. This behaviour is an integral part of leadership. It is sensitive to personality and situation. (Wickham, 2006, p.21)

Wickham (2006) links motivation to the entrepreneurial responsibility of setting goals. He also rationalises that if an individual is to deliver outcomes on these goals, s/he may need support and reward. He does, however, recognise that to motivate someone there needs to be an understanding of what they hope to gain for their effort.

Motivating academic staff to engage in enterprise activities is affected by a number of issues such as knowledge, skills, confidence, time, willingness, reward and the value placed on being entrepreneurial in an academic context. There is no magic formula for increasing motivation particularly as things that motivate colleagues may not be ones I value (McCaffery, 2004). Personal experience in the role of Director of Enterprise has confirmed this. Some academic staff in the Cardiff School of Education are motivated by a financial reward. For others, this is of little or no importance; they perceive alleviation from formal scheduled teaching as an appropriate reward. Thorp and Goldstein (2010) confirm that:

Inside academia, it's hard to talk about the university's impact on the world's greatest problems without getting immersed in a conversation about faculty rewards and university structure. Discussions about enterprise creation or entrepreneurship... quickly become debates over whether faculty should be rewarded with promotion and tenure for securing patents and creating businesses. (Thorp and Goldstein, 2010, p.106)

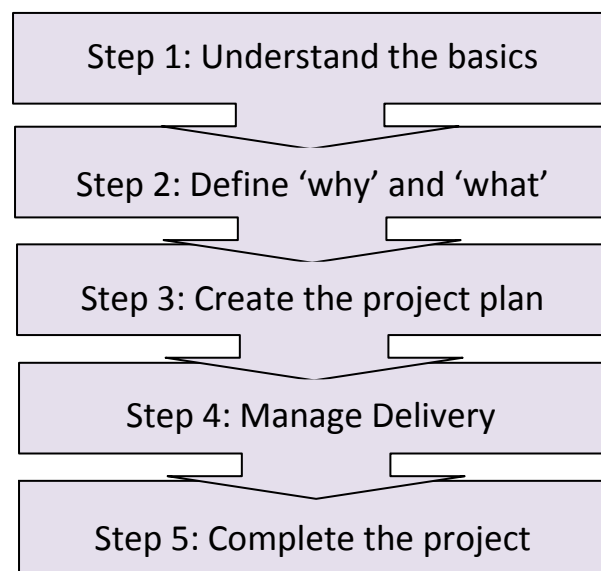
Nonetheless, Wickham (2006) highlights the need for those engaged in enterprise to comprehend what is required of them, clarifying that this extends beyond an understanding of the 'good business idea' to embrace general management skills that can be utilised to mobilise the physical and financial resources to run an enterprise venture. He lists these as: strategy skills; planning skills; marketing skills; financial skills; project management skills; and time management skills. These attributes are essential to the success of commercial activities offered by the university.

2.4.3 Managing Enterprise Projects

For each enterprise activity undertaken within Cardiff Metropolitan University, the 'lead academic' is required to complete a 'Costing and Pricing' form. The process identifies staff costs, resource costs and calculates the rate of return/level of contribution (profit) that the activity will make. The lead academic is required to sign as 'project manager' however, this is not indicative of the possession of project management skills/training. This might be problematic particularly where a project manager has not recognised the need to steer the initiative to success. For example, projects can be doomed to failure if deadlines are not met, project objectives are not achieved, there is an overspend of the budget with the project manager taking the stance of 'innocent bystander' (Barker and Cole, 2007). For some academic staff, there is a need for project management training. The Research and Enterprise Service unit at Cardiff Metropolitan University provide project management staff development, however, at a School level, the timing of these sessions may not coincide with specific project opportunities. To address this, support is provided by the School's Research and Enterprise Support Team, however, this can be challenging for project managers and the team, alike.

Barker and Cole (2007) discuss the benefits of managing enterprise initiatives that are challenging, varied, interesting and offer job satisfaction. This is positive; it can feed into the annual Staff Performance Review Scheme and be highly motivating. In contradiction, they also suggest that demanding projects provide a way to learn quickly, saying that there is "no substitute for on-the-job training" (Barker and Cole, 2007, p.7). One of the challenges in a learning by doing approach would be ensuring that academic staff are

sufficiently supported and able to achieve a successful outcome. An unsupported member of academic staff project managing a demanding project might lead to stress related failure. In turn, this devalues the benefits that can be gained from engagement with enterprise activity. In an attempt to address this, Newton (2006) suggests that all project managers should adopt a step-by-step approach to managing and delivering projects. (See Figure 7: Newton's Step-by-Step Model of Project Management, below).



Newton (2006)

Figure 7: Newton's Step-by-Step Model of Project Management

Newton (2006) suggests that if you know what the project is and your role (step one) in relation to the project dimensions, you are more likely to achieve success. It is the project definition stage (step two) of this model that is most interesting, as it provides a mechanism to explore the appropriateness of the project. In an educational setting, one

could argue that a Director of Enterprise may be more likely to undertake this first, before even tendering for a project as the following questions posed by Newton (2006, pp22-23) have the potential to drive the decision making process:-

- Why do we want to do this project?
- What will you have at the end that you don't have now?
- Will you (should you) deliver anything else?
- Is anything explicitly excluded from the project?
- Are there any gaps or overlaps with other projects?
- What assumptions are you making?
- Are there any significant problems you should be aware of?
- Has the customer set any conditions on the way you do this project?

At the project planning stage (step three) Newton's model suggests that the project manager should be adding milestones and contingency to the skeleton plan and reviewing progress with the 'project customer'. This leads logically to the next phase (or step) where the project starts and the project manager begins to undertake tasks and deal with issues that will enable the deliverables of the project to be completed within the given timeframe. The final step highlights a need to 'test' the deliverables before releasing them to the customer; an essential aspect of the quality assurance process for an educational establishment that builds its reputation on its assurance of educational standards and the quality of its degree. Newton (2006) also advocates the need to be

proud of and celebrate successful projects. This facet of the model is important in developing enterprise (McCaffery, 2004), more so in a climate where the impact achieved and reputation of the project manager, School and/or organisation can be enhanced by such celebration.

2.4.3 An Emergent Model Supporting Intrapreneurship in the Cardiff School of Education

A number of conceptual models and theories that support enterprise and an entrepreneurial climate were analysed as part of the review of the literature. In the early stages of the research these models lacked coherence in terms of developing and sustaining an entrepreneurial culture in the Cardiff School of Education. The hierarchy of enterprise needs (Bridge, O'Neill and Martin, 2009) was not linked to stepped approach for successful project management (Newton, 2006), with neither making reference to the role of the intrapreneur (Wickham, 2006). This led to the creation of a synergistic conceptual model for supporting intrapreneurship in the Cardiff School of Education (Jones, 2011a). The model was implemented in the School from the academic year 2009-2010 onwards, one that drew on the several theoretical strands examined in the literature. The success of the model is reported in Table 1: Research and Enterprise Targets, page 30.

The conceptual model I created reflected Wickham's (2006) notion of intrapreneurship, in that academic staff would be expected to behave like entrepreneurs for Cardiff Metropolitan University. Further, it modelled the hierarchical approach adopted by

Bridge, O'Neill and Martin (2009) and the stepped, progressive style of Newton (2006). In contrast to the hierarchy of enterprise needs presented by Bridge, O'Neill and Martin (2009), where the environment to sustain well-run enterprise activity is seen to be the pinnacle for the hierarchy, it is based on a central core. This 'core' also reflects the need to sustain motivation (Wickham, 2006) through an effective and supportive network. The core represents the 'services' of the Cardiff School of Education's Director of Enterprise and its Research and Enterprise Support Team. The core was fundamental in supporting academic engagement with enterprise activity and developing an effective enterprise culture that enabled the School to respond to commercial, social and cultural opportunities. (See Figure 8: A Core of Enterprise Support, below).

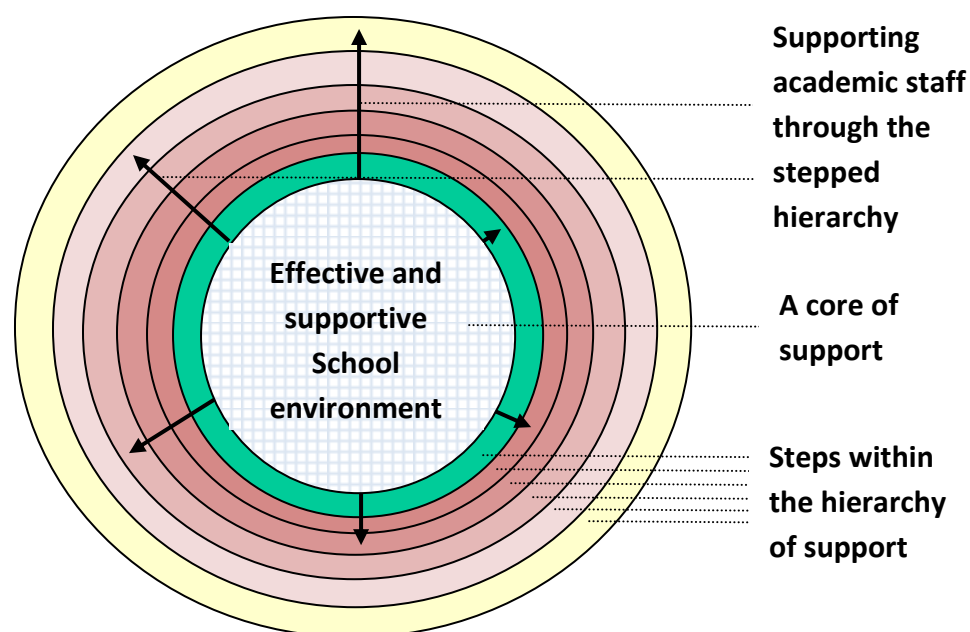


Figure 8: A Core of Enterprise Support

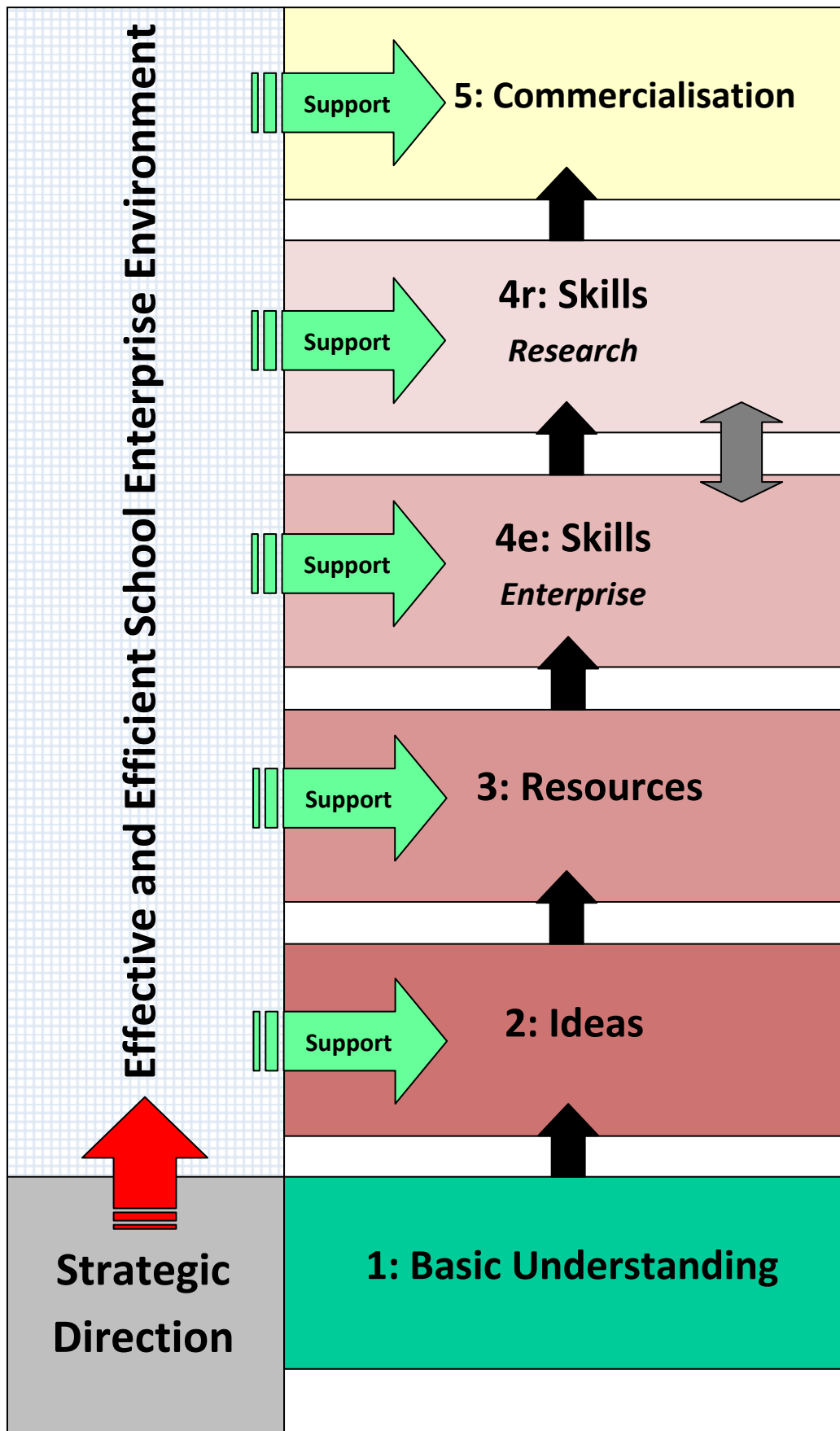


Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education

As with Newton's (2006) model for Project Management, the model for supporting intrapreneurship in the Cardiff School of Education (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79) was founded on academic staff having a basic understanding of their role and the expectation to engage with enterprise activity, step one. This is aligned to the strategic direction of the university/School. However, this also reflected Wickham's (2006) suggestion that to maintain levels of motivation, there needs to be an understanding, or direction, of what is expected. This basic understanding could be informed further with a clear role expectation (job description) that makes specific reference to engagement with enterprise and creates a link between enterprise and research. Likewise, clear articulation of the value placed on engagement with enterprise activity would be beneficial in order to show how this contributes to professional practice and career advancement in the context of Higher Education.

Step two of the model related to having 'ideas' that have potential to generate income and contribute to the knowledge economy. Informed support at this stage was essential. Firstly, to ensure that ideas for enterprise tied into the Corporate/School strategic plans, secondly, that ideas for enterprise would enhance the reputation of the Cardiff School of Education and Cardiff Metropolitan University, thirdly, that the activity was 'doable' and fourthly, that it was fully costed. This step of the conceptual model was important with regard to motivation. When someone felt that their idea was valued and supported, they were more likely to spend time thinking of further ideas that they could bring to fruition. In cases where ideas were not financially viable, it was important to consider the effect

that this might have in terms of motivation. Additionally, some ideas were based on the involvement of teams and involved staff development to ensure that everyone was in a position to contribute to the successful fruition of the idea for enterprise.

Once an idea for enterprise was recognised as viable, the model of support progressed to step three, resources. Newton (2006) makes no specific reference to the resources required to enable ideas for enterprise to come to fruition, although this might be implicit in the step he refers to as 'creating the project plan'. Resources are an important element of project management as this also encompasses financial rewards and incentives. Having the required resources to advance the idea for enterprise activity, had an element of similarity with the Hierarchy of Enterprise Needs (Bridge, O'Neill and Martin, 2009). Where it differed was that they made reference to pump-priming and start-up finance. In the Cardiff School of Education, once an enterprise project was costed and authorised by the Dean of School and Cardiff Metropolitan University's Head of Enterprise, it was allocated a cost-code. This cost-code, in essence, had the role of start-up finance because all outgoing costs were permitted on the basis of incoming finance.

Once the resources were in place to advance the enterprise activity, consideration was given to skills. This step in the model related to what Bridge, O'Neill and Martin (2009) referred to as having the 'skills to advance the enterprise'. In the model I developed, step four was two-fold with each step seen to be interchangeable and dependent on the

individual needs of academic staff. Some project managers and academic member of staff required technical skills, specific to the project. I referred to this as 'skills for enterprise'. This ensured that staff were fully supported in achieving project outcomes. This step also had elements of similarity with Newton's steps to 'manage delivery' and 'complete the project'. However, there was no reference to academia in either Newton's model or the hierarchical model of Enterprise Needs offered by Bridge, O'Neill and Martin (2009). Likewise, there was no explicit requirement to evidence the influence an enterprise activity had achieved, nor the impact it had made. To address this, my model included 'skills for research'. This was based on the fact that there were a large number of academic staff who were very active in terms of engagement with enterprise but less active in articulating these outcomes amongst the research community. This step was intended to enable and empower enterprise active staff to write up and publish the outcomes of their enterprise activities. This is a modification of the work of Bridge, O'Neill and Martin (2009) who simply identified a need for 'skills' without categorising them in any way.

The categorisation is an important aspect of the model of support I created as it links to the priorities of the Welsh Government, the Higher Education Funding Council for Wales, Cardiff Metropolitan University and the Cardiff School of Education, namely to commercialise the outcomes of research. More recently, it reflects one of the recommendations of Tabberer (2013) for providers of Initial Teacher Training to engage with research.

The model for supporting intrapreneurship in the Cardiff School of Education (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79), has been successful with regard to enterprise. The number of academic staff engaged with enterprise activities has increased and the contribution (profit) to the School's Research and Enterprise financial targets have been exceeded annually (see Table 1: Research and Enterprise Targets, page 30). The model has been less successful with regard to developing an integrated approach to research and enterprise. Whilst step four of the model was meant to facilitate engagement with research it required a more collaborative approach across the School's directorate. Despite the limitation with regard to research, overall, its effectiveness with regard to enterprise has relevance to other academic schools within Cardiff Metropolitan University and has potential to be of relevance to other School's of Education in the Higher Education sector.

2.4.4. Value Metrics for Enterprise

The varying concepts which can be attributed to 'value' were not explored in detail as a component of the model for supporting enterprise activity (Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79). The university's targets for enterprise were articulated in the Corporate Strategic Plan for 2012-2017, but this does not include a means of measuring the attributes that are valued and to be rewarded (Bessant and Tidd, 2011).

Expressing values through the university's mission statement provides an opportunity to develop an entrepreneurial culture with metrics that can be employed to measure entrepreneurial efficiency and place value on the wider benefits of engagement with enterprise (Penaluna, Penaluna and Jones, 2012). It is still open to debate whether greater value is placed on those outputs that are financial and easy to measure, or on those which are associated with broader changes in attitude and mindset (All Party Parliamentary Group for Micro Business, 2014).

To be effective in supporting academic staff who choose to engage with enterprise, there needs to be an understanding of the priorities of the university and the school. These priorities are usually expressed as mission statements that reinforce the core purpose and values of the organisation (Witcher and Chou, 2014). Corporate values influence organisational strategy and define the ways in which it operates (Womack and Jones, 2003; Johnson *et al.*, 2015). As previously discussed in section 2.1.1 The Entrepreneurial University (page 38 onwards), the changing role of academic staff has been influenced by amendments to funding accompanied by an expansion of the university mission (Etzkowitz, 2003; Deem, Hillyard, and Reed, 2007; Penaluna, Penaluna and Jones, 2012). Etzkowitz (2003) relates this expansion to 'academic revolutions' wherein universities have moved from the preservation and dissemination of knowledge to embrace research (first academic revolution) and more recently, economic and social development (second academic revolution). One of the challenges for universities is to ensure that mission statements reflect changing cultural values that encapsulate all its activities: learning and teaching, research and enterprise (Brown and Swain, 2012).

At Cardiff Metropolitan University there has been a tendency to value activities associated with research, learning and teaching, with the recommendation that enterprise activity has 'parity of esteem' with both. In reality, this has not always been the case. In 2007 there were only 11% of academic staff in the Cardiff School of Education recorded as enterprise active, suggesting that this was favoured career option for fewer members of academic staff in that school.

Nonetheless, enterprise is economically valued by the university in its Corporate Strategic Plan 2012-2017 through measurements against financial targets and the creation of business start-ups. In return, academic staff can use their experience to support an application to Reader/Professor (Cardiff Metropolitan University, 2013-2014), reflecting an element of cognitive value (Campbell and Stonehouse, 2011). Similarly, academic staff can choose to benefit financially for securing commercially viable work (economic value) through the university's Rewards and Incentive Scheme, which can be as high as 20% of the 'net profit' – though this is negotiable at school level. These payments could either be made to the individual/project leader, or ring-fenced for a particular group/project. Whilst the scheme was intended to encourage staff to secure commercially viable work, the rewards for those undertaking it were variable.

In a knowledge economy, academic staff (knowledge workers) are valuable assets (Keep and James, 2010). In this context, there is a need to incentivise staff, encouraging them

to invest time and energy in meeting organisational goals (Pritchard and Ashwood, 2008; Keep and James, 2010). The university uses metrics to benchmark academic practice and academic standards through performance and programme review, yet there is no metric that measures or evaluates the value of enterprise activity. This may be because the measurement for success is unclear and/or debatable (Thorp and Goldstein, 2010).

In contrast, the Cardiff Metropolitan University's Portfolio Development Group has established a metric that allows the 'health' of learning and teaching activities to be measured. The metric is based on five categories: demand; quality; retention; goals; and diversity. These categories are linked to twelve factors on which measurements are made. (See Table 4: Metric for Learning and Teaching Activity, below). Each of the factors is scored out of five, with the performance of academic programmes based on a measurement out of 60. The higher the score a programme receives, the healthier it is deemed to be. For example, taking 'applications' from the 'demand' category, programmes with fewer than fifty applicants are allocated a score of one; programmes with more than 200 applicants receive a score of five. Similarly, in the 'quality' category that measures degree outcomes, programmes with less than 40% of students achieve either a First Class Honours Degree or an Upper Second Class Honours Degree would score one; those achieving over 75% score five. The metric expresses the importance of specific outcomes for learning and teaching. It places a measurement against the qualities of a programme that are desired. In turn, this leads academic staff towards operating in certain ways to achieve these desired outcomes (Orsi, 2015).

Table 4: Metric for Learning and Teaching Activity

Categories	Factors			
Demand	Application	Clearing	Offers: Acceptances	New students: Target
Metric	<50	>30%	<20%	<70%
1	50 – 75	20-30%	>19%	>70%
2	76 – 99	11-19%	>29%	>75%
3	100 – 200	6-10%	>39%	>80%
4	>200	0-5%	>49%	>90%
5				
Quality	Entry tariff	1st/2:1		
Metric	0-99	0-39%		
1	100-199	40-49%		
2	200-249	50 – 64%		
3	250-299	65 – 74%		
4	300+	75+%		
5				
Retention	Withdrawals	Attrition rates		
Metric	10+%	25%		
1	8-9%	20-24%		
2	6-7%	15-19%		
3	4-5%	10-14%		
4	0-3%	0-9%		
5				
Goal	NSS Scores	Graduate level employment		
Metric	1 – <70%	<20%		
1	2 – 71 – 75%	21-24%		
2	3 – 76 – 80%	25-29%		
3	4 – 81 - 85%	30-39%		
4	5 – 86+%	40+%		
5				
Diversity	Profile	International students		
Metric	<i>Metric not provided</i>	<i>Metric not provided</i>		

This measurement of value reflects the criteria for success for learning and teaching, an activity, considered integral to the business of the university. This enables academic staff to understand what is important in terms of their practice (Brown and Swain, 2012; Johnson *et al.*, 2015), and the ways in which this supports success with regard to corporate strategic goals (Taylor, 2008).

The metric for learning and teaching activity confirms valued elements of practice. A similar metric, relating to enterprise activity could serve the same function. In turn, this would guide academic staff who are enterprise active and create a cross-university infrastructure that recognises its importance as a business activity. That is to say, categories of importance for academic staff could include the degree of engagement with enterprise activity (number of enterprise projects/project management responsibility), the duration of enterprise projects, income generation (percentage return/contribution to financial targets), the degree of cross-school activity, and overall outcomes (income/publications/dissemination via conferences).

Creating a value metric across differing types of enterprise activity so that an entrepreneurial culture could flourish and lead to career opportunities would be challenging. To maintain levels of motivation for engagement with enterprise activity, what is of value and what adds value to the organisation would need to be articulated with a metric that is transparent, fair (Pritchard and Ashwood, 2008) and relevant to varying types of value (Campbell, Edgar and Stonehouse, 2011).

There are six common types of value identified by Campbell, Edgar and Stonehouse (2011):

- i) economic value, which is linked to wealth and resources;
- ii) physical value, associated with wellbeing and comfort;
- iii) emotional value, which reflects a person's feelings;
- iv) social value, associated with relationships;
- v) cognitive value, associated to the quest for knowledge and wisdom; and
- vi) political value, that is aligned to influence, power and control.

The importance given to each type of value will vary and is dependent upon the perspective of the organisation and individuals within the organisation. More than one type of value can influence professional practice. For example, a member of academic staff from the Cardiff School of Education could engage with enterprise activity because it has cognitive value, contributing to personal research. However, physical value relating to personal wellbeing may be of equitable importance in relation to the demands associated with the task. In contrast, the university may prioritise economic value in order to diversify income alongside cognitive value that could be linked to the knowledge economy. At the same time, the university could place political value on activities that reflect national and international priorities of strategic importance.

In summary, engagement with enterprise is a priority of Cardiff Metropolitan University and the Cardiff School of Education. This engagement addresses the desire of the Welsh Government for universities to commercialise their research. The hierarchy of enterprise needs (Bridge, O'Neill and Martin, 2009) was analysed for its relevance in developing an entrepreneurial climate (McCaffery, 2004). In addition, the value placed on engagement with enterprise activity was explored in relation to achieving the corporate and School strategic objectives. This included types of value (Campbell, Edgar and Stonehouse, 2011), the measurement of value (Thorp and Goldstein, 2010), and the interrelationship between value metrics and motivation (Pritchard and Ashwood, 2008). Pritchard and Ashwood's (2008) model was considered, as was the issue of incentivisation. Of particular note is the need for enterprise projects to be managed effectively and the impact this has on developing project management capability. Here, the step-by-step approach, advocated by Newton (2006) was evaluated. The section culminates in the presentation of an original, conceptual model for supporting intrapreneurship designed for the Cardiff School of Education. The model was introduced in the academic year 2009-2010. The model has been successful in developing enterprise capabilities and in achieving and exceeding enterprise targets. It has been less successful in integrating research outcomes. The model formed an integral part of the research and has informed the focus of research tools used for data collection.

Chapter Three: Methodology

Research is an instrumental part of problem resolution (O’Leary, 2005). It offers the opportunity to bring about change (Clough and Nutbrown, 2007), make a difference, develop new or deeper understanding and creates something better (Winkler, 2010-11).

This chapter describes the research methodology. It includes scrutiny of the underpinning theoretical perspectives that informed the research framework. Further, it clarifies how the research was planned, designed and implemented. The measures in place to ensure the robustness and trustworthiness of the research data, are also discussed. The process for ethical approval is included as is the way in which this was applied to data collection, data analysis and the implications for reporting the findings of the research. Both quantitative and qualitative approaches were utilised. These aspects are analysed in relation to the design and development of the bilingual on-line questionnaire and the semi-structured interview guide used for data collection. The chapter also includes the measures taken to test the format of data reporting that informed the presentation of the analysis and results.

The research took place between 2008 and 2014. The journey is linked to my professional practice and detailed in Figure 10: Chronology of Research, below⁹². The data collection stage of this research was undertaken in six phases. These phases are detailed in Table 5: Phases of Data Collection, page 93.

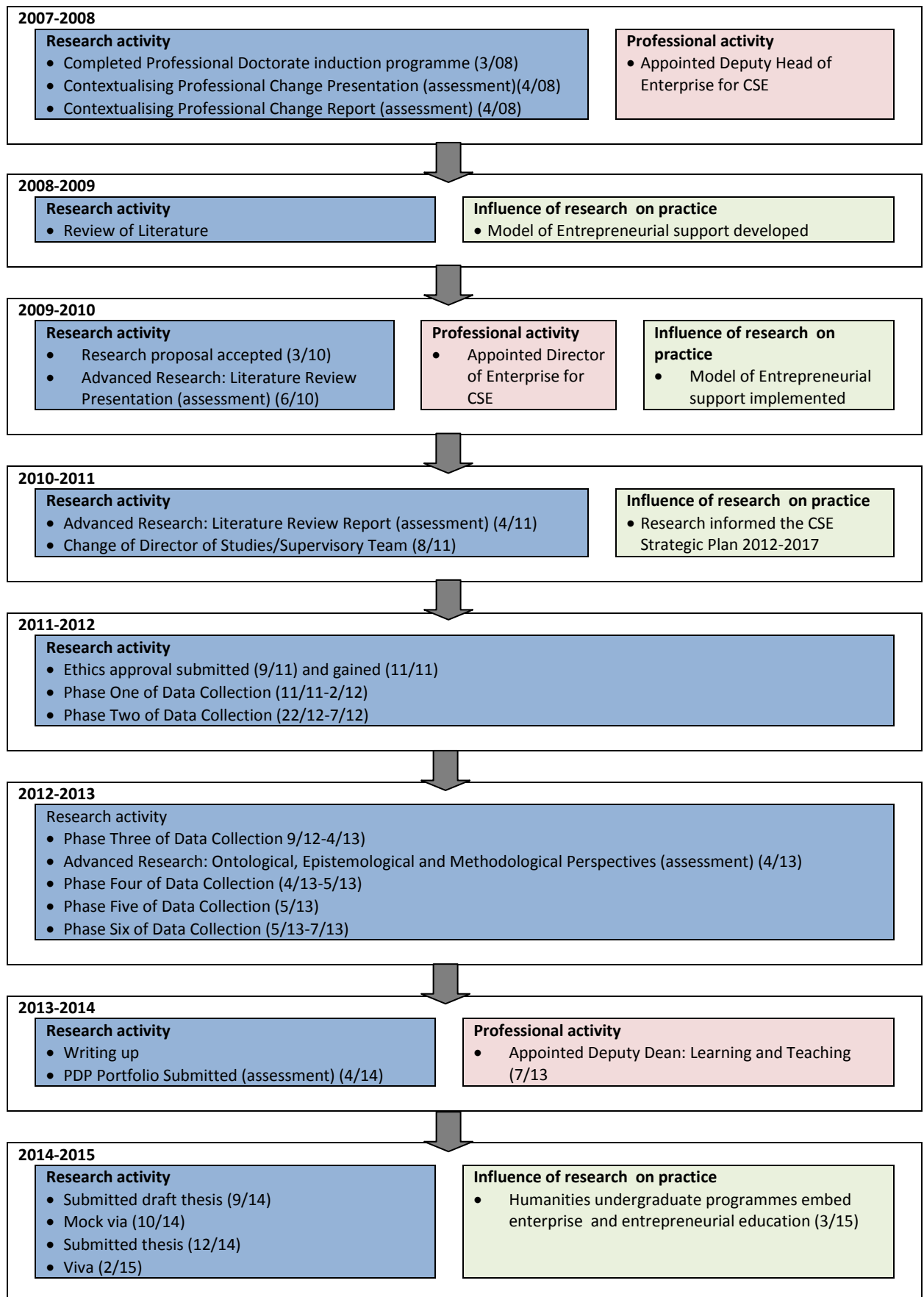


Figure 10: Chronology of Research

Table 5: Phases of Data Collection

Phase One Nov 2011 – Feb 2012	Planning and design of the bilingual, on-line questionnaire.
Phase Two Feb 2012 – July 2012	Testing on-line questionnaire with eight members of staff from the Cardiff School of Sport and subsequent updating based on feedback from those involved in testing.
Phase Three Sept 2012 – Apr 2013	Distribution of English and Welsh on-line questionnaire to 63 academic staff, the results of which informed the planning and design of the interview guide; phase five of the research.
Phase Four Apr 2013 – May 2013	Planning, design and recording of the semi-structured interviews.
Phase Five May 2013 - May 2013	Testing interview guide and transcription of audio file with one member of staff from the Cardiff School of Education and subsequent updating based on feedback received.
Phase Six May 2013 - July 2013	Completion of semi-structured interviews with 18 academic staff and three support staff from the Cardiff School of Education, along with two staff from the university's Research and Enterprise Services unit and one member of the Vice-Chancellor's Board.

The phases of data collection provided structure to answering the research questions (presented in Chapter One, Section 1.6 Research Aim and Research Questions, page 31). The research questions defined the investigation, set boundaries, provided direction and acted as a frame of reference (O'Leary, 2005). According to Trochim (2006), there are three types of research question: i) descriptive research questions that describe what is happening, ii) relational research questions that determine association between linked objects, and iii) causal questions that ascertain whether or not specific variables lead to specific outcomes. These criteria were applied to the research questions (see Table 6: Categorising the Research Questions, below).

Table 6: Categorising the Research Questions

Research Questions:		Category	Justification:
RQ i)	<i>How have the types of enterprise practices that currently exist within the Higher Education sector evolved?</i>	Descriptive Question	This explored what was currently taking place with regard to enterprise activities nationally and regionally.
RQ ii)	<i>In what ways has the university promoted enterprise activities and how effectively are academic staff supported strategically and operationally to engage with them?</i>	Descriptive Question and Relational Question	This question explored what was currently taking place with regard to enterprise activities institutionally and at School level (descriptive). There was also an element of examining the association between support given and the outputs of enterprise activities (relational).
RQ iii)	<i>How effective is the support available to Cardiff School of Education academic staff in achieving 'impact' in the wider community with the enterprise activities undertaken?</i>	Causal Question	The question considered the variable element of support and the intended specific outcome of impact of enterprise activities within the Cardiff School of Education.
RQ iv)	<i>How can the findings of the research inform change/s to future strategic planning within the Cardiff School of Education?</i>	Relational Question	This question determined the association between the findings of the research, the potential to develop a model of enterprise, based on the findings and future strategic planning

The research questions formed the basis of the methodological design; a means of moving from questions to answers (O'Leary, 2005). The next section of the work articulates the methodological approach undertaken.

3.1 The Research Methodology

Gaining a theoretical understanding of research and the use of research terminology has been part of the doctoral journey, and is reflected upon in the Professional Development

Portfolio (Section Three: Reflections on Undertaking the Professional Doctorate, page 395 and PDP Appendix Two: Me and Understanding Me, page 422, as well as PDP Appendix Three: A theory is..., page 428). When considering the terms 'ontology' and 'epistemology', Braun and Clarke (2013, p. 26) suggest that 'ontology' is about 'the nature of reality' and 'epistemology' is about 'the nature of knowledge'.

In order for the findings of this research to be accepted as an original contribution to the field of knowledge relating to engagement with enterprise, it needed to relate to existing knowledge. Gill and Johnson (2010) explain that in everyday life, we make attempts to interpret and understand events that occur around us because when we know why something has occurred in a certain circumstance we can begin to suggest ways of remedying a situation, if necessary, in order to take it forward. They explain that this is our application and evaluation of theory.

Whilst theories are a form of evidence to support the analysis and interpretation of research data, they also define, categorise and have the potential to predict (Gill and Johnson, 2010). Theories enable researchers to explain why something has happened. Theory is based on observed practices which have been organised and categorised. Theory is derived from what has happened before and can be used as a benchmark to measure what is being tested/researched. However, exploring the relationship between theory and the research data, Leitch, Hill and Harrison (2010) indicate that central to the research design, is the quality of the management of the research.

The conceptual framework for the research was considered from four perspectives, the ontological perspective, the epistemological perspective, the methodological approach and methods used for data collection. This was based on the work of Hitchcock and Hughes (1995) who suggested that:

... ontological assumptions give rise to epistemological assumptions; these, in turn, give rise to methodological considerations; and these, in turn, give rise to issues of instrumentation and data collection (Hitchcock and Hughes, 1995, p.21).

These perspectives are explored in the following sections.

3.1.1 Ontological Perspective

Ontology is one of the four building blocks of research (Waring, 2012). It relates to the relationship between the 'world' we are researching and our interpretation of what we find. (Braun and Clarke, 2013). The ontological continuum extends from realism to relativism. Realism is based on a 'single truth' and 'reality' being independent of the ways in which we have come to know it. In contrast, at the opposite end of the continuum, relativism is dependent on interpretation and the ways we came to know, with potential for 'multiple realities' (Braun and Clarke, 2013). Ontology based on interpretivism is not the pursuit of an objective truth (Leitch, Hill and Harrison, 2010).

There are multiple interpretations of 'reality' and as such, "We cannot see the world outside of our place in it" Waring (2012, p. 18). Waring (2012) further explains that the

values of the researcher and the nature of the 'world' that is being researched cannot be separated from the research process. This is reinforced by Boden, Kenway and Epstein (2005, p.42) who suggest that ontology is about how our place in the world impacts on the way in which we see it. It is about 'assumptions' and that "ontological assumptions underpin the context of enquiry". It is suggested that there are four key assumptions (Learning Agency, 2009) that influence every aspect of the research. These assumptions have been explored in the context of my professional practice in the role as a Director of Enterprise who was able to access parts of the organisation relevant to the research (Coghan and Brannick, 2010) and life experiences (Wright-Mills, 2000). Additionally, it has been explored in the context of being a culturally literate (Trowler, 2011) 'insider researcher' (Dandelion, 2000). As ontological assumptions influence interpretation, it was important as part of this process that the four key assumptions noted by the Learning Agency (2009) were explored.

- Assumption One: my assumptions about me as a researcher;

I am an 'entrepreneurial academic undertaking research'. My subject field is post-compulsory education and training, in the context of the role of Director of Enterprise I worked with academic staff across the School, enabling them to contribute to enterprise activities by informing, motivating and supporting them. In the context of my role within the university and the project work I have undertaken, I have a very good knowledge of enterprise activities and the skills and attributes that are likely to contribute to successful outcomes. I understand the importance of an effective professional network in terms of identifying commercial opportunities and marketing/promoting commercial events. I also

recognise the need for a strong customer focus – in selling a product or service to internal and external agents. Customers want a quality product and value for money. I am also strongly aware of the need for financial acuity in ensuring accountability with both public and project finance. I have developed and honed the knowledge and skills that have enabled me to do this by engaging purposefully and effectively in a broad range of enterprise activities in the Cardiff School of Education. I am also aware that I have skills and attributes that have developed outside my role as Director of Enterprise for the Cardiff School of Education and even outside my persona as an academic. My parents were in business, my husband and son are also in business. I have had the experience of being an entrepreneur and setting up my own business and whilst this ultimately led to my journey into academia, I have life experiences and an upbringing where entrepreneurial skills and hard work were valued and encouraged. The connection between our social, historical and personal life experiences and trajectory in life is commented on by Wright-Mills (2000). As mentioned in my PDP (see PDP: 2.1 Career Background, page 389 and PDP Appendix Two: Me and Understanding Me, page 422), success in enterprise has been achieved through hard work, a strong work ethic and a positive attitude. This research is an outcome of my enterprise activity, rather than my engagement with enterprise being an outcome of the research.

- Assumption Two: my assumptions about the subject I am researching;

Academic staff in the Cardiff School of Education have a contractual obligation to engage in Research and/or Enterprise activities (see Appendix 2: Job Description-Teaching and Scholarship, page 280 and Appendix 3: Job Description-Teaching and Research, page

284). With regard to assumption two, the subject I am researching (Learning Agency, 2009), whether or not academic staff engage with enterprise, it is assumed that academic staff understand the three missions of the university, whether their recognition of enterprise is in the guise of 'third mission', 'innovation and engagement' or 'enterprise'.

- Assumption Three: my assumptions about the aspects of the subjects' life I am researching;

The guidelines for enterprise and entrepreneurship education, produced by the Quality Assurance Agency for Higher Education (2012) identified the need to help academics embed enterprise and entrepreneurship across the curriculum. The guidance seeks to promote learning and teaching strategies that foster enterprising and entrepreneurial mindsets. With regard to the aspects of subject life I am researching, assumption three is that academic staff would respond to questions posed, share experiences and give an insight into their contribution/potential contribution to enterprise activities in the Cardiff School of Education.

- Assumption Four: my assumptions about the context in which my subjects and I operate.

Bessant and Tidd (2011) talk of the innovation imperative, stressing its importance for survival and growth, particularly with regard to the products and services offered by an organisation. They suggest that innovation does not happen automatically; it needs to be

driven by entrepreneurship. This requires an infrastructure that capitalises on the university's core mission and commercialises knowledge through entrepreneurial thinking to serve the needs of the knowledge economy (Etzkowitz, 2008; Thorp and Goldstein, 2010). Christensen and Eyring (2011) refer to this as changing the DNA of Higher Education. With regard to assumption four, the context in which my subjects (academic staff) and I operate (Learning Agency, 2009), Cardiff Metropolitan University will maintain enterprise as a core function and work towards the status of 'entrepreneurial university'.

As an 'insider researcher' (Dandelion, 2000) I was able to get close to participants, enter their reality and interpret their perceptions with an awareness of my position in it (Waring, 2012). As an interpretivist ontological perspective, this self understanding enabled me to view the research holistically and gain a richness of understanding of participants' perceptions (Leitch, Hill and Harrison, 2010). My own experiences, values, morals and position in the organisation influenced the research process and the interpretation of raw data (Leitch, Hill and Harrison, 2010; Waring, 2012; Braun and Clarke, 2013).

3.1.2 Epistemological Perspective

Epistemology (knowing) relates to the nature of knowledge and how meaningful knowledge can be generated (Braun and Clarke, 2013). It enables researchers to make sense of how their 'world' works (Boden, Kenway and Epstein, 2005; Waring, 2012),

enabling them to establish whether or not any claims emerging from their research are warranted (Gill and Johnson, 2010). As with ontological perspectives, epistemological assumptions exist on a continuum from positivism, where there is direct observation and measurement that discovers a 'truth', to interpretivism, where knowledge developed through a process of interpretation of accounts and observations (Waring, 2012). With a positivist stance, knowledge is gained through scientific methods where variables are controlled and contamination eliminated (Braun and Clarke, 2013). In contrast, at the other end of the continuum, an interpretivist stance is concerned with the investigation of social reality, giving a voice to the experiences and perceptions of those involved in the research (Leitch, Hill and Harrison, 2010).

Adopting an interpretivist approach reflected the aim of the research, to understand the everyday, shared experiences of academic staff from the Cardiff School of Education who engaged with enterprise (Cohen, Manion and Morrison, 2007). This was confirmed further by Waring (2012) with his suggestion that in such an approach, the investigator and the investigation are interactively linked. This was the case for this research, with me as Director of Enterprise (the researcher) undertaking research relating to enterprise practices in the Cardiff School of Education, for which I was responsible.

Understanding the epistemological stance was pivotal as the choices made affect the influence the research findings will achieve (Leask, 2012). Oliver (2004) links this to the contribution of new knowledge and the need for researchers to know the basis on which

any claims for truth are made. Whilst Gill and Johnson (2010) refer to the dilemma of 'truth' and 'falsehood' in relation to 'new knowledge', (King and Horrocks, 2010) relate it to 'epistemological integrity' and consideration of the values, principles and rules adopted in finding new knowledge. I was aware that it is possible to construct meaning in different ways, even in relation to the same phenomenon (Crotty, 2003). However, an interpretivist epistemology provided variety and a richness to the interpretation of data (Leitch, Hill and Harrison, 2010) with the findings developing as the investigation proceeded (Waring, 2012). For example, the design of the model of support for intrapreneurship (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79), managing change at institution and School level (see section PDP 2.2 Managing Change, page 392), and the updating of the Cardiff School of Education's Strategic Plan 2012-2017.

3.1.3 Methodological Perspective

The methodological perspective relates to the process of enquiry (Cohen, Manion and Morrison, 2007). Developing a methodological design for the research was a critical step in moving forward from having research question to having answers to the questions. The plan, or methodological design for conducting research included the methodological framework used to conduct the research, the research methods used to collect data, and the research instruments used (O'Leary, 2004).

A case study was selected as the methodological approach. This enabled me to compare and contrast the views of participants and distil and interpret them to gain informed consensus (Waring, 2012). Additionally, it provided a means with which to get close to participants, enter their reality, understand their behaviours and interpret their perceptions (Leitch, Hill and Harrison, 2010).

The intention of this research was to develop a greater understanding of enterprise and use the knowledge gained to improve practice (Bell, 1993). Whilst characteristic of action research in that it was practical, work-based, linked to the concept of change and professional development, cyclical in terms of feeding back into changes in practice, and most distinctively, participatory (Denscombe, 2003), it did not fulfil the collectivity of criteria stipulated by Evans, Fleming and Hardy (2000) for action research. I was also mindful of Trowler's (2011) assertion that research in your own organisation is a form of case study.

As the research was based on an in-depth investigation of individuals, groups and situations in the Cardiff School of Education (Wisker, 2001) and observation of the characteristics of an individual unit (Cohen, Manion and Morrison, 2007), consideration was given to a case study approach. The use of case study as a research methodology is extremely widespread and is based on what is happening, rather than orchestrating a situation or intervention for the purpose of the research (Denscombe, 2003). Denscombe (2003) suggests characteristic features define the case study approach. Each of these

features were present in my research (see Table 7: Justifying the Case Study Approach, below).

Table 7: Justifying the Case Study Approach

The features of a case study approach:		Present
a)	It includes the defining characteristic of being a spotlight on one instance	Yes
b)	It involves an in-depth study	Yes
c)	It focuses on relationships and processes	Yes
d)	It occurs in a natural setting (i.e. is a real life situation and not one generated for the purpose of research)	Yes
e)	It involves multiple sources and multiple methods	Yes

Adapted from Denscombe (2003).

From the table it can be seen that the research methodology was accurately identified as a case study approach. One of the key attributes of this approach was the ability to make use of the variety of types of data that could be accessed in the role of Director of Enterprise (Denscombe, 2003). Likewise, the focused insight garnered from the in-depth nature of the case study approach facilitated the investigation of enterprise activity in the Cardiff School of Education. These aspects justified the case study approach as the research methodology.

3.1.4 Research Methods

To differentiate between methodology and methods, Crotty (2003, p.3) describes the former as the “plan of action” and the latter as the “procedures used to gather data”. Moving into the ‘active’ phase of the research, consideration needed to be given to the ways in which research data would be acquired and processed (Wisker, 2001). There are three main research methods used in this study: questionnaires, interviews and documentary analysis (Denscombe, 2003). Whilst these research methods are different, they can complement each other, as data stemming from more than one research method have the potential to strengthen the validity of the research findings (Biesta, 2012).

Combining qualitative and quantitative methods of data collection has become increasingly popular in the field of education as a means of gaining a reliable understanding of the research subject (Gill and Johnson, 2010). This approach enables researchers to get as close to the ‘truth’ of the object of study as possible, provide a richer, fuller story (Braun and Clarke, 2013), and overcome bias (Gill and Johnson, 2010). Authors writing about research often refer to this as triangulation; the convergence of data from different sources, different methods and from different researchers studying the same phenomenon (Braun and Clarke, 2013).

With regard to using quantitative and qualitative approaches, McFee (1992) argues that the value of triangulation in corroborating findings is easily overestimated. He also

highlights the oxymoron of having two research methods providing triangulation. McFee (1992) differentiates between triangulation between methods and triangulation within methods. The use of two complementary research methods (triangulation between methods) increases the potential to substantiate the research findings, provided they seek solutions to a single problem. Likewise, McFee (1992) discusses triangulation within methods, where two or more viewpoints are sought in relation to a single problem. Despite difficulties with the term 'triangulation', my intention was to ensure confidence in the data/outcomes of this research. The research methods included an on-line questionnaire and semi-structured interviews. Both focussed on enterprise, so there was the opportunity to combine results to increase the soundness of findings (triangulation between methods). To increase this further, the semi-structured interviews included the differing viewpoints of academic staff, support teams and senior managers to establish whether or not the differing viewpoints were convergent or divergent (triangulation within methods). Whilst McFee (1992) suggests that neither version of triangulation can hope to achieve what it claims on its own, by combining the two approaches, the methodological soundness of the research was increased.

In preparing to implement phase one of the data collection (see Table 5: Phases of Data Collection, page 93), it was noted that Brace (2004) categorised the different ways for researchers to collect data as either 'interviewer-administered' or 'self-completion' approaches. He recognised that the different types of data collection media available provide their own opportunities and drawbacks. Understanding these informed the selection process. My initial plan for data collection was to use documents to research

the broader perspective and inform the design of a questionnaire to generate primary, quantitative data at School level (phases one, two and three of the data collection). This was to be followed up with semi-structured interviews, garnering personal, qualitative data (phases four, five and six). This approach provided triangulation between methods. However, unless different viewpoints were sought, there would be no triangulation between data (McFee, 1992). This was incorporated into the interview guide. There were benefits and drawbacks in selecting questionnaires and semi-formal interviews as methods for data collection.

Questionnaires are research tools that are commonly used to collect quantitative data and gather information from sample groups, enabling the researcher to answer his/her research questions (Brace 2004; Menter *et al.*, 2011). The use of questionnaires is advocated by Menter *et al.* (2011) as, despite requiring time to plan, design and implement, they are relatively easy to administer and they can be used to collect large amounts of data in a short period of time. This was a desirable facet of this research method as the timeframe to distribute the questionnaire was short. Other benefits included rapid data analysis and the ability to study attitudes, values, beliefs and past behaviours. However, Wisker (2001, p.142) explains that using a questionnaire is not an easy option for collecting data because “they are actually rather difficult to design, and because of the frequency of their use... the response rate is nearly always going to be a problem”. Additionally, according to Menter *et al.* (2011), the data generated are dependent on the honesty of the responders. This was an important factor with regard to the credibility of the research outcomes. Menter *et al.* (2011) also mention an inability to

spontaneously follow up questions posed in the questionnaire. I aimed to address this by including a follow-up semi-structured interviews with a sample of staff from the School.

Using the questionnaire for data capture also provided a means with which to identify themes that could be investigated further. These themes were followed up in the qualitative, semi-structured interviews. Having had prior experience of carrying out interviews, I felt confident that I had the interpersonal skills and communication skills to do this effectively. Talking to academic staff enabled me to gain an understanding of their perspective (Kvale, 2007) through in-depth, purposeful discussion and discover their experiences, thoughts and feelings (Mears, 2012). However, I was aware that this involved an ability to frame the research question, choose an appropriate type of interview, define the sample and develop the interview guide (King and Horrocks, 2010).

There were advantages to using semi-structured interviews, Menter *et al.* (2011) explain that interviewees can provide detailed responses and both the researcher and interviewee can ask for clarification if a question or response is unclear, something not possible with a questionnaire. They also perceive the interactive nature of this research method to be a means of gaining a greater insight from the interviewee. Yet they are also time consuming but on balance the advantage of the greater insight was considered to be a more compelling rationale for adopting the choice of method.

Based on this, the conceptual framework for the research was developed. (See Figure 11: The Conceptual Framework for the Research, below).

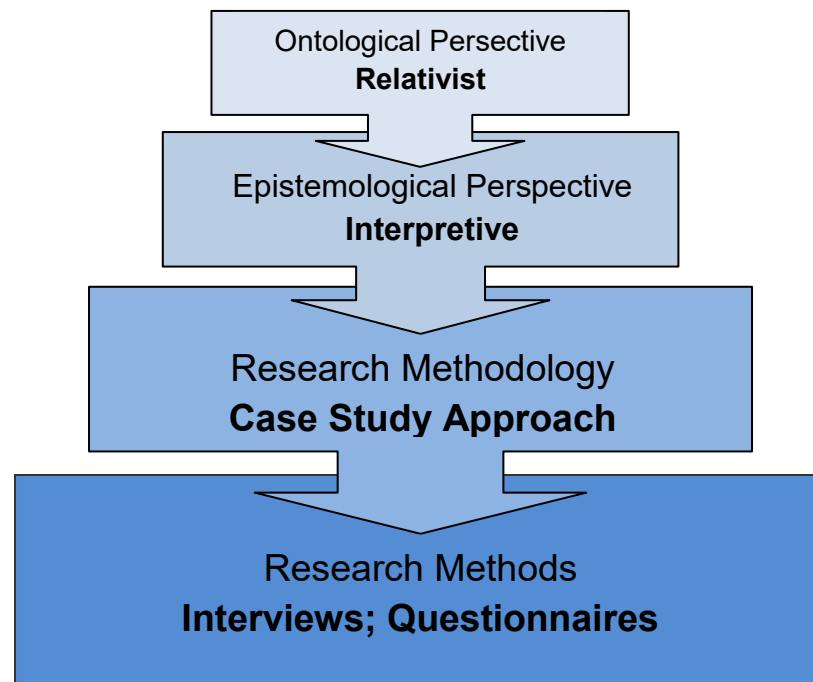


Figure 11: The Conceptual Framework for the Research

Silverman (2006) makes mention of the need for researchers to justify their research strategy. This is supported by Phelps, Fisher and Ellis (2007) who suggest that identifying how research data is to be collected should be part of the research proposal early in the researcher's candidature. The intended use of on-line, self-completion questionnaires (Brace, 2004) and interviewer-administered, semi-structured interviews (Brace, 2004) were included in the application for Research Ethics Approval (Jones, 2011b, p.5).

3.1.5 Validity and Reliability

The themes of 'validity' and 'reliability' are interrelated. The one is meant to show that the research has captured reality; the other, that it is possible for another researcher to generate the same results using the same research instruments (Braun and Clarke, 2013). Whilst validity is not necessarily a precondition of reliability, reliability is a precondition of validity (Cohen, Manion and Morrison, 2007). Ultimately, this relates to the trustworthiness of the research findings and having measures in place to mitigate against any potential threats to the validity of the research findings. Research is worthless if it is deemed to be invalid (Cohen, Manion and Morrison, 2007).

Validity is the central element of research design; the cohesion between the conceptual framework, methods, questions and the research findings (Wisker, 2001). There are different forms of validity (Cohen, Manion and Morrison, 2007; Gill and Johnson, 2010; Hedges, 2012; Braun and Clarke, 2013), which can be linked to the type of threat they pose for the research design (Hedges, 2012).

To have content validity the research design needs to comprehensively cover what it says it will (Cohen, Manion and Morrison, 2007). In this study, a combination of research methods were used: an on-line questionnaire and semi-structured interviews. Additionally, the research questions were mapped to the survey questions and interview themes (see Appendix 20: Mapping Research Questions, page 368). A number of themes

and survey questions were applicable to each research question, confirming content validity.

Internal validity is concerned with whether or not the cause (research) produces the effect (research outcomes) (Hedges, 2012; Braun and Clarke, 2013). To address this, I included triangulation between methods (McFee, 1992) using the on-line questionnaire and informal semi-structured interviews and triangulation within methods (McFee, 1992) by garnering different viewpoints when using semi-structured interviews. These included academic staff, support staff and senior managers of the university. Having the differing viewpoints enabled me to establish whether or not effects were convergent or divergent. Convergent data substantiated validity. However, should the data have been divergent, consideration would have been given to subsequent methods of data collection. For example, divergent responses were given to Question 26 that asked staff how they preferred to be rewarded for their enterprise activities. Preliminary analysis of the questionnaire data enabled me to address this by including 'reward' as a theme for the subsequent semi-structured interviews.

Data analysis validity relates to the trustworthiness of the data, the credibility of the data measured and used along with the accuracy of its analysis (Hambleton, 2012; Hedges, 2012). Conclusions drawn from a research design that includes incorrectly analysed and unreliable data would be invalid. To limit any threat to data analysis validity, all research instruments were tested prior to their release. Likewise, the reporting functionality of the

on-line reporting wizard was tested. Most importantly, rigour and attention to detail was applied throughout the collection, analysis and reporting processes.

Braun and Clarke (2013) also make note of ecological validity and the extent to which the research data is representative of the 'real world'. As the research undertaken was based on personal practice and the practices of academic staff working in the Cardiff School of Education, it reflected a 'live' and therefore, 'real world' situation. The research therefore, had ecological validity.

The final type of validity to be considered as part of the research methodology, is external validity, sometimes referred to as generalisability. It relates to the extent to which the results of research can be generalised and applied to a wider population (Gill and Johnson, 2010; Braun and Clarke, 2013). The research was undertaken in the Cardiff School of Education, one of five academic schools in Cardiff Metropolitan University. Despite the differing academic disciplines of individual schools (Education, Sport, Art and Design, Management, Health Sciences), the corporate strategic drivers relevant to this research apply to all academic schools. Job descriptions are standardised and apply to all academic staff. Likewise, academic staff are working within similar parameters and likely to experience similar conditions for engagement with enterprise. This provides confidence in generalising the findings within Cardiff Metropolitan University. As research undertaken in a School of Education, the findings can confidently be applied to

other Schools of Education as they will have academic staff teaching to the same Professional Standards for Teaching and engaging with enterprise in a similar context.

Reliability relates to consistency, the potential to replicate the study over time and the uniformity with which variables are measured (King and Horrocks, 2010; Braun and Clarke, 2013). The meaning of reliability differs in quantitative and qualitative research. It is about dependability, consistency, and replicability in the context of quantitative research and trustworthiness, credibility, confirmability and transferability in the context of qualitative research (Cohen, Manion and Morrison, 2007). Quantitative data was captured using an on-line questionnaire. This provided consistency and replicability as all participants used the same research instrument. Qualitative data was captured using semi-structured interviews. To ensure the credibility of the findings, those interviewed were given transcripts of their interview to ensure it was a true reflection of the discussions we had had. Threats to the quality of transcripts (King and Horrocks, 2010) were addressed by testing the recording equipment prior to the test interview as this helped with the final transcription.

The interpretation of qualitative data garnered through interviews provided different viewpoints although I was aware that using this method, it would be possible for another researcher to generate a different set of findings. Cohen, Manion and Morrison (2007) describe this as 'inter-rater reliability'; the extent to which another researcher studying the same phenomena would interpret findings in the same way. In my role as the sole

Director of Enterprise in the Cardiff School of Education, there was no means of establishing whether or not another researcher would interpret findings in the same way. However, parallel form reliability (Cohen, Manion and Morrison, 2007) was achieved by using semi-structured interviews where the same key themes would be posed to participants.

Given the measures put in place to address/limit potential threats to the validity and reliability of the research data, confidence was had in the trustworthiness of the research findings.

3.1.6 Research Ethics and Ethics Approval

There has been an increased recognition of the importance of research ethics in contemporary educational and social research (Cohen, Manion and Morrison, 2007). Cohen, Manion and Morrison (2007) imply that greater awareness of ethical issues is reflected in the growth of literature on research methodology and the appearance of regulatory codes of research practice. Dawson (2009) is more pragmatic and says that the willingness of participants to disclose personal information, places a responsibility on researchers to treat both the participants and the information they provide with honesty and respect. Some researchers may perceive ethics approval as bureaucratic process, however, it is about what is “fair, just, right or wrong” (O’Leary, 2005, p.27).

An essential element of the research methodology for any doctoral research undertaken within Cardiff Metropolitan University is ethics approval. Coghlan and Brannick (2010) note that just as ethical procedures are part of life, they are also part of research; explaining that the role of ethics committees should be the prevention of abusive behaviour. This view is supported by Denscombe (2003, p.142) who says “researchers have no privileged position in society that justifies them pursuing their interests at the expense of those they are studying – no matter how valuable they hope the findings may be”. Silverman (2006) explains that ethical research is about protecting people from harm and ensuring that there is mutual trust between the researcher and research participants. To achieve this, he suggests that ethical guidelines are necessary.

The Cardiff Metropolitan University guidelines for obtaining ethics approval (Cardiff Metropolitan University, 2010, p.1) stipulate that research undertaken by its staff and students must conform to “the highest ethical standards”. Ethics approval is carried out by academic schools (Cardiff Metropolitan University, n.d. e) with the ultimate responsibility lying with the Cardiff Metropolitan University Ethics Committee. Within the Cardiff School of Education, emphasis is also placed on the Ethical Guidelines for Educational Research (BERA, 2011).

The ethics approval process for this research included compliance with BERA (2011) guidelines that made reference to the dual role of teacher and researcher:

Researchers engaged in action research must consider the extent to which their own reflective research impinges on others, for example in the dual role of teacher and researcher and the impact on students and colleagues. Dual roles may also may also introduce explicit tensions in areas such as confidentiality and must be addressed accordingly. (BERA, 2011, p.5)

Coghlan and Brannick (2010) make mention of the potential for divided loyalties and the difficulties faced by ethics committees in approving research proposals that include 'insider action research'. With regard to this research, confirmation was given that recruitment to participate would only commence when ethical approval had been granted from the Cardiff School of Education Research Ethics Committee. Ethics approval was granted in January 2012 (see Appendix 5: Confirmation of Ethics Approval, page 290), following which the permission of the Dean of School was requested and secured (see Appendix 6: Request for Organisational Consent, page 292 and Appendix 7: Confirmation of Organisational Consent, page 294). Additionally, I ensured that participants would be provided with sufficient relevant information to enable them to make an informed decision regarding their participation by providing them with a Participant Information Sheet (see Appendix 8: Participant Information Sheet, page 296). Alongside this, as the informed consent of participants was necessary (Cohen, Manion and Morrison, 2007) and a Participant Consent Form was developed (see Appendix 9: Informed Consent, page 299). In compliance with the good practice advocated by Denscombe (2003) the identity of the researcher, information about the research, the expectations about the participants' contribution, the right to withdraw consent, a commitment from the researcher to maintain confidentiality and data security, signature of the participant and date, countersignature of the researcher and date, were all included in the consent form.

Since collecting data lies at the heart of the research process (Phelps, Fisher and Ellis, 2007) I was mindful of the need for a rigorous and systematic approach to data management. The Participant Information Sheet clarified that data would be codified and should it become apparent that anonymity could not be guaranteed, participants would be offered the right to withdraw from the study if they felt that the presentation of data compromised them in some way. Williams (2009b) refers to this as the burden of professional practice, the dilemma arising from the right of the public to know versus the rights of participants not to be harmed; an action reliant on the moral base and moral judgements of the researcher.

The professional doctorate is based on professional practice and potentially becoming privy to what Williams (2009b) refers to as 'guilty knowledge'. Confronting the reality of guilty knowledge is explored by Fetterman (1983); his approach was adopted in taking the view that academic staff in the Cardiff School of Education were "decent human beings" (p.214). However, I shouldered a burden of trustworthiness: the need to uphold my responsibilities as a senior manager within the School and my duty towards those voluntarily participating in this research. These aspects were included in the application for ethics approval.

3.2 Research Methods in Action

This section examines in detail the design and development of the bilingual, on-line questionnaire (phase one), its testing (phase two) and its implementation (phase three). The bilingual, on-line questionnaire was followed up with a series of semi-structured interviews. The development (phase four), testing (phase five) and implementation (phase six) of the interview guide is also discussed. A bilingual approach to on-line data collection was chosen because at the time of this research 15.9% of academic staff in the Cardiff School of Education were fluent speakers of Welsh. This recognised their use of Welsh and respected their first language. Additionally, there is an institutional commitment to the use of Welsh through the Cardiff Metropolitan University Welsh Language Scheme.

3.2.1 Designing and Constructing the Bilingual On-line Questionnaire

Phase one of the data collection involved the design and construction of the on-line questionnaire. Emerging information and communication technologies have offered new ways to conduct research (Salmons, 2010; Menter *et al.*, 2011). On-line communication is described as either synchronous, where the researcher and research participants respond to messages at the same time, or asynchronous, where they are able to respond to each other at different times. I decided to opt for an asynchronous bilingual on-line questionnaire as this did not constrain academic staff in the Cardiff School of Education to participating at a particular time (Salmons, 2010). Further, this would be followed up at a later date with face-to-face semi-structured, interviews.

The two on-line survey packages considered were 'Survey Monkey' (Survey Monkey 1999-2011a) and 'Checkbox' (Checkbox Survey Solutions, 2002-2012a). Survey Monkey was described as an on-line software package that enabled the researcher to select a template, customise it and distribute it (Survey Monkey 1999-2012) and Checkbox as "a powerful, flexible and easy to use on-line survey tool... for creating professional surveys [and] questionnaires" (Checkbox Survey Solutions, 2002-2012a, p.1).

One of the initial benefits of the Survey Monkey option was having prior experience of using the software as a respondent. Whilst the basic survey was free (Survey Monkey 1999-2012) it was restricted to a maximum of 10 questions (Survey Monkey 1999-2011a). Additionally, the security I had assured participants in the Participant Information Sheet (Appendix 8: Participant Information Sheet, page 296) was unavailable. An enhanced protocol for transmitting information using secure socket layer (SSL) technology combined with hypertext transfer protocols (HTTP) which provided secure encryption (HTTPS) of data was only available via the 'select option' (Survey Monkey, 1999-2012) which was based on monthly subscription. In contrast, Checkbox included these features and was free of charge to staff and students within Cardiff Metropolitan University. Additionally, unlimited questions and unlimited surveys were permitted. One of the creative aspects of the package was the 'logic' feature. This enabled users to create conditions and branches within a survey so that only relevant questions were presented to those participating in the survey. The most important aspect of the programme was that it could be hosted on an internal or external server (Checkbox, 2002-2012b). Using

an internal server permitted users to view staff ID, so the questionnaire was hosted on an external server to ensure complete anonymity.

Permission to use the licensed version of Checkbox was sought via the university's Library and Information Services Division. Once approved, a personal account was set up with user ID and a password provided.

The secure login function provided the essential confidentiality and anonymity I had assured the Cardiff School of Education Research Ethics Committee and those taking part in the research. In designing the survey, I realised that questionnaire layout and professional appearance was an important factor in getting an appropriate response rate (Brace, 2004; O'Leary, 2005). Additionally, I was mindful of O'Leary's (2005) suggestion to include background information in the 'Welcome Screen'. I was also aware of the need to vary the types of questions used, as different types of question generated different types of data (Brace, 2004). As a result, open and closed questions were utilised; for example, Question 2 of the pilot questionnaire (see Appendix 10: Pilot On-line Questionnaire, page 301) was closed and asked participants if they had read the Participant Information Sheet. This had a YES/NO response option. In contrast, Question 15 was 'open' and asked participants who were engaged with enterprise activity, about the ways in which this had been informed by research or incorporated into learning and teaching. I also included questions with rating scales to measure attitudes; for example, Question 19 asked participants to what extent [a range of variable factors] provided the opportunity to engage in enterprise activity.

Consideration of the survey questions was a requirement of the Cardiff School of Education Research Ethics Approval process (see Appendix 10: Pilot On-line Questionnaire, page 301). These questions were utilised in populating the on-line survey template. The 'conditions' function ensured that the questionnaire was logical (O'Leary, 2005), creating a questionnaire pathway relevant to the respondent. For example, with Question 2 (reading of the Participant Information Sheet), a condition was included to permit those who answered 'YES' to progress to the next question (Question 4); those answering 'NO', were directed to the information page (Question 3). This reiterated a need to read the Participant Information Sheet. With regard to layout, the survey title was included on each page, reinforcing the focus of the research. A progress bar was also used so that participants could see how far they had travelled through the questionnaire.

The questionnaire 'conditions' were tested and trialled with my supervisory team, prior to phase two of the data collection where the on-line survey was tested it with a sample group.

3.2.2 Testing the On-line Questionnaire

Brace (2004) advises that a questionnaire, whether paper-based or on-line, should be piloted before going live. This increases the reliability and validity of the questionnaire (Cohen, Manion and Morrison, 2007). A key aspect of this is its practicability, for example: the time it takes to complete, whether or not questions are clear, the

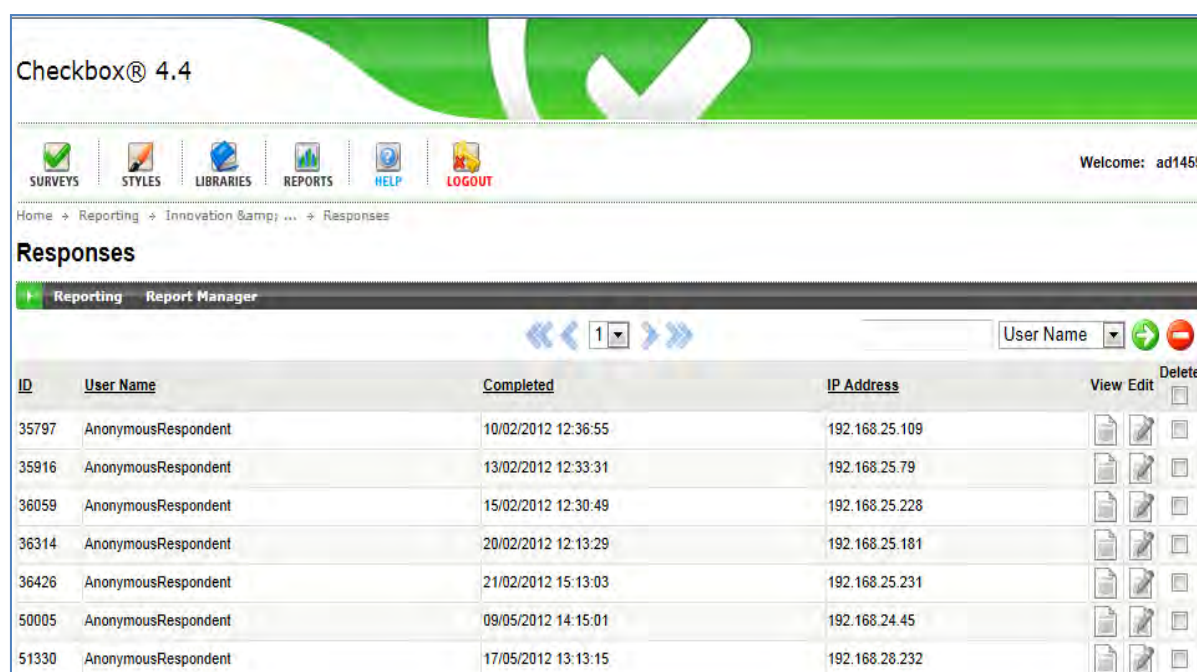
appropriateness of the layout and sequencing of questions and most importantly, the opportunity to trial data analysis.

To test the on-line questionnaire, phase two of the data collection, I needed to consider who would be invited to participate. The importance of having a strategy for sampling is noted by Cohen, Manion and Morrison (2007, p.100) who stipulate that the “quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted”. As the research was a study based on academic staff in the Cardiff School of Education, I wanted to include the whole population in the final, on-line survey. Menter *et al.* (2011) refer to this as a ‘census’. I was reluctant to lose any data for the final report by asking academic staff from the Cardiff School of Education to test the draft on-line questionnaire. Consequently, I used academic staff from the Cardiff School of Sport.

Knowing respondents from the Cardiff School of Sport increased prospective participation (Survey Monkey, 1999-2011b). With a well planned questionnaire and strategies in place to follow-up those yet to complete the survey, Cohen, Manion and Morrison (2007) suggest a potential response rate as high as 70 – 80%.

The pilot online questionnaire was distributed to eight staff within the Cardiff School of Sport. This part of the process was not an exact replica of the final survey. This was

because the survey hyperlink was sent directly to the pilot respondents email account. In contrast, the final survey was sent via the global Cardiff Metropolitan University list, cseAcademicStaff@CardiffMet.ac.uk. Those agreeing to test the on-line questionnaire were provided with a matrix to record their feedback (see Appendix 11: Template and Feedback from Pilot Questionnaire, page 313). I also tested participant anonymity at the piloting stage. To confirm the success of this approach, with participants listed as 'AnonymousRespondents', see Figure 12: Participant Anonymity, below.



The screenshot shows the 'Responses' section of the Checkbox 4.4 software. It features a navigation bar with icons for Surveys, Styles, Libraries, Reports, Help, and Logout. Below the navigation bar, there is a breadcrumb trail: Home > Reporting > Innovation Samp; ... > Responses. The main heading is 'Responses'. Below this, there is a 'Reporting' tab and a 'Report Manager' section. A table displays a list of responses, with columns for ID, User Name, Completed, IP Address, and View/Edit/Delete actions. All 'User Name' entries are 'AnonymousRespondent'. The table includes a pagination control showing '1' of 1 results.

ID	User Name	Completed	IP Address	View Edit Delete
35797	AnonymousRespondent	10/02/2012 12:36:55	192.168.25.109	[View] [Edit] [Delete]
35916	AnonymousRespondent	13/02/2012 12:33:31	192.168.25.79	[View] [Edit] [Delete]
36059	AnonymousRespondent	15/02/2012 12:30:49	192.168.25.228	[View] [Edit] [Delete]
36314	AnonymousRespondent	20/02/2012 12:13:29	192.168.25.181	[View] [Edit] [Delete]
36426	AnonymousRespondent	21/02/2012 15:13:03	192.168.25.231	[View] [Edit] [Delete]
50005	AnonymousRespondent	09/05/2012 14:15:01	192.168.24.45	[View] [Edit] [Delete]
51330	AnonymousRespondent	17/05/2012 13:13:15	192.168.28.232	[View] [Edit] [Delete]


Figure 12: Participant Anonymity

The sample size for the pilot stage of the questionnaire was eight. Five responses (62.5%) were received from the initial request. A follow-up request yielded a further response, increasing the response rate to 75%. A final reminder to outstanding potential pilot participants yielded one further completion, achieving a final response rate to the pilot questionnaire of 87.5%.

This informed my approach to the timescale for phase three of the data collection and the distribution of the bilingual on-line questionnaire in the main study. This was timed to coincide with the start of the academic year (see Table 8: Schedule for Survey Completion, below).

Table 8: Schedule for Survey Completion

Stage One: Week 1	Stage Two: Week 3	Stage Three: Week 5
Request and Hyperlink sent to all CSE academic staff		
	Reminder One and hyperlink sent to all CSE academic staff	
		Final reminder and hyperlink sent to all CSE academic staff



When the on-line questionnaire was tested, the branching conditions worked. This was very pleasing as I had invested a great deal of time in creating this functionality and testing it prior to its release. The majority respondents testing the questionnaire completed it within the first 10 days. This indicated a need for maximum impact when distributing the questionnaire in the main stage of data collection. It confirmed the appropriateness of using an on-line questionnaire for capturing data. Additionally, 85% of those testing the questionnaire indicated that they would be willing to participate in a follow-up interview. This degree of willingness was very pleasing. However, it did make

me think about my strategy for sampling when interviewing. When seeking ethics approval, I indicated that I would interview 15 members of academic staff, spread evenly across the three departments. However, by testing the instrument, I was made aware that a willingness to be interviewed may not necessarily be spread evenly across departments. Having awareness at the testing stage, I decided that should this be the case in the main stage of data collection, I would target staff in particular departments for follow-up e-mails, rather than use the global CSE e-mail address.

The use of the on-line survey was strongly advocated by colleagues who had tested it. However, the functionality of the Check Box report wizard was problematic. Three types of question were tested; a closed question, a multiple choice question and an open question. For closed questions, e.g. Question 2 and multiple choice questions, e.g. Question 8, only the options selected by those testing the questionnaire appeared in the legend. For example, the results of the test survey, reported 71% of respondents undertook enterprise projects and 29% did not. The category, 'I am not sure if the activities I undertake are classed as enterprise' did not appear in the legend. The replies for an open text response box were also examined. All entries were listed in tabular form in numerical order. This limited the opportunity to cluster emergent themes and to highlight comments of specific importance. Finally, the reporting of one of the complex multiple choice questions was tested. Question 19 asked respondents to rate the extent to which a range of variables were required to participate in enterprise activities. The report generated omitted the scale used by respondents, without which it made no sense to the reader.

Given the issues noted in the formatting of the test data report, I decided not to use the report wizard function for the main stage of data reporting. Instead, I exported data and created graphs/charts manually using Microsoft Excel. Whilst potentially time consuming, this addressed the issue of completeness of information in the reporting stage. It also addressed the issue of combining the separate reports generated from the Welsh and English versions of the on-line survey.

Those involved in testing the draft on-line questionnaire provided invaluable feedback (see Appendix 11: Template and Feedback from Pilot Questionnaire, page 313). The majority of points highlighted were linked to style and formatting. For example, the space available for the open text responses was limited on the screen (Pilotee 5). I addressed this by increasing the parameters of the shape using the style function. Some related to inaccuracy, for example, the direction for Question 19, was to rate the skills 1, through to 6 when in fact I had included 7 options in the chart (Pilotee 2). One pilotee highlighted a category I had not considered for Question 26, when asking academics to consider the ways in which they would wish to be rewarded (Pilotee 1), “buying out teaching time”. I considered this to be a valid point and added the category to the variables listed in the final version. This pilotee (Pilotee 1) also highlighted the need for greater clarity in posing the question, ‘To what extent would the following provide the opportunity for you to engage with enterprise activity?'; he/she wrote “the question is not clear – are you asking what skills I feel I need in order to be confident of successfully participating in enterprise activity or what skills I feel are used in enterprise activity?” This was a valid

criticism and the question was amended to read 'In your opinion, to what extent do you need the following skills to be confident of successfully participating in enterprise activities?' The issue of anonymity was raised by one respondent (Pilotee 6) who mentioned that the 'please state' request linked to 'other' in the question regarding academic positions (Question 7) could have been problematic. For example, there is only one Dean of School; including this information would have compromised identity. To address this, the 'other' option was modified to a tick box function, and the 'please state' request was removed. It was reasoned that as there were several staff in the School in the 'other' category, this would strengthen the capability for maintaining the anonymity of participants in the main stage of data collection.

Some feedback was considered but not acted on. Pilotee 4 suggested that Question 15 which asked about the ways in which participation in enterprise activity was informed by their research or incorporated into their learning and teaching, was "a tricky question to answer... what if I am not research active". I considered this point and disregarded it because there was the option for respondents, in the main stage of data collection, to link it to learning and teaching if they were not research active. Likewise, Pilotee 3 suggested that it "would be worth adding another consent question at the end [because at the] start of the survey they do not know exactly what they are consenting to". I felt that the Participant Information Sheet provided this and kept just the one question to confirm informed consent to participate in the study.

3.2.3 Implementing the On-Line Questionnaire

The on-line questionnaire was modified in response to the feedback received from staff in the Cardiff School of Sport who had tested it (see Appendix 12: Modified On-line Questionnaire, page 319). For ease of recognition, modifications have been highlighted. This final version of the on-line questionnaire, along with the Participant Information Sheet and consent form were translated into Welsh. The translation was facilitated via the university's Welsh Language Unit. This process meant that as a non-Welsh speaker, I needed to be quite specific in asking for text to be translated as there was no room for making minor amendments, post translation. Additionally, I needed to ensure accuracy, so that translated text could be copied and pasted in the on-line survey template when constructing the Welsh-medium version of the questionnaire. I achieved this by placing text for specific questions into a grid, so that it could not be confused with text from another question. Each question was clearly labelled, with a number, to avoid any possible mix-up in the translation stage of the survey design. (See Appendix 13: Menter Mewn Addysg Uwch, page 332).

Phase three of the data collection was implemented on 11th September 2012 with the release of the on-line questionnaire and accompanying Participant Information Sheet. An e-mail was sent via the Cardiff Metropolitan University global address system to all academic staff in the Cardiff School of Education, cseAcademicStaff@CardiffMet.ac.uk, inviting them to contribute to the research (see Appendix 14: Request to Participate in the Study, page 349). The English and Welsh versions were released simultaneously. Whilst described as a census rather than a sample by Menter *et al.* (2011) because it

included all academic members of staff from the Cardiff School of Education, it also related to the case study methodology (Denscombe, 2003) as it created a spotlight on one particular academic school within Cardiff Metropolitan University. Of the 63 academic staff invited to participate, 11 were members of the Department of Professional Development, 21 were from the Department of Humanities and 31 were from the Department for Teacher Education and Training. This included 6 members of the School's Senior Management Planning team, two Professors and an academic member of staff who was aligned to the Department for Humanities with primary responsibility for an enterprise initiative.

A response rate of 28.6% was achieved from the initial request. Whilst realistic in a 'real-world context', it was nonetheless disappointing as a response rate of 62.5% had been achieved in the testing phase. A subsequent request was made on the 26th September 2012 (see Appendix 15: First Reminder to Participate in the Study, page 352). This boosted the response rate to 54%. Again disappointing when compared to the test response rate of 75%. Personal circumstances delayed the timing of the final reminder. This was released on the 18th April 2013 (see Appendix 16: Second Reminder to Participate in the Study, page 354) accruing a final tally of 45 responses and a final response rate of 71.4% (45 of 63). Whilst the final response rate when testing the on-line questionnaire was 87.5%, I felt that having the viewpoints of 71.4% of academic staff in the school strengthened the credibility of the research outcomes. This also fell within the parameters of 70-80% suggested as an outcome of a well planned survey (Cohen, Manion and Morrison, 2007).

Of key importance was the response rate for the Welsh medium version of the questionnaire. Of the 10 members of staff who regularly use Welsh, 50% used the Welsh medium version of the questionnaire. An additional three chose to use the English version. These were identified because they had opted to include their email details for the subsequent interview. A greater percentage of Welsh speaking academic staff completed the questionnaire (see Table 9: Comparison of Response Rates - Welsh and English, below).

Table 9: Comparison of Response Rates - Welsh and English

Number of Welsh speaking academic staff invited to participate in the research	% Welsh participation	Number of English speaking academic staff invited to participate in the research	% English participation
10	80% (8 staff)	53	70% (37 staff)

The differential was pleasing, particularly as the Welsh medium version required additional effort in planning to ensure accuracy in populating the on-line questionnaire. In subsequent interviews with staff who spoke Welsh, I asked whether or not the Welsh medium version had made a difference; Rhiannon (a pseudonym) explained that “it’s this point of principle... if I receive things in Welsh, I am much more likely to respond”. She went on to say that it was about “respect towards the language”. Likewise, and of note to other researchers, Brangwen (a pseudonym) said that she “responded quickly because I

thought wow, look at this, you've gone to the effort of doing this in Welsh for people like myself... it rang a trigger point".

When planning the mixed-methods approach to data collection, the intention had been to explore engagement with enterprise activities. In order to establish whether or not this held any relationship to academic departments, Question 6 asked staff which one they worked within. The results confirmed that there was representation from each of the departments across the Cardiff School of Education (see Table 10: Comparison of Completion by Department, below). This information informed the sampling of staff invited to participate in the semi-structured interviews.

Table 10: Comparison of Completion by Department

n=63	Department for Humanities	Department for Teacher Education and Training	Department for Professional Development
Number of staff in academic departments	21	31	11
Number of staff completing questionnaire	15	20	10
Number of staff by department agreeing to be interviewed	8	12	10

Overall, 66.6% (30 of 45) of those academic staff who participated in the on-line questionnaire indicated that they would be prepared to be interviewed at a later date

and provided their email contact details. This enabled me to establish the viewpoints of each of the departments in the School.

3.2.4 Emergent Themes Informing the Interview Guide

Choosing interview as one of the methods for this research was based on successful prior experience in gathering qualitative data. In comparison to the on-line questionnaire, it allowed for an element of flexibility (King and Horrocks, 2010) providing a means to use key themes as a point of questioning, rather than set questions. This enabled me to build a rapport with those interviewed and offered freedom to follow up and explore unexpected responses, thereby gaining greater insight to contextual detail and valuing the viewpoints of those participating (Braun and Clarke, 2013).

Braun and Clarke (2013) categorise interviews in three types: structured, semi-structured and unstructured, suggesting that the unstructured interview is thematic and participant led. Whilst this reflected the approach adopted, describing it as an unstructured approach intimated that interviews were unplanned and inconsistent. This was not the case. Identified themes formed the basis for discussion. They were carefully selected as a result of analysing the quantitative data generated via the on-line questionnaire. The same themes were used with each participant, promoting discussion and facilitating the opportunity to follow up unexpected responses.

As the Director of Enterprise, I had a good understanding of enterprise and the notion of the entrepreneurial university. However, in phase four of the data collection, I wanted to investigate the extent to which this had been communicated to academic staff in the Cardiff School of Education. To achieve this, the opportunity to 'define enterprise' and questioning awareness of Cardiff Metropolitan University as an 'entrepreneurial university' were themes included. I also incorporated 'commercialising research' as this was a relevant corporate strategic objective.

Initial analysis of responses to the on-line questionnaire confirmed that there was strong and proactive engagement with enterprise activities. I wanted to establish whether this was based on motivation that was either intrinsic or extrinsic. To achieve this, I included the themes of 'strategic importance of enterprise', to both the university and the Cardiff School of Education and 'gaining personal enjoyment' from enterprise activities.

For those engaged in enterprise, I wanted to explore if there was any personal impact, particularly as responses to Question 16 (time allocated in the costing and pricing exercise, see Appendix 12: Modified On-line Questionnaire, page 319) were varied. Likewise, the open responses to Question 23 relating to supporting academic staff to engage with enterprise elicited the reoccurring themes of 'workload' and 'time limitations'. To gain a greater understanding of these issues, I included the 'wellbeing' and 'workload' in the themes to be explored. Additionally, the theme of 'reward' was included as responses to Question 26 (the best way to reward academic staff engaged

with enterprise) were varied and to establish any interrelationship between motivation and reward.

Responses to some parts of Question 19 were perplexing; particularly those relating to financial awareness. It appeared that a number of academic staff did not consider financial awareness to be an important skill for those engaged with enterprise. Project managers were responsible for the financial outcomes of their enterprise activities and the School was responsible for meeting its Research and Enterprise financial targets. I wanted to explore the reasoning behind this, so included this as a theme.

As Director of Enterprise, I was required to report annually on progress against enterprise strategic targets. As a result of this, I was aware that academic staff were using knowledge and skills gained through their enterprise endeavours to inform learning and teaching. Analysis of question 15, which provided the opportunity those completing the questionnaire to explain the ways in which enterprise activities had informed learning and teaching or had been informed by research, confirmed this. However, I wanted to establish the extent to which this was influenced by the recently published QAA guidance for *Enterprise and Entrepreneurship Education* (QAA, 2012) and incorporated this theme.

To close, I wanted to offer those I interviewed with the opportunity to discuss themes I had not raised. So I finished the interview guide with an invitation to highlight issues important to them that I had not covered.

The final list of themes used to test the interview guide included:

1. Defining enterprise
2. Strategic importance of enterprise (prompts - University/School/Department)
3. Entrepreneurial university
4. Enjoyment of enterprise activities
5. Reward (prompt – fellowship)
6. Wellbeing
7. Workload
8. Support
9. Financial awareness (prompts – self/project managers/senior managers)
10. QAA Enterprise and Entrepreneurship guidance (prompts - embedding enterprise in learning and teaching/curriculum)
11. Commercialising research
12. Any other questions?

3.2.5 Testing the Interview Guide

Preparation and planning are vital components of successful interviews (Braun and Clark, 2013) and whilst Menter *et al.* (2011) suggest that a list of questions should be sent to

interviewees prior to the interview, I chose not to do this. Academic staff who were to be interviewed had already completed the questionnaire so they were not completely unaware of the focus of the research. Additionally, I considered that having prior warning that participants would be asked to define enterprise, questioned about their knowledge and understanding of the entrepreneurial university and the QAA guidance regarding enterprise education and entrepreneurship, would prompt background reading prior to the interview. When testing the interview guide, the themes for discussion were not shared in advance.

In terms of the interview environment, I was aware that some academic staff shared an office with a colleague. This would compromise anonymity. I was also aware that for some, my office would not be perceived as a neutral location. King and Horrocks (2010) say that the interview setting and environment are important, so those participating were asked for their preferred location; offering their own office, my office or a neutral location (classroom).

In phase five of the data collection, the interview guide was tested with one member of academic staff who was randomly selected from the thirty who had indicated that they would be prepared to be interviewed. The interview was held on the 14th May 2013. Ernest (a pseudonym) chose my office as a preferred location. I used a 'do not disturb' sign on the door to ensure that there were no interruptions. One of the important issues was ensuring that the interviews were accurately documented. Whilst testing the

interview guide, I used both a digital tape recorder and the QuickVoice Pro application available on the iPad. The interview lasted 22 minutes. Ernest was informed that a transcribed file of the interview would be e-mailed for comment.

With regard to the digital recorder, when the audio file was played back, I found it difficult to transcribe as my listening skills and speed of typing are not synchronised. To address this, the secondary voice recording was exported from QuickVoice Pro via an iTunes account to Dictapad. The Dictapad application had the facility to play back audio files at a speed of 0.5. Although time consuming, this was more suited to my listening and typing speed. The transcribed file (see Appendix 17: Testing the Interview Guide, page 356) was sent to Ernest for comment (see Appendix 18: Response to Testing the Interview Guide, page 363).

When testing the interview guide, Ernest suggested that finding out about 'resistance to enterprise' be included. This was linked to theme two, the strategic importance of enterprise, and incorporated as a prompt. In addition, establishing perceptions of the 'strengths' of enterprise activity was incorporated as a prompt to theme four, 'enjoyment of enterprise', and 'areas for improvement' was incorporated as a prompt to theme eight, support, to the appropriateness of the assistance currently provided for enterprise activity. The final interview guide was updated in readiness for phase six of the data collection (see Appendix 19: Interview Guide, page 366).

The interview themes and survey questions were mapped to the Research Questions, thereby ensuring content validity (see Appendix 20: Mapping Research Questions, page 368).

3.2.6 Implementing the Interviews

The semi-structured interviews, phase six of the data collection, were held between 20th May and the 24th July 2013. Twenty-one interviews were carried out; eighteen with academic staff, two interviews with small teams and one with a member of the university's Vice-Chancellor's Board; twenty-four interviewees in total. Whilst thirty staff had expressed a willingness to be interviewed, one member of staff was used to test the interview guide. Eighteen of the remaining twenty-nine staff from the Cardiff School of Education were interviewed. The selection process adopted was purposeful sampling (Salmons, 2010). Individuals were chosen to achieve a statistical representation of academic staff from the Cardiff School of Education (King and Horrocks, 2010).

The following criteria were applied in the sampling process:

- As 78% of staff were enterprise-active, the viewpoints of those not engaged in enterprise activities, was considered to be essential. Three respondents to the on-line questionnaire indicated that they did not engage in enterprise. All three were selected for interview; one from the Department of Humanities and two from the Department of Professional Development;

- Of the respondents that completed the Welsh medium version of the on-line questionnaire, two indicated that they were willing to participate in the semi-structured interview. To ensure the viewpoints of Welsh speaking academic staff were represented, both were selected. One from the Department of Humanities and one from the Department for Teacher Education and Training;
- Two Heads of Department expressed a willingness to be interviewed. Both were selected;
- In the Department for Humanities, a further four members of staff were selected. One member of staff because he had been employed at the university for between 0-1 years, another because she had a contract as a lecturer. One because he was the only member of staff from this department with a Senior Lecturer contract that had expressed a willingness to be interviewed, with the final member of this department selected because she had worked at the university between 6-10 years;
- For the Department of Professional Development as three staff had already been included in the sample, it was important to ensure that there was an equitable spread across the three academic disciplines. Consequently, one member of staff was selected because she had worked at the university for more than ten years and another, because she had worked at the university between 2-5 years;
- In the Department for Teacher Education and Training a further five members of staff were selected, making seven. Whilst the application for ethics approval had suggested that five members of staff from each department would be interviewed it was felt that the differences in the number of staff from each department needed to be reflected in the final sampling. As a greater number of

staff are aligned to this department, increased numbers were incorporated into the final sample. One member of staff from each of the available employment timelines was included (2-5 years, 6-10 years and 10 years plus). As no staff with a Lecturing contract had expressing a willingness to be interviewed, two Senior Lecturers were selected.

The gender balance of the sample is notable. 35.4% of staff in the Cardiff School of Education were male. The gender balance of the sample was 27.7% male, 72.3% female. Given the constraints presented by the demographics of those willing to be interviewed by department, it was not possible to address this imbalance (see Appendix 21: Interview Sample and Profiles, page 371).

Once the sample was decided, phase six was implemented and an invitation was sent to each member of staff. Individual timeslots were made and locations were selected by those interviewed. At the start of each interview, the purpose of the research was communicated as this was suggested by Braun and Clarke (2013), to be good practice. This also helped to contextualise the interview. Following the guidance of Menter *et al.* (2011), those interviewed were reminded of the detail included in the Participant Information Sheet they had received when completing the on-line questionnaire. Confidentiality and anonymity were reassured and the opportunity to withdraw from the research at any point was reiterated. It was made clear that extracts from the discussion would be incorporated into the final report and that those participating would have the

opportunity to view their transcribed audio file. In accordance with the BERA (2011) guidelines for ethical research educational research, those interviewed were asked to sign a consent form. In compliance with the legal requirements for data management and storage, all consent forms were stored in a locked filing cabinet in an office with controlled access.

The interviews were recorded using QuickVoice Pro. They were purposeful and interactive (Mears, 2012). From the outset, I focussed on establishing a rapport as King and Horrocks (2010) say that this makes participants feel comfortable and 'open up'. When formulating questions around the given themes, if background contextual detail was required I provided it. This was particularly pertinent for the QAA guidance for Enterprise and Entrepreneurship Education. As Mears (2012) notes, setting the context opens an avenue for response. Where necessary, probing questions were used to encourage participants to elaborate on the response or to clarify my understanding of a response made. Braun and Clarke (2013) talk of the need to get people to talk. This did not appear to be a problem. When testing the interview guide, it took 22 minutes. Accordingly, a 30 minute timeslot was allocated for each interview; however, timing varied between 24.56 minutes and 51.16 minutes. In total 879.67 minutes of audio recording was made. That said, I was mindful that the focus was the quality of the information gathered, not the quantity (Menter *et al.*, 2011).

The one-to-one interviews offered the opportunity to gain an insight into the academics' perspective of enterprise. I was however, also interested in the perceptions of those with the responsibility of supporting academic staff to engage with enterprise. To achieve this, two group interviews were used; one with a support team from the Cardiff School of Education and another with a support team from the university's central services. Menter *et al.* (2011) explain that a key feature of a focus group approach is the interaction between participants, providing the freedom to express themselves in their own words. This was certainly the case with the group interviews of this research.

Finally, an interview was carried out with a member of the Vice-chancellor's Board. This provided the opportunity to explore the strategic approach to enterprise.

All voice recordings were transcribed using Dictapad. The resulting files were shared with those interviewed. No requests were made to exclude comments made.

3.3 Emergent Themes from the Data

Analysis of themes to identify patterns across data is a commonly used approach for qualitative research (Braun and Clarke, 2013). Gibbs (2012) mentions the use of computer software for coding and data analysis, however, as this was a small-scale research project, I chose to label and code data manually.

Themes that emerged from the analysis of the raw data collected via the on-line questionnaire informed the interview guide. These themes were judged to be relevant to the the research questions. In turn, responses to the themes used for the interview guide were transcribed and scrutinised. For each theme of the interview guide, sub-themes were identified using colour coded highlighter pens. These sub-themes were then transposed onto coloured post-it notes. This approach enabled me to reflect upon the sub-themes and examine and interpret the relationship between themes and sub-themes, gaining an understanding of the enterprise practices of academic staff.

It was this way of managing the data that led to the identification of four over-arching themes that formed the basis of the S⁴E Model for Enterprise. These were: i) Strategic Significance for Enterprise; ii) Support for Enterprise; iii) Synergy for Enterprise; and iv) Success for Enterprise. See Figure 13: Themes and sub-themes, below.

Themes of the Interview Guide	Emergent sub-themes	Link to the S ⁴ E Model for Enterprise
Defining Enterprise	Commercialisation / income generation Personal qualities and behaviours	Strategic Significance for Enterprise
Strategic importance of Enterprise	Reputation (university)	
	Diversified funding	
	Personal and professional development	
	Research interests	
	Promoting learning and teaching	
Entrepreneurial University	Commercialisation of education	Support for Enterprise
	Income generation	
	Entrepreneurial behaviours	
Enjoyment	Personal development	
	Reputation (academic staff)	
	Enhancing the student experience	
Reward	Incentives	
	Recognition	
	Time	
Wellbeing	Work-life balance	
	Time	
Workload	Motivations	
	Time	
Support	Infrastructure	Synergy for Enterprise
	Ethos and culture	
	Benefits of Enterprise	
	Staff development	
Financial awareness	Staff development	Success for Enterprise
QAA Enterprise and Entrepreneurship Education	Enterprise competencies	
	Enterprise informed curriculum	
Commercialising research	Knowledge and skills of academic staff	
	Learning and teaching portfolio	
	Learning, Teaching, Research and Enterprise nexus	
	Impact and communicating outcomes	

Figure 13: Themes and sub-themes

3.4 Limitations of Research Methods

The selection of data collection methods for this research was based on their appropriateness to gather the perceptions of academic staff of their engagement with enterprise activity in the Cardiff School of Education. An on-line questionnaire was used as it offered a means of establishing the views of all academic staff from the School. Qualitative data was collected through semi-structured interviews as this provided a means to gather the viewpoints of varying staff with regard to engagement with enterprise activity.

Limitations identified with regard to the on-line questionnaire:

- Potential confusion with the term 'page' instead of 'question' in formatting of the on-line questionnaire. The infrastructure did not allow for this to be amended. Consequently, 'page' was replaced by 'question' when reporting. I do not believe this was detrimental to the trustworthiness of the data.
- Delay in the timing of the second request to participate in the on-line survey. The release of the on-line questionnaire unfortunately coincided with the loss, over an eight week period, of an elderly parent and two elderly parents-in-law. The delay was unavoidable. However, having analysed the data, I do not feel the delay was detrimental to the quality and outcomes of the study. It simply delayed it.
- As a non-Welsh speaker, the translation of open responses to the Welsh medium version of the on-line questionnaire required accuracy. Google translate offered a measure of translation. However, for accuracy, a bilingual colleague who was not

an academic member of staff, agreed to translate responses. Text only was provided to ensure confidentiality. This did not compromise the anonymity of respondents or the credibility of the data.

- There were some structural issues with the on-line questionnaire:
 - Question 5, the responses of three participants were unrecorded. Consequently the sample size was adjusted to 42, with the adjusted sample size highlighted.
 - Question 20, respondents were asked to select options linked to staff development opportunities. Had the question been rephrased to read ‘What type of opportunities have you engaged with to develop the skills needed to be confident in successfully participating in enterprise activities?’ responses would have provided an indication of engagement, rather than an awareness of availability. This could have informed the recommendations of the research.
 - Question 22, the responses were not recorded. To address this, the theme of ‘support’ (theme eight) was incorporated into the interview guide.
 - Question 26, when analysing the data, I realised a guide to the rating scale had been omitted. The data presented in Table 15: Rewarding Successful Engagement with Enterprise, page 229 was analysed using the trajectory used for all other questions that included a rating scale; 1 as the most preferred option and 7 as the least. However, to substantiate this, ‘reward’ was incorporated as a theme (theme five) of the interview guide.

Limitations identified with regard to the semi-structured interviews:

- The transcription of interviews was time-consuming. This was not detrimental to credibility of the data.
- There was a possibility of responses to the questions posed being influenced by my position as a senior manager. To address this, participants were offered the opportunity to email further points at a later date, should they wish. One participant did this.

The response rate of 71.4% was credible and therefore permits application to a wider population, generalisability (Braun and Clarke, 2013). Where issues were identified in the on-line data collection, these were either addressed in the report or through the inclusion of relevant themes in subsequent interviews.

Reporting the research data presented a challenge. It has been tested with a number of colleagues. This led to the richness of data in places being sacrificed to maintain participant anonymity. This is particularly pertinent for enterprise projects, where despite the use of a pseudonym, academic staff could still be identified.

Overall, despite the imitations mentioned, I have every confidence in the trustworthiness of the research data.

Chapter Four: Analysis and Discussion of Results

The research findings are interpreted, analysed and discussed in this chapter. They are organised into five sections which reflect the S⁴E model for Enterprise that transpired as a result of data collection and analysis: Academic Context; Significance for Enterprise; Synergy for Enterprise; Support for Enterprise; and Success for Enterprise. When presenting the research data, pseudonyms have been used to provide the anonymity participants were assured. The profiles of anonymised participants have been provided (see Appendix 21: Interview Sample and Profiles, page 371).

Whilst analysing the research data four key themes emerged (see Figure 13: Themes and sub-themes, page 144) which influenced the organisation and presentation of the research findings. First, there needed to be an understanding of the strategic significance of enterprise and its function in relation to the core business of the university. Second, there needed to be appropriate support to encourage engagement with enterprise, to bring viable enterprise projects to fruition and to achieve project outcomes. Third, there needed to be synergy between the knowledge, skills and interests of academic staff and the types of enterprise activity undertaken. Finally, there needed to be a means of recognising successes in order to promote engagement with enterprise activity, the influence achieved by enterprise activities institutionally, regionally, nationally and internationally and establishing engagement with enterprise as a valued career opportunity. From this, the S⁴E model emerged. The analysis and interpretation of results has been presented using this model. The on-line survey questions and semi-structured interview themes were mapped to the core themes of: strategic significance

for enterprise, support for enterprise, synergy for enterprise, and success for enterprise (see Appendix 22: Mapping to S4E Model, page 376).

4.1 Academic Context

Alongside the four key themes used to present the research findings, an analysis of respondents participating in the on-line questionnaire was undertaken. This provided the academic context within which academic staff engaged with enterprise activities. This included the number of years individuals had been employed at Cardiff Metropolitan University, the academic department they were aligned to within the Cardiff School of Education, the type of academic position they held and whether or not they engaged with enterprise activities (Questions 5, 6, 7 and 8).

I wanted to explore any possible link between the number of years staff had worked at Cardiff Metropolitan University and their willingness and/or capability to engage in enterprise activities. The majority of staff responding to the survey had worked at Cardiff Metropolitan University for between two and five years. This was closely followed by those working at the university for more than ten years. Figures held by the School indicated that the two largest groupings of academic staff fell into these two categories. (See Figure 14: Years Employed at Cardiff Metropolitan University, below). The respondents were therefore representative of the profile of academic staff from the Cardiff School of Education with regard to the number of years they had worked at Cardiff Metropolitan University.

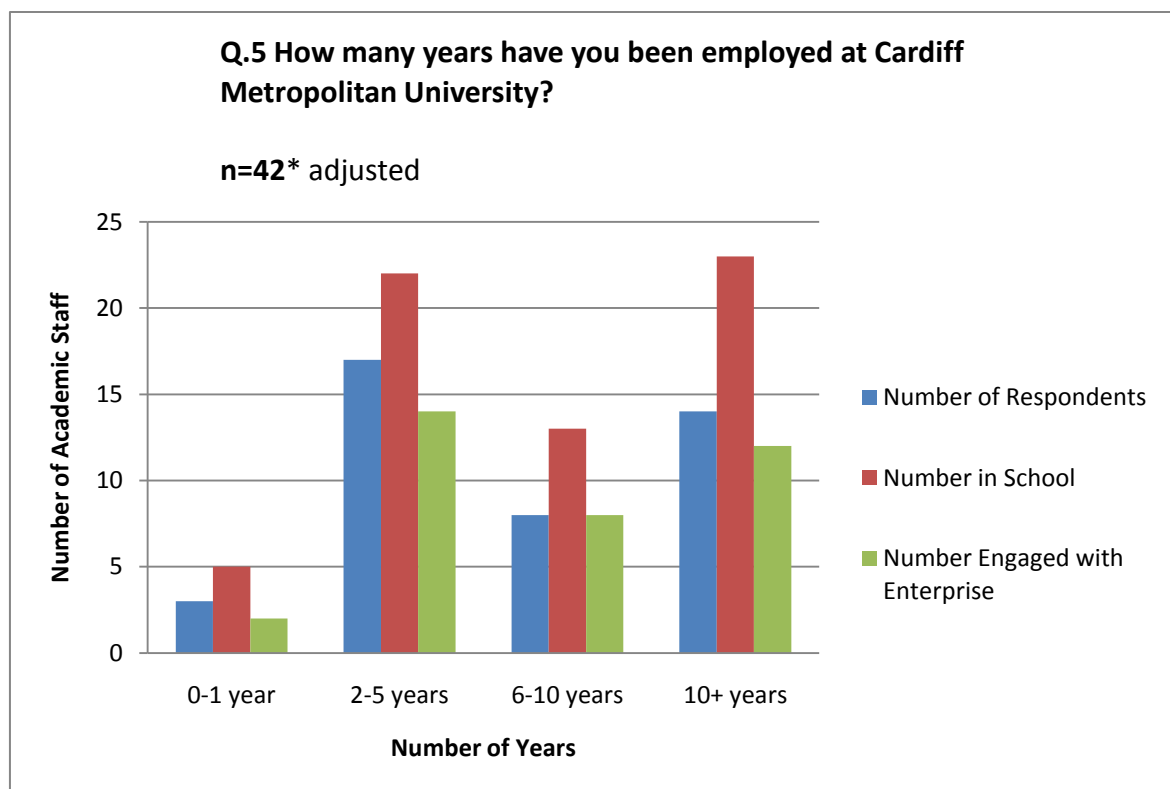


Figure 14: Years Employed at Cardiff Metropolitan University

Academic staff from the three departments (Department of Humanities, the Department of Teacher Education and Training, and the Department of Professional Development) engaged in the study. There were two reasons for asking respondents which department they were aligned to. The first was linked to the desire to include academic staff from each of the departments in the subsequent semi-structured interviews that formed part of the research design. The second, I wanted to establish whether or not there was a link between the department a member of staff was aligned to and his/her engagement with enterprise; and thirdly, whether or not this influenced the types of enterprise activities staff were attracted to. There was equitable representation of staff, across each of the departments with the majority of those responding (44.4%) coming from the Department

for Teacher Education and Training. (See Figure 15: Departmental Representation, below).

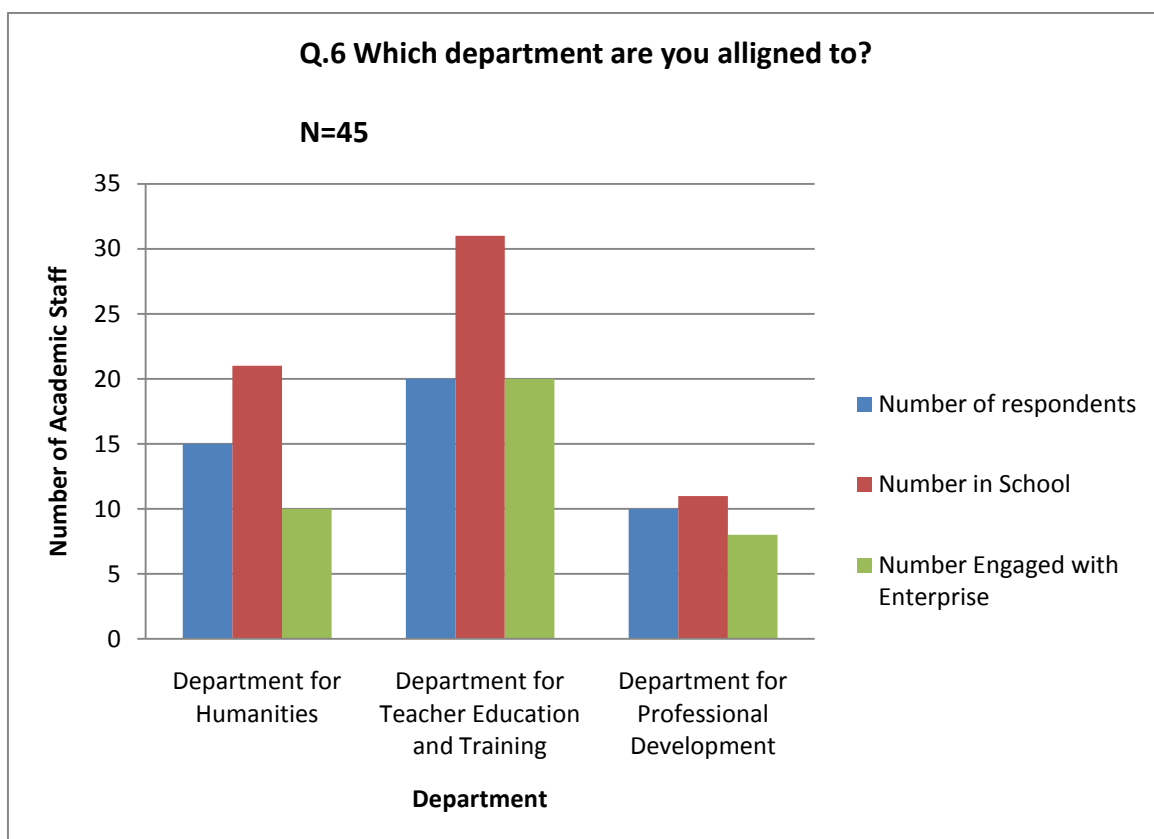


Figure 15: Departmental Representation

With regard to the profile of academic staff that had participated in the survey, I wanted to establish whether there was a correlation between the type of academic position held and staff willingness and/or capability to engage in enterprise activities. The majority of those responding indicated that they had Senior Lecturing posts (57.8%). Those with positions senior to Principal Lecturer (PL) are presented as 'Other >PL'. When the designation of those responding to the survey was compared to the figures for the School

as a whole, the distribution was broadly representative. (See Figure 16: Staff Designation, below).

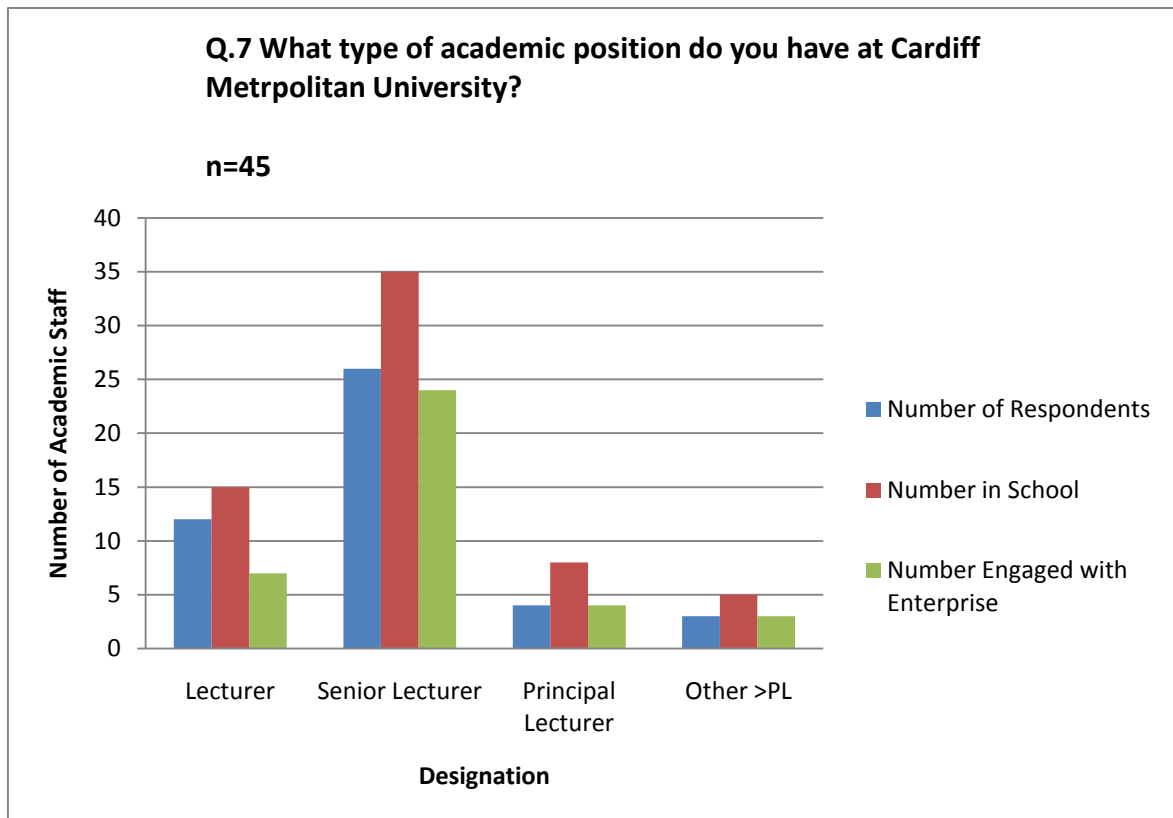


Figure 16: Staff Designation

In summary, the profile of respondents was representative of the overall profile of academic staff within the Cardiff School of Education. All respondents working at the university for 0-1 years had lecturing contracts. The majority of academic staff aligned to the Department for Humanities had lecturing contracts (73.3%) with the greater part having worked at the university for between two and five years. The majority of academic staff from the Department of Teacher Education and Training had senior lecturing contracts (80%) and whilst the greater part had worked at the university for

more than ten years. This was closely followed by those in the six to ten year category. The majority of academic staff from the Department of Professional Development had senior lecturing contracts (80%) and had worked at the university for more than ten years. (See Figure 17: Profile of Respondents, below).

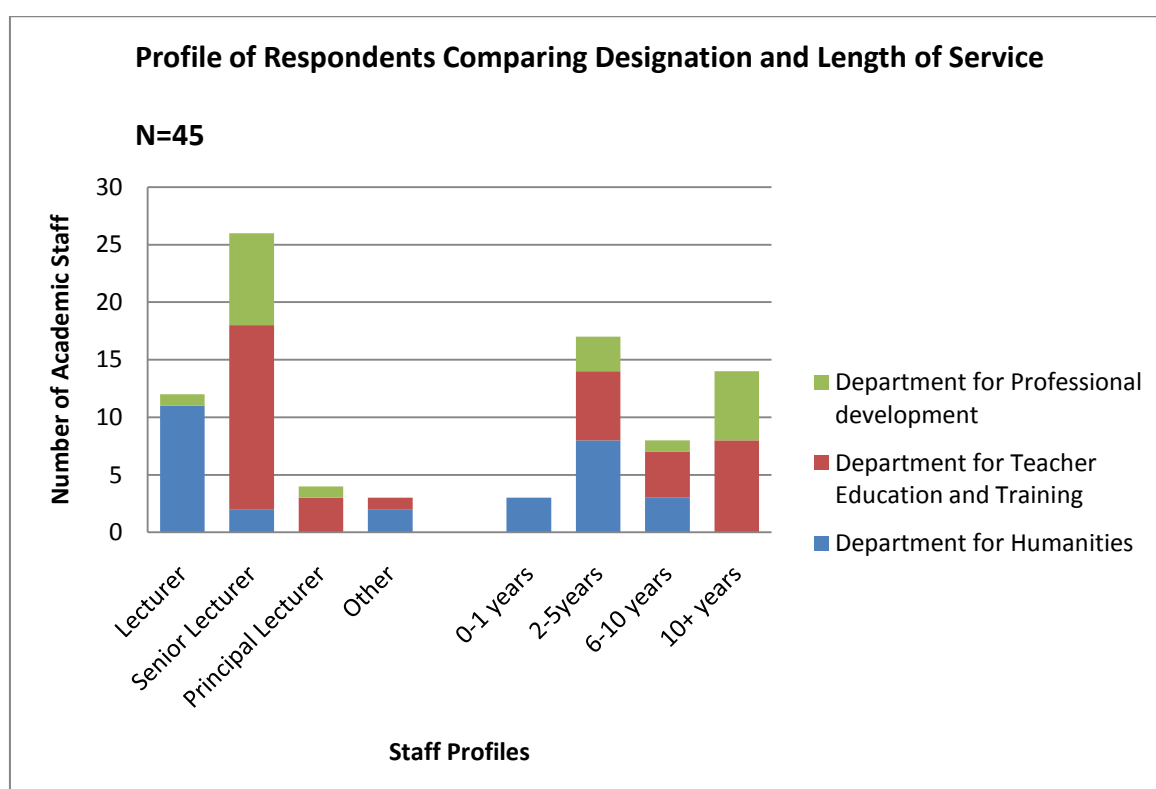


Figure 17: Profile of Respondents

This has relevance to staff development opportunities linked to enterprise competencies as Henry, Hill and Leitch (2005b) highlight the longer-term effects of enterprise education. The longer academic staff have been engaged with enterprise, the greater the potential to achieve a reputation as a successful engager (taking between 0-5 years) and start new enterprise initiatives (3-10 years) that contribute to society and the economy

(10+ years). This is reflected in departmental outcomes. In the academic year 2009-2010, the annual Research and Enterprise report indicated that 65% of academic staff from the Department for Teacher Education and Training, where the majority of academic staff had worked at the university for more than ten years, engaged with enterprise. Similarly, 58% of academic staff from the Department for Professional Development engaged, with the majority of academic staff having worked at the university between six and ten plus years. The number of staff from the Department for Humanities, where the majority of academic staff had worked at the university for less than five years, was 16%. Suggesting a relationship between the number of years a member of staff is employed by the university and engagement with enterprise.

Having analysed the profile of academic staff participating in the study, I wanted to examine this in relation to whether or not academic staff engaged with enterprise activities (Question 8). The School's Strategic Plan 2007-2012 highlighted a target of 22% of academic staff to be engaged in enterprise activity. The School's Key Performance Indicators for 2008-2009 confirmed that it was well on the way to achieving this, reporting a level of 19% for academic staff engagement. At that time, the academic curriculum vitae was used as the instrument for measurement. By 2009-2010 staff engagement had increased to 54% as reported in the School's Annual Research and Enterprise Report. By then, the School's measurement of engagement with enterprise activity was more refined and included costing and pricing data as well as workload analysis. Despite having these data, I wanted to test the perceptions of academic staff towards enterprise activities in the School. Whilst the majority of academic staff

responding to the survey indicated that they engaged with enterprise activities (see Figure 18: Staff Engagement with Enterprise Activities, below), the figure of 84% differed from that which had been generated through the School's annual audit for the same academic year (78%). This was attributed to the audit being representative of all academic staff in the Cardiff School of Education and the data generated through the survey, representative of respondents. However, the data confirmed strong levels of engagement with enterprise activity in the Cardiff School of Education.

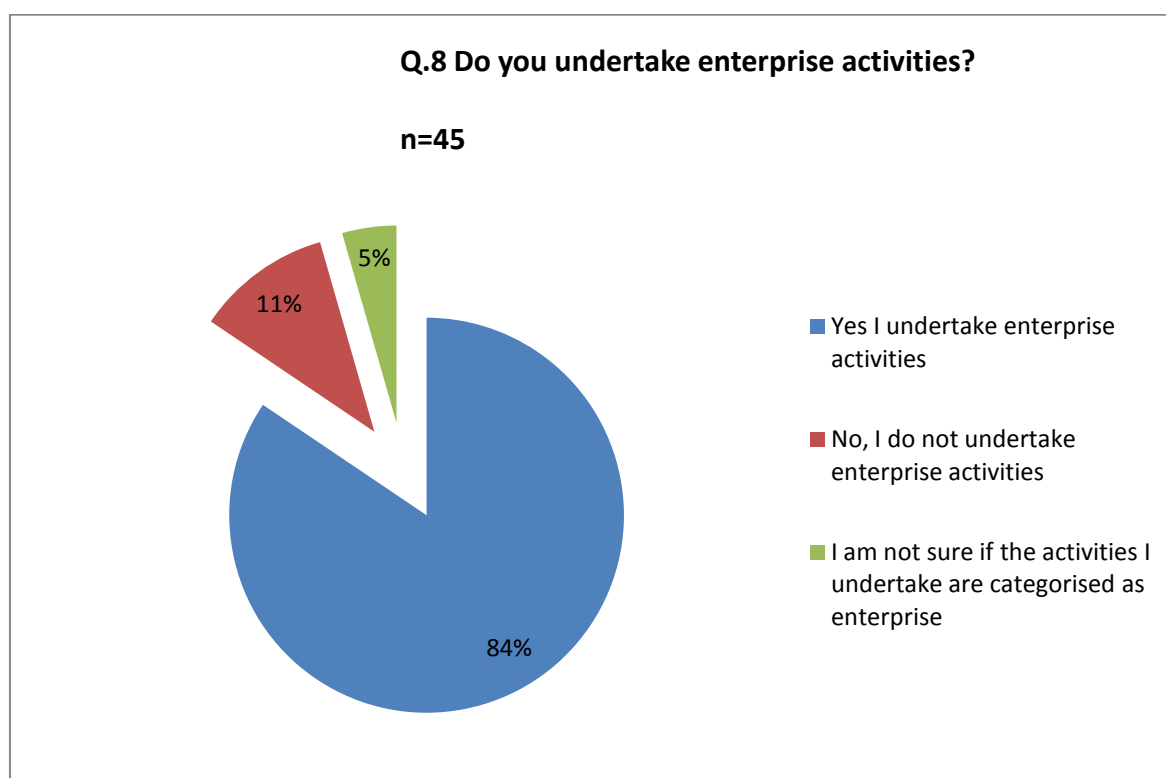


Figure 18: Staff Engagement with Enterprise Activities

An in-depth analysis of engagement with enterprise, in relation to the profiles of academic staff is presented in Table 11: Profile of Academic Staff Engaged with Enterprise and Table 12: Profile of Academic Staff Not Engaged with Enterprise, below.

Table 11: Profile of Academic Staff Engaged with Enterprise

Profile of Academic Staff Engaged with Enterprise (n=36)		Department for Humanities				Department for Teacher Education and Training				Department for Professional Development			
Number of Years Service	Designation	L	SL	PL	>PL	L	SL	PL	>PL	L	SL	PL	>PL
	0-1 year	2	-	-	-	-	-	-	-	-	-	-	-
	2-5 years	3	2	-	-	-	6	-	-	1	2	-	-
	6-10 years	1	-	-	2	-	4	-	-	-	-	-	1
	10+ years	-	-	-	-	-	4	4	-	-	4	-	-
		10				18				8			
		Numbers of Academic Staff											

Table 12: Profile of Academic Staff Not Engaged with Enterprise

Profile of Academic Staff Not Engaged (or not sure * if they engaged) with Enterprise (n=6)		Department for Humanities				Department for Teacher Education and Training				Department for Professional Development			
Number of Years Service	Designation	L	SL	PL	>PL	L	SL	PL	>PL	L	SL	PL	>PL
	0-1 year	2	-	-	-	-	-	-	-	-	-	-	-
	2-5 years	2	-	-	-	-	-	-	-	-	-	-	-
	6-10 years	-	-	-	-	-	-	-	-	-	-	-	-
	10+ years	-	-	-	-	-	-	-	-	-	2*	-	-
		Numbers of Academic Staff											

All respondents indicating non-engagement with enterprise had been employed by the university for five years or less, had lecturing contracts and were from the Department for Humanities. All respondents indicating that they were unsure whether or not the activities they undertook were categorised as enterprise, had been employed by the university for more than ten years, had senior lecturer contracts and were from the Department for Professional Development.

Despite being one of the core functions or missions of the university, some academic staff did not engage with enterprise activities. To explore this further, respondents to the on-line survey, who did not engage with enterprise, were asked to give details of any contributing factors that led to their non-engagement. One respondent explained that s/he had “started in post on September 1st and so had not yet had the chance to be involved with enterprise activities”. In contrast, another respondent wrote “teaching workload, priorities within workload [and a] limited scope for contributing”. This response, whilst linked to workload allocation and the physical value of enterprise (Campbell, Edgar and Stonehouse, 2011), indicated that there was a lack of awareness of the ways in which engagement with enterprise was supported in the School, for example with HPL cover, or with additional payment. Despite Learning and Teaching, Research and Enterprise being the three core missions of the university, the majority of workload allocation for academic staff features Learning and Teaching. As such, ‘workload’ became one of the themes incorporated into the interview guide with Margaret suggesting enterprise “should be a third of what we normally do”. As an ex-Director of Enterprise, I

appreciated the sense of this argument. However, its effectiveness is dependent on academic staff understanding the organisational value of engagement with enterprise, being pro-active, having entrepreneurial ideas and following them through. Whilst the school has strong engagement with enterprise, at an individual level, this is more variable in terms of time commitment. Additionally, the types of enterprise projects differ year on year. A member of academic staff might be busy with a specific enterprise project one year and whilst motivated to engage (Pritchard and Ashwood, 2007) have nothing the next. It would also place a much greater responsibility on the (now) Associate Dean: Enterprise to understand the physical values (Campbell, Edgar and Stonehouse, 2011) attributed to enterprise and engage in the work allocation exercise.

Similarly, those academic staff who were unsure if the activities they engaged with were enterprise were asked to indicate the types of activity they engaged with. One respondent included “networking events [and] promotional stalls at conferences”, another wrote “I do things that might be categorised as enterprising – though in general I probably would not call them enterprising. For example, I am currently trying to organise [a] conference”. This highlighted a need for staff development (Henry, Hill and Leitch, 2005a; 2005b) not only to highlight opportunities to develop the skill set of the entrepreneur and clarify activities encapsulated within the broader meaning of enterprise (Bridge, O’Neil and Martin, 2009), but also to develop an understanding of the ways in which the knowledge and skills have cognitive value (Campbell, Edgar and Stonehouse, 2011).

This theme was followed up with those academic staff who were willing to be interviewed and who did not engage in enterprise activity. Vanessa stipulated that she “wouldn’t want to be involved in something purely to just make profit. It would have to add value to something that I was doing”. She also mentioned that whilst enterprise activity was flagged up as important in her Staff Performance Review, “priority wise it hasn’t been that important [personally] partly because I am so subsumed in the job. The job being to teach and to support [students]”. Andrew had stronger views and voiced his concerns regarding the commercialisation of knowledge and the “big push... to pull education... to a position where it is largely serving the needs of big business”. This limited vision of engagement with enterprise fails to consider the role of the social entrepreneur (Wickham, 2006), or the need to diversify the university’s funding base (Clark, 1998). Additionally, this view fails to consider the benefits of the ‘triple helix’ advocated by Etzkowitz (2008) that enables universities to capitalise knowledge and create institutions that are self determined; not under the control of Government or Industry. Interestingly, Andrew went on to admit that he “didn’t know enough about enterprise work or the work within the School as a whole” and considered that he might not “be able to add much in terms of the contribution because I’m simply not as aware, as certain as I want to be”. This has implications with regard to staff development at departmental level, given the drive to embed entrepreneurship education into all undergraduate/postgraduate programmes and demonstrate a commitment to entrepreneurship (Young, 2014). The need for greater awareness was acknowledged by a member of the Pro-Vice Chancellor’s Board who suggested that for some academic staff, engagement with enterprise activities might take them outside their comfort zone; “their

comfort zone is teaching 18 year olds” and that some academic staff “don’t have the knowledge [to] exploit their ability”.

These findings were significant as the majority of academic staff in the Cardiff School of Education engaged with enterprise activity. This corresponded with the approach adopted by Warwick University where a strategic decision to generate income was made, earning it, rather than expecting it to be given (Shattock, 2003; University of Warwick 2010). Academic staff employed by Cardiff Metropolitan University for less than five years were less likely to engage with enterprise activity. Likewise, those employed as Lecturers were less likely to engage with enterprise activity, along with academic staff from the Department of Humanities. Whilst workload was cited as a reason for not engaging with enterprise activity, for some, there was a lack of awareness that the activities they engaged with were enterprise. This meant that these enterprise activities were unreported and the endeavours of the academic staff involved, unacknowledged. Despite a need to generate income from new sources to address the changes made to Government funding (Clark, 1998), there was also an element of disquiet regarding the commercialisation of knowledge and the move towards being entrepreneurial. This resonated with the work of Shattock (2009, p.197) who recognised that across the Higher Education sector, “there is still a resistance to the commercialisation of knowledge”.

4.2 Strategic Significance for Enterprise

Engagement in enterprise is predicated on its perceived significance or value to academic staff. The greater the significance, the more likely academic staff will engage. Some academic staff engaged with enterprise because it was linked to their research interests which Campbell, Edgar and Stonehouse (2011) relate to cognitive value. For example, Janet, an expert in the field of Fantasy Literature delivers on-line accredited modules based on this expertise. Others engage with enterprise because they had a passion for a subject and were excited about sharing it. For example, Tracey project managed the Triple Laureate event, having secured Julia Donaldson, the Children's Laureate and author of *The Gruffalo*, as the key speaker. Academic staff were also asked to contribute, based on the knowledge and skills required to complete a project. For example, Rhiannon was asked to contribute to the Aspects of Childrens' Lives in Wales based on her experience of primary school teaching and her knowledge of the Welsh curriculum. For some academic staff, there are also enjoyable, international opportunities, for example, delivering accredited staff development programmes in Singapore. Whilst all academic staff could engage and contribute effectively to the university's enterprise agenda, having an understanding of the expectations of the university/School with regard to enterprise would enable them to recognise and contextualise their personal contribution and professional development.

The literature highlighted differing uses and interpretations of the term 'enterprise' and I needed to ascertain whether or not there was a common understanding amongst academic staff. Applying the work of Bridge, O'Neil and Martin (2009) to establish

whether academic staff linked enterprise to the narrow meaning of the word, relating it to business and business activity or the wider meaning that included “personal qualities that make holders more ready than others to seek their own solutions to economic or other problems” (Bridge, O’Neil and Martin, 2009, p.19).

A definition of ‘enterprise’ was used as the opening theme of the interview guide. Responses were coded using key words/phrases associated with the narrow meaning, such as ‘making money’, ‘income generation’, ‘commercialisation’, ‘budgets’, ‘fund raising’ and ‘profit’. Likewise, to the wider meaning including key phrases such as ‘being creative’, ‘being innovative’ and ‘problem solving’. Whilst a senior manager of the university described ‘enterprise’ as a “set of enterprising behaviours that you might associate with someone who is being innovative, creative, novel and is able to react to the modern world in a particular way”, half (50%) of academic staff interviewed only considered ‘enterprise’ in the context of its narrow meaning. (See

Figure 19: Defining **Enterprise**, below).

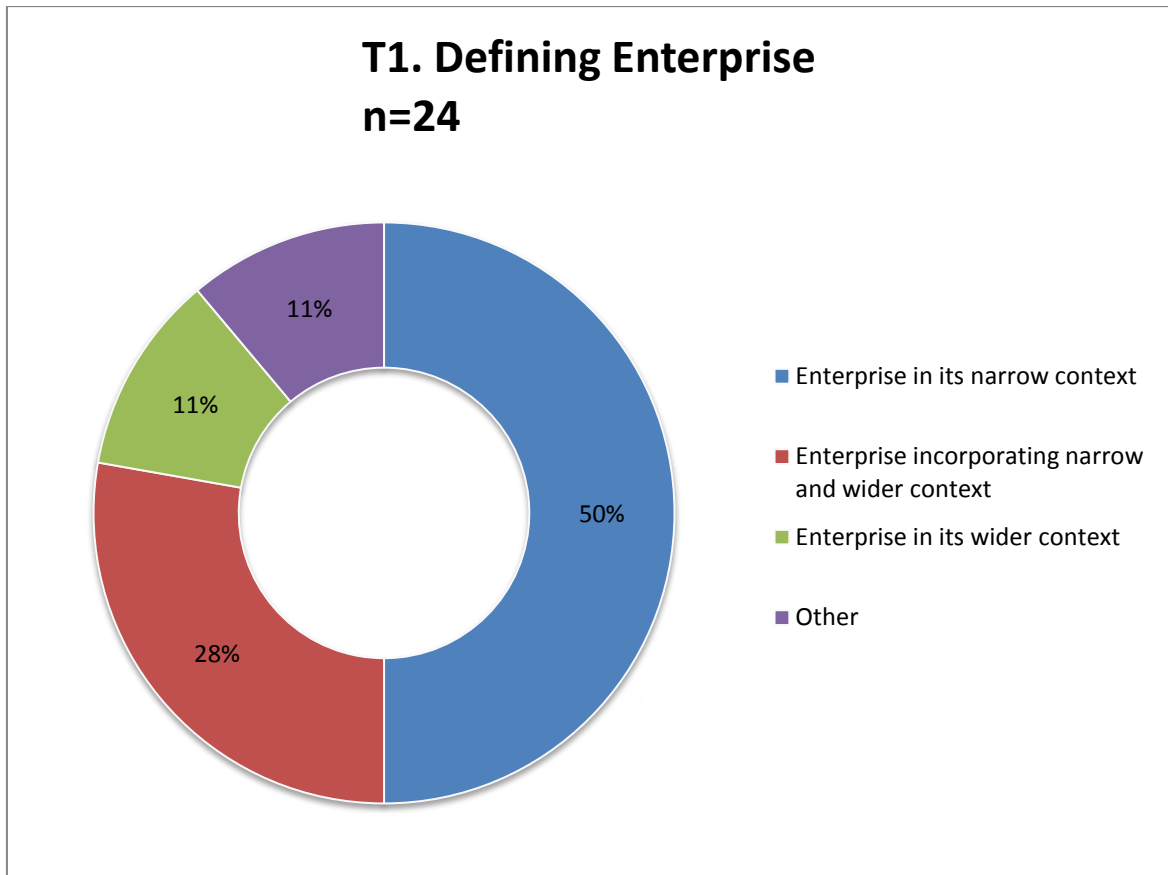


Figure 19: Defining Enterprise

In this narrow context, Kate regarded enterprise as a mechanism to “raise additional funds”, giving it economic value (Campbell, Edgar and Stonehouse, 2011). Similarly, Elsie perceived it to be “something that makes money”. In contrast, some academic staff (28%) included both the narrow and wider meanings in their description of ‘enterprise’. For example, Joanne suggested it was “being innovative, it would be creative, it would be making money”. Likewise, Margaret linked it to learning and teaching in saying that “the fact that it brings in some money is fantastic but the ethos is starting with good practice relating to outdoor learning and Forest School”.

Academic staff depicted as 'other' in

Figure 19: Defining **Enterprise**, above, either gave no explanation (Jessica), or a response that neither included a narrow meaning of 'enterprise' or the wider meaning; "enterprise is something that kind of comes from outside and is almost an external requirement" (Gethyn). A minority (11%) embraced the wider connotations, although without the set of behaviours. For example, Jayne explained it as "taking the work of Cardiff Met. out to the wider community, making those links with other stakeholders and other sort of educational communities in the wider educational spectrum". In contrast Tracey suggested it was an opportunity to "flagship Cardiff Met. and the School of Education, [spreading] the word of who we are and what we've got". The School's Research and Enterprise team focused on the narrow meaning of 'enterprise' indicating that it was about "making money and contributing in some way". One member of the team, considered 'enterprise' to be a means of enabling academic staff to "think in a different way which injects new ideas into the School". To an extent, this reflected the views of Thorpe and Goldstein (2010) who believed that having an entrepreneurial mindset enabled universities to "unlock [their] innovative potential" (p.9).

Whilst many academic staff perceived enterprise to be associated with the generation of income, I wanted to establish the extent to which academic staff were aware of its strategic significance as the actions of an organisation are driven from centralised strategy (Wickham, 2006). To explore the ways in which institutional strategic drivers

influenced the day-to-day practices of academic staff within the School, interviewees were asked for their perceptions of the strategic importance of enterprise (Theme two of the semi-structure interview guide, see Appendix 19: Interview Guide, page 366).

Interestingly but unsurprisingly, no respondents made reference to the Corporate Strategic Plan or the School Strategic Plan, despite it being presented at all departmental meetings and in the School's annual end-of-year meeting, suggesting that academic staff were unaware of the university's corporate values (Taylor 2008; Johnson *et al.*, 2015). In terms of coding responses, eleven of those interviewed, regurgitated the word 'important' in their response. Resonating with the work of the University of Derby (n.d.) and the thoughts of Clark (1998), Kate talked about the need to diversify income streams, saying "...we have got to essentially make sure all our eggs are not in one basket and I think we need to start diversifying and ensuring that the institution is going to remain robust in these recessionary and challenging times". A member of the School's Management Planning Team (Harriet) commented that enterprise "chimes with an overall mission or target of the university which is increasingly to see itself as a university operating within the community [letting] people know what we are doing and to see if there is any level on which we can engage participatively in projects and activities". Rhiannon gave the most direct response, explaining that enterprise went beyond the institution, that it was "national and government wide. They expect Higher Education Institutions to be making contributions to the economy".

A more proactive response was provided by Grace who said that strategically, enterprise “provides opportunities we probably wouldn’t have... the opportunity to be involved in something outside of my job, that complements my job... to work with other bodies outside of the university system”. Likewise in relation to complementing her academic role, Jessica talked about enterprise validating her teaching saying “you have to have some kind of connection with what is going on out there in the workplace”. This concept of enterprise informed learning and teaching was also highlighted by Tracey who explained that strategically enterprise enabled her “to go out there and do more than just teach”. This approach also reflected the perception of the member of the Vice-Chancellor’s Board who considered engagement with enterprise to be “a natural part of what you do as an academic in an applied post ’92 modern university. We don’t tend to recruit people who want to shut themselves away in an office for eight to ten hours a day with a pencil and pad and think great thoughts”.

Responses highlighted the fact that some academic staff were more informed than others with regard to the strategic importance of enterprise. Enterprise and the influence gained from associated activities are clearly strategically important for the university. They enhance the reputation of the university, they provide additionality; enhance employability, with successful enterprise projects leading to staff satisfaction. However, despite its corporate strategic objectives and its glossy brochures, some academic staff remain unsure and even ignorant of the function it plays in relation to their academic role. Given the diversity of responses relating to the strategic importance of enterprise, there needs to be greater promotion of the benefits of engaging with enterprise and

greater clarity of the interrelationship between enterprise activities undertaken at School level and the contribution they make to the university's Corporate Strategic objectives.

In terms of 'great thoughts' and the interrelationship between research and enterprise, Tracey challenged the notion of the three missions having equitable status, saying:

In any university where there's a focus on academic life (learning and teaching) and research, for some reason enterprise is kind of the poor relation... because actually, people offering enterprise are offering it because they are specialists in their field.

This viewpoint takes no account of the Learning and Teaching, Research and Enterprise nexus and the need to develop connecting threads between the three missions (HEA, 2009). Enterprise is well placed to be the centralised focus of the nexus with embedded skills for entrepreneurship informing curriculum design, the outcomes of enterprise projects informing curriculum content and the commercialisation of research. Jayne, commented on the need for greater integration. She explained that enterprise activity had enhanced her reputation as a 'cutting edge' practitioner in her field, going on to say "I don't think research, for all its value, can have that kind of... dynamic to it". Brown and Swain (2012) relate the shaping of these personal values to our upbringing and professional experiences. Similarly, in recognition of a greater need to integrate research, Roger explained that whilst his enterprise activities had enabled him to "give something to the School" he was not prolific with regard to articulating enterprise outcomes through "[research] papers and journals".

For those with a key role in supporting enterprise activity centrally, there was a sense of frustration in this lack of strategic awareness of the university's enterprise imperatives and the value it placed on enterprise activity (Johnson *et al.*, 2015). A member of the Research and Enterprise Services unit explained "it is written down in all the right places and they say all the right things. However, there is a long way to go (to gain a greater understanding of the strategic importance of enterprise)". Rationalising that seemingly, enterprise had a smaller focus than research at Research and Enterprise Board, which could only be increasingly smaller at Academic Board where the Enterprise agenda jostled alongside those for Research and Learning and Teaching. This was an interesting observation; personal experience over the period of the research would indicate that the significance of enterprise has grown with an increased recognition of enterprise informed learning and teaching and the commercialisation of research. More importantly, there has been a greater recognition of enterprise as a viable career option with the introduction in November 2013 of more clearly defined routes to Reader and Professor status, enabling academic staff to use enterprise activities such as international work, knowledge transfer, the exploitation of intellectual property and external advisory roles (Cardiff Metropolitan University, 2013-2014) to inform their application. This is a positive strategic message that communicates the value of enterprise activity across the university that is articulated at the highest level via the university's Academic Board and reported to the university's Board of Governors.

From a School perspective, with regard to diversified income streams, enterprise activity had financial importance. Of the net income generated via enterprise towards the School's Research and Enterprise financial target, 40% was retained centrally and 60% was returned to the School. This was substantial; rising from £53,400 in 2008-2009 to £216,600 in 2012 – 2013. Reflecting the drive to commercialise knowledge (Clark, 1998; Gibb, 2010; Young, 2014), this provided a significant source of additional revenue for the School. I wanted to establish whether or not the School's Strategic Plan informed the practice of academic staff with regard to engagement with enterprise. To achieve this, the sub-themes of 'School' and/or 'Department' were used as prompts when discussing the strategic significance of enterprise in the semi-structured interviews (Theme two of the semi-structured interview guide, see Appendix 19: Interview Guide, page 366).

The School's Research and Enterprise Support Team considered enterprise to be of significant importance. One member of the team professed that the School "couldn't function without it... because budgets have been slashed [and there is] an onus on enterprise to bring in the money. You are also looking at the employability of students. Where would they get the extra strings to their bow [without] enterprise opportunities?" This was explored from a wider perspective by his/her colleague who said "[enterprise] strikes me as being really important for the reputation of the university as a whole". S/he explained that enterprise activities, such as workshops and conferences had "a lot of people going back to various parts of the UK and further a-field talking about Cardiff Met. and Cardiff Met's academic staff". This is important as loss of reputation is a potential risk with regard to engagement with enterprise (McCaffery, 2004).

From a departmental perspective, one of the Heads of Department, thought its perceived importance “depends on the ethos of the department [and] where it feels the interests of its members lie..., how strongly the department feels that enterprise activity is important [and the extent to which staff] have time to get involved”. The primary issue here is the importance of departmental ownership of the strategic objectives for enterprise. To be able to relate to the university’s strategic objectives they have to have relevance to academics and valued at School level. In the Cardiff School of Education the objectives for Learning and Teaching, Research and Enterprise are usually communicated through the staff performance review process.

In coding the data, the themes or imperatives that emerged for academic staff within the Cardiff School of Education were: credibility, competitiveness, and personal and professional development.

Enterprise and enterprise informed learning and teaching enhances the credibility of academic staff and the curriculum. One of the Programme Directors, Grace, explained that a Sport Wales project had enhanced the curriculum and improved the employability prospects of students. She also recognised the value of the enterprise portfolio saying “with things like the MEP stuff (the Welsh Government’s Masters in Educational Practice programme for all newly qualified teachers), the PISA stuff (the Programme for International Student Assessment that measures and compares the attainment of 15 year

olds internationally), staff are at the forefront of things that are happening in Wales". Making connections to the reputation of the School, she went on to say "our partnerships with schools are really important... they (schools) think we are at the forefront of things... Knowing what is going on and being involved in developing it is very important for our credibility". The issue of credibility was also noted by Rhiannon who said "enterprise for us is important because it means we are keeping our hand in regarding recent developments which are in schools [without this] it could be very easy for us to be left behind".

A number of academic staff were also aware that the one of the outcomes of enterprise was increased competitiveness with regard to student recruitment (Wickham, 2006; Bridge, O'Neil and Martin, 2009). For example, Vanessa mentioned that enterprise "raises the profile of the Cardiff School of Education elsewhere... that might be something that will be very useful in terms of future engagement for our courses". This aspect was also commented on by Brangwen who said "We need to be out there, we need students, we need them to know who we are and what we do". Articulating the positive contribution made by enterprise activities enhances both the university's and School's competitiveness amongst universities offering similar programmes elsewhere. Elsie related this to her own experiences saying "in terms of outreach and impact and just showing ourselves off, it is quite important". She went on to say "it's a good excuse to tell people about our courses... and the people who teach on our courses... what we do and what our research is. ... almost like a shop window". This 'shop window' approach is important. The two-day Train the Trainer programme offered through enterprise has

seen increased enrolments onto the School's Preparing to Teach in Post Compulsory Education and Training (PCET) programme. If short courses offered through enterprise lead to increased student numbers, there is a need to include focused marketing in short course material and utilise such opportunities effectively.

This also relates to post-short course opportunities to market the expertise of academic staff and highlighted by Jayne, who felt the School needed to be better at articulating the depth and breadth of enterprise activities undertaken and the influence they had made. She said "we should actually do a lot more sharing... I know other people have been involved in other things, but I have no idea what they do, how they've been involved, or what the outcomes have been". If the enterprise endeavours remain known only to those who engage with them, the outcomes are less influential and opportunities to develop understanding are lost (Gibb, 2010). When the outcomes of enterprise projects remain unknown to other academic staff, the opportunities to share are diminished, as is the propensity to emulate creativity, innovation and risk taking in a safe environment (McCaffery, 2004). Likewise, if students are made aware that enterprise activities have informed curriculum content, it raises the profile of enterprise and entrepreneurship as well as the reputation of academic staff involved. Broadening student awareness of the function enterprise can play in their future career (QAA, 2012).

One of the Heads of the Department talked about the benefits gained through engagement with enterprise in relation to personal and professional development. He

talked of departmental staff being “invigorated” and engagement with enterprise “paying dividends for the School”. A more personal perspective was offered by Brangwen who recognised that enterprise activities offered opportunities “for us to develop personally. Sometimes we lose sight a little bit when we get caught up in the day to day teaching”.

4.2.1 S⁴E: the Concept of the Entrepreneurial University

The literature revealed the concept of the ‘entrepreneurial university’ (Clark, 1998; Gibb, Haskins and Robertson, 2009; Gibb, 2010). As part of the study, I wanted to ascertain the extent to which academic staff in the Cardiff School of Education were cognisant with the term (Theme three of the semi-structured interview guide, see Appendix 19: Interview Guide, page 366) and the potential implications this would have for future strategic planning within the School. The entrepreneurial university is innovative in its approach to achieve a more promising future (Clark, 1998). Whilst some respondents were open and honest in admitting that they did not recognise the term saying “I don’t know what an entrepreneurial university is” (Reginald) others made links to what they already knew. For example, Jayne mentioned that whilst she “didn’t know the bigger picture... enterprise had a big impact on [her] work and [her] students’ learning”. This approach was also taken by Tracey who said “I think we are quite cutting edge in terms of what we do. We run things very professionally... so I think, yes, we are quite entrepreneurial”. Similarly, Elsie considered Cardiff Metropolitan University to be “quite an entrepreneurial university [with the] work ethos element right at the heart of its branding”.

Gethyn debated whether or not Cardiff Metropolitan University was a “little reticent” to describe itself as an entrepreneurial university, and stated that “our university seems to have aspirations in that direction” but that it also seemed “to want to maintain a more traditional university identity” offering his opinion that education was a “public service and a public right and something that should transcend commercialism” The argument for education as a ‘public service’ and a ‘public right’ has been diminished across the Higher Education sector with the introduction of course fees (Shattock, 2009). Whilst it has influenced the concept of income generation and benefit to the economy, in Wales it has been accompanied by a widening access imperative that seeks to address social justice and benefit society. Research activities were seen to be a mechanism for informing the planning decisions of local authorities, and learning and teaching activities a means of promoting participation in Higher Education and creating informed citizens. Likewise, the Higher Education Funding Council for Wales introduced Third Mission funding arrangements (HEFCW, 2004) that sought to encourage universities to support knowledge transfer economic growth (Shattock, 2009). The commercialisation of education in relation to the concept of the entrepreneurial university was commented on by Vanessa who perceived it as having a “fundamental flaw, [being] all about business rather than about teaching and learning” going on to say that “education should be free at the point of access”. This philosophical approach was reiterated by Andrew who said:

... if it was taken from a neo-liberal, sort of let’s go out and make lots of money at lots of people’s expense, then I am not sure universities should be in that business at all. If [it] is viewed more as, actually let’s serve the needs of the communities that we work with and it relates to the innovative, creative and developmental needs... then it should be happening. I think the university is currently in danger of moving towards the first model.

Both views fail to take account of, or the need to develop connectivity between Research and Enterprise, and Learning and Teaching.

Some staff linked their response to the work of other academic schools. For example, Rhiannon thought that Cardiff Metropolitan University might be an entrepreneurial university “because of the Business [sic] School”. Matthew also responded in this vein in suggesting that “some parts would be more entrepreneurial than others... I would imagine that Art and Design and the School of Management would be more entrepreneurial”. Joanne explained that she only had ‘local knowledge’ from within the School, saying “I think there are pockets of people who are naturally enterprising, creative thinkers, ideas people, income generators if you like, and some people aren’t. I think there are good teachers, good researchers and good enterprisers [sic]” but she questioned whether an academic should need to be all three. These viewpoints confirm the need to communicate the benefits to be gained from engagement with enterprise in a School of Education, along with a need for increased specificity with regard to the achievements of academic staff with the Cardiff School of Education, particularly as in the academic year 2013-2014, the Cardiff School of Education made the largest contribution to the university’s financial targets for research and enterprise from the five academic schools.

For the strategic imperative for enterprise to have significance in terms of measurable outcomes that are valued, there needs to be strong, underpinning support both centrally

and at School level. This enables academic staff to innovate and contribute effectively with enterprise activities.

4.3 Support for Enterprise

The Research and Enterprise culture of Cardiff Metropolitan University was supported centrally by the university's Research and Enterprise Services (RES) unit. With specific regard to Enterprise, the unit was managed by the Head of Enterprise (now Director of Enterprise) who was supported by two officers. The officers acted as a conduit between RES and individual Schools. One officer with the role of supporting the Cardiff School of Education and the Cardiff School of Sport, the other with the remit for the Schools of Management, Health Sciences and Art and Design.

At School level, the Cardiff School of Education was supported by a Research and Enterprise Support Team whose role it was to inform, promote, offer guidance, and provide support to academic staff, thereby ensuring that those staff willing to share their creative ideas were empowered and enabled to bring them to fruition, contributing to the School's strategic objectives. In conjunction with the School's Director of Enterprise, the team comprised a Research and Enterprise Manager, and a Research and Enterprise Administrator. The team was augmented by three academic staff with fractional roles as Enterprise Activists, one for each of the three departments within the School and an Enterprise Champion who was also an academic member of staff.

Centrally, there was autonomy at School level to manage the support available for enterprise activities. The Director of Enterprise in the Cardiff School of Sport was supported by a full-time administrator. Likewise, the Director of Enterprise for the Cardiff School of Art and Design was supported by a full-time Enterprise and Engagement Administrator. The support team within the Cardiff School of Health Sciences had greater symmetry with that of the Cardiff School of Education. The Director of Enterprise was supported by a Research and Enterprise Manager, a Research and Enterprise Administrator and five Enterprise Leaders, one for each of the disciplines within the School. Similarly, the support team within the Cardiff School of Management included a part-time officer, a full-time administrator along with departmental Enterprise Champions.

Having introduced a model of support to promote participation in enterprise activities in the Cardiff School of Education (Jones 2011a) it was pleasing to have the outcomes of its implementation commented on as a strength by those interviewed. For example, one of the Heads of Department noted strength in “the collegiate ethos that has been engendered by the Head [sic] of Enterprise and her immediate team”. Likewise, Fiona said “knowing that there is a team of people that you can go to with ideas and they are always prepared to listen [and] prepared to give you expertise to make those ideas a reality” was important. This was also commented on by Elsie, who explained that it was useful to have an appointed team to support enterprise because “if I have an idea I can pop up and be told ‘yes’ or ‘no’”. With experience of working elsewhere, she explained that this support for enterprise was not always available in other universities.

Activities within universities need to act independently of personality, however, it is clear that the approach of an 'open door' to listen to new ideas, accepting a 'sorry, that project doesn't turn me on' or 'how can I help you with that', works. Having this ingrained enterprising culture across the School (Wickham, 2006) was noted by academic staff. For example, Gethyn said that there "seems to be a very strong mindset towards [enterprise]. I think I've been aware of that from the time I started here". Likewise, Harriet felt there was an "emphasis on the benefits [enterprise] can bring to the people working here, both in terms of their own satisfaction and enjoyment, and their engagement with potential partners". Environmental factors such as climate and culture have the capacity to encourage or constrain creativity (Bessant and Tidd, 2011). This culture for enterprise was apparent to new members of academic staff. Jessica said "I think [enterprise has] a really high profile. All through the year there have been lots of emails, lots of information... this is happening, are you interested in doing this? So I know who the enterprise team are, and I know if there was something I wanted, I know the person to go to. I think that personal connection is very clear and very strong".

Engagement with enterprise needs replicability and therefore should be reliant on procedures and entrepreneurial processes (Wickham, 2006), rather than individual personalities. Elements of this were noted by a member of the Vice-Chancellor's Board who recognised support to be "hugely important... you need databases, you need marketing, you need a constant kind of web presence". S/he also recognised the importance of keeping staff informed of the enterprise opportunities "on offer at a

particular time and why [academic staff] might want to [engage with] the different things that are available at any one time". Interestingly, no mention was made of a process that calculated measurable values for enterprise activity (Taylor, 2008). A member of the university's Research and Enterprise Services unit considered Cardiff School of Education had "a very good structure [for enterprise]. I feel confident that [the School] understands the system [and] I like to think that we support you when you need support". The School's Research and Enterprise Support Team also recognised the part they played in enabling academic staff to engage with enterprise, with one member of the team reflecting that some projects "would not have happened without support". This was endorsed by his/her colleague who explained that "some project managers need a bit more direction. We can step in and give that direction". This supportive approach suggested that academic staff were acting as intrapreneurs, undertaking enterprise projects that were overseen by others which had no personal financial risk (Maier and Pop Zenovia, 2011).

Nonetheless, the support provided to promote creativity, innovation and ultimately, engagement with enterprise was appreciated. For example, Elsie thought "the support from [the team] is excellent. You don't get that in lots of other universities. The last place I worked, I'd have all these ideas and there was no one to talk to about them". Matthew based his response on his own understanding of managing an enterprise project, saying "the experience I've had has been positive. Having just played a large part in organising [a] conference, it wouldn't have happened without the support of the School's enterprise team". This was also mentioned by Andrew who suggested that having support made a

difference, saying “I’m easily put off if there are any barriers [because] I haven’t got the energy to start jumping through loads of extra hoops. [The team are] very good at pushing barriers out of the way, you tend to do the barrier pushing and I’m able to get on with [what’s] important”. This aspect of overcoming potential barriers was also mentioned by Jayne in relation to the enterprise work she had undertaken. She explained “I just class myself as a teacher and I’m limited in my knowledge and expertise. Without [the team] I just don’t think I could do it”. The developmental aspect of support is invaluable. A member of the Outdoor Education Team said “when I first did the Forest School training, the support you gave me to put that first short course together... now, with the development of the centre, I can deliver quality experiences but the actual putting together of that bid, I [was] out of my comfort zone, so you do need that support”. Support, in the context of Higher Education extends beyond finance (Wickham, 2006) managing performance (McCaffery, 2004) and managing motivation (Pritchard and Ashwood, 2008) to include the development of an entrepreneurial skill set through a focussed training programme (Henry, Hill and Leitch, 2005a; Gibb, 2010) and providing appropriate incentivisation for engagement (Pritchard and Ashwood, 2008). Therefore, developing the confidence of academic staff and building enterprise capability engage effectively with and/or project manage enterprise activities.

The aspect of building confidence was noted by a member of the university’s Research and Enterprise Services unit who said of the enterprise culture within the Cardiff School of Education, “‘nurture’ is a really good word to describe how you deal with people and how you deal with enterprise projects, not being afraid of small projects. Other schools

have different views [where] it's only the big-bucks that they are looking for". This view was supported by a colleague who explained "when we do staff development sessions, [we say] it is about starting small and we describe the journey that develops people's confidence and it growing with them going for bigger pots of money". Whilst this opens up the 'nature versus nurture' debate (Bridge, O'Neill and Martin, 2009), in the context of Higher Education, nurturing fledgling academic entrepreneurs is akin to nurturing early career researchers and contributes to the Research and Enterprise nexus (HEA, 2009).

Raising wider awareness of the support available is clearly important in terms of encouraging staff with ideas to come forward. This was commented on by Rhiannon, who said "unless you're involved with an enterprise project, you're not really aware of the support that's available". She made a comparison of her experiences contributing to the development of the Welsh Government's PISA training materials where "so much of the administration was dealt with [by the enterprise team]" and her learning and teaching role where "a lot of the administration is down to me". She also noted that "people may not be aware of that support until they're directly involved [in enterprise]". Whilst academic staff appreciate the support given to engage with enterprise, it can foster a culture of under-responsibility (Thorpe and Goldstein, 2010). With regard to the role the support plays in motivating staff (Pritchard and Ashwood, 2008), one of the Heads of the Department thought the level of support was "excellent. The recognition and the warmth in which the team operates with staff goes a huge way to make people come back and do a bit more". Consideration of the wider role played by academics in supporting enterprise was highlighted by Margaret who said "my enterprise work has grown because I feel

really supported. Also, my line manager has been supportive and understanding, giving me the flexibility to manage other things around [it]”.

I became aware that some staff perceived support for enterprise to be linked to individuals, which Thorp and Goldstein’s (2010) refer to as the ‘responsibility virus’. For example, Fiona suggested that participation with enterprise and engagement happened because “it’s connected to you”. This point was also mooted by Harriet who said:

You have a huge part to play and a huge positive role because of the way in which you are encouraging of people and their proposals and are very supportive of them. You guide them through, you don’t just say that’s a great idea - go off and do it on your own. You put into place very clear procedures and you make yourself available to help them. I think because you have that ethos, that translates or has an effect on which the wider team respond as well which is to give positive and helpful advice and support.

Whilst accepting effective leadership was part of my responsibility as Director of Enterprise, the role was complex and people’s expectations of me differed. For example, being figurehead, manager, coordinator, negotiator, planner, resource allocator, controller and a role model. The role of ‘leader’ was crucial to success (Gibb, Haskins and Robertson, 2009; Cobb, 2012) in the Cardiff School of Education. Similarly, as ‘leader’ and ‘negotiator’ there was a need to create successful project teams, that “deliver[ed] the goods” (Cobb, 2012, p.116) and foster a culture of enterprise responsibility (Thorp and Goldstein, 2010).

Effective engagement with enterprise needs to transcend the individual ethos, work ethic and/or personality of an individual. However, a member of the Vice-Chancellor's Board explained that Schools would not win contracts unless it had "a) expertise, and b) the right sort of personality to win tenders". When asked what makes a good Director of Enterprise, he talked of the need for 'credibility' saying "it's all very well being credible as a professor internally, but it's externally, when you are speaking to people outside universities [they] want to know what we can do for them and at what price. To have that credibility, you've got to be a certain sort of person, with a certain background and level of experience". This was confirmed by Gibb, Haskins and Robertson (2009) who suggested a need for entrepreneurial leaders to be strategic, proactive and role model engagement with enterprise.

Interestingly, and similarly to events in my own life (see PDP Appendix Two: Me and Understanding Me, page 422), a number of academic staff interviewed talked of having personal values (Brown and Swain, 2012) and experiences outside of academia that would be considered to be commercial/entrepreneurial. For example, Fiona explained that her grandfather was a baker and that her father had grown up in a bakery business "as a child there were always cakes and businessy things. My father will always come up with an idea [so] I've always been used to having somebody to throw ideas around with". Likewise, Tracey explained that prior to becoming a senior lecturer in education she was a freelance educational consultant in Philosophy for Children. She "also ran [her] own bag making company and worked as a consultant for an organic beauty company, selling products to friends and colleagues". She noted that she used "the entrepreneurial skills

acquired with having my own business. Having the support of an enterprise team has meant I continue to develop enterprise skills alongside my lecturing post”.

Being predisposed to engage with enterprise has been discussed personally in the PDP section of the thesis (PDP: 2.1 Career Background, page 389) and by Bridge, O’Neill and Martin (2009) with their nature versus nurture debate. However, they also discuss external influences that impact on participation with enterprise, including: economic political and cultural conditions, supply and demand, and social capital. They were also of the opinion that to be in control of an enterprising event, individuals needed to be competent. They developed a list of frequently cited enterprise competencies which included personal qualities, skills and orientation. (See Table 3: Enterprise Competencies, page 67).

The research explored perceptions of the skills and competencies that I had considered important for those involved in enterprise activities. Question 19 of the on-line survey asked respondents to rate a range of skills linked to successfully participating in enterprise activities from 1 (very necessary) through to 7 (not at all necessary). (See Table 13: The Entrepreneurial Skill Set, below).

Table 13: The Entrepreneurial Skill Set

Q.19 In your opinion, to what extent do you need the following skills to be confident of to successfully participate in enterprise activities?							
n=44							
<div> <div>Very Necessary</div> <div>←</div> <div>→</div> <div>Not at all necessary</div> </div>							
Skills for Enterprise	1	2	3	4	5	6	7
Project management skills	11	15	11	7	-	-	-
Subject knowledge	30	11	2	1	-	-	-
Time management skills	19	18	7	-	-	-	-
Financial skills	2	6	11	5	12	6	2
Interpersonal skills	29	11	4	-	-	-	-
People management skills	19	18	6	-	-	1	-
Understanding commercial market	6	9	11	3	7	5	3
Research skills	12	13	10	3	4	1	1
Marketing skills	4	7	14	10	3	5	1
Communication skills	32	10	2	-	-	-	-
Personal contacts	16	10	13	1	4	-	-
Professional networks	15	10	8	7	4	-	-

Academic staff rated 'communication skills' highly with 32 (n=44) considering it very necessary. Likewise, they recognised the value of subject knowledge, with 30 (n=44) rating this as a very necessary skill. This was closely followed by interpersonal skills. To an extent, this was to be expected in a School of Education where the very premise of successful learning and teaching is predicated on knowing your subject and articulating that clearly to students. I was interested to learn that of those responding to the survey, only two (n=44) considered financial skills to be very necessary and that three

respondents (n=44) thought an understanding of the commercial market was not at all necessary. This could have been attributed to a resistance to the commercialisation of knowledge and/or conflict with academic values (Shattock, 2009). As such, the theme of financial awareness was explored with those interviewed.

Confirming the data generated through the on-line survey, a minority of academic staff interviewed considered financial awareness to be a desirable skill. For example, a programme director with budgetary responsibility said “I think if you’re holding a budget, perhaps you should be financially aware”. More comprehensively, Matthew said of his experiences:

I have learned a lot from working with yourself and the team. I have a lot more to learn in that respect. I would imagine that many people who perhaps aren’t enterprise active would not have any insight into the financial planning side of things; pricing and costing [sic]. Issues around how much it costs to rent rooms in the building, catering, it can be quite substantial sums of money and I think there are people who might be surprised by the complexity of the financial planning that’s involved in enterprise activity.

The overwhelming majority considered financial awareness less important or unimportant because they perceived it to be part of the support they received from the School’s Research and Enterprise Support Team. Jayne, whose enterprise activities included an external secondment for a significant proportion of her contracted formal scheduled teaching said:

Personally, I don’t really feel the need to be aware of it, maybe because I’ve got no expertise or, quite frankly, interest in it. What interests me is going out and

spreading the word and working with teachers and students. I'm very happy for somebody else to kind of do the financial stuff.

Similarly, Tracey said:

We don't have to think about that because that's all done for us. The decisions are made on whether it's a good tender and it's a viable option. The costing and pricing is a blurry little field of spreadsheets that we don't need to get involved in.

These viewpoints failed to take account of the responsibility of project managing the finance linked to their enterprise activities (Newton, 2005). In both cases, costing and pricing forms had been signed for enterprise activities for which they had financial accountability. These perceptions were most likely to have developed as financial monitoring and financial project audits were tasks undertaken by the School's Research and Enterprise Support Team as part of the support provided. This aspect was mentioned by Rhiannon who considered financial awareness to be unimportant "because whenever we have worked on a bid, we've been so well supported that we haven't had to play a significant role [in it]. I feel that the burden has been taken away. That is something I value". Providing appropriate support may be a solution to the lack of financial acuity, however, this leaves an area of under responsibility (Thorpe and Goldstein, 2010) and a known skills gap that leaves academic staff unprepared for the financial responsibility associated with management positions (Newton, 2006).

From a strategic perspective, a member of the Vice-Chancellor's Board considered financial awareness to be "quite important, certainly [for] at least one member of the team". In general terms s/he spoke of the tendency for the university to overcharge, saying "we think we're worth more than the market will actually bear at any particular point". This was interesting given the notion of 'supply and demand' documented by Bridge, O'Neill and Martin (2009) with reference to external factors impacting on enterprise activities. At School level, a member of the Research and Enterprise Support Team explained "we've had plenty of academic staff [that] don't really have any awareness of how it all works, but we have managed to do an event and the event has turned some kind of profit". This was rationalised by a colleague who pointed out "a lot of them will be aware that they should aim to make a profit, but I don't know whether they need to know the 'nuts and bolts', for instance, the costing and pricing form. In the first instance, we need them to be not scared to come to us with an idea". The developmental nature of nurturing enterprising behaviours and competency is discussed by Gibb (2010) who suggests that enterprise education should not be perceived as exclusive to business people.

The task of costing and pricing an enterprise activity provided an excellent opportunity for academic staff to develop financial acuity; an enterprise competency. The form records expected income, expected costs, the central top-slice and calculated return for the enterprise activity. In the planning stage, the estimation of time required to undertake a specific task is at best, guesswork. The calculation is based on information provided and reference to other enterprise activities of a similar nature. This approach is

not unusual, however, the greater the guesswork, the greater the risk for budgetary inaccuracy, which requires a greater margin of contingency (Newton, 2006) to prevent a project overspend.

A lack of awareness of the implications of the costing and pricing process was confirmed through the on-line survey. Question 16 asked respondents whether or not the hours allocated to enterprise activities reflected the time spent. The question had two purposes. Firstly, to ascertain financial awareness, as academic staff time has a cost, and secondly, to ascertain whether or not academic staff considered the time allocated, accurate. (See Figure 20: Costing and Pricing - Time Allocation, below).

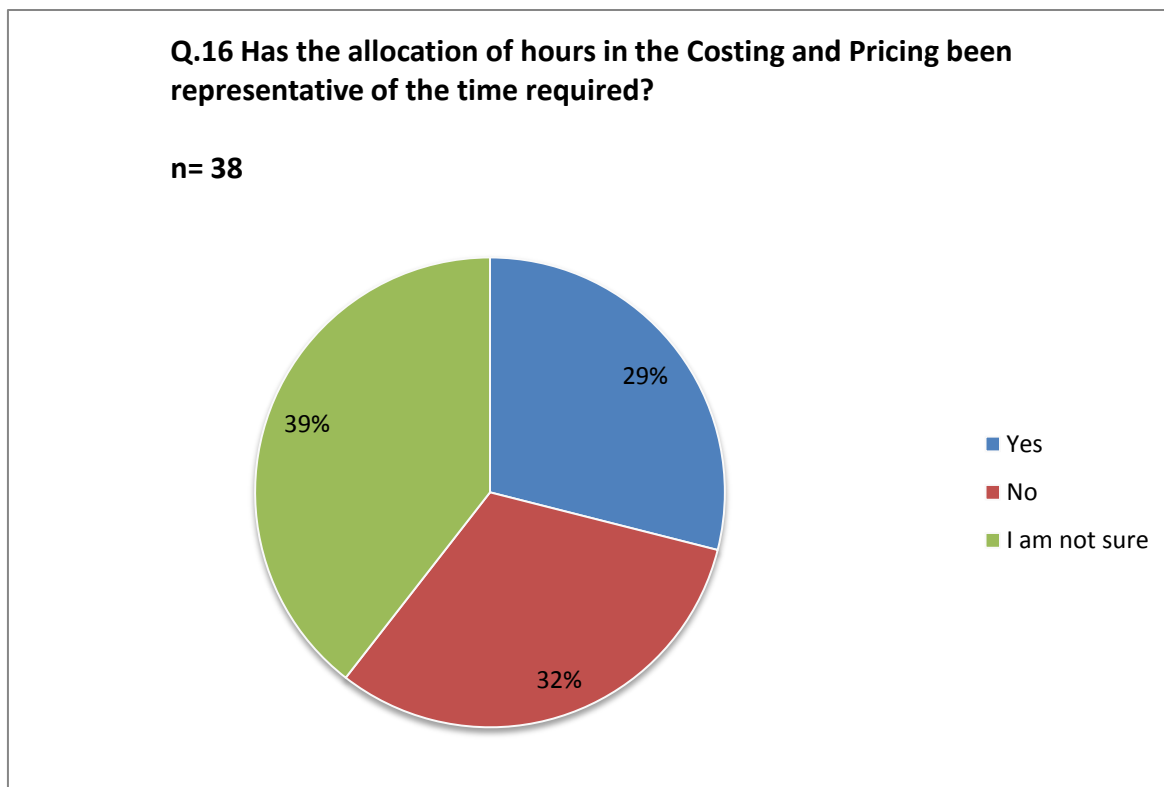


Figure 20: Costing and Pricing - Time Allocation

Many of the respondents (39%) were 'not sure' if the allocation of time represented the time spent on their project and were therefore unaware of the cost implications of inaccuracy. Interestingly, this lack of financial awareness, is perceived by Shattock (2009, p.144) to be beneficial and quotes an Australian Pro-vice Chancellor who said 'if these million-dollar-a-year staff ever realise how much they are worth to us, we are in a lot of trouble'. Unknowing of this, Jessica when asked, replied "I don't know how much I'm worth".

The lack of financial awareness has implications with regard to professional advancement within the School, particularly so for those aspiring to positions of senior management. Joanne said "I didn't train to be an accountant and I didn't train to read figures, so in order to progress up the scale, there is a massive [skills] gap for lecturers". Having had managerial experience, Gethyn explained:

When you are thinking about academics, you generally think about people who try to avoid those issues but that's a cliché, that's a stereotype. I was head of department for five years so I had to learn in that time pretty quickly about how budgets work and how funding works. Generally speaking, I think most colleagues have got quite a low awareness of those things. When people are saying 'I haven't got enough time to do this', [and] 'it's inconvenient', I sometimes think there needs to be some broader sense of economic reality. This is what we've got to do to prosper.

This theme was followed up with members of the university's Research and Enterprise Services unit who were asked whether or not financial awareness was important for managers. One member of the team said "Yes, because your School's research and

enterprise target is financial, rather than anything else". This was supported by his/her colleague who explained "Directors of Enterprise need to have financial awareness, that has been the case with some of the most successful Directors of Enterprise. Giving that support to people is a key aspect [of] putting the School's Enterprise interests ahead of other interests". Developing financial competence has relevance because managing an enterprise project, and achieving outcomes within a given budget, involves similar skills to managing the financial expenditure of a programme, a department or a school (McCaffery, 2004; Newton, 2005).

The university's Research and Enterprise Services unit were proactive in scheduling opportunities for academic staff to develop enterprise competencies. These included developing and delivering commercial training courses, funding and managing research and enterprise projects, European funding for research and enterprise, and commercialising research ideas (e-mail communication 17th April 2013). Likewise, appropriate staff development was provided at School level, both departmentally and on a one-to-one basis. External staff development opportunities were also available and supported through the Cardiff School of Education's Staff Development Fund. The research sought to ascertain awareness of these opportunities (Question 20) and whether or not they were fit for purpose (Question 21).

With regard to awareness of the opportunities made available for academic staff to develop the skills to be confident in successfully participating in enterprise activities,

respondents were invited to choose all categories relevant. Some respondents indicated that they were aware of all three approaches to providing staff development opportunities. One respondent suggested that in his/her opinion, no opportunities were made available. Greatest awareness was of the scheduled programme offered by the university's Research and Enterprise Services unit, with 29 (n=44) respondents selecting this option. Awareness of the opportunities provided internally by the Cardiff School of Education was selected by 24 respondents (n=44), with 19 (n=44) indicating awareness of externally funded opportunities to develop enterprise competencies. (See Figure 21: Staff Development Opportunities, below).

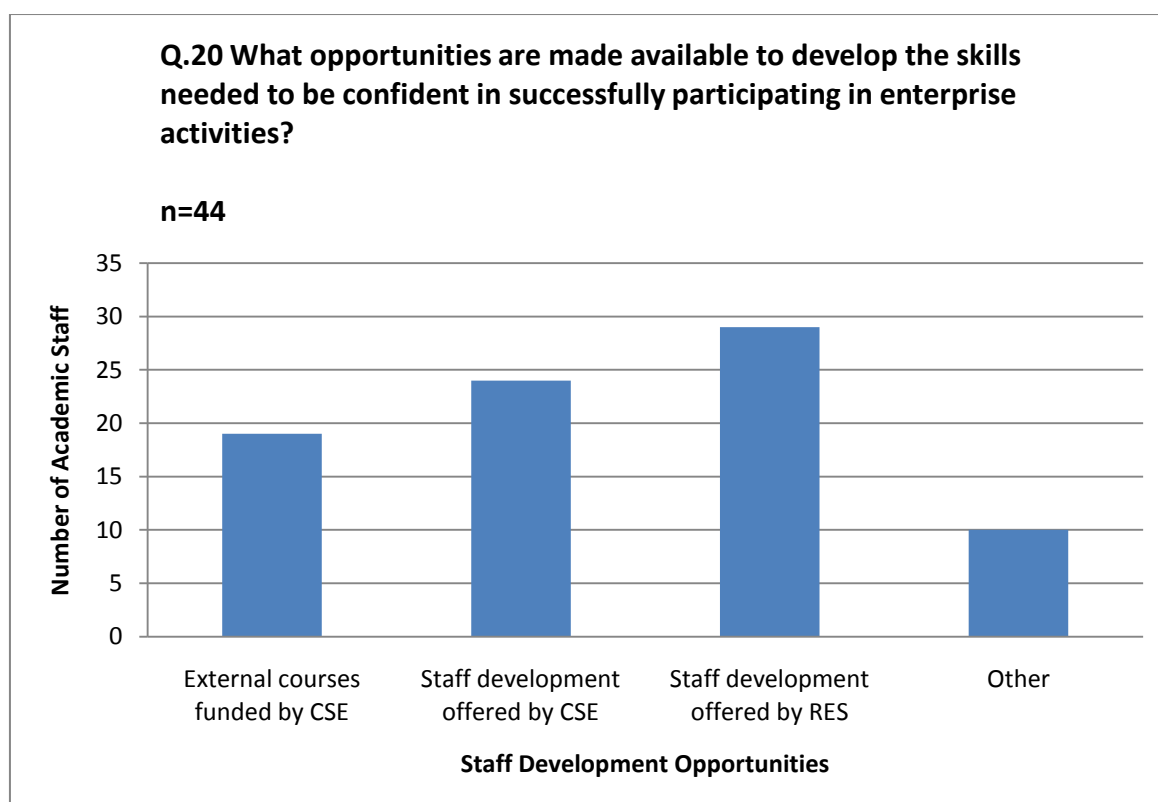


Figure 21: Staff Development Opportunities

The strong awareness of scheduled staff development opportunities provided by the university's Research and Enterprise Services unit was attributed to regular e-mail communication from the team. Awareness of opportunities at School level were attributed to departmental briefings and through School reports. Respondents using the 'other' option, highlighted themes of 'support' and 'encouragement'. One wrote "[it is] more to do with personal encouragement than organised INSET". Another illustrated the specificity of one-to-one staff development writing "the Enterprise team are very supportive and encouraging [and] I draw on their expertise".

In terms of staff development opportunities, the HEA (2009) highlight a need to be cognisant of greater connectivity between Learning and Teaching, Research and Enterprise. Without the knowledge and understanding of the skills set of the entrepreneur (Bridge, O'Neill and Martin, 2009), academic staff in the Cardiff School of Education will be unprepared for the task of providing students with curricular opportunities that foster enterprise and entrepreneurship (QAA, 2012; DBIS, 2013). Likewise, they will be ill-prepared to respond to the growing interest in enterprise and entrepreneurship education generated through the Young (2014) report, *Enterprise for All*. The report makes specific recommendations for the Higher Education sector to embed enterprise into the curriculum, preparing young people not only for employment but also, self-employment.

Respondents to the on-line questionnaire were asked about the ways in which opportunities to develop skills relevant to enterprise (enterprise competencies) could be improved (Question 21). Three key, interlinking themes emerged from the data: the promotion of opportunities available, the appropriateness of training provided; and time to attend training events.

With regard to improved promotion of staff development in relation to enterprise competencies, some respondents indicated that greater efforts needed to be made to promote the opportunities available. One wrote “if they are already available, they need to be promoted more widely”. With regard to the enterprise successes and achievements, a respondent suggested “there could be more sharing of case studies and examples of good practice [to] demystify the process for colleagues”. These operational elements were augmented by another respondent who indicated a need for “more clarity and steer from senior managers regarding how enterprise activities fit within and contribute towards the day job”. This comment highlighted a need to develop a means of measuring the value of enterprise activities and integrate the three missions more closely, creating a Learning and Teaching, Research and Enterprise nexus.

A number of respondents to the on-line questionnaire highlighted a need for project specific training. One suggested having “training sessions that [were] particularly focussed on the enterprise activities being undertaken so that it guided the members of staff through the project”. Another wrote:

It would be really useful to sit down with somebody to identify how you become a 'marketable resource'. I regularly see work I could do, but do not know how to get started. I am from a strongly academic background so have had very little experience of enterprise.

As enterprise activities vary greatly, utilising the newly implemented Peer Learning Scheme, whereby academic staff engage in a peer to peer process of reflection on professional practice (Cardiff Metropolitan University, n.d. d), would lead to better integration of the three missions and capture the outcomes of integrated activities. Thereby developing the enterprise competencies of less confident academic staff and leading to greater connectivity between Learning and Teaching, Research and Enterprise.

Time to engage with staff development opportunities was a dominant feature of responses, which relates to wellbeing and the physical values associated with a strong commitment to enterprise (Campbell, Edgar and Stonehouse, 2011). One respondent wrote "the problem is finding the time to attend courses. There is always a lot to do". Another suggested a need for "a greater time allowance for staff to spend time planning and engaging in enterprise". Whilst laudable suggestions, their implementation would be challenging with regard to measurement, performance management and workload allocation, particularly when there is no metric of measurement and many of the enterprise projects in any given year are unknown at the start of the academic year when workloads are agreed between academic staff and their line managers.

The research revealed a time allocation issue for engagement with enterprise. Less than 30% of respondents indicated that the costing and pricing exercise undertaken for enterprise projects was a true reflection of their time. This suggested inaccuracy in the costing and pricing itself, or a lack of awareness of time allocation process for engagement with enterprise activities (see Figure 20: Costing and Pricing - Time Allocation, page 189). The latter was further substantiated by respondents' suggestions for more time to engage with enterprise activities. Line managers had responsibility for countersigning completed costing and pricing forms so that time allocated to individuals could be cross-checked against workload allocation, primarily as due consideration needed to be given to other duties required of academic staff (Cobb, 2012). Exploring this further was an important element of the research (theme seven, of the interview guide). The School was very successful in terms of staff engagement with enterprise activity and ascertaining the impact on staff would ensure ongoing longevity and momentum of its success.

Grace highlighted the detrimental impact on her students that engagement with enterprise had created saying "while I am doing that one day, I'm not actually responding to emails that come in from my students. You become less sensitive to [their] needs. So I think there is definitely a conflict there". Similarly, Gethyn said "it's hard to maintain a kind of balanced profile as an academic, undertaking enterprise activity alongside a high teaching load". A wider perspective was considered by Rhiannon who said "I think I have been holding back partly because of concerns not just about my own wellbeing, but the family one as well". This is an important aspect of managing the work-life balance of

academic staff engaged with enterprise. However, a good example of the measures in place to support engagement with enterprise was a secondment undertaken by Jayne in 2011. In collaboration with the Head of Department, the 50 days allocated to the project were mapped to her workload. This identified a need for hourly paid lecturers to cover scheduled teaching time. This was costed into the project budget. This approach ensured that the workload remained manageable and within contracted hours, whilst enabling Jayne to engage in an enterprise project of national significance that was important to her subject and gave her professional credibility pan-Wales.

Some staff were motivated by an additional payment for enterprise activities that were over and above their contractual workload. Campbell, Edgar and Stonehouse (2011) describe this as the 'economic value' of enterprise. For example, Kate said "because I know there is going to be a monetary reward, it really helps me go that extra mile". A novel solution to addressing the issue of 'time' was put forward by Brangwen was the ability "to earn additional days where you would not be expected to work because you had done over and above for an enterprise project". This idea had similarity with the flexible working time arrangements for support staff. However, the notional time spent on enterprise projects would be difficult to audit amongst the overall responsibilities of academic staff, with the potential for inaccuracy in calculating the number of additional days earned. There would also be the challenges in monitoring the take up of additional days earned.

The need for work-life balance (theme six of the interview guide, see Appendix 19: Interview Guide, page 366) and managing the workloads of academic staff was mooted by one of the Heads of Department. S/he thought there were “three types of people. Those who are clear about how much they can take on and they’ve got boundaries, [those] who would just say ‘too busy, I don’t want to know, not interested’, and [those] who get excited by projects and have a tendency to take on a lot of projects but haven’t thought about the bigger picture”. S/he went on to explain that some academic staff used engagement with enterprise activity to offset their contribution to events such as the periodic review of academic programmes or the teaching of unfavourable modules. This has implications for programme teams in terms of managing levels of motivation, particularly where this leads to an imposition of additional responsibility on others. Pritchard and Ashwood (2008) describe this as being a situation where the connection between ‘actions’ and ‘results’ are low, which in turn, leads to reduced levels of motivation.

In contrast, one of the members of the School’s Research and Enterprise Support Team thought that some academic staff “found the time because [they] cared and doing these things enhanced [their] working life”. This was confirmed by Tracey who said “part of wellbeing is having to opportunity to do [enterprise]. I feel I’ve got into quite a nice pattern with the work that I do with conferences. I rarely go out and do stuff in the autumn term, I usually set aside June and early July, to develop enterprise work”. Likewise, Margaret described her enterprise activities as “good for the soul, you just go

outside and exhale come back in and actually you feel quite energised, sometimes [with] a new idea”.

In summary, the majority of academic staff appreciated the support provided to enterprise active staff. However, the availability of support to enable academic staff to engage with enterprise activities needed to be more clearly communicated as one respondent to the on-line survey indicated that s/he was unsure of what support was available (Question 23). Academic staff developed some enterprise competencies through their learning and teaching role (subject knowledge, communication skills, interpersonal skills) and engaged with staff development opportunities to enhance these further. Enterprise competencies such as an awareness of commercial markets and financial acuity were not considered to be important for academic staff as there was the perception that the School’s Research and Enterprise Support Team were able to undertake this function. The majority of academic staff in the Cardiff School of Education engaged with enterprise, although only a minority considered sufficient time had been allocated to their enterprise activities. This was substantiated by a respondent to the on-line survey who suggested a need for “a realistic workload” (Question 23). This had implications with regard to wellbeing and ensuring that those academic staff who engaged with enterprise were not disadvantaged in terms of an increased workload as a result of their endeavours. This could be achieved through a mechanism to measure levels of engagement and greater synergy between the knowledge, skills and experiences of academic staff and the types of enterprise activities undertaken.

4.4 Synergy for Enterprise

In order to seek answers to Research Question two (the ways in which academic staff were supported strategically and operationally to engage with enterprise activity), an in-depth awareness of the Cardiff School of Education enterprise portfolio was required. To achieve this, Question 9 of the on-line survey asked those respondents who had indicated that they engaged with enterprise activities, what types of projects they had undertaken in the last three years (see Figure 22: Types of Enterprise Activities Undertaken in CSE, below).

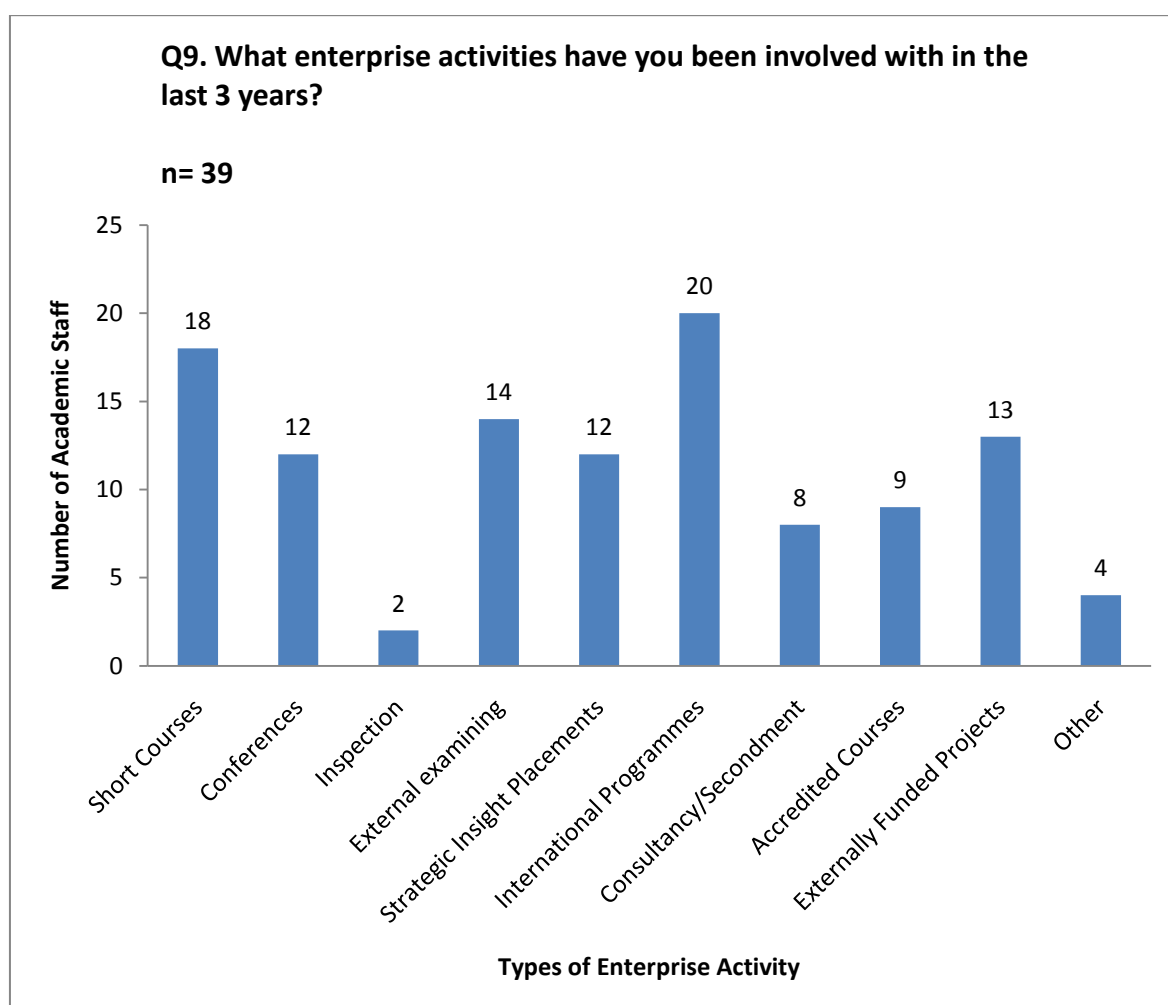


Figure 22: Types of Enterprise Activities Undertaken in CSE

The survey included a range of options and respondents were able to select all relevant categories. Some included five of the categories proffered, whereas others selected just one. Most academic staff (51%) had been involved with the School's International programmes. This was closely followed by involvement with the School's short course portfolio (46%). In contrast, there was minimal engagement with inspection of schools (5%) with just two academic staff selecting this option.

Follow-up questions were based on the initial selection at Question 9. For example, respondents who indicated they engaged with 'short courses' were directed, via the conditioning and branching function to Question 10 that gave a breakdown of the courses offered.

The data generated through the on-line survey suggested that the majority of academic staff were involved in the delivery of short courses that had not been included in the questionnaire options (see Figure 23: Engagement with Short Courses, below). These included courses such as: Action Research and Reflective Practice, Creative Music-making in the Foundation Phase, Research Methods Training, and More Able and Talented. Other categories listed by respondents, such as the Pre-sessional, Sports Teaching and Musical Futures, were incorrectly attributed as 'short courses'. In the case of the Pre-sessional course, this was most likely because it was a fifteen week, non-accredited programme of study that could be offered as a six week option. For the Sport Teaching, the mis-identification was probably because the outcome of the externally grant funded project

was to provide a series of personal development courses for trainee teachers. Similarly, the externally funded Musical Futures project, whilst a consultancy, included subject specific staff development.

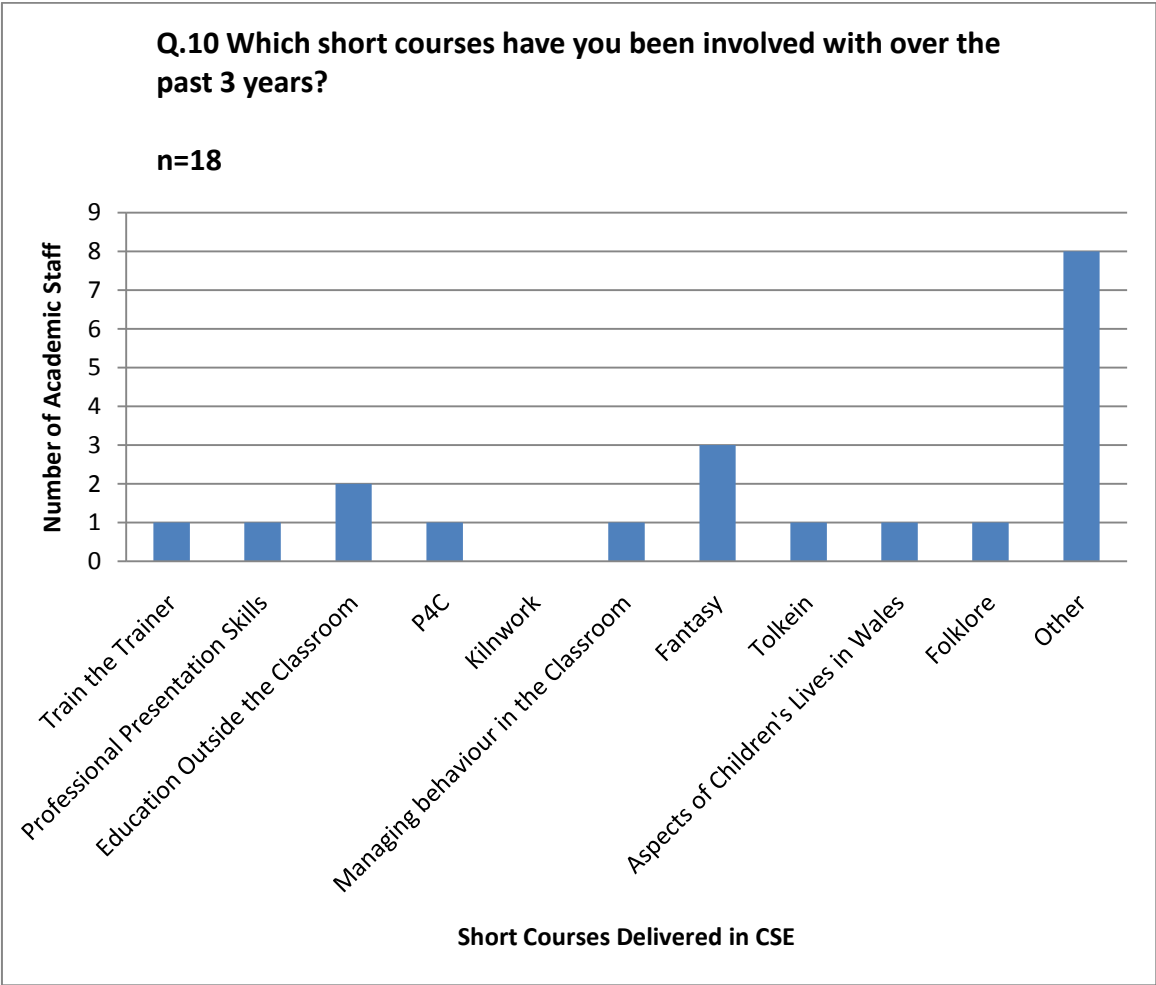


Figure 23: Engagement with Short Courses

The School’s international portfolio was financially important. The survey data confirmed high levels of involvement with the international portfolio, with 20 (n=39) respondents selecting options that represented the types of international programmes they had engaged with. (See Figure 24: Engagement with International Programmes, below).

Several academic staff were involved in more than one international programme. For example, one respondent was involved with the Quality and Accreditation in Higher Education Programme and the Managing Quality: an International Perspective. Likewise, another included five programmes: Research Skills Training, Advanced Research Skills Training, Quality and Accreditation in Higher Education Programme and the Managing Quality: an International Perspective, and Strategic Planning in Higher Education.

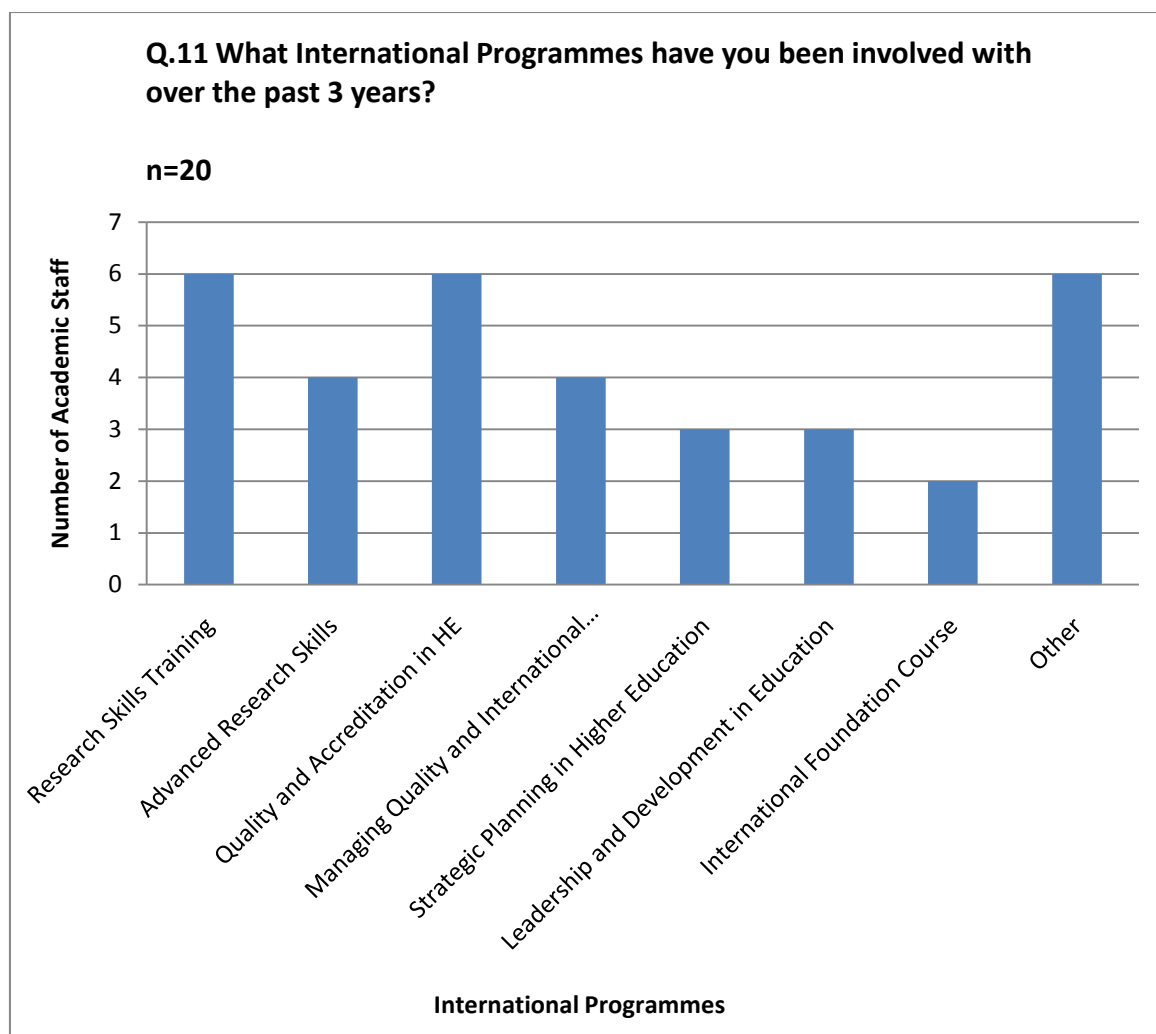


Figure 24: Engagement with International Programmes

The international portfolio developed from an initial enquiry based on an external professional network. This highlights the social value (Campbell, Edgar and Stonehouse, 2011) and longer term benefits of establishing professional relationships, whether competitive or collaborative, with external organisations (Wickham, 2006). In the Cardiff School of Education, professional networks and relationships built by academic staff provided opportunities to secure external grant funding. For example, a member of academic staff was successful in gaining three years of funding from Sport Wales to provide a series of workshops linked to Physical Education and Sport in Schools (PESS). Likewise, another member of academic staff was successful in achieving grant funding for the Forest School initiative. Other sources of external funding for programmes were based on tenders. The majority of academic staff engaged with 'other' externally funded projects (see Figure 25: Engagement with Externally Funded Programmes, below).

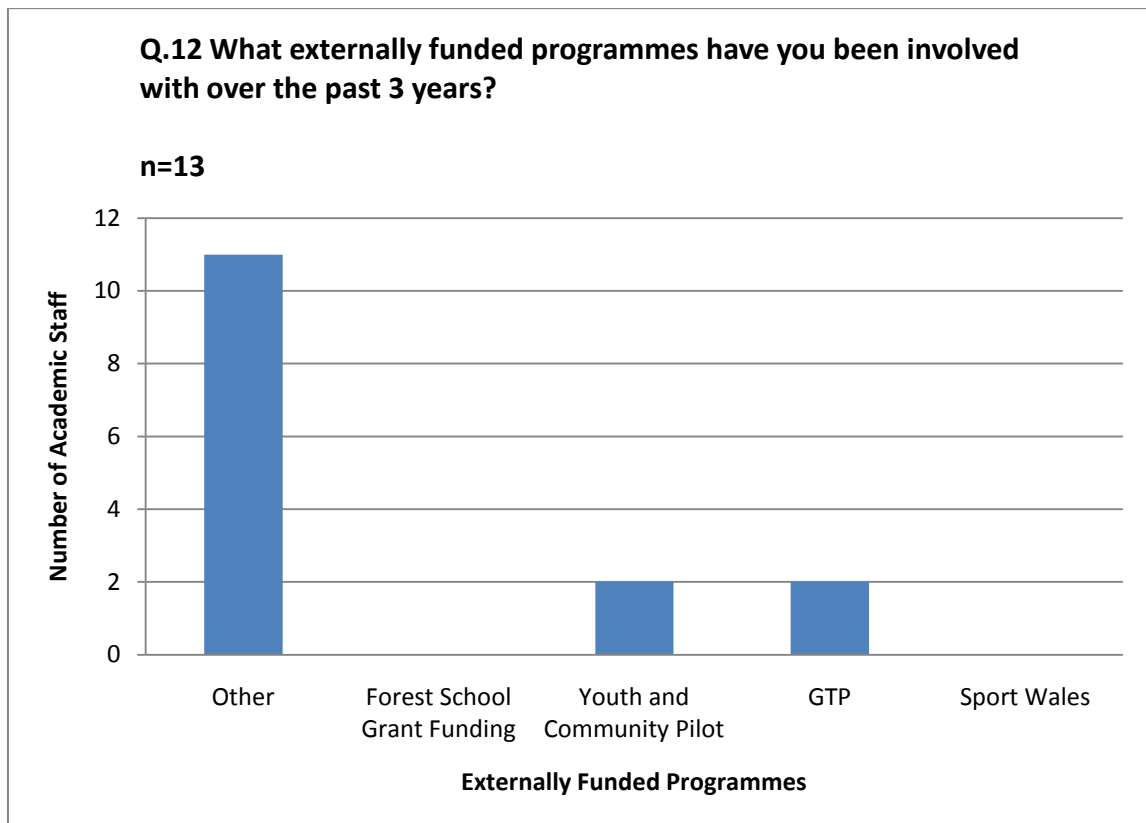


Figure 25: Engagement with Externally Funded Programmes

The ‘other’ externally funded programmes listed by respondents included: the Welsh Government (WG) Programme for International Student Assessment (PISA), the design and development of Training Materials for Estyn, the Welsh medium Improvement Scheme, the WG School Liaison Evaluation Project, and ESCalate.

For many academic staff, attendance and contribution at conferences was perceived to be aligned to the School’s research agenda and therefore of political value (Campbell, Edgar and Stonehouse, 2011). However, besides offering the opportunity for academic staff to share their research, knowledge and skills with a wider audience, conferences also provide opportunities to generate income and/or promote key initiatives. The

hosting of conferences is included in the School’s Strategic Plan. Twelve respondents indicated that they had involvement with conferences. (See Figure 26: Engagement with Conferences, below).

The majority indicated an involvement with the Philosophy for Children (P4C) conference. ‘Others’ included the Building Bridges conference, the Berger conference and a Youth and Community Work conference. The Berger conference and Building Bridges conference were in the planning stage at the point of data collection for this research.

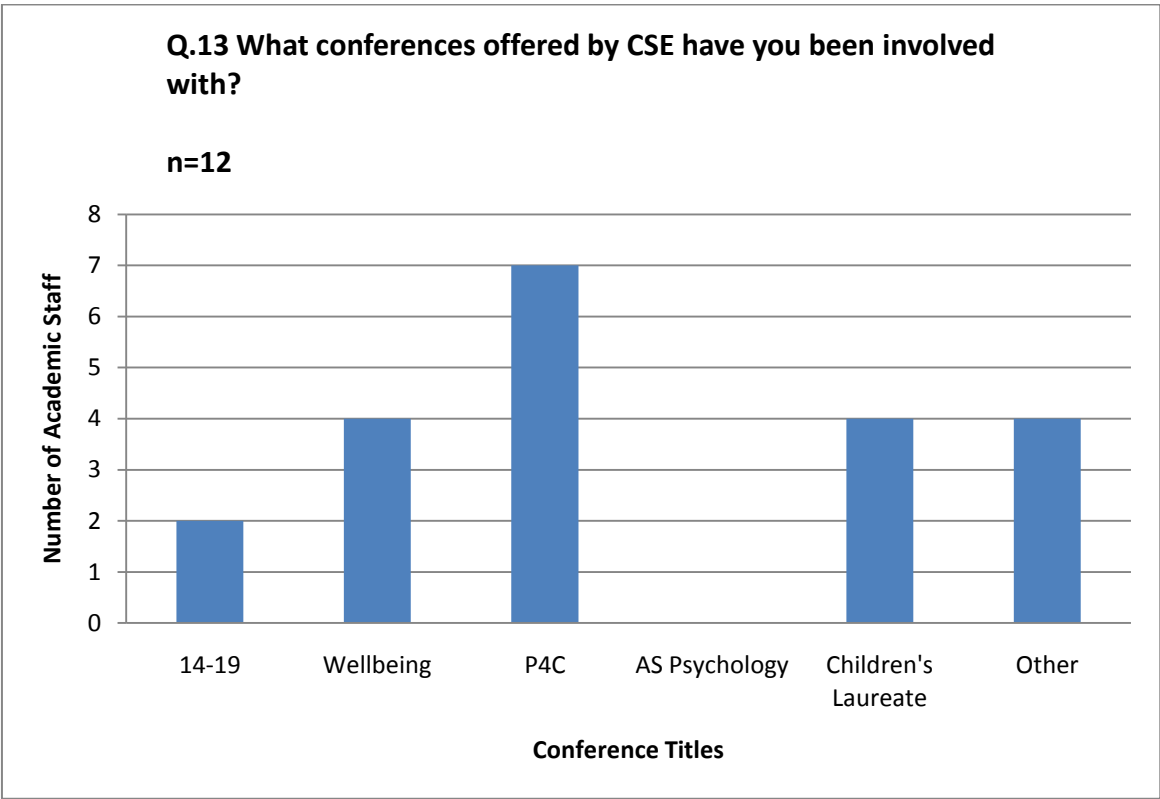


Figure 26: Engagement with Conferences

Respondents were also questioned about accredited courses. Accredited courses included externally accredited programmes such as the Agored Cymru accredited Forest School programme and internally accredited programmes such as the Level 7 Tolkein on-line programme. They also included accredited main-stream modules taken outside of the core degree. For example, Creative Writing was a module within the MA Creative Writing programme. The module could be undertaken as a discrete module outside the degree programme, via enterprise. The majority of respondents indicated that they were involved with Forest School, closely followed by the WG Learning Coaches Legislation module. (See Figure 27: Engagement with Accredited Courses, below).

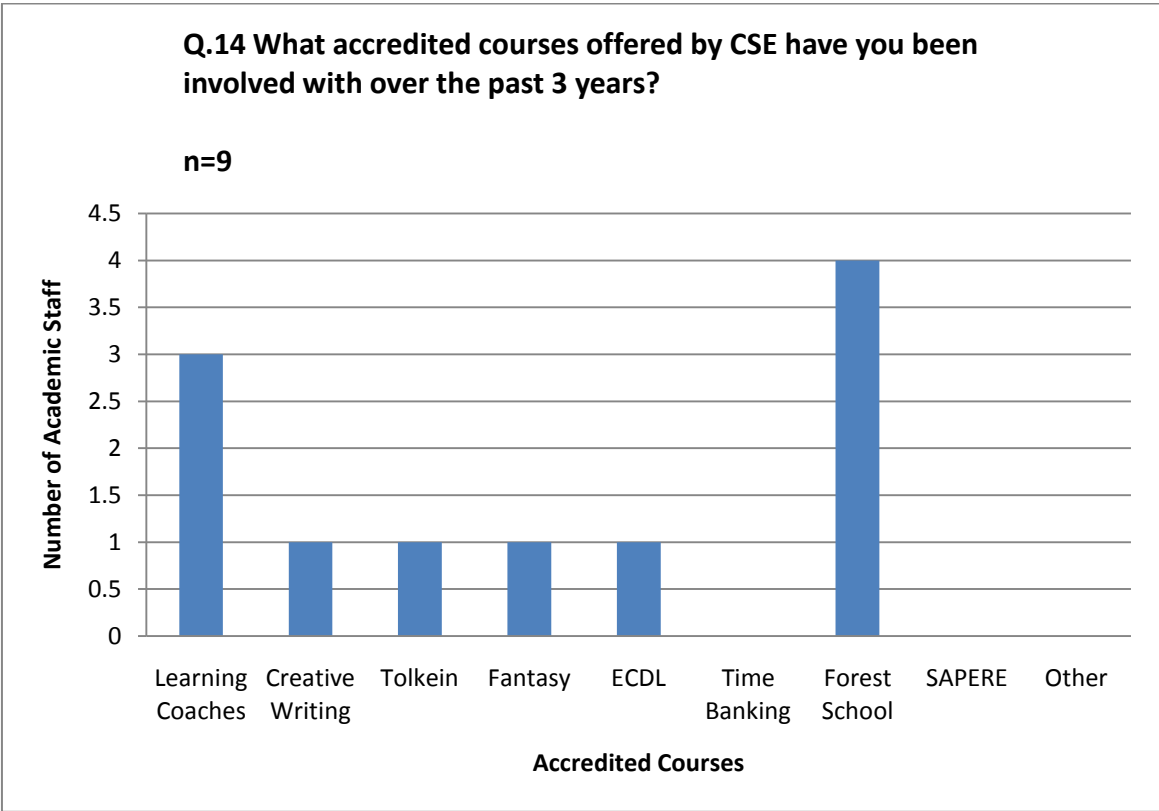


Figure 27: Engagement with Accredited Courses

When scrutinising the collated data presented in Appendix 23, (Appendix 23: Enterprise Activities in the Cardiff School of Education, page 378) a small number of anomalies were identified. Two respondents included enterprise activities that could not be matched to a corresponding costing and pricing form. For example, one survey respondent indicated that s/he had engaged with a 'Sports Teaching' short course. Likewise, another survey respondent included a 'Youth and Community Work Conference'. In terms of auditing individual contributions, one particular survey respondent listed some activities that s/he had experienced rather than contributed towards and omitted projects where s/he had been named on the costing and pricing forms, for example leaving out involvement in the Learning Coaches project, Managing Behaviour short course, as well as the PISA externally funded project. Likewise, only four staff indicated that they had engaged with the externally funded PISA project, yet the costing and pricing listed in excess of 19 members of academic staff. For the accredited programmes, there was no indication of engagement with the SAPERE accredited P4C programme despite a respondent to the survey selecting 'P4C' in Question 10. Likewise, only one respondent selected 'Fantasy' as an accredited programme, yet 3 selected it at Question 10.

Heeding Brace's (2004) warning that research data is dependent on the accuracy of the provider, I took the pragmatic view that the data confirmed engagement with a wide range of enterprise activities, and the activities reflected the academic disciplines and research interests of staff in the Cardiff School of Education.

4.4.1 Synergy for Enterprise: the Learning, Teaching, Research and Enterprise Nexus

The wide range of enterprise activities undertaken by staff in the Cardiff School of Education reflected the knowledge, skills and research interests of academic staff across the three departments (Humanities, Professional Development, and Teacher Education and Training). However, in addition, the enterprise activities needed to have some connectivity to learning and teaching activities and/or research, in order to create a nexus (HEA, 2009). To establish the extent of this interconnectivity, respondents to the on-line survey were invited to explain how their engagement with enterprise had been informed by their research and/or incorporated into their teaching (Question 15).

A minority (18%) of respondents (n=37), only made reference to research. For example, one respondent wrote “I have been undertaking a Professional Doctorate [and] this research has helped me greatly in relation [to] research methods. This has enabled me to feel more confident when presenting to peers at conferences”. Thirteen of those responding only gave examples of enterprise informed learning and teaching. To illustrate this, one of the respondents described how his/her involvement with the Cardiff School of Education’s International Summer School provided the opportunity to “draw on the discussions that had taken place to provide an extra perspective for the modules that I deliver to students in my normal teaching role. I found that the extra knowledge that I had gained from the international programme was extremely relevant to some of the modules that I teach, especially those that encourage the use of a global view of education”. Likewise, another respondent explained that involvement with enterprise provided additionality, an “opportunity outside curriculum time to help up-

skill the PGCE groups. It has also allowed us to offer a slightly wider range of practical activities for the students to experience in addition to timetabled lectures". One of the respondents using the Welsh medium survey option provided the example of engagement with the Welsh Medium Improvement Strategy, via enterprise, as a means to "develop [the] language skills and proficiency of prospective teachers and their ability to develop literacy levels and teach their learners through the medium of Welsh".

The main thrust for this question was to examine the extent to which academic staff were creating a series of connecting links between enterprise, research and learning and teaching. This was clearly happening with in terms of the practice reported by one respondent who stated that his/her "research is based on language learners and their barriers to progression in their language learning. This has a direct implication to the learning and teaching that takes place on the enterprise-based language programmes I work on". This was also reflected in the comments of the respondent who wrote:

The enterprise work that I have undertaken was informed greatly by research work in the initial stages, and recently it has lead to further research opportunities. It has had a significant impact on the methods of delivery and content of the PGCE Secondary Music and BA courses.

Whilst some (37%) respondents to the on-line survey (n=37) indicated engagement with all three academic missions, it was the following response that seemed to embrace the ethos of this multi-faceted approach:

My PhD research has a focus on Forest School, an element of this links clearly with my enterprise activities and Forest School training. Enterprise, research and

teaching for me are closely connected. For me, each term involves a good balance of all three strands of work. It can be a challenge sometimes in finding the time to maintain this approach, however, I feel it enriches my working days, my understanding and most importantly impacts positively on the quality of experiences of students and agencies I work in collaboration with.

An interesting aspect that came out of this question was a greater understanding of the importance of the knowledge economy (Shattock, 2009; Gibb, 2010) and the role universities have to play in supporting others. One respondent explained that it was his/her “knowledge of the Professional Standards for Teachers [and experience] from training teachers [that] transferred to work on the GTP programme”. This was also highlighted by a respondent who had undertaken a Strategic Insight Placement with an external organisation, and explained that the intention was “to improve my IT skills and to further develop my understanding of GCSE Physics. In return the external partner developed their understanding of primary science, which helped them with a book they have written”. In part, this enables academic staff to respond to the questions posed by Arroyo-Vazquez, van de Sijde and Jimenez-Saez (2010) that tasks academic staff with knowing i) what they have to sell, ii) the customers, iii) the costs and iv) the market price.

Alongside the need for greater connectivity between Learning and Teaching, Research and Enterprise, is a need for enterprise projects to be attainable in relation to the skill sets and knowledge for academic staff. When interviewed, Brangwen mentioned the need for enterprise projects that were:

Closely linked to what we do. When I was first involved with Dynamo (a Welsh Government's initiative to support the development of entrepreneurial skills), we could see how that was actually implemented out in schools, and again with the PISA project (the Cardiff School of Education designed the training materials for teachers in school), we could see exactly how that related to schools. The projects that are chosen need to relate specifically to what we do.

This is of importance when considering potential tenders and enterprise activities. Activities that require external consultants only, provide little input to the enterprise capabilities of academic staff from the School. Thus reflecting the flawed perception of Gummet, Chief Executive of HEFCW (The Information Daily, 2010) that specialist staff are needed for income generating activities such as consultancy. Whereas, opportunities that involve academic staff from the Cardiff School of Education, provide openings to incorporate enterprise competencies into the curriculum and/or initiate research, creating a Learning and Teaching, Research and Enterprise nexus.

A need for greater connectivity between Enterprise, Research, Learning and Teaching in the Cardiff School of Education was illustrated by a respondent to the on-line questionnaire who wrote "since my programme is primary it (connectivity between enterprise, research and or learning and teaching) didn't really fit". Academic staff in the School need to feel that there is some value and sense of achievement personally and professionally in developing greater connectivity between Learning and Teaching, Research and Enterprise. As was the case with the respondent who wrote "the Enterprise activities I have been involved in have enhanced student learning. They have each increased my confidence as an HE expert. They have all added to my interest in research and sense of achievement as a productive staff member and collegiate team player".

Respondents to the on-line survey (Question 24) highlighted the lack of influence the commercialisation of research had achieved beyond the Cardiff School of Education (see Table 14: Reputational Influence Achieved Through Enterprise Activities, page 220), with just six (n=43) respondents indicating that, in their opinion, it has achieved greatest success. This was replicated in the School's contribution to the Research and Enterprise financial targets. For example, in the academic year 2012-2013, from an overall contribution of £361,000, research activity generated an income of £1,643. Hence the concept of commercialising research (Theme eleven) being incorporated into the interview guide. This was discussed with academic staff as well as a member of the Vice-Chancellor's Board, the Research and Enterprise Services unit, and the School's Research and Enterprise Support Team.

A member of the Vice-Chancellor's Board explained that there was a need for "academics engaged in high quality research [to become] more rigorous in [talking] to other researchers who are capable of or now producing commercialisable [sic] research". The limitation, with regard to the commercialisation of research within the Cardiff School of Education, was recognised by the university's Research and Enterprise Services unit. They explained that capacity building was crucial, saying "there isn't enough going on in the School. [It] needs a critical mass of people doing research first". This was also recognised by the School's Research and Enterprise Team with a member of the team saying "from the five schools, this one is probably the hardest for making that (the commercialisation of research) a reality". These findings confirmed the appropriateness of the Tabberer

(2013) report that tasked providers of teacher education and training with improving their research to bring about improvements in schools.

Academic staff were asked for their thoughts regarding the commercialisation of research. Many academic staff considered 'conferences' to be an effective means of achieving this. For example, Joanne thought that "conferences seem to bring in a lot of money". However, in relation to time spent and effort expended, the financial return for conferences within the Cardiff School of Education was low when compared to other enterprise activities. This was particularly noticeable in the academic year 2011-2012 where the Philosophy for Children conference generated a contribution of £3,326 to the School's Research and Enterprise financial targets, compared with the Musical Futures secondment that made a financial contribution of £14,471.

One of the key hurdles to achieving the commercialisation of research is increased awareness of the connectivity between Research and Enterprise. This was mentioned by Jessica, who said "the university has to have a clearer framework, or a clearer articulation. There's not really a clear enough link between [learning and teaching] and research at the moment". The need for appropriate skills was highlighted by Jayne who explained that she was "so sort of research inactive really that I haven't got the experience to know how to commercialise research". Jayne was involved in a national, cutting-edge pilot scheme based on an innovative approach to music education. Whilst she had been able to make the link between Learning and Teaching and Enterprise, she

had not been able to incorporate a research element. The lack of awareness was commented on by a new member of academic staff, Brangwen, who explained that “it took a while to start making connections between the research and the enterprise, and since I have been here I have realised that we are not as research active as we could be”. Whether or not academic staff were research active, viewpoints did not always embrace its commercialisation. As Grace suggested research was “for the greater good, a purity rather than to say we make money out of it”. These findings confirmed the need for clarity with regard to corporate values (Johnson et al., 2015) and the types of value (political, cognitive, social, emotional, physical, and economic) that contribute to corporate goals (Taylor, 2008; Campbell, Edgar and Stonehouse, 2011).

Considering the wider picture, one of the Heads of Department thought that commercialising research:

... might be problematic because it tends to be ‘red brick’ universities or at least not post’92 universities [where] research, in a sense, is commercial. The reason for commercialising research usually is to make money. Where you have universities that manage to secure large research projects, that job is done in itself because they are attracting large pots of money. So they may talk less in terms of commercialising it. Where universities start talking about commercialising research it is with the idea that if you are having to plough resources into the research you want to get resources, money, whatever out of that research.

Whilst centrally, through the university’s Strategic Plan, there was a strong focus on research informed learning and teaching and the commercialisation of research, in the Cardiff School of Education, there was strong evidence that enterprise activities were

informing learning and teaching. Programme Directors, reporting on progress towards School specific strategic objectives in Annual Programme Reports (2012-2013) highlighted momentum with regard to enterprise informed learning and teaching. The English cluster reported that “work placements and volunteering opportunities (for students) were a result of a bibliotherapy enterprise activity” (English Cluster APR 2012-2013). Similarly the Programme Director for the BA Secondary Education programme commented that “tutors have taken part in national developments such as MEP and PISA [and] have had a direct impact on subject elements of the BA Secondary programme” (BA Secondary Education APR 2012-2013). This extended to post-graduate provision, with the Programme Director for the MA Education cluster reporting “the Coleg Cenediaethol Cymraeg funded enterprise activity offered an insight into how learners’ specific needs, in particular dyslexia, can manifest themselves in a Welsh language context” (MA Education Cluster APR 2012-2013).

The key issue is the synergy created as a result of enterprise activities that are matched to the knowledge, skills and experiences of academic staff, so that the outcomes extend beyond the enterprise project itself. Creating a ‘value added’ element by embedding new knowledge gained as a result of enterprise endeavour into learning and teaching. One of the core gains would be an increased knowledge of enterprise and the enterprise competencies required for equipping academic staff to act on the guidance document from the Quality Assurance Agency (QAA) (2012) and prepare students for self employment as well as employment. Given that the QAA published guidance relating to enterprise and entrepreneurship education to help those working in Higher Education I

wanted to explore the extent to which this was embedded in the curriculum and used this as theme ten of the interview guide.

Not unexpectedly, nine of the eighteen academic staff interviewed admitted that they were unaware of the document. Some academic staff related it to employability, for example Gethyn explained that the team made “good efforts towards that. Graduate attributes and employability have been addressed much more directly (in the recent periodic review of programmes)”. Others, aware of a skills/knowledge gap said “I try not to make it too explicit in my programme documentation because I am aware of other things like staffing – who is going to be teaching this?” (Elsie). Interestingly, staff from the Department for Teacher Education and Training considered their primary role to be ensuring trainee teachers gained professional positions in schools. Tracey admitted to not knowing of the QAA guidance document explaining “it’s probably not addressed a great deal, we are equipping them to go and do a job in a school, and therefore they are not going to be entrepreneurs”. Likewise, Jayne from the same department said “when I am with students, enterprise isn’t something that really comes to mind. I am aware of it as an agenda and I am aware that schools are interested in enterprise, but it’s not something that really figures highly”. A colleague said “if you had asked me two years ago, I would have said pretty much embedded in terms of the Dynamo (a Welsh Government initiative to develop the enterprise skills of pupils aged 4-18) work that was done here [but] our priorities have changed, opportunities have been seized for literacy and numeracy development”. Academic staff with responsibility for training teachers to work in primary and secondary school need to be cognisant of the Young Report

Enterprise for All (2014) and the challenges of teaching entrepreneurship education (Henry, Hill and Leitch, 2005a). Trainee teachers working in primary schools will need to capture the imagination of pupils. Similarly, trainee teachers working in secondary schools need to promote successful enterprise education. In preparing trainee teachers for the job market, business awareness is deemed to be part of the skill set required of teachers with head teachers advised to recruit accordingly (Young, 2014).

Discussion with Matthew relating to the QAA guidance was reassuring. He said:

I have seen it but not read it. I am assuming there will be more of a directive towards embedding enterprise into education. Certainly it seems to be the way degree programmes are going, more of a focus on enterprise and enterprise education and perhaps education for self employment. For me, it provides opportunities rather than threats but I am not sure how well it will go down with the non-enterprise members of staff.

In summary, academic staff in the Cardiff School of Education engaged with a wide range of enterprise activities. The activities reflected the academic disciplines of the School. However, there needs to be alignment between the knowledge, interests, experiences and skill-set of academic staff and the type of enterprise activities undertaken. Engagement with relevant enterprise activities has led to enterprise informed learning and teaching, creating a synergy between enterprise and learning and teaching. Nevertheless, there is a lack of awareness of the need to prepare trainee teachers to embed enterprise and entrepreneurship education in the primary/secondary curriculum. Likewise there is a lack of awareness of the need to prepare undergraduates for self employment as well as employment. Whilst the School has been less successful in

commercialising its research, there are opportunities to develop greater connectivity between Enterprise and Research, Learning and Teaching. There are high levels of engagement with enterprise activity in the School but a key challenge will be using this to develop the enterprise competencies of students.

4.5 Success for Enterprise

Success for enterprise can be measured in a number of ways. Success can be financial, reputational, outcome based or it can be personal. The Cardiff School of Education had a proven record of financial success (see Table 1: Research and Enterprise Targets, page 30). Year on year the School had exceeded its Research and Enterprise financial targets, most substantially in 2012-2013. In terms of its reputational success, respondents completing the on-line survey were asked to what extent the enterprise activities they had engaged with, had made an impression with the wider community (Question 24). Respondents were asked to rate the influence achieved from one to four. One signifying the greatest impact and four, the least. (See Table 14: Reputational Influence Achieved Through Enterprise Activities, below).

Table 14: Reputational Influence Achieved Through Enterprise Activities

Q.24 What external impact does enterprise activity undertaken by CSE achieve in the wider community?					
n=44					
		Greatest impact → Least impact			
		1	2	3	4
Enhanced reputation of Cardiff Metropolitan University	Number of Academic Staff	28	15	1	0
Professional development of academic staff		19	18	3	4
Community Engagement and local impact		10	22	9	4
Regional engagement		5	23	11	5
International engagement		7	23	8	6
Commercialisation of research		6	15	15	8

There was strong recognition of the reputational influence of enterprise activity with regard to the university and its staff. When combining the two sets of data for greatest success (1 and 2) and least success (3 and 4), the research data showed that the majority of respondents (97%) considered enterprise activities had enhanced the reputation of Cardiff Metropolitan University. The majority of (84%) of respondents also considered enterprise activities had influenced the professional development of academic staff. Similarly, 72% of respondents indicated that enterprise activities had achieved local influence, 63% regional influence and 68% international influence. This aspect is of importance, not only in terms of the credibility of academic staff and the School, but also in terms of communicating its success. Whilst the commercialisation of research was

deemed to have least influence with a combined percentage of 47% this was attributed to the need to increase the School's research capability (see Section 4.4 Synergy for Enterprise, page 200). It was also a reflection of a willingness to engage in enterprise that was evidenced by the financial contribution made by enterprise activities towards the School's Research and Enterprise financial target.

As reputational influence was reliant on effective communication (Vitae, 2011), respondents were asked how they communicated their enterprise activities to wider academic communities (Question 25). Respondents were invited to select all those that were appropriate. (See Figure 28: Communicating Enterprise Outcomes, below).

The most popular means of communicating enterprise and engagement activities to the wider community was through conference papers and conference workshops. Publications and public lectures came next, which was followed by academic journals and conference keynote speaker. Interestingly, these types of activities are usually linked to research (Vitae, 2011) which would confirm connectivity between Research and Enterprise in the Cardiff School of Education.

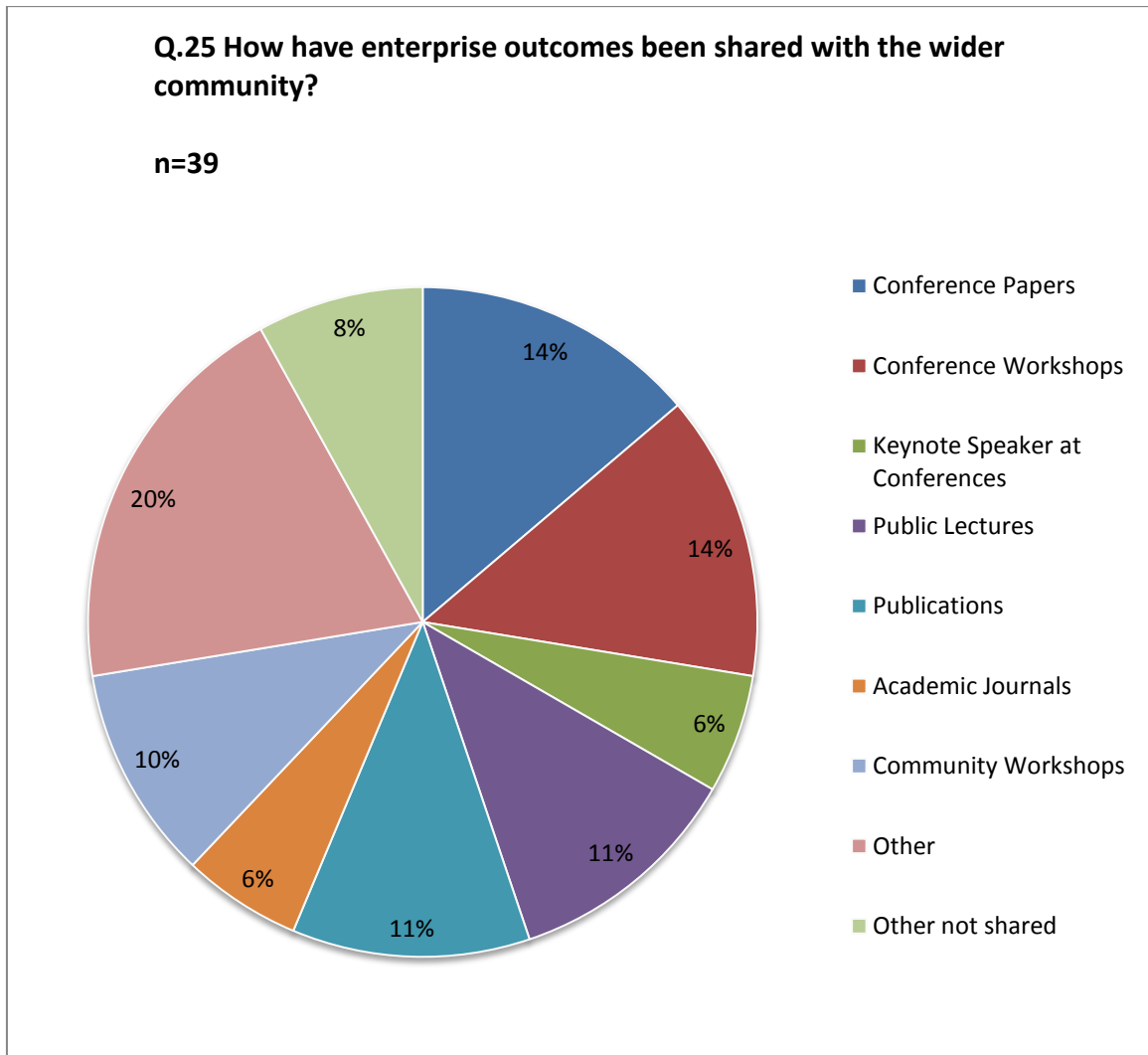


Figure 28: Communicating Enterprise Outcomes

A number of respondents (8%) used the 'other' option to indicate that enterprise outcomes had not been shared (depicted as 'other not shared'). Those selecting the 'other' option (20%) to indicate alternative means for sharing enterprise, used on-line platforms, the Welsh Government's Learning Wales website, word of mouth and embedding information into undergraduate modules. Conference papers (14%) and conference workshops (14%) were the most popular means of communicating enterprise

outcomes, suggesting that consideration needs to be given to the way in which enterprise activities promote practice led research within the School.

The conundrum 'research' or 'enterprise' was recognised by a member of the Vice Chancellor's Board who said "academics are often driven by the success of publishing a journal article, or finishing a course. I think you have to get some genuine pleasure from the commercial aspect of the work. You know, making a bit of profit, it gives you a good feeling". I could relate to this, having previously had my own small business. I enjoyed making money. However, to explore this further, 'enjoyment of enterprise activity' was used as a theme in the semi-structured interviews (theme four, see Appendix 19: Interview Guide, page 366).

This (theme) ignited the passion of respondents interviewed. Overall, the responses of those interviewed expressed enjoyment in being involved with enterprise and the stimulus it provided. They appreciated the influence it had with regard to the student experience and the impression it made personally, institutionally and with the wider community (see Figure 29: The Influence of Enterprise, below).

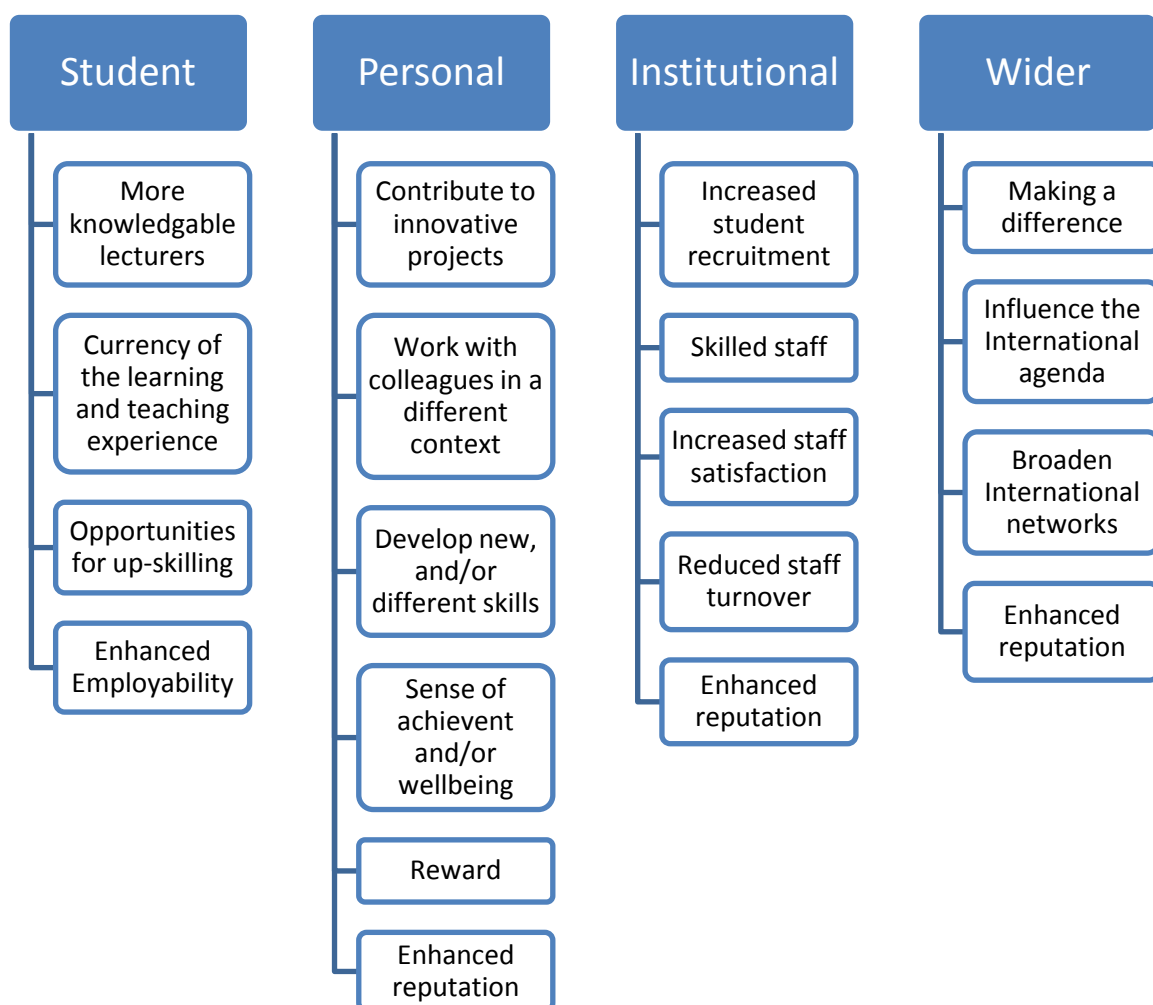


Figure 29: The Influence of Enterprise

Interviewees talked of a sense of achieving something for students and providing opportunities for academic staff to engage in enterprise projects that they were passionate about and/or to work with colleagues in a new and different context. For example, in general terms, Matthew described the achievement as “the buzz you can get from working with proactive people who want to make things happen, and can...” Similarly, one of the Heads of Department talked of the excitement created by “working

with people [colleagues] you know in a different way". Kate explained that she found engagement with enterprise "very rewarding. Probably more so than the day job". Likewise, Roger discussed his enjoyment of teamwork, saying "The ones I'm enjoying the most are the ones where I am collaborating with other members of staff... to bounce ideas off and to develop, everyone brings something different to the table... everyone's got different experiences and skills".

More specifically, and with reference to enterprise projects, Elsie said "I loved doing the anthology, the SIP, I really enjoyed that". With regard to another SIP, Margaret explained "I did a SIP with the museum and that was really exciting because I felt I was learning, taking a lot of information in". Similarly, with regard to Outdoor Education, Brangwen said of her experience "I enjoyed Forest School... it was more about my own personal development rather than seeing at the outcome of any enterprise... I thought it would be something that I would enjoy doing. Be part of a team and develop bilingualism because that's my passion". Establishing an element of connectivity between Research and Enterprise, one of the Heads of Department thought that "some of the conferences that we have been involved with have been uplifting and enriching... key people, experts in their field sharing their thinking... that's always good for the soul [and] a sense of achievement when things are complete and well received". Establishing links to the reputational outcomes of Research and Enterprise, Gethyn said of his engagement with conferences "I enjoy doing that kind of thing. [It provides] a way of promoting the university... it's important for us [to] get our name out there in the wider academic community".

In terms of the influence enterprise made in relation to the student experience, those interviewed talked about being more knowledgeable, better informed in their teaching role and the currency of materials used in their teaching. Rhiannon explained that the enterprise project she had been involved with had given her “a different perspective on what [she] was doing on the PGCE programme”. Many highlighted the enhancement opportunities enterprise provided for their students, relating this to their future employability. For example, Grace commented on the PESS project she had overseen, saying of the enterprise initiative “it gives them something that they wouldn’t have had through our normal provision. I think that makes them have an edge”. Likewise, the international portfolio has momentum in a wider perspective. Courses such as Quality and Accreditation in Higher Education, Strategic Planning in Higher Education, and Leadership and Development in Higher Education have informed the strategic planning of several Middle Eastern universities. This was commented on by Harriet who said “I enjoyed the courses with an international flavour. It has been an opportunity to feel genuinely that you have contributed to giving people a wider or better understanding of HE culture”.

Some academic staff undertook enterprise activities because they wanted to enhance their experiences at work. Vanessa, although interviewed as a non-engager in enterprise, said that enterprise needed to be about “giving me a buzz because otherwise, I am not good at the mundane day-to-day job. I think it is a waste of me as a resource if I am just

doing the mundane, getting by things. I need more than that. I need more to keep my interest up". This aspect was also highlighted by a member of the School's Research and Enterprise Support Team who thought academic staff might think "'we've got to do this', with regard to their programme, whereas sometimes, they might 'wish' to do something different". S/he thought enterprise offered academic staff "the chance to play with an idea [then make] those ideas a reality". The element of choice was also important to academic staff, one of the Heads of Department, commented that "whilst everybody is encouraged to participate, people aren't forced to participate which I think is a strength, basically. I think it provides people with an opportunity to be creative". For enterprise to flourish academic staff need to feel secure. They need to feel supported and they need to feel that their opinions matter.

Although not highlighted by respondents to the on-line questionnaire, or those interviewed, there are a number of hidden facets of successful engagement with enterprise. The raised profile of the university in the annual Destination Leavers Higher Education (DLHE) survey, resulting from the 'additionality' students gained as an outcome of enterprise activity. For example, attainment of the Forest School Leader Award, enhancing opportunities for increased student employment/graduate employment. Likewise, 'self employment' attaining a higher score in the DLHE survey. This holds importance for the integrated curriculum (QAA, 2012; Young, 2014) and a need to teach students to be entrepreneurs (Henry, Hill and Leitch, 2005a). Similarly, the raised profile of employability and student satisfaction (National Student Survey) enhances levels of student recruitment and retention. Additionally, successful

engagement with enterprise activity creates learning opportunities for academic staff, up-skilling them and contributing to personal and professional development (Bridge, O'Neill and Martin, 2009; Gibb, 2010). Successful achievement of projects fosters a sense of wellbeing and contributes to staff satisfaction (Newton, 2005). It increases the reputation of the university and the calibre of its staff, with the Cardiff School of Education and Cardiff Metropolitan University recognised as a desirable place of academic employment. All of this said, engagement with enterprise can become a debate regarding measurement (Johnson *et al.*, 2015), promotion and/or reward with academic staff (Thorp and Goldstein, 2010).

The number of enterprise projects undertaken and managed by the Cardiff School of Education increased year on year from 28 in 2009-2010 to 64 in 2012-2013. Besides an exponential increase in income generation, this also afforded increased opportunities for project management. The project managers of the School's enterprise activities were consistent in their attainment of project outcomes. Whether this was founded on their effective leadership and management (Riches, 1997; Cobb, 2012)) and/or their capability to motivate others (Wallace and Gravells, 2007) project teams wanted appreciation of the endeavours (Pritchard and Ashwood, 2008). The research explored this aspect through the on-line survey as I was aware different approaches were adopted to 'reward' academic staff, depending on the type of enterprise project undertaken and the needs of individual academic staff involved.

Respondents to the on-line survey were asked how they could be best rewarded for engagement with enterprise activity (Question 26). Respondents were asked to rate: buying out teaching time to free up staff time; rewards and incentives payments; overtime payment; recognition of time against workload; and innovation and engagement fellowship, using the scale 1-7. (See Table 15: Rewarding Successful Engagement with Enterprise, below). However, when analysing the data, I realised a guide to the rating scale had been omitted for this question. The data presented in Table 14 was analysed using the trajectory used for all other questions that included a rating scale; 1 as the most preferred option and 7 as the least. However, to substantiate the research data, 'reward' was incorporated as a theme (Theme five, see Appendix 19: Interview Guide, page 366) of the interview guide.

Table 15: Rewarding Successful Engagement with Enterprise

Q.26 How could the university best reward engagement with enterprise activity?							
n=44							
	1	2	3	4	5	6	7
Buying out teaching time	25	9	5	2	1	-	2
Rewards and incentive payment	10	14	9	4	-	5	2
Overtime payment	9	17	5	4	2	6	1
Recognition of time against workload	23	16	3	1	-	-	1
Enterprise fellowship	11	9	12	6	1	4	1

Buying out teaching time by incorporating costs for hourly paid lecturers into enterprise activities and recognition of time against workload were most favoured by respondents. This confirmed issues previously discussed in relation to workload and wellbeing. Of lesser importance was the value given to a university Enterprise Fellowship Scheme based on successful engagement with enterprise activity.

When considering the effects of incentivisation as a means of motivating academic staff, Pritchard and Ashwood (2008) mention the need for a connection between the incentive, the action and the result. They said for it to be effective, “people must believe they have fairly good control over their results” (p.138). From a School perspective, it was recognised that varying options were utilised to ‘reward’ enterprise active staff. Some academic staff with a full timetable, in terms of their teaching commitment, chose an additional payment as recognition of the additional time spent undertaking enterprise. Others chose to have hourly paid lecturers cover their teaching to alleviate their workload. This individualised approach was confirmed by a member of the School’s Research and Enterprise Support Team who said “some [want] the money. Others [are] doing it purely because they want to get an idea of the ground”. S/he related this to the development of the School’s Outdoor Learning Centre where academic staff had chosen to forgo payment so that a woodland classroom could be built. S/he quoted them, saying “don’t give me the payment, I want this idea to come to fruition”. The individualised approach to ‘rewarding’ academic staff who engaged with enterprise was noted by a member of the university’s Research and Enterprise Services unit who said:

Your School is very different in the way it operates compared to other Schools. We are trying to develop a workload allocation model which is a huge task to do fairly because of the way different people operate and the areas of different interest individuals have. The direction the university wants to go; the set term times that people think they should operate in [...] to draw up a system that is fair to everyone is difficult.

Personal experience of managing this at School level confirmed this to be the case.

However, the entrepreneurial university is characterised by shared vision where innovation and success is rewarded (Gibb Haskins and Robertson, 2009).

Some academic staff, focussed on the intrinsic reward engagement with enterprise afforded. For example, Matthew explained that:

Engagement with community groups brings enough reward. It is contributing to a sense of purpose, and a sense of social justice. It makes academic life more interesting, broadening the students' perspective in terms of career destinations and possible work experience.

Likewise Roger said:

It has never been about finance for me. When I first started doing Teddy Bear's Picnic, I was doing it because I believed it was important. Providing children and learners with the opportunity to go outside and enjoy something, re-engage with the natural environment. For me, that's reward.

This was reiterated by his colleague Margaret who said "I think it's very rewarding in itself to be part of the team. It's great to see the impact and the excitement that is generated in the teachers going out to do something outdoors". She went on to explain

that there was a need for recognition of the way enterprise fits in with the core business of the School with regard to overall 'time capacity'.

Wider professional recognition was mentioned by Jayne making reference to her secondment, saying:

The recognition of my colleagues is probably the most rewarding part of it. You can be seen as somebody who is kind of stuck in a university and 'that lady who used to teach once', but what is really rewarding is that I am working with colleagues in all sorts of different environments: classroom, peripatetic teachers, and you know, I am being recognised for that work. Certainly in Wales, Musical Futures... my name has become synonymous with [it]. That's really nice, that something that's really exciting is kind of associated with me.

Rhiannon made the link between reward and time against workload, saying "I am not sure how to say this without it sounding wrong. I wouldn't do it really for the money, partly because I think I am well paid anyway. Possibly time...". Similarly, Brangwen explained that "there's very much the time element and that it is seen as valuable by the School, so therefore your time is your reward if you like, your payment, your currency". A minority of those interviewed mentioned an additional overtime payment, although for Kate, the financial imperative was the driver saying explicitly, "pay packet at the end of the month". This can work well with regard to projects where academic staff work independently, however, Pritchard and Ashwood (2008) highlight the challenge of applying fairness to financial incentives associated with group projects.

An unexpected theme coming from the research data was the issue of being valued. With the close of all enterprise projects, a point was made to thank all staff involved, copying in line managers, Heads of Department and the Dean of School. I considered this to be an important part of recognising the contribution of individuals, celebrating success and promoting the different types of enterprise activity undertaken. I had not realised how well these were received and the importance they played in the success of the School with regard to engagement with enterprise. Joanne commented that “a ‘thank you’ goes a long way”. This was also mentioned by Grace who said “it’s very nice when somebody says ‘thank you’”. The importance of this was also mentioned by Tracey who said “we all like good feedback, everybody likes good feedback. We aren’t very good at celebrating ourselves, so it’s always nice when that’s shared. You are very good at that”. She went on to explain that “when Jayne did her first course, it was clear to the whole department that she had had a great success because you shared it”.

The prompt in the interview guide relating to an Enterprise Fellowship Scheme created more of a vehicle for discussion than affirmation, or otherwise, that this would be a suitable reward to recognise successful engagement with enterprise. Gethyn was of the opinion that “it’s a good idea. In terms of enterprise, it’s really good to look at role models; to look at what people actually do, and I suppose the value of that, obviously apart from the motivation factor, would be to demonstrate to other people what kinds of things can be done”. With regard to greater connectivity between Learning and Teaching, Research and Enterprise, Joanne said “If there are three elements to the role then they should have equal status”. Similarly, Grace explained that “it might be the ideal

way to say there's some sort of equity between the three driving forces [of the university]". A member of the Vice-Chancellor's Board indicated that there was work to be done in terms of recognition and reward and a structure for career progression. S/he commented that one of the academic schools was looking at "introducing some kind of fellowship type rewards for [academic staff] what we don't yet really have in practice, apart from the Director of Enterprise posts and the odd kind of application for promotion to Professor, is a recognised career route for enterprise".

In summary, despite the lack of a recognised metric for enterprise, academic staff were keen to have their endeavours recognised. The aspect of recognition most mentioned was time. Intrinsic factors played a large part in motivating staff involved in enterprise projects with the capacity to achieve reputation influence in the wider community, locally, regionally, nationally and internationally. Whilst recognition of success, in terms of thanks, was highly regarded by many, the issue of an Enterprise Fellowships Scheme was primarily considered in the context of having parity across the three missions of the university.

Chapter Five: Conclusions and Recommendations

This chapter reviews the focus of the study and research methodology. This provides the contextual background on which the outcomes of the research have been based. The main conclusions and key findings have informed the recommendations which are also included in the chapter. Additionally, a summative and critical analysis has been undertaken of the research to establish the extent to which the research aim has been met and the research questions answered. Discussion with regard to the original contribution the research makes to the body of knowledge relating to engagement with enterprise is also presented. The final section of the chapter explores the implication, in terms of future research opportunities, for the Cardiff School of Education and for Cardiff Metropolitan University, linked to the implementation of the S⁴E model for Enterprise.

5.1 A Review of the Study

The focus of the research was enterprise with a study that examined how academic staff may be encouraged to be entrepreneurial, using the skills and attributes of the entrepreneur. It was based on the enterprise practices of academic staff in the Cardiff School of Education, one of the academic schools of Cardiff Metropolitan University and covered a four year period, 2009-2013. The rationale underpinning the research was to gain an in-depth and evidence-based understanding of engagement with enterprise activity that would enable the School to inform its operational and strategic planning, thereby ensuring the longevity of its success in contributing to the university's Enterprise imperative.

To achieve this, relevant literature and internal documents and reports were scrutinised. This led to an exploration of key terms relevant to the research such as ‘enterprise’, ‘entrepreneur’, ‘academic entrepreneur’ and ‘social entrepreneur’ (Wickham, 2006; Bridge, O’Neill and Martin, 2009). The concept of the knowledge economy (Shattock, 2009) and the phenomenon of the entrepreneurial university (Clark, 1998; Etzkowitz, 2008; Gibb, 2010) were also examined. This provided a means of contextualising and evaluating the appropriateness of initiatives adopted by the university to promote staff engagement with enterprise activity. This included an exploration of external factors that influenced engagement with enterprise, such as the diversification of funding sources (Deem, Hillyard and Reed, 2007), and greater interaction between universities, industry and government (Etzkowitz, 2008). The skill and attributes of the entrepreneur were scrutinised (Bridge, O’Neill and Martin, 2009) and the role of the ‘intrapreneur’ was examined for its relevance to academic staff (Arroyo-Vazquez, van de Sijde and Jimenez-Saez, 2010). Models of support were considered, particularly the model for enterprise needs (Bridge, O’Neill, and Martin, 2009) and Wickham’s (2006) model for motivation. The review of literature also included the conceptual model created to support research and enterprise in the Cardiff School of Education.

5.2 A Review of the Research Aim and Research Questions

This section of the research includes a review of the research aim and research questions. The research has been a detailed and systematic enquiry to discover new, evidence-based knowledge that adds to existing understanding of academic engagement with enterprise activities in the Cardiff School of Education (Menter *et al.*, 2011; Coe,

2012). At the beginning of the research journey, the research questions defined the focus of the investigation, set the boundaries/parameters of the research, provided direction, informed the design of the research methods, and acted as a frame of reference steering the course of the research (O’Leary, 2005; Menter *et al.*, 2011).

The aim of the research was:

To undertake a critical and analytical exploration of engagement with enterprise in the Cardiff School of Education between 2009 and 2013.

The research methodology is documented in Chapter Three where the ontological, epistemological, theoretical and methodological perspectives were discussed. The research methodology used was case study. This approach enabled me to carry out an in-depth investigation (Wisker, 2001) based on what was happening with regard to engagement with enterprise in the Cardiff School of Education (Denscombe, 2003) between 2009 and 2013. The methods used for data collection included a bilingual (English and Welsh) on-line questionnaire (n=45) and semi-structured interviews (n=21). The design, testing and implementation of the tools for data collection were documented in sections 3.2.1 Designing and Constructing the Bilingual On-line Questionnaire, page 118, through to 3.2.6 Implementing the Interviews, page 138. This included discussion relating to the approach used for sampling and measures taken to preserve participant anonymity. The results and analysis of the data was presented in Chapter Four, using the

S⁴E Model for Enterprise that emerged from the research. The model provides strategic direction for enterprise in the context of Higher Education. Each of the research questions had a distinct role; however, their overall function was to achieve the research aim.

Research Question 1: How have the types of enterprise practices that currently exist within the Higher Education sector evolved?

This established what others were doing, what other researchers had already found, and was a means of informing the research design. Defining 'enterprise' in the context of Higher Education was complex as terms such as 'enterprise, 'Third Mission' and 'innovation and engagement' were often used interchangeably (E3M, n.d.). Whilst learning and teaching was recognised as the core business of universities (Temple, 2009), there was a move to capitalise knowledge (Clark, 1998; Etzkowitz, 2008; Shattock, 2009; Gibb, 2010) and apply business practices to academic resources (Wickham, 2006; Bridge, O'Neill and Martin, 2009) to diversify the funding sources of universities (Deem, Hillyard and Reed, 2007). Some universities talked openly of their commitment to being an entrepreneurial university; for example, the University of Warwick (2009; 2010) set a target of securing investment worth £200million over a period of five years. Others questioned the appropriateness of treating education as a commodity. However, all the literature suggests that universities needed to develop an element of autonomy founded on freedom from unreliable grant funding.

Clark's (1998) model for the entrepreneurial university talked of the need for a 'strengthened steering core', an 'expanded developmental periphery', a 'stimulated academic heartland', 'diversifying the funding base' and an 'integrated entrepreneurial culture'. Similarly, Etzkowitz (2008) discussed the needs for universities to work with Government and industry. However, the practicality of developing the enterprise competencies of academic staff presented a challenge. Bridge, O'Neill and Martin (2009) were controversial in their nature versus nurture debate. They highlighted the concept of the 'stella entrepreneur' whose skills for enterprise were in-born, rather than taught. To a certain extent, this is supported by Henry, Hill and Leitch (2005a) who discuss the challenge of teaching students to be entrepreneurs.

The role of the entrepreneur (Section 2.2.2 Entrepreneur, page 49), academic entrepreneur (Section 2.2.3 Academic Entrepreneur, page 53) and social entrepreneur (Section 2.2.4 Social Entrepreneur, page 54) were explored in the literature. However, it is the role of the 'intrapreneur' (Maier and Pop Zenovia, 2011) that holds the greatest resemblance to practice in the university. Intrapreneurs operate in an enterprising manner in someone else's business. They are able to use the good name of the organisation and whilst responsible to managers, are free from personal financial risk.

Existing conceptual models of support for enterprise reviewed in the literature lacked coherence and relevance to practice in the Cardiff School of Education. The hierarchy of

enterprise needs (Bridge, O'Neill and Martin, 2009) placed support at the higher levels of the model, suggesting a lack of support at lower levels. The model didn't incorporate the stepped approach for project management advocated by Newton (2006) and neither made reference to the role of the intrapreneurs (Wickham, 2006). This led to the creation of a synergistic conceptual model for supporting intrapreneurship (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79) which was implemented in the School from 2009-2010, onwards.

Research Question 2: In what ways has the university promoted enterprise activities and how effectively are academic staff supported strategically and operationally to engage with them?

The second research question promoted scrutiny of internal strategic approaches for engagement with enterprise, it also provided a focus for garnering staff perceptions to measure the relevance and extent of the success of these strategies.

The Job Description and Person Specification for academic posts informs the recruitment process. For a university to be entrepreneurial, it requires entrepreneurial staff. The current Job Description and Person Specification fails to detail explicit expectations with regard to engagement with enterprise. Wickham (2006) refers to recruitment as gaining human commitment for enterprise and highlights the importance of attracting employees with appropriate skills and knowledge. To a certain extent, this is reflected in

the findings of the research as many academic staff associated enterprise with income generation. They did not consider its wider perspective in terms of enterprising behaviours or the social and cultural benefits it provides to society.

The university promoted enterprise through its Research and Enterprise Services unit. At School level, this task was undertaken by the Research and Enterprise Support Team, in collaboration with the Director of Enterprise. Whilst those supporting academic staff to engage with enterprise understood its strategic importance, there was a lack of awareness amongst academic staff of the way in which the Corporate Strategic Plan and the School Strategic Plan influenced practice and what value was placed on engagement with enterprise; further, how value was allocated to endeavour. Strategically, enterprise activity was important to the Cardiff School of Education. It provided an additional source of funding (£216,600 in 2012-2013), facilitated enterprise informed learning and teaching, provided learning experiences that enhanced student employability and staff development opportunities for enterprise active staff. Staff rarely considered their engagement with enterprise in the context of knowledge transfer and economic growth (Shattock, 2009). Indeed, for some, there was a resistance to the commercialisation of education (Vanessa).

Research Question 3: How effective is the support available to Cardiff School of Education staff in achieving 'impact' in the wider community with the enterprise activities undertaken?

The role of the third research question was twofold. It intended to establish the success, or otherwise, of the model of support implemented to support engagement with enterprise. It also had the function of establishing the extent to which others, in the wider academic community, were aware of the range and types of enterprise activities undertaken.

In terms of supporting academic staff, the introduction of the conceptual model for supporting intrapreneurship (Jones, 2011a) discussed in Chapter Two (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79), was successful. This was evidenced in the financial achievements brought about by the engagement of academic staff with enterprise (see Table 1: Research and Enterprise Targets, page 30). Participants in the research noted that the School's Research and Enterprise team were "very good at pushing barriers out of the way" (Andrew) operating in a ways that "make people come back and do a bit more" (Harriet). This supportive approach can lead to under-responsibility (Thorpe and Goldstein, 2010) with academic staff failing to grasp the importance of core enterprise competencies such as financial acuity. This was of particular relevance to the research as only a minority of academic staff considered the time allocated to enterprise tasks to be accurate, the outcome being, in cases where staff time was overestimated, costs were disproportionately high and where underestimated, deficits in time had an impact on workload and wellbeing. In turn, this can be linked to the lack of measurable value allocated to engagement with enterprise.

The range and types of enterprise activity undertaken in the Cardiff School of Education have been discussed in Chapter Four (Section 4.4 Synergy for Enterprise, page 200). They were varied and reflected the academic disciplines and research interests of academic staff. One of the interesting findings of the research was attempting to establish the ways in which enterprise activity informed Learning and Teaching, and similarly informed research (Section 4.4.1 Synergy for Enterprise: the Learning, Teaching, Research and Enterprise Nexus, page 209). The majority of academic staff failed to recognise the connectivity between Learning and Teaching, Research and Enterprise. In terms of commercialising research, a member of the School's Research and Enterprise Support Team acknowledged that a School of Education "was probably the hardest for making that a reality". That said, the majority of academic staff considered enterprise activities enhanced the reputation of Cardiff Metropolitan University (Chapter Four, Section 4.5 Success for Enterprise, page 219). Academic staff shared enterprise outcomes through a variety of means, the most popular being conference papers and conference workshops. This was followed by academic journals and the role of conference key note speaker; approaches usually associated with research (Vitae, 2011). It was considered that the reputational influence of this engagement with enterprise was achieved locally and extended wider; regionally and internationally.

Research Question 4: How can the findings of the research inform change/s to future strategic planning within the Cardiff School of Education?

The final research question was purposeful, intended to ensure that the outcomes of the research were utilised with the Cardiff School of Education. At the beginning of the research, enterprise activity was driven by the School's Strategic Plan for 2007-2011. The initial outcomes of the research informed the development of the Strategic Plan 2012-2017. A recommendation of the research is that the Enterprise Activists engage with the development of the Strategic Plan 2018-2023 ensuring ownership of the strategic objectives for enterprise, by all academic staff.

5.3 The Key Findings of the Research

Firstly, whilst not a direct result of the study, during the period of the research, 2009-2013, the Cardiff School of Education increased its contribution to the university's Research and Enterprise financial targets, year on year; from £89,000 in 2008-2009 to £361,000 in 2012-2013. Similarly, over the same timeframe, the engagement of academic staff with enterprise activities increased from 19% in 2008-2009 to 78% in 2012-2013.

Secondly, with regard to the profile of academic staff from the Cardiff School of Education, those least likely to engage with enterprise were Lecturers who had worked at the university for less than one year. Those most likely to engage worked at the university for more than one year with the majority falling into the 6-10 years and 10+ years categories, establishing a relationship between the number of years a member of academic staff had been employed by the university and his/her engagement with enterprise activities. This can also be linked to the longer term effects of enterprise education and training (Henry, Hill and Leitch, 2005b).

Thirdly, whilst most academic staff engaged with enterprise, generally, there was a lack of understanding of the way in which their endeavours related to strategic planning, whether at School or corporate level. Most academics had a narrow perception of enterprise, seeing it as a function for income generation rather than wider set of skills and behaviours associated with being creative, innovative and able to solve problems (Bridge, O'Neill and Martin, 2009). Similarly, they did not relate enterprise activity to the diversification of the funding (Deem, Hillyard and Reed, 2007). Academic staff recognised that enterprise informed learning and teaching and increased student employability were beneficial outcomes of engagement with enterprise, however, many were unaware of the way in which this contributed to the concept of Cardiff Metropolitan University being an entrepreneurial university (Clark, 1998; Gibb, Haskins and Robertson, 2009; Gibb, 2010).

Fourthly, the conceptual model of support introduced to support academic staff to engage with enterprise (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79) was effective, with many commenting that the support mechanism influenced their decision to engage with enterprise. The model nurtured and built confidence. It supported ideas, making viable ones happen. However, the model can lead to under-responsibility (Thorpe and Goldstein, 2010). Academic staff recognised skills associated with enterprise that could be readily aligned to Learning and Teaching, such as effective communication, interpersonal skills and subject knowledge. However, they were less aware of the need for financial acuity and an awareness of

commercial markets. The lack of financial acuity was reinforced in the costing and pricing of enterprise activities with only a minority of academic staff considering the time allocated an accurate reflection of the time spent. In turn, this had implications for workload allocation and the ongoing wellbeing of enterprise active staff.

Fifthly, academic staff in the Cardiff School of Education engaged with a wide range of enterprise activities that reflected academic disciplines and research interests. A number of participants indicated that there was an element of connectivity between their enterprise activity and Learning, Teaching and Research, leading to enterprise informed learning and teaching. However, many were unaware of the QAA guidance relating to Enterprise and Entrepreneurship Education (QAA, 2012). This has implications for those working with trainee teachers who need to embed enterprise education in the primary and secondary school curricula as a means of preparing young people for self-employment as well as employment (Young, 2014). Similarly, many considered the commercialisation of research to be limited. With regard to Schools of Education, in general, this reflected the findings of Tabberer (2013).

Sixth, the successes of enterprise can be measured, or valued, in a number of ways. For example it could be financial, reputational, outcomes based or personal. The majority of academic staff considered engagement with enterprise enhanced the reputation of Cardiff Metropolitan University. Many believed that enterprise contributed to the personal and professional development of staff. There was agreement that enterprise

activities had been influential locally, regionally and internationally. Whilst Thorpe and Goldstein (2010) discuss the challenges associated with rewarding success, incentivisation is something academic staff value. Whether the incentive is time-based, financial or reputational, academic staff deemed 'reward' to be motivating (Wickham, 2006; Pritchard and Ashwood, 2008). Of key importance was a means of formally recognising an academic career founded on enterprise in the Higher Education sector.

Seventh, whilst academic staff discussed the notion of incentives to engage with enterprise and were able to differentiate between rewards that were personally important and those which were perceived to be of significance to the university, there was no recognised metric for apportioning value to enterprise endeavour for enterprise active academics. Similarly, there was little apparent correlation between what was important to the university (and articulated in its Corporate Strategic Plans) and what was of personal importance to academic staff in the Cardiff School of Education.

Finally, the key outcome of the research is a model for enterprise activity, S^4E , which is based on four essential components for effective engagement with enterprise. They are: Strategic significance for Enterprise, Support for Enterprise, Synergy for Enterprise, and Success for Enterprise. (See Figure 30: The S^4E Model for Enterprise, below). The findings are based on a need for enterprise to be of strategic significance (S^1), both corporately and at school level, to academic staff in the Cardiff School of Education. The enterprise culture needs to be supportive (S^2) with appropriate systems in place to make engagement with enterprise straightforward. Synergy (S^3) is required between the

knowledge and skills sets of academic staff and the enterprise activities proposed; and finally, success (S^4) needs to be acknowledged and celebrated.

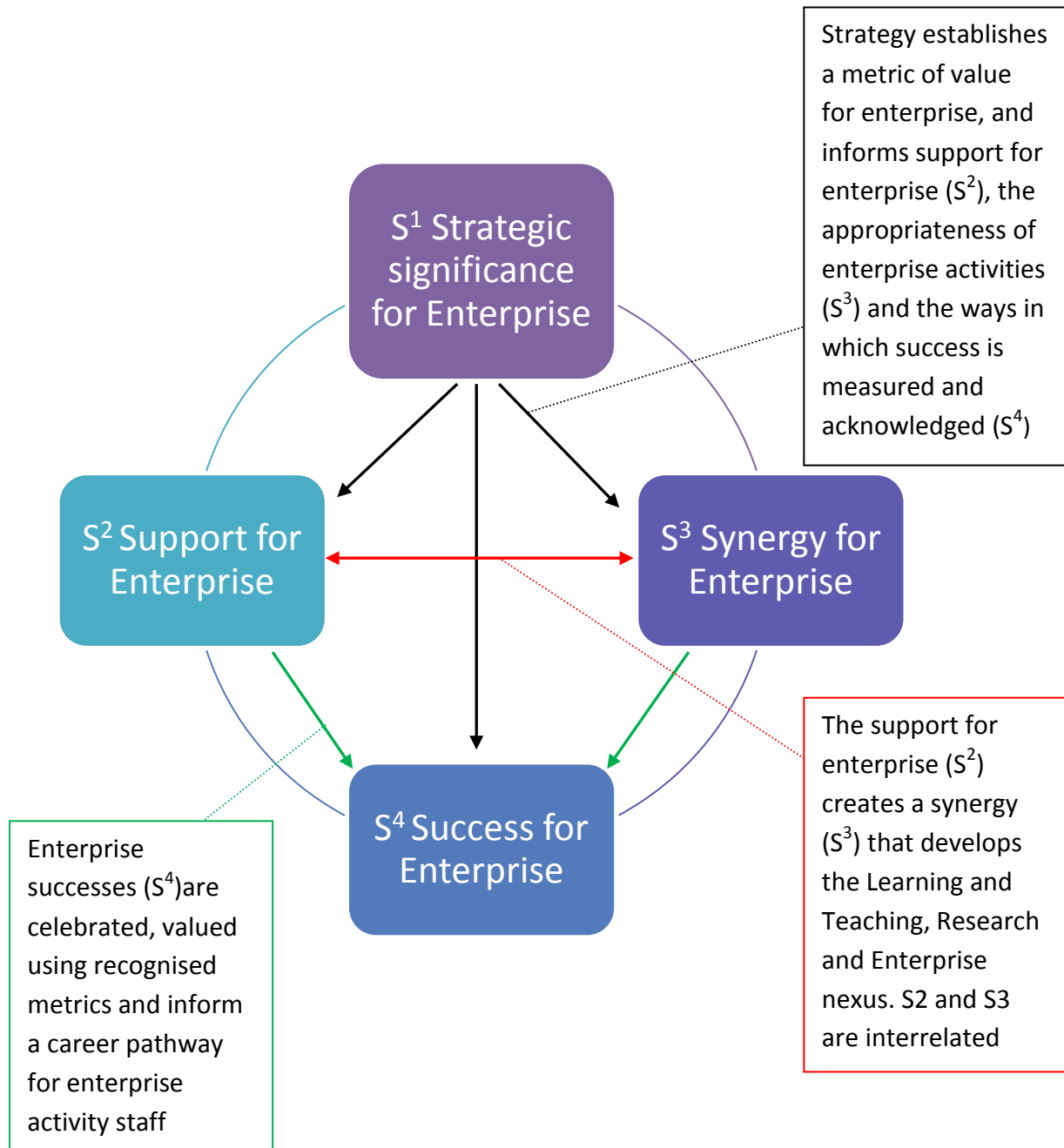


Figure 30: The S^4E Model for Enterprise

5.4 Limitations of the Study

An account of the limitations of the research methods has been documented in Chapter 3 (Section 3.4 Limitations of Research Methods, page 145). The limitations were explained in relation to the appropriateness of the data collection methods to gather the perceptions of academic staff with regard to their engagement with enterprise activity. Structural issues relating to the on-line questionnaire were highlighted, along with the strategies used to ensure the integrity of data collected/reported. In addition, as a non-Welsh speaker, the challenges of planning, designing, implementing and analysing the Welsh medium version of the on-line questionnaire were conveyed. As mentioned in the application for ethics approval, the duality of my role, as a researcher and senior manager, had the potential to influence the responses given to either the on-line questionnaire or the semi-structured interviews. This was also discussed in Chapters 1 and 3 (Section 1.7 Undertaking Research in my own Organisation, page 33 onwards and 3.4 Limitations of Research Methods, page 145 onwards) along with the strategies used to address/minimise any bias in the research data. Those participating were given the opportunity to withdraw from the study at any time. Additionally, those interviewed were given a transcript of the interview enabling them to confirm whether or not it represented a true reflection of our discussion.

Measures were put in place to mitigate any potential threat to the validity of the research outcomes. The study has ecological validity as it is representative of a real situation. Internal validity was achieved by incorporating differing viewpoints, including those of academic staff, support staff, senior managers at School level as well as a senior

manager of the university. Data analysis validity was accomplished by rigour and attention to detail in relation to testing data collection methods, data collection, analysis and reporting. Content validity was achieved by mapping the research questions to questions incorporated into the on-line questionnaire and themes used in the interview guide. As a result, there is every confidence in the trustworthiness of the research data. To substantiate this, the findings show many similarities with the literature.

The research was undertaken using a case study approach. As such, it was an in-depth investigation of the enterprise activities of academic staff in the Cardiff School of Education at Cardiff Metropolitan University; one academic school in one Welsh university in the UK. This may be perceived as a limitation as it influences the extent to which the findings can be applied to a wider population (external validity). Nonetheless, the study has merit and potential for future research. The emergent S⁴E model for Enterprise has relevance across the Higher Education sector.

5.5 Recommendations

Based on the findings of the research, the following recommendations were made:

1. Update the Job Description and Person Specification for academic positions at Cardiff Metropolitan University making the expectations with regard to engagement with enterprise more explicit. (*Recommendation for Human Resources*).

A requirement to engage with enterprise activity is not explicit in the current version of the Job Description and Person Specification for academic roles. Strategically, whether or not intentional, this suggests its lack of importance. Including a focus on enterprise establishes parity with Learning, Teaching and Research. Additionally it creates a coherent pathway from recruitment and staff performance, through to the promotional routes for Reader and Professor.

2. Devise a metric that measures and allocates value to enterprise endeavour. The metric should articulate enterprise behaviours and enterprise activities that are valued by the university and linked to career progression. *(Recommendation for the Pro-Vice-Chancellor Enterprise).*

The notion of value and a metric to measure value provides opportunity to establish a clear career trajectory for enterprise active academic staff. It offers a mechanism by which deeper connectivity between Learning, Teaching, Research and Enterprise can be achieved. It removes subjectivity in the reward and incentive process and offers linkage between Strategy for Enterprise, Support for Enterprise, Synergy for Enterprise and establishing the criteria on which Success for Enterprise is measured.

3. Implement the S⁴E Model for Enterprise within the Cardiff School of Education. *(Recommendation for the Associate Dean - Enterprise).*

Implementing the S⁴E model for Enterprise in the Cardiff School of Education provides a framework on which to base ongoing sustainability of the School's considerable enterprise successes. The model is an original contribution to the field of knowledge and there is potential to adopt it across all academic schools. Its implementation provides opportunity for further research which has been documented in Section 5.8 (see 5.8 Future Directions, page 260).

4. Implement the conceptual model for supporting intrapreneurship (Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79) in the Cardiff School of Education and at least one other academic school at Cardiff Metropolitan University. (*Recommendation for the Pro-Vice Chancellor Enterprise, in collaboration with Associate Deans – Enterprise*).

There is evidence-based success of the conceptual model for supporting intrapreneurship in the Cardiff School of Education. Implementation in another academic school, where academic staff are working towards the same corporate strategic objectives, within the same conditions of employment, offers the opportunity to test the model. This would establish its effectiveness in supporting enterprise success elsewhere in the university.

5. Establish and maintain a staff development programme within the Cardiff School of Education relating to enterprise capabilities. This needs begin with the induction of new staff and followed by a regular schedule of education and

training that enables academic staff to develop and hone the skills and attributes of the entrepreneur. *(Recommendation for the Associate Dean – Enterprise and Deputy Dean – Learning and Teaching).*

This will ensure that academic staff are aware of the importance of an entrepreneurial culture and the need to develop enterprise competencies. It will raise awareness of the wider meaning of enterprise and the types of activity usually associated with social enterprise. It will ensure that academic staff are equipped with appropriate skills to confidently engage with enterprise activity and lead/manage enterprise projects successfully, including financial acuity and an awareness of commercial markets.

6. Involve academic staff and Departmental Enterprise Activists in the development of the School's Strategic Plan for enterprise. *(Recommendation for the Associate Dean – Enterprise and CSE Departmental Enterprise Activists).*

Involving academic staff in the development of the School's Strategic Planning process is not new. Opinions would usually be sought through the School's Research and Enterprise Committee. However, allocating responsibility to Enterprise Activists to inform the process at a departmental level is an innovation. This will ensure ownership of the School's strategic objectives at 'ground level' with the Departmental Activists able input into the process in a more specific way.

7. Embed enterprise education and entrepreneurship into all undergraduate programmes, postgraduate programmes and teacher education and training programmes. (*Recommendation for Programme Directors*).

Embedding enterprise education and entrepreneurship into undergraduate programmes will provide a conduit for academic staff to attain a greater awareness of enterprise. It will enable them to explore the ways in which entrepreneurial skills contribute to student employability and self-employability. An enterprise informed curriculum will address the recommendations of the Young report, *Enterprise for All* (2014) and provide increased opportunities for research. This approach will also foster improved connectivity between Learning and Teaching, Research and Enterprise across the School.

8. Ensure all academic staff are aware of the promotional routes to Reader and Professor. Further that they are aware of the criteria on which these awards are conferred. (*Recommendation for the Deputy Dean – Learning and Teaching, the Associate Dean – Research and the Associate Dean – Enterprise*).

The awards of Reader and Professor are considered by the Professorship and Readership Committee. Decisions are based on the advancement of knowledge through one or a combination of three criteria. These criteria are associated with portfolio of evidence developed by academic staff in relation to: Learning and Teaching, Research, and Enterprise. The route to Reader and Professor has been more clearly defined in relation to engagement with enterprise. This ensures that

equitable value is placed on all three areas of the university's activity. In addition, it enables academic staff who possess the skills and attributes of the entrepreneur to use them for career advancement in a more structured and purposeful way in a Higher Education setting.

5.6 Original Contribution to Knowledge

The outcomes of the research make an original contribution to the field of knowledge in relation to academic engagement with enterprise and the thesis recommendations have potential to inform practice in other academic schools within the university and, in a wider context, within other schools of education regionally, nationally and internationally.

Two key criteria for Doctoral research are that it adds to existing knowledge (Coe, 2012) and in some way, is original (Murray, 2002). This research is original and contributes to the field of knowledge because:

- No previous research had been undertaken in the Cardiff School of Education relating to engagement with enterprise activity. As an empirical study, the outcomes provide an evidence-based foundation for future research relating to enterprise practice. Further, this research has informed and will continue to inform strategic planning in the Cardiff School of Education.
- The conceptual framework for supporting intrapreneurship (Figure 9) is based on a central core of support and was a synthesis of Wickham's (2006) notion of

intrapreneurship, the hierarchical approach adopted by Bridge, O'Neill and Martin (2009) in relation to enterprise needs, and the stepped, progressive style for project management advocated by Newton (2005). These works have not been put together before in this way. This represents a new interpretation of the ideas of someone else that have been applied to a different context, creating an effective means of supporting enterprise activity at School Level in Cardiff Metropolitan University. This has potential to inform practice in other academic schools in the university. It also has potential to inform practice regionally, nationally and internationally.

- The S^4E Model for Enterprise (Figure 30: The S^4E Model for Enterprise, page 248) that has emerged from the research is original. It is new and adds to knowledge. The S^4E Model for Enterprise provides strategic direction for enterprise activity in Higher Education. The model is based on a need for enterprise to be of strategic significance (S^1), both corporately and at School level, to academic staff. An enterprise culture needs to be supportive (S^2) with appropriate systems in place to make engagement with enterprise straightforward. Synergy (S^3) is required between the knowledge and skills sets of academic staff and the enterprise activities proposed. Finally, successful engagement with enterprise (S^4) needs to be acknowledged and celebrated. This conceptual model offers the opportunity to raise the profile of engagement with enterprise and contribute to greater connectivity between Learning and Teaching, Research and Enterprise. The S^4E Model for Enterprise has potential to inform practice at Cardiff Metropolitan

University. It also has potential to inform practice regionally, nationally and internationally.

5.7 Relevance of this Research for Others

As mentioned in Chapter One (see Section 1.1 Contextual Background, page 14), the research was undertaken in a post '92 university. The university has a student population is approximately 17,000, placing at the median of UK Higher Education institutions and the fourth largest in Wales with an income in excess of £80 million. The university aspires to be a top-ten, post '92 university. Its programmes of study have professional/vocational relevance with the university aspiring to grow its reputation in research and enterprise (Cardiff Metropolitan University, 2014). The research was based upon the enterprise practices of academic staff from the Cardiff School of Education, one of the five academic schools of Cardiff Metropolitan University. At the time the research was undertaken, there were approximately 1600 students enrolled across eleven academic programmes offered by the Cardiff School of Education and the School had an annual operational budget of approximately £12 million.

A requirement for academic staff to engage with enterprise activity was articulated in the Corporate and School strategic plans. Action planning, at School level, made reference to meeting/exceeding financial targets. These financial targets related to Research and Enterprise and were set annually in collaboration with the Dean of School, the School's Director of Enterprise, the university's Head of Enterprise and the university's Finance

Manager. Targets were based upon 'known enterprise activities' and 'unknown enterprise activities'. Financial targets for 'known enterprise activities' were calculated against on-going projects and the ongoing economic activities of the School's Business Units (the English Language Training Centre, the Cardiff Metropolitan University Press, Education Specialist @ Cardiff Metropolitan University and the Outdoor Learning Centre). The calculations, in terms of target setting, were based upon expected income minus expected costs. In contrast, for 'unknown enterprise activities', a set financial target was established to encourage the School to seek out and take on new enterprise activities. This approach overall, ensured that financial target were met, whilst encouraging the on-going evolution of the types of enterprise activity undertaken. It required the School to constantly review the services it offered to ensure that it met the needs of potential future clients of its enterprise endeavour (Institute for Education, n.d.).

Whilst the research was undertaken in the context of a School of Education, the features of the Model for Supporting Intrapreneurship are transferable to other academic schools and can be used by other Associate Deans – Enterprise at Cardiff Metropolitan University. The features of the S⁴E Model for Enterprise have relevance to the university and offer a coherent structure that articulates values accorded to engagement with enterprise activity, enabling growth of its reputation as an entrepreneurial university. In a wider context, the outcomes are also transferable to other Universities/Higher Education Institutions. While other academic schools and universities may have different infrastructures, strategic priorities or reputations and have dissimilarities in curriculum and staffing, there are also many similarities. For example, universities have an academic

culture, they are required to comply with the QAA Quality Code, there are standards for admitting students to study, and procedures for maintaining the quality of the student experience (Christensen and Eyring, 2011). Alongside these similarities, there has been an increased need to think in global terms (Institute of Education, no date) and a global imperative to be more entrepreneurial (Leitch and Harrison, 2008). There is a need to adopt business approaches to the allocation of resource, resource management (Deem Hillyard and Reed, 2007) and the management of knowledge (Institute of Education, n.d.).

With regard to Cardiff Metropolitan University, there is opportunity for the others Schools and Centres to learn from the internal processes and approaches taken to manage engagement with enterprise that have been adopted successfully by the Cardiff School of Education. Leitch and Harrison (2008) refer to this as endogenous horizontal learning (as opposed to vertical or sequential). In a broader context, universities have common agenda, namely learning and teaching, research and enterprise. Universities provide a community of practice, and are a regional resource (Institute for Education, n.d.). They are increasingly required to be competitive, meet the needs of Government and Industry (Etzkowitz, 2008) and to be innovate (Shattock, 2009). As such, the present study provides opportunity for other universities to benefit from the outcomes of the research whether applying the Model for Supporting Intrapreneurship (see Figure 9: A Model for Supporting Intrapreneurship in the Cardiff School of Education, page 79) or by implementing the S4E Model for Enterprise (see Figure 30: The S4E Model for Enterprise, page 248). This could be disseminated and shared either through personal and/or

professional networks (exogenous absorptive capacity) or by partner organisations acquiring the knowledge and expertise because they are in the 'same supply chain' (exogenous transfer of knowledge) (Leitch and Harrison, 2008).

In the context of this research, and my professional networks, learning was shared with (for example) senior managers from King Khalid University, Saudi Arabia (see PDP: 3.3 Contributing to the Research Community, page 400 and PDP Appendix Six: CSE International Summer School Workshop 2011, page 435) and similarly with staff from all academic disciplines from King Saud University, Saudi Arabia (see PDP: 3.3 Contributing to the Research Community, page 400 and PDP Appendix Eight: 1st Learning and Teaching Forum Saudi Arabia, page 445). With regard to the relevance of the research to organisations in the same supply chain, this could apply to universities seeking to diversify income sources. It could also be shared across all universities providing Initial Teacher Education and Training that embed and assess 'common standards' for Qualified Teacher Status in their award with the expectation for teachers to learn about and deliver entrepreneurial skills in schools.

5.8 Future Directions

The research has been a systemic and in-depth study of the engagement with enterprise activity in the Cardiff School of Education. Future directions are examined in relation to personal goals, opportunities for further internal research and opportunities for further

external research. The section concludes with a brief evaluation of my journey as a researcher.

5.8.1 Personal Goals

In relation to personal goals, the task of reflecting on my research journey is documented in the PDP: 5.1 Action Planning: Short-term goalspage 414. Whilst this enabled me explore the skills and knowledge gained it also made me aware of the need to communicate the outcomes of my research. Short-term personal goals include dissemination of the research outcomes and sharing the S⁴E model for Enterprise with those responsible for School and institutional strategy in relation to enterprise, namely the School's Senior Management Planning Team and Cardiff Metropolitan University's Research and Enterprise Services. Future medium-term personal goals are based on communicating the outcomes of my research with academic staff and the research community. This includes the planning and design of a focussed staff development programme for the Cardiff School of Education relating to the knowledge, skills and attributes that foster an enterprise culture in an educational context. It also includes the presentation the S⁴E model for Enterprise at an academic conference and publication in a peer reviewed journal. Finally, longer-term personal goals are more strategic and intended to influence the practices of academic staff and provide them with the appropriate knowledge and skills to enhance the student experience and achieve a learning, teaching, research and enterprise nexus. This will be achieved by embedding enterprise and enterprise education across the Cardiff School of Education curriculum in the planning period 2012-2017 and by championing institutional acknowledgement for enterprise active academic staff.

5.8.2 Opportunities for Further Internal Research

There are several opportunities for further internal research. These relate to both the conceptual model for supporting intrapreneurship and the conceptual S⁴E Model for Enterprise.

Firstly, if as is recommended, the new incumbent Associate Dean – Enterprise implements the the conceptual model for supporting intrapreneurship, this will provide the opportunity to investigate whether or not the timing of this study influenced the research outcomes. Additionally, whether or not the model of support has the capacity to stand as an independent process unreliant on the personality/leadership qualities of the strategic lead for enterprise in the Cardiff School of Education.

Secondly, if, as is recommended, the conceptual model for supporting intrapreneurship is implemented in another academic school within Cardiff Metropolitan University, a comparative study can be undertaken. This would confirm its appropriateness as a model for supporting enterprise at School level across the full range of disciplines offered at Cardiff Metropolitan University. More specifically, that it is relevant to Art and Design, Management, Sport and Health Sciences. This would be particularly relevant to those academic disciplines where Research and Enterprise Annual Reports indicate that financial targets have not be met and/or levels of academic staff have been reported as

low. Longer term, this would support the university's vision for increased enterprise activity.

A third opportunity for future internal research relates to the implementation of the S⁴E Model for Enterprise. It is an original contribution to the field of knowledge relating to engagement with enterprise in the context of Higher Education. If, as is recommended, the S⁴E Model for Enterprise is implemented in the Cardiff School of Education, further research is warranted regarding its effectiveness. This will inform strategic direction for the university relating to its use across the Cardiff Metropolitan University.

Finally, and in the context of my role as Deputy Dean – Learning and Teaching, there is the opportunity to investigate the effect of embedding enterprise and entrepreneurship education across the curricula. This would afford a means of establishing the extent to which a learning and teaching, research and enterprise nexus has been achieved. Further, it would provide opportunity to investigate the ways in which enterprise and entrepreneurship education impacts upon the student experience and student aspirations for employment/self-employment. This would be of particular importance in an academic school where a large proportion of academic programmes embed professional and/or regulatory standards for specific career destinations.

5.8.3 Opportunities for Further External Research

In relation to external research, there are opportunities relating to both the conceptual model for supporting intrapreneurship and the S⁴E Model for Enterprise. As was noted by one of the university's Pro-Vice Chancellors, Schools of Education often struggle to engage with the business element of enterprise. As such, there are opportunities to provide direction for other Schools of Education, regionally, nationally and internationally and opportunities for comparative study. If the conceptual model for supporting intrapreneurship is adopted in an external organisation, further research would allow for comparison with the research findings of this study. Similarly, should the S⁴E Model for Enterprise be adopted in another School of Education, there would be opportunity for collaborative research. This would enable comparison based on discipline specific application of the model.

In conclusion, the research has afforded the opportunity to scrutinise enterprise activity in the Cardiff School of Education. The research journey has enabled me to develop my skills as a researcher, make an original contribution to knowledge and improve enterprise practice in an educational context, in the Cardiff School of Education. The journey is documented in the Professional Development Portfolio that follows and illustrates the way in which personal reflection was integral to the research process. It documents my journey from an embryonic researcher to that of one with greater theoretical awareness of the research process and one with increased sophistication in communicating research outcomes. Of particular note is the audit of knowledge, behaviour and attributes as they relate to both my research experience and enterprise experience (see PDP Appendix Ten:

Researcher Development Framework Personal Skills Audit April 2014, page 470) that has been mapped to the Researcher Development Framework (Vitae, 2012) and the Enterprise Lens (Vitae, 2011).

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APPENDICES

Appendix 1: Role Description-Director of Enterprise

JOB DESCRIPTION

Job Title: Director of Enterprise

Accountable to: Dean of School

Purpose of Post:

As a senior member of the School's Management Team, you will drive the enterprise agenda in the School, working closely with the Directors of Learning and Teaching and Research and also corporate colleagues to ensure a joined-up approach to academic endeavour. This will involve managing staff, activities and resources within defined budgets to a high level of performance and to maximise the achievement of the key strategic aims and objectives of Cardiff Metropolitan University.

Summary of Accountabilities and Responsibilities:

1. Deliver corporate targets relevant to the School.
2. Manage staff, activities and resources to achieve School and Cardiff Metropolitan University targets and objectives.
3. Lead specific areas of work, enterprise, and innovation as determined as determined by the Dean of School.
4. To work collaboratively with other members of the Directorate and with the School's Business Support Manager.
5. To develop new areas of work, portfolios of programmes and new funding sources.
6. To develop appropriate quality assurance and quality enhancement frameworks and to manage complaints and appeals as appropriate.
7. To manage local and Cardiff Metropolitan University-wide projects as appropriate.
8. To contribute to staff induction, training and development relevant to remit within the School.
9. To engage in developing a strong and cohesive School management team.
10. To develop strong and supportive links with other Schools and Units across Cardiff Metropolitan University.
11. To engage in effective internal and external partnership arrangements appropriate to School activities.
12. To promote a positive image for Cardiff Metropolitan University throughout all School activities.
13. To attend and proactively contribute to Cardiff Metropolitan University committees, boards/working groups as appropriate to the role.
14. Substitute for the Dean of School as required.
15. Undertake teaching and/or research as agreed by the Dean of School

Individuals appointed to the post of Director of Enterprise should expect to spend 0.50 fte equivalent in directing and managing enterprise-related activities within the School, having a specific responsibility for ensuring the delivery and implementation of the School's contribution to Corporate enterprise, knowledge transfer and proactive contribution and attendance at the R&E Board.

Appendix 2: Job Description-Teaching and Scholarship



Cardiff
Metropolitan
University

Prifysgol
Metropolitan
Caerdydd

ROLE PROFILE

Lecturer – Teaching and Scholarship

This role profile is indicative, not prescriptive, and the balance of duties will be in accordance with the contract of employment.

Teaching and learning support

- Design teaching material and deliver either across a range of modules or within a subject area.
- Use appropriate teaching, learning support and assessment methods.
- Supervise student projects, and/or e.g. field trips and, where appropriate, placements.
- Identify areas where current provision is in need of revision or improvement.
- Contribute to the planning, design and development of objectives and material.
- Set, mark and assess work and examinations and provide feedback to students.

Research and scholarship

- Engage in subject, professional and pedagogy scholarly activity/research as required to support teaching activities.
- Participate in individual or collaborative scholarly projects.
- Support the identification of sources of funding and contribute to the process of securing funds for own scholarly activities.
- Extend, transform and apply knowledge acquired from scholarship to teaching and appropriate external activities.
- Develop and produce learning materials and disseminate the results of scholarly activity.

Communication

- Routinely communicate complex and conceptual ideas.

Liaison and networking

- Participate in and help develop internal and external networks for the benefit of Cardiff Metropolitan University in the areas of teaching and scholarship.

Managing people

- Mentor colleagues with less experience and advise on personal development.
- Depending on the area of work, could be expected to supervise the work of others.
- Co-ordinate the work of others to ensure modules are delivered to the standards required.

Teamwork

- Act as a responsible team member, leading where agreed, and develop productive working relationships with other members of staff.
- Collaborate with colleagues to identify and respond to students' needs.

Pastoral care

- Act as a module tutor.
- Be responsible for the pastoral care of students within a specified area.

Initiative, problem-solving and decision-making

- Identify the need for developing the content or structure of modules with colleagues and make proposals on how this should be achieved.
- Develop ideas for promoting the subject:
 - e.g. Develop ideas and find ways of disseminating and applying the result of scholarship.
 - e.g. Responsibility for the design and delivery of own modules and assessment methods.
 - e.g. Collaborate with colleagues on the implementation of assessment procedures.
 - e.g. Advise others on strategic issues such as student recruitment and marketing.
 - e.g. Contribute to the accreditation of courses and quality control processes.
 - e.g. Tackle issues affecting the quality of delivery within scope of own level of responsibility, referring more serious matters to others, as appropriate.

Planning and managing resources

- As module leader or tutor, co-ordinate with others (such as support staff or academic colleagues) to ensure student needs and expectations are met.
- Manage projects relating to own area of work and the organisation of external activities such as placements and field trips.
- Participating in developing ideas for generating income.
- Be responsible for administrative duties in areas such as admissions, time-tabling, examinations, assessment of progress and student attendance.

Sensory, physical and emotional demands.

- Balance the pressures of teaching and administrative demands and competing deadlines.

Work environment

- Within the context of Cardiff Metropolitan University's H&S policy, depending on area of work and level of training received, may be expected to conduct risk assessment and take responsibility for the health and safety of others.

Expertise

- Possess sufficient breadth or depth of specialist knowledge in the discipline to develop teaching programmes and the provision of learning support.
- Use a range of delivery techniques.

Standard Notification

These guidelines are provided to assist you in the performance of your contract. The university is a dynamic organisation; therefore changes may be required from time to time. Any changes will be made in consultation with the post-holder. The Summary of Duties and Responsibilities is not intended to be an exhaustive list of tasks performed. Other associated technical tasks are likely to be performed as directed by the line manager.

It is accepted that individual staff will have a specialist skills and knowledge base in relation to the role they have been appointed to. In addition to this, Cardiff Metropolitan University expects that all staff will contribute to the vision and ethos of the university and conduct themselves in a professional, courteous and student/customer focused manner at all times. All staff should have particular regard for their responsibilities under Cardiff Metropolitan University's Equalities, Financial, Environmental and Sustainability, Human Resources and Health and Safety policies and procedures.

Appendix 3: Job Description-Teaching and Research



Cardiff
Metropolitan
University

Prifysgol
Metropolitan
Caerdydd

ROLE PROFILE

Lecturer – Teaching and Research

This role profile is indicative, not prescriptive, and the balance of duties will be in accordance with the contract of employment

Principal Duties and Responsibilities:

Supervise postgraduate research students

Teaching and learning support

- Design teaching material and deliver either across a range of modules or within a subject area.
- Use appropriate teaching, learning support and assessment methods.
- Supervise student projects, and/or e.g. field trips and, where appropriate, placements.
- Identify areas where current provision is in need of revision or improvement.
- Contribute to the planning, design and development of objectives and material.
- Set, mark and assess work and examinations and provide feedback to students.

Research and scholarship

- Support the development of research objectives, projects and proposals.
- Participate in individual or collaborative research projects.
- Support the identification of sources of funding and contribute to the process of securing funds.
- Apply knowledge acquired from scholarship to teaching, research and appropriate external activities.
- Write or contribute to publications or disseminate research findings using other appropriate media.
- Make presentations at conferences or exhibit work in other appropriate events.

Communication

- Routinely communicate complex and conceptual ideas.

Liaison and networking

- Participate in and help develop internal and external networks for the benefit of Cardiff Metropolitan University in the areas of teaching and research.

Managing people

- Mentor colleagues with less experience and advise on personal development.
- Depending on the area of work, could be expected to supervise the work of others.

Teamwork

- Act as a responsible team member, leading where agreed, and develop productive working relationships with other members of staff.
- Collaborate with colleagues to identify and respond to students' needs.

Pastoral care

- Could be expected to act as a module tutor.
- Be responsible for the pastoral care of students within a specified area.
- Deal with standard problems and help colleagues resolve their concerns about progress in research.

Initiative, problem-solving and decision-making

- Assess, interpret and evaluate outcomes of research.
- Identify the need for developing the content or structure of modules with colleagues and make proposals on how this should be achieved.
- Develop ideas promoting the subject and/or research areas.
- e.g. Develop ideas and find ways of disseminating and applying the results of research and scholarship.
- e.g. responsibility for the design and delivery of own modules and assessment methods.
- e.g. Collaborate with colleagues on the implementation of assessment procedures.
- e.g. Advise others on strategic issues such as student recruitment and marketing.
- e.g. Contribute to the accreditation of courses and quality control processes.

Planning and managing resources

- As module leader or tutor, co-ordinate with others (such as support staff or academic colleagues) to ensure student needs and expectations are met.
- Manage projects relating to own area of work.
- Participating in developing ideas for generating income.

Sensory, physical and emotional demands.

- Balance the pressures of teaching and administrative demands and competing deadlines.

Work environment

- Within the context of Cardiff Metropolitan University's H&S policy, depending on area of work and level of training received, may be expected to conduct risk assessment and take responsibility for the health and safety of others.

Expertise

- Possess sufficient breadth or depth of specialist knowledge in the discipline to develop teaching and/or research programmes and the provision of learning support.
- Use a range of delivery techniques.

Standard Notification

These guidelines are provided to assist you in the performance of your contract. The university is a dynamic organisation; therefore changes may be required from time to time. Any changes will be made in consultation with the post-holder. The Summary of Duties and Responsibilities is not intended to be an exhaustive list of tasks performed. Other associated technical tasks are likely to be performed as directed by the line manager.

It is accepted that individual staff will have a specialist skills and knowledge base in relation to the role they have been appointed to. In addition to this, Cardiff Metropolitan University expects that all staff will contribute to the vision and ethos of the university and conduct themselves in a professional, courteous and student/customer focused manner at all times. All staff should have particular regard for their responsibilities under Cardiff Metropolitan University's Equalities, Financial, Environmental and Sustainability, Human Resources and Health and Safety policies and procedures.

Appendix 4: Cardiff School of Education Strategic Plan (Third Mission) 2007-2011

Extract from the Cardiff School of Education Strategic Plan 2007-2011 - Third Mission

3M.1 Increase the volume of enterprise activity, and the contribution that this generates;

- Increase [the] proportion of staff engagement in enterprise activity to reach/exceed [the] given target of 22% by 2012;
- To achieve at least 5% annual increase from [the] current level of 12% in 2007, as measured by UWIC (QAA) criteria against academic CVs;
- For at least 10% of these enterprise active staff to be in category 3 on the given rating scale, i.e. 'with strong and sustained evidence of such activity';
- To reach or exceed set financial targets each year from 2007-2011;
- To sustain or exceed [the] current level of 12% return of contribution from enterprise activity.

3M.2 Develop a portfolio of attractive, flexible CPD (Continuing Professional Development) provision;

- To validate and later expand a postgraduate CPD framework which will allow the flexible provision of Masters credits to a wide range of professionals;
- Through such postgraduate framework to increase [the] number of postgraduate students by at least 10% annually from 2007-2011;
- To develop and validate a flexible graduate CPD framework by 2009 to allow flexible provision of undergraduate accredited CPD to a wide range of professionals working within the educational community;
- To market single modules from the graduate framework (and other existing programmes) to targeted audiences as income generating stand alone short course CPD opportunities;
- To continue to provide a small number of specialist short courses to niche markets;
- To hold at least two conferences per year in the school, one of which to be income generating.

3M.3 Play a leading role in supporting the WAG's (Welsh Assembly Government's) health agenda;

- To contribute to the corporate aim of developing the Academy Heath Wales by contributing expertise in the area of children's services and Integrated Centres.

3M.4 Gain wider recognition for our cultural and social contributions to the city of Cardiff and the wider region.

- To continue to engage staff and students of the school in third mission activities, as resources allow, to impact on at least 500 children and adults annually;
- To improve the marketing and publicity of school third mission activities.

Appendix 5: Confirmation of Ethics Approval

From: Jones, Huw
Sent: 19 January 2012 10:36
To: Jones, Gill L.
Subject: ethics

Hi

Your Ethics form has been approved. Attached the most up to date versions for your records.

Regards
Huw

Huw Jones
Gweinyddwr Menter ac Ymchwil
(Research and Enterprise Administrator)

Ystafell C210
Campws Cyncoed
Heol Cyncoed
Caerdydd
CF23 6XD

Ffon: 02920 417078
Ffacs: 02920 416163
ebost: hpjones@cardiffmet.ac.uk



Appendix 6: Request for Organisational Consent

[Date]

Paul Thomas
Dean of the Cardiff School of Education
Cardiff Metropolitan University
Cyncoed Campus
Cyncoed Road
Cardiff
CF23 6XD

Dear Paul

Professional Doctorate - Consent to Undertake Research Within the Organisation.

As you are aware, I am undertaking the Professional Doctorate within the Cardiff Metropolitan University. I am in the process of submitting my application for ethical approval and once this has been accepted, with your approval, will begin the active phases of my research.

My research is entitled 'Innovation & Engagement: the Academic's Challenge' and is linked to my role as Director of Enterprise within the School and within the Cardiff Metropolitan University.

The research will involve the evaluation of national, regional and organisational policy as well as a more focused evaluation of School-specific policy. It will involve aspects of my professional role, such as the audit of staff engagement with enterprise activity and an audit of the range, type and scope of activities that reflect the skills and aspirations of academics within the School. I will be using an on-line questionnaire (via the internal, global 'CSE Academic' address book) to illicit the views of academic staff and will also include semi-structured interviews to gain further insight into the ways in which staff can be supported in their role.

The participation of staff will be voluntary. Potential participants will be given a Participant Information Sheet that will enable them to give due consideration to their willingness to contribute to my research and informed consent will be sought.

I have attached the 'Application for Ethical Approval' along with the 'Participant Information Sheet' for your perusal. Additionally, I have included a paper copy of the questionnaire that will be presented on-line.

I formally request your consent to undertake this research within the School.

Kind regards

Gill ☺

Gill Jones

Director of Enterprise
Cardiff School of Education
Cardiff Metropolitan University

Appendix 7: Confirmation of Organisational Consent

From: Thomas, Paul
Sent: 18 January 2012 18:32
To: Jones, Gill L.
Subject: RE: EdD - Permission to proceed

Hi Gill

Permission granted. Looks really interesting.

No need for the red wine – don't think I even know what a Freddo is but I'm sure they are not good for you.

Best of luck

Paul

From: Jones, Gill L.
Sent: 18 January 2012 18:01
To: Thomas, Paul
Subject: EdD - Permission to proceed

Hi Paul

I have just had confirmation from Gary that my submission for Ethical Approval has been approved.

So I am now in a position to formally request your permission to undertake research that will involve staff within the Cardiff School of Education.

All relevant documents are attached for your consideration.

I have to pay John (a pseudonym) in Freddos – is red wine going to entice you!

Gill ☺

Gill Jones MA Ed, Cert Ed (FE), FHEA
Director of Enterprise
Cardiff School of Education

Tel: 020 2041 6548
Email: GLJones@cardiffmet.ac.uk

Appendix 8: Participant Information Sheet

Cardiff Metropolitan University Participant Information Sheet

Title of Project: Enterprise the Academic's Challenge

This research project contributes to the Professional Doctorate I am undertaking at the Cardiff Metropolitan University. The Professional Doctorate is based on professional practice and while it is linked to my role as Director of Enterprise within the Cardiff School of Education, I am undertaking this study as a researcher.

The focus of my research was stimulated by my personal experiences of enterprise activity and discussions with academic staff who engage in enterprise initiatives. I want to find out what would best support the Enterprise agenda.

- This is an invitation to you to join the study, and to let you know what this would involve. The study is being organised by Gill Jones in the Cardiff School of Education.
- The findings of the research will be reported in an anonymised form and disseminated internally to a range of stakeholders. I also intend to publish the results of the study in a prominent academic journal.
- There is no external sponsorship of the research project.
- If you want to find out more about the research project, or if you need more information to help you make a decision about joining in, please contact me on 029 2041 6548 or at GLJones@cardiffmet.ac.uk.

Your Participation in the Research Project

Why you have been asked

I am approaching all members of academic staff within the Cardiff School of Education at Cardiff Metropolitan University to take part in this study.

Taking part is entirely voluntary – there is no obligation to join the study.

What happens if you want to change your mind?

If you decide to join the study you can change your mind and stop at any time. I will respect your decision. If you wish to withdraw from the study, please could you let me know either by email GLJones@cardiffmet.ac.uk or by telephone (029 2041 6548). There are no penalties for stopping.

What would happen if you join the study?

If you agree to join the study, then initially, you will be asked to complete the anonymous on-line questionnaire that will ask you about your experiences relating to enterprise activity. This can be accessed on a secure website at XX@cardiffmet.ac.uk and I anticipate that this will take approximately 15 minutes to complete and submit. You will be asked if you are willing to participate further, in a short semi-structured interview. The interview should last approximately 60 minutes. Here, you would be asked about your personal experiences of enterprise projects, as well as your personal attributes and entrepreneurial skills as a means of exploring links to social enterprise, income generation, and the commercialisation of research.

This information can be made available in other formats including electronic, large print, audio and Welsh. Please contact Gill Jones GLJones@cardiffmet.ac.uk /029 2041 6548 if you would prefer an alternative format.

Are there any risks?

I do not think there are any significant risks due to the study. I have asked a small group of people the questions I will be asking you, and they suggested that they were very straightforward, and not stressful. If you did feel that there was any stress involved you can ask to stop at any time.

It is important for you to note that the focus of the questioning contributes to the Professional Doctorate that I am undertaking. Whilst the final outcomes may inform future practice within the Cardiff School of Education, the information you provide as a participant will be treated anonymously.

Your rights.

You may withdraw from the study at any time.

What happens to the questionnaire and interview results?

As the researcher, I will be responsible for putting all the information from the study (except names and addresses, and personal identification information) into a computer programme. I will then look to see if there are links between engagement in enterprise activities and the skills and attributes of academic staff. Once the data has been analysed and written up, the results will be made public with the final submission of the EdD thesis.

Are there any benefits from taking part?

As mentioned previously, whilst I have a responsibility as Director of Enterprise in the Cardiff School of Education, I am undertaking this study as a researcher and whilst there are no direct benefits to you for taking part, this study may help improve the support available to make Enterprise a valuable career choice for academic staff at the Cardiff Metropolitan University or those in other universities nationally and internationally. When the study is complete and the results have been published I will let you know what I have found.

How your privacy will be protected:

All the information you provide will be strictly confidential and your privacy will be respected. I will be taking careful steps to make sure that you cannot be identified from any of the data provided or any confidential information about you that is collated/held as part of the study.

I will keep your name and personal details completely separate from the information you provide voluntarily for the study. Data will be coded so that you will not be identifiable.

In reporting the results, individuals will be anonymised. In instances where there may be the potential to identify an individual (for example, by the unique nature of an enterprise project), this will be discussed with the academic member of staff and they will be given the opportunity to withdraw from the study.

When I have finished the study and analysed the information, all the forms used to gather data will be completely destroyed. I will retain a copy of the attached consent form for 10 years, because we are required to do so by the University.

Please note: *Informed consent is incorporated into the research questionnaire. Those willing to be interviewed will be asked to complete a participant consent form.*

Contact Details: Gill Jones, Office: C2.11 (Cyncoed Campus), T: 6548, E: GLJones@cardiffmet.ac.uk

This information can be made available in other formats including electronic, large print, audio and Welsh. Please contact Gill Jones GLJones@uwic.ac.uk /029 2041 6548 if you would prefer an alternative format.

Appendix 9: Informed Consent

PARTICIPANT CONSENT FORM

Participant name:

Title of Project: **Enterprise – the Academic’s Challenge**

Name of Researcher: **Gill Jones**

Participant to complete this section:

Please initial each box.

- | | |
|---|--------------------------|
| 1. I confirm that I have read and understand the information sheet for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. | <input type="checkbox"/> |
| 2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason. | <input type="checkbox"/> |
| 3. I agree to take part in the above study. | <input type="checkbox"/> |
| 4. I agree to the interview being audio recorded. | <input type="checkbox"/> |
| 5. I agree to the researcher making notes to record the interview | <input type="checkbox"/> |
| 6. I agree to the use of anonymised quotations in publications | <input type="checkbox"/> |

Signature of Participant	Date
--------------------------	------

Print Name

Signature of researcher taking consent	Date
--	------

Print Name

When complete, 1 copy will be retained by the participant, and 1 copy will be retained by the researcher.

Appendix 10: Pilot On-line Questionnaire

Pilot On-line Questionnaire

Innovation & Engagement in Higher Education

Page 1 of 31

Welcome

Thank you for your willingness to take part in my research.

Your responses are an integral aspect of the Professional Doctorate I am undertaking at Cardiff Metropolitan University.

This on-line survey is hosted on an external server - this means that your anonymity will be retained. It will not be possible for me to identify you. That said should it be possible for me to identify you from the type of responses made, anonymity will be ensured when reporting on the data in my thesis.

Please be assured that your responses will be handled in accordance with the Ethical Guidelines for the Cardiff School of Education.

The questions should take approximately 15 minutes of your time.
Please answer all questions

[<< Previous Question] [Next Question >>]

Innovation & Engagement in Higher Education

Page 2 of 31

*This questionnaire forms part of the research I am undertaking as part of my Professional Doctorate. You will have received a Participant Information file. Have you read the information provided?

Please select from the following options:

- () Yes, I have read the Participant Information Sheet
- () No, I haven't read the Participant Information Sheet

[<< Previous Question] [Next Question >>]

Innovation & Engagement in Higher Education

Page 3 of 31

The Participant Information Sheet can be accessed from this link. Please read this before proceeding.

[Next Question >>]

Page 4 of 31

*In proceeding, you are giving informed consent to participate in this study. Are you willing proceed in the survey giving informed consent?

Please select one of the following:

☐ Yes

☐ No

[Next Question >>]

Innovation & Engagement in Higher Education

Page 5 of 31

*How many years have you been employed at the Cardiff Metropolitan University

Please select one of the following:

☐ 0-1 years

☐ 2-5 years

☐ 6-10 years

☐ 10 plus years

[Next Question >>]

Innovation & Engagement in Higher Education

Page 6 of 31

*Participants for interviews will be selected from across all three departments within the School. If you work on programmes from more than one department, please use the department of your line manager. Are you attached to:

Please select from the following:

☐ The Department for Teacher Education and Training

☐ The Department for Professional Development

☐ The Department for Humanities

[Next Question >>]

Page 7 of 31

*What type of academic position do you have at Cardiff Metropolitan University?

Please select one of the following: If the type of contract you have is not listed, please use the open text box.

- ☐ Lecturer
- ☐ Senior Lecturer
- ☐ Principal Lecturer
- ☐ Other, please state []

[Next Question >>]

Innovation & Engagement in Higher Education

Page 8 of 31

*Do you undertake enterprise projects?

Please select one of the following:

- ☐ Yes, I undertake enterprise activities
- ☐ No, I do not undertake enterprise activities
- ☐ I am not sure if the activities I undertake are classed as enterprise

[Next Question >>]

Innovation & Engagement in Higher Education

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*You have answered YES. What types of enterprise activity have you been involved with ?

Please select all that are relevant to you:

- ☐ Short Courses
- ☐ Conferences
- ☐ Inspection
- ☐ External Examination
- ☐ Strategic Insight Placements
- ☐ International Programmes
- ☐ Consultancy/Secondment
- ☐ Accredited Courses
- ☐ Externally Funded Projects

[Next Question >>]

Page 10 of 31

*You mention that you have been involved with short courses offered by the Cardiff School of Education. What ones?

Please select from the following list:

- ☐ Train the Trainer
- ☐ Professional Presentation Skills
- ☐ Education Outside the Classroom
- ☐ P4C
- ☐ Kilnwork
- ☐ Managing Behaviour in the Classroom
- ☐ Fantasy
- ☐ Tolkein
- ☐ Aspects of Children's Lives in Wales
- ☐ Folklore
- ☐ Other, please state []

[Next Question >>]

Page 11 of 31

*You mention that you have been involved with the International Programmes offered by the Cardiff School of Education

Please indicate which ones you have been involved with:

- ☐ Research Skills Training
- ☐ Advanced Research Skills Training
- ☐ Quality & Accreditation in Higher Education
- ☐ Managing Quality: an International Perspective
- ☐ Strategic Planning in Higher Education
- ☐ Leadership and Development in Education
- ☐ International Foundation Course
- ☐ Other, please state: []

[Next Question >>]

Page 12 of 31

*You mention that you have been involved with Externally Funded Programmes. Which ones?

Please select all that apply from the following:

- ☐ Sports Wales
- ☐ GTP
- ☐ Youth & Community Pilot
- ☐ Forest Schools Grant Funding
- ☐ Other, please state: []

[Next Question >>]

Innovation & Engagement in Higher Education

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*You mention that you have been involved with conferences offered by the Cardiff School of Education. Which ones have you contributed too?

Please select from the following options:

- ☐ 14-19
- ☐ Wellbeing
- ☐ P4C
- ☐ AS Psychology
- ☐ Children's Laureate
- ☐ Other, please state: []

[Next Question >>]

Innovation & Engagement in Higher Education

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*You mention that you have been involved with accredited short courses. Which ones?

Please select from the following:

- ☐ Learning Coaches: Legislation
- ☐ Creative Writing
- ☐ Tolkein
- ☐ Fantasy
- ☐ ECDL
- ☐ Other, please state: []

[Next Question >>]

Innovation & Engagement in Higher Education



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*You mention that you have been involved with enterprise activity; in what ways has this engagement been informed by your research or incorporated into the learning and teaching of programmes/modules you deliver?

Please use the box below for comment [200 word limit]

[Next Question >>]

Innovation & Engagement in Higher Education


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*The Costing and Pricing exercise allocates a number of hours (time) to enterprise activities. Considering enterprise activities you have involved with, has the allocation of hours been a true representation of the time required?

Please select one of the following:

- () Yes, it has reflected the time spent
- () No, it hasn't reflected the time spent
- () I am not sure

[Next Question >>]

Innovation & Engagement in Higher Education



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*You have answered NO. What factors have contributed to your non-engagement with enterprise activities?

Please use the box below for your comments (200 word limit)

[Next Question >>]

Innovation & Engagement in Higher Education


Page 18 of 31

*You mention that you are not sure if the activities you undertake are categorised as enterprise activity.

Please could you provide an indication of the types of activity you have undertaken.

[Next Question >>]

Innovation & Engagement in Higher Education

Page 19 of 31

*In your opinion, to what extent would the following provide the opportunity for you to engage in enterprise activity?

Please score the following, from 1 (very necessary) through to 6 (not at all necessary):

	*						
	Very Necessary		Necessary			Not at All Necessary	
	1	2	3	4	5	6	7
Project Management Skills	()	()	()	()	()	()	()
Subject Knowledge	()	()	()	()	()	()	()
Time Management Skills	()	()	()	()	()	()	()
Financial Skills	()	()	()	()	()	()	()
Inter-personal Skills	()	()	()	()	()	()	()
People Management Skills	()	()	()	()	()	()	()
Understanding of the Commercial Market	()	()	()	()	()	()	()
Research Skills	()	()	()	()	()	()	()
Marketing Skills	()	()	()	()	()	()	()
Communication Skills	()	()	()	()	()	()	()
Personal Contacts	()	()	()	()	()	()	()
Professional Networks	()	()	()	()	()	()	()

[Next Question >>]

Innovation & Engagement in Higher Education

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*In your opinion, what opportunities are made available for academic staff to develop these skills?

Please select all that apply from the following list.

☐ External courses

☐ Internal staff development courses offered by Cardiff Metropolitan University

☐ Staff development opportunities offered by the Cardiff School of Education

☐ Departmental staff development

☐ Other, please state: []

[Next Question >>]

Innovation & Engagement in Higher Education

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*In what ways could this be improved?

Please use the box below for your comments.

[Next Question >>]

Innovation & Engagement in Higher Education

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*What support have you made use of with regard to your engagement/potential engagement in enterprise activities?

Please select all those that are relevant to you.

- ☐ None
- ☐ Communication & Marketing at Cardiff Metropolitan University
- ☐ Library & Information Services at Cardiff Metropolitan University
- ☐ Academic Registry & Awards at Cardiff Metropolitan University
- ☐ Research & Enterprise Services
- ☐ Research & Enterprise Support Team within the Cardiff School of Education
- ☐ Director of Enterprise for the Cardiff School of Education
- ☐ Head of Department within the Cardiff School of Education
- ☐ Other support I have used: []

[Next Question >>]

Innovation & Engagement in Higher Education

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*In your opinion, in what ways could the support available be improved?

Please use the box below for your comments (Word limit 100)

[Next Question >>]

Innovation & Engagement in Higher Education

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*In your opinion, what impact does enterprise activity undertaken by the Cardiff School of Education have in the local, regional, national and international community?

Please score the following, using the scale 1 (greatest impact) through to 4 (least impact):

	*						
	Greatest Impact					Least Impact	
	1	2	3	4	5	6	7
Enhanced reputation of Cardiff Metropolitan University	()	()	()	()	()	()	()
Professional development of academic staff	()	()	()	()	()	()	()
Community Engagement and Local impact	()	()	()	()	()	()	()
Regional Engagement	()	()	()	()	()	()	()
International Engagement	()	()	()	()	()	()	()
Commercialisation of research	()	()	()	()	()	()	()

[Next Question >>]

Innovation & Engagement in Higher Education

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*You have mentioned that you have been involved with Enterprise activity. How have the outcomes of this enterprise activity been communicated to the wider academic community?

Please select all that apply from the following list:

- ☐ Conference Papers
- ☐ Conference workshops
- ☐ Key note Speaker at Conferences
- ☐ Public lectures
- ☐ Publications
- ☐ Academic Journals
- ☐ Community Workshops
- ☐ Others ways I have made people aware of my enterprise activities are: []

[Next Question >>]

Innovation & Engagement in Higher Education

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*In your opinion, in what ways could the Cardiff Metropolitan University best reward academic engagement with enterprise activity?

Please rate the following in order of importance to you:

	*						
	Very important		Quite Important			Unimportant	
	1	2	3	4	5	6	7
Rewards & Incentive payments	()	()	()	()	()	()	()
Overtime Payment	()	()	()	()	()	()	()
Recognition of time against workload	()	()	()	()	()	()	()
Innovation and Engagement Fellowship	()	()	()	()	()	()	()

[Next Question >>]

Innovation & Engagement in Higher Education

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*Would you be interested in taking part in an informal interview ?

Select from the drop down menu

[Select: \ /]

[Next Question >>]

Innovation & Engagement in Higher Education

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*Thank you for selecting YES. As the responses to this survey are anonymous, please would you provide your email details so that I can contact you.

This will be used to contact you at a later date

[]

[Next Question >>]

Innovation & Engagement in Higher Education



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Thank you for taking the time to complete this on-line survey. Your responses will be a valuable part of my data collection and I appreciate your support. Gill Jones Cardiff School of Education

[Next Question >>]

Innovation & Engagement in Higher Education



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Thank you for taking part in my research. I appreciate your support and will contact you shortly regarding your offer to participate in the informal interviews I have planned. Gill Jones, Cardiff School of Education.

[Next Question >>]

Innovation & Engagement in Higher Education



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Unfortunately, I need respondents to give their informed consent to comply with ethical guidelines. Thank you for showing an interest in my research though. If you have made an incorrect selection, you can log in and start again.

[Finish]

Innovation & Engagement in Higher Education

Survey Complete

Appendix 11: Template and Feedback from Pilot Questionnaire

Collated Feedback from the Pilot Study

TIME TAKEN TO COMPLETE THE QUESTIONNAIRE

Pilotee 1 (P1) : 10 minutes
 Pilotee 2 (P2): 20 minutes
 Pilotee 3 (P3): No time recorded
 Pilotee 4 (P4): 7 Minutes
 Pilotee 5 (P5): 12 minutes
 Pilotee 6 (P6): 15 minutes
 Pilotee 7 (P7): 11 minutes
 Pilotee 8 (P8): Non-response

Average time taken:

12.5 minutes

Survey Pane: Your Responses	Addition Comments
Welcome Screen	P3: I don't like smilies P6: Line 4: ... That said, should it Line space between penultimate and final lines. P7: No problem – nice simple language.
Have you read the participant information sheet?	
YES/NO OPTION 1	
NO OPTION 1	
Please read the participant information sheet which can be accessed from this link	
CONTINUES TO NEXT PANE	
YES OPTION 1	
In proceeding, you are giving informed consent	
YES/NO OPTION 2	P3: As no one knows what the questions are before they start the survey they do not know exactly what they are consenting to. Would it be worth adding in another consent question at the end? P7: This needs to come at the start. Confusing format.
YES OPTION 2	
How many years have you been employed at CMU?	P1: CMU has only existed a few months but I have been here since '95 P4: How relevant is this? P6: I'm an odd case here... I've worked here on two separate occasions. In total more than 10 years, but individually each 'sentence' was less than 10.
Participants will be selected from 3	P4:

departments. Which department are you in? *Realize this isn't relevant to CSS please select one of your choice	Just selected on at random
What type of academic position do you have?	P5: Problem if easily identified by other P6: Two points here: (i) the type of contract is not the issue. It's the job title (I think). Most Colleagues in CSE are all on the same 'standard academic contract' ... (ii) Other job titles will identify individuals... eg Reader, Professor, Dean. Do you need to know what the 'other' actually is? Will there be any Associate Lecturers? Demonstrators?
NO OPTION 2	
Unfortunately I need respondents to give informed consent.	
Survey Complete	
Do you undertake enterprise projects YES/NO/NOT SURE OPTION 3	
YES OPTION 3	
What types of activity have you been involved with? *Options in panes will be relevant to CSE but you can use 'other'	P4: I used 'other' for all of these P5: Not sure of timescales eg ever, last year, last five years P6: Is this an exhaustive list? Make it '... Which ones?
SHORT COURSE OPTION PANE	
INTERNATIONAL PROGRAMME PANE	P5: Not sure what the difference between some of the course titles eg research skills and advanced research skills
EXTERNALLY FUNDED PROJECTS PANE	
CONFERENCES PANE	
ACCREDITED SHORT COURSES PANE	
You mention that you have engaged with enterprise activity – in what ways has this been informed by your research or been incorporated into your programme/module?	P2: This box needs to be bigger P4: This is a tricky question to answer – not sure how to articulate how enterprise is linked to research – what if it is not or if I am not research active? P5: 200 word count – box too small can't see what

	<p>you have written to reflect on content.</p> <p>Also, this is the only question (I think) where there is an implied requirement/opportunity to write in an extended way (200 words). Might be worth saying that this is the only question of this sort.</p>
The costing and pricing exercise allocates a number of hours to enterprise activity [...] is this a true reflection of time spent?	
To what extent would the following provide the opportunity for you to engage with enterprise activity?	<p>P1: The question is not clear – are you asking what skills I feel I need in order to be confident of successfully participating in enterprise activity or what skills I feel are used in enterprise activity?</p> <p>P2: There is a 7 here but you only refer to 1-6?</p> <p>P7: Need to think about what you want as an outcome/wording? Small white font on a bright red background is difficult to read. Recommend differentiating Likert scale pages with yellow on blue and larger font.</p>
In your opinion, what opportunities are made for academic staff to develop these skills?	<p>P1: Do you mean what opportunities am I aware of for PDP related to enterprise activity?</p> <p>P6: Why must I answer this question? What if I don't think the CSE makes any available?</p>
In what ways could this be improved?	
What support have you made use of with regard to your engagement/potential engagement in enterprise activity?	<p>P6: Can you make the font bigger?</p>
In your opinion, in what ways could the support available be improved?	<p>P6: Can you make the font bigger?</p>
In your opinion what does enterprise activity undertaken by CSE have in the local, regional, national and international community?	<p>P1: The impact of enterprise could be very different at the levels included in the question – so I might think the impact is 'greatest impact' at local and 'least impact' at international – I think this needs breaking down.</p> <p>P4: I don't recall seeing this question</p> <p>P5: Not sure what the differences are</p>
You mention that you have engaged with enterprise activity, in what ways have the	

outcomes been communicated to the wider academic community?	
In your opinion, in what ways could CMU best reward academic staff engaged with enterprise activity?	<p>P1: The question is easy to use BUT it is not clear how you want me to 'rate' the rewards – for example I have clicked on very important for all of them... because I think they are.</p> <p>P3: Standard abbreviation is Cardiff Met. Not CMU</p> <p>P7: Buying out tme?</p>
Would you be interested in taking part in an informal interview YES/NO OPTION 4	
NO OPTION 3	
You have answered no, you do not engage with enterprise activities. What factors have contributed to non-engagement ...	
To what extent would the following provide the opportunity for you to engage with enterprise activity?	P3: A bit wordy
In your opinion, what opportunities are made for academic staff to develop these skills?	
In what ways could this be improved?	
In your opinion what does enterprise activity undertaken by CSE have in the local, regional, national and international community?	P3: Word Missing?
In your opinion, in what ways could CMU best reward academic staff engaged with enterprise activity?	
Would you be interested in taking part in an informal interview YES/NO OPTION 4	
NOT SURE OPTION 3	
You mention that you are not sure if the activities you undertake are categorized as enterprise activity. What activities do you undertake?	
To what extent would the following provide the opportunity for you to engage with enterprise activity?	
In your opinion, what opportunities are made for academic staff to develop these skills?	
In what ways could this be improved?	

What support have you made use of with regard to your engagement/potential engagement in enterprise activity?	
In your opinion what does enterprise activity undertaken by CSE have in the local, regional, national and international community?	
You mention that you have engaged with enterprise activity, in what ways have the outcomes been communicated to the wider academic community?	
In your opinion, in what ways could CMU best reward academic staff engaged with enterprise activity?	
Would you be interested in taking part in an informal interview YES/NO OPTION 4	
YES OPTION 4	
Thank you for selecting YES. As the survey is anonymous, please could you provide your email contact details	
Thank you for completing the on-line survey, I will contact you shortly regarding the interview.	
Survey Complete	
NO OPTION 4	
Thank you for taking the time to complete this on-line survey. Your responses will be a valuable part of my data collection.	
Survey complete	

Appendix 12: Modified On-line Questionnaire

Enterprise in Higher Education

Page 1 of 31

Welcome

Thank you for your willingness to take part in my research.

Your responses are an integral aspect of the Professional Doctorate I am undertaking at Cardiff Metropolitan University.

This on-line survey is hosted on an external server; this means that your anonymity will be retained. It will not be possible for me to identify you. That said, should it be possible for me to identify you from the type of responses made, anonymity will be ensured when reporting on the data in my thesis.

Please be assured that your responses will be handled in accordance with the Cardiff School of Education Ethical Guidelines.

The questions should take approximately 15 minutes of your time.

Please answer all questions

[Next Question >>]

Enterprise in Higher Education

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***This questionnaire forms part of the research I am undertaking as part of my Professional Doctorate. You will have received Participant Information. Have you read the information provided?**

Please select from the following options:

- () Yes, I have read the Participant Information Sheet
 () No, I haven't read the Participant Information Sheet

[Next Question >>]

Enterprise in Higher Education

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The Participant Information Sheet can be accessed from [this link](#). Please read this before proceeding.

***I have now read the participant information sheet**

Please select from the following:

- () Yes
 () No

[Next Question >>]

Enterprise in Higher Education

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***In proceeding, you are giving informed consent to participate in this study. Are you willing proceed in the survey giving informed consent?**

Please select one of the following:

☐ Yes

☐ No

[Next Question >>]

Enterprise in Higher Education

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***How many years have you been employed at Cardiff Metropolitan University**

Please select one of the following:

☐ 0-1 years

☐ 2-5 years

☐ 6-10 years

☐ 10 plus years

☐ Other, please clarify []

[Next Question >>]

Enterprise in Higher Education

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***Participants for interviews will be selected from across all three departments within the School. If you work on programmes from more than one department, please use the department of your line manager. Are you attached to:**

Please select from the following:

☐ The Department for Teacher Education and Training

☐ The Department for Humanities

☐ The Department for Professional Development

[Next Question >>]

Enterprise in Higher Education

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***What type of academic position do you have at Cardiff Metropolitan University?**

Please select one of the following: If the type of contract you have is not listed, please choose "other".

- ☐ Lecturer
- ☐ Senior Lecturer
- ☐ Principal Lecturer
- ☒ Other

[Next Question >>]

Enterprise in Higher Education

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***Do you undertake enterprise projects?**

Please select one of the following:

- ☐ Yes, I undertake enterprise activities
- ☐ No, I do not undertake enterprise activities
- ☐ I am not sure if the activities I undertake are classed as enterprise

[Next Question >>]

Enterprise in Higher Education

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***You have answered YES. What enterprise activities have you been involved with in the last 3 years ?**

Please select all that are relevant to you:

- ☐ Short Courses
- ☐ Conferences
- ☐ Inspection
- ☐ External Examining
- ☐ Strategic Insight Placements
- ☐ International Programmes
- ☐ Consultancy/Secondment
- ☐ Accredited Courses
- ☐ Externally Funded Projects
- ☐ Other, please specify []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with short courses offered by the Cardiff School of Education over the past 3 years. Which ones?**

Please select all that are relevant to you.

- ☐ Train the Trainer
- ☐ Professional Presentation Skills
- ☐ Education Outside the Classroom
- ☐ P4C
- ☐ Kilnwork
- ☐ Managing Behaviour in the Classroom
- ☐ Fantasy
- ☐ Tolkein
- ☐ Aspects of Children's Lives in Wales
- ☐ Folklore
- ☐ Other, please state []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with the International Programmes offered by the Cardiff School of Education over the past 3 years. Which ones?**

Please select all that are relevant to you.

- ☐ Research Skills Training
- ☐ Advanced Research Skills Training
- ☐ Quality & Accreditation in Higher Education
- ☐ Managing Quality: an International Perspective
- ☐ Strategic Planning in Higher Education
- ☐ Leadership and Development in Education
- ☐ International Foundation Course
- ☐ Other, please state: []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with Externally Funded Programmes over the past 3 years. Which ones?**

Please select all that are relevant to you.

- ☐ Sport Wales
- ☐ GTP
- ☐ Youth & Community Pilot
- ☐ Forest Schools Grant Funding
- ☐ Other, please state: []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with conferences offered by the Cardiff School of Education. Which ones ?**

Please select all that are relevant to you.

- ☐ 14-19
- ☐ Wellbeing
- ☐ P4C
- ☐ AS Psychology
- ☐ Children's Laureate
- ☐ Other, please state: []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with accredited short courses offered by the Cardiff School of Education over the past 3 years. Which ones?**

Please select all that are relevant to you.

- ☐ Learning Coaches: Legislation
- ☐ Creative Writing
- ☐ Tolkien
- ☐ Fantasy
- ☐ ECDL
- ☐ Time Banking

☐ Forest School

☐ SAPERE

☐ Other, please state: []

[Next Question >>]

Enterprise in Higher Education

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***You mention that you have been involved with enterprise activity. In what ways has this engagement been informed by your research or incorporated into the learning and teaching of programmes/modules you deliver?**

Please use the box below for comment [200 word limit]

[Next Question >>]

Enterprise in Higher Education

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***The Costing and Pricing exercise allocates a number of hours (time) to enterprise activities. Considering enterprise activities you have involved with, has the allocation of hours been a true representation of the time required?**

Please select one of the following:

- ☐ Yes, it has reflected the time spent
- ☐ No, it hasn't reflected the time spent
- ☐ I am not sure

[Next Question >>]

Enterprise in Higher Education

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***You have answered NO. What factors have contributed to your non-engagement with enterprise activities?**

Please use the box below for your comments (200 word limit)

[Next Question >>]

Enterprise in Higher Education

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***You mention that you are not sure if the activities you undertake are categorised as enterprise activity.**

Please could you provide an indication of the types of activity you have undertaken.

[Next Question >>]

Enterprise in Higher Education

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***In your opinion, to what extent do you need the following skills to be confident of successfully participating in enterprise activity?**

Please score the following, from 1 (very necessary) through to 7 (not at all necessary):

	*						
	Very Necessary		Necessary			Not at All Necessary	
	1	2	3	4	5	6	7
Project Management Skills	()	()	()	()	()	()	()
Subject Knowledge	()	()	()	()	()	()	()
Time Management Skills	()	()	()	()	()	()	()
Financial Skills	()	()	()	()	()	()	()
Inter-personal Skills	()	()	()	()	()	()	()
People Management Skills	()	()	()	()	()	()	()
Understanding of the Commercial Market	()	()	()	()	()	()	()
Research Skills	()	()	()	()	()	()	()
Marketing Skills	()	()	()	()	()	()	()
Communication Skills	()	()	()	()	()	()	()
Personal Contacts	()	()	()	()	()	()	()
Professional Networks	()	()	()	()	()	()	()

[Next Question >>]

Enterprise in Higher Education

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***In your opinion, what opportunities are made available for academic staff to develop the skills needed to be confident in successfully participating in enterprise activities?**

Please select all that apply from the following list.

- ☐ Attendance at external courses that are funded by Cardiff Metropolitan University
- ☐ Staff development courses offered internally by Cardiff Metropolitan University
- ☐ Staff development opportunities offered by the Cardiff School of Education
- ☐ Other, please state: []

[Next Question >>]

Enterprise in Higher Education

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***In what ways could the opportunities available to develop skills relevant to enterprise be improved?**

Please use the box below for your comments. [100 word limit]

[Next Question >>]

Enterprise in Higher Education

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***What support have you made use of with regard to your engagement/potential engagement in enterprise activities?**

Please select all those that are relevant to you.

- ☐ None
- ☐ Communication & Marketing at Cardiff Metropolitan University
- ☐ Library & Information Services at Cardiff Metropolitan University
- ☐ Academic Registry & Awards at Cardiff Metropolitan University
- ☐ Research & Enterprise Services
- ☐ Research & Enterprise Support Team within the Cardiff School of Education
- ☐ Director of Enterprise for the Cardiff School of Education
- ☐ Head of Department within the Cardiff School of Education
- ☐ Other support I have used: []

[Next Question >>]

Enterprise in Higher Education

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***In your opinion, in what ways could the support available to academic staff in the Cardiff School of Education and/or Cardiff Metropolitan University to enable them to engage in enterprise activity be improved?**

Please use the box below for your comments (Word limit 100)

[Next Question >>]

Enterprise in Higher Education

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***In your opinion, what external impact does enterprise activity undertaken by the Cardiff School of Education achieve in the wider community?**

Please score the following, using the scale 1 (greatest impact) through to 4 (least impact):

	*			
	Greatest Impact			Least Impact
	1	2	3	4
Enhanced reputation of Cardiff Metropolitan University	()	()	()	()
Professional development of academic staff	()	()	()	()
Community Engagement and Local impact	()	()	()	()
Regional Engagement	()	()	()	()
International Engagement	()	()	()	()
Commercialisation of research	()	()	()	()

[Next Question >>]

Enterprise in Higher Education

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***You have mentioned that you have been involved with enterprise activities. How have the outcomes been communicated to the wider academic community?**

Please select all that apply from the following list:

- ☐ Conference Papers
- ☐ Conference workshops
- ☐ Key note Speaker at Conferences
- ☐ Public lectures
- ☐ Publications
- ☐ Academic Journals
- ☐ Community Workshops
- ☐ Other, please state []

[Next Question >>]

Enterprise in Higher Education

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***In your opinion, in what ways could the Cardiff Metropolitan University best reward academic engagement with enterprise activity?**

Please rate the following in order of importance to you:

	*						
	Most important		Quite Important			Unimportant	
	1	2	3	4	5	6	7
Buying out teaching time to free-up staff time	()	()	()	()	()	()	()
Rewards & Incentive payments	()	()	()	()	()	()	()
Overtime Payment	()	()	()	()	()	()	()
Recognition of time against workload	()	()	()	()	()	()	()
Enterprise Fellowship	()	()	()	()	()	()	()

[Next Question >>]

Enterprise in Higher Education

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***Would you be interested in taking part in an informal interview ?**

Select from the drop down menu

[Select: V]

[Next Question >>]

Enterprise in Higher Education

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***Thank you for selecting YES. As the responses to this survey are anonymous, please would you provide your email details so that I can contact you.**

This will be used to contact you at a later date

[]

[Next Question >>]

Enterprise in Higher Education

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Thank you for taking the time to complete this on-line survey. Your responses will be a valuable part of my data collection and I appreciate your support. Gill Jones Cardiff School of Education

[Next Question >>]

Enterprise in Higher Education

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Thank you for taking part in my research. I appreciate your support and will contact you shortly regarding your offer to participate in the informal interviews I have planned. Gill Jones, Cardiff School of Education.

[Next Question >>]

Enterprise in Higher Education

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Unfortunately, I need respondents to give their informed consent to comply with ethical guidelines. Thank you for showing an interest in my research though. If you have made an incorrect selection, you can log in and start again.

[Finish]

Enterprise in Higher Education

Survey Complete

[Next Question >>]

Appendix 13: Menter Mewn Addysg Uwch

Participant Information Sheet

Informed Consent

On-line Questionnaire

Prifysgol Fetropolitan Caerdydd Taflen wybodaeth i gyfranogwyr

Teitl y prosiect: Menter - her yr academydd

Mae'r prosiect ymchwil hwn yn cyfrannu at y Ddoethuriaeth Broffesiynol yr wyf yn ymgymryd â hi ym Mhrifysgol Fetropolitan Caerdydd. Mae'r Ddoethuriaeth Broffesiynol yn seiliedig ar arferion proffesiynol, ac er ei bod yn gysylltiedig â'm swydd fel Cyfarwyddwr Menter yn Ysgol Addysg Caerdydd, rwyf yn ymgymryd â'r astudiaeth hon fel ymchwilydd.

Cafodd fy ngwaith ymchwil ei sbarduno gan fy mhrofiadau personol o weithgareddau menter a'm trafodaethau â staff academiaidd sy'n ymwneud â chynlluniau menter. Rwyf am ddarganfod beth fyddai'n cefnogi'r agenda arloesi ac ymgysylltu orau.

- Mae hwn yn wahoddiad i chi ymuno yn yr astudiaeth ac mae'n gyfle i chi gael gwybod beth fydd yr astudiaeth hon yn ymdrin ag ef. Trefnir yr astudiaeth gan **Gill Jones yn Ysgol Addysg Caerdydd**.
- Caiff canfyddiadau'r ymchwil eu cyflwyno'n ddienw a'u rhannu'n fewnol ag ystod o randdeiliaid. Rwyf hefyd yn bwriadu cyhoeddi canlyniadau'r astudiaeth mewn cyfnodolyn academiaidd blaenllaw.
- Nid yw'r prosiect ymchwil yn derbyn unrhyw nawdd allanol.
- Os hoffech gael gwybod mwy am y prosiect ymchwil, neu os oes angen rhagor o wybodaeth arnoch i'ch helpu i benderfynu a ydych am gymryd rhan, cysylltwch â mi ar 029 2041 6548 neu GLJones@CardiffMet.ac.uk.

Eich rhan chi yn y prosiect ymchwil

Pam yr wyf wedi gofyn i chi

Rwy'n gofyn i bob aelod o staff academiaidd yn Ysgol Addysg Prifysgol Fetropolitan Caerdydd gymryd rhan yn yr astudiaeth hon.

Chi sydd i benderfynu a ydych am gymryd rhan – nid oes unrhyw orfodaeth i chi wneud hynny.

Beth fydd yn digwydd os byddwch am newid eich meddwl?

Os byddwch yn penderfynu ymuno â'r astudiaeth, gallwch newid eich meddwl a rhoi'r gorau iddi ar unrhyw adeg. Byddaf yn parchu eich penderfyniad. Os hoffech dynnu'n ôl o'r astudiaeth, rhowch wybod i mi naill ai trwy e-bost (GLJones@CardiffMet.ac.uk) neu dros y ffôn (029 2041 6548). Ni cheir unrhyw gosb am roi'r gorau i gymryd rhan.

Beth fydd yn digwydd os byddwch yn ymuno â'r astudiaeth?

Os byddwch yn cytuno i ymuno â'r astudiaeth, y peth cyntaf y byddaf yn gofyn i chi ei wneud fydd llenwi'r holiadur dienw ar-lein a fydd yn gofyn i chi am eich profiadau'n

gysylltiedig â gweithgareddau menter. Gellir cael mynediad i'r holiadur hwn ar wefan ddiogel o ddolen gyswllt y byddaf yn ei darparu. Rwy'n rhagweld y bydd yn cymryd oddeutu 15 munud i

lenwi'r holiadur a'i gyflwyno. Gofynnir i chi a fydddech yn fodlon cymryd rhan bellach, trwy gael cyfweiliad byr a fydd wedi'i strwythuro i raddau. Dylai'r cyfweiliad bara oddeutu 60 munud. Yn ystod y cyfweiliad hwn, gofynnir cwestiynau i chi am eich profiadau personol o brosiectau menter, ac am eich priodoleddau personol a'ch sgiliau entrepreneuriaidd fel modd o archwilio cysylltiadau â menter gymdeithasol, cynhyrchu incwm a masnacheiddio ymchwil.

A oes unrhyw risgiau?

Nid wyf yn credu bod unrhyw risgiau penodol yn gysylltiedig â'r astudiaeth. Rwyf wedi gofyn y cwestiynau y byddaf yn eu gofyn i chi i grŵp bach o bobl, a ddywedodd fod y cwestiynau'n syml iawn ac nad ydynt yn cynnwys dim i ofidio amdano. Os bydd y cwestiynau'n peri gofid i chi, gallwch ofyn am gael rhoi'r gorau iddi ar unrhyw adeg.

Mae'n bwysig i chi nodi bod yr hyn y mae'r cwestiynau'n canolbwyntio arno'n cyfrannu at y Ddoethuriaeth Broffesiynol yr wyf yn ymgymryd â hi. Er y gallai'r canlyniadau terfynol ddylanwadu ar arferion a ddefnyddir yn y dyfodol yn Ysgol Addysg Caerdydd, bydd y wybodaeth yr ydych yn ei darparu fel cyfranogwr yn cael ei thrin yn ddienw.

Eich hawliau

Gallwch dynnu'n ôl o'r astudiaeth ar unrhyw adeg.

Beth fydd yn digwydd i ganlyniadau'r holiadur a'r cyfweiliad?

Byddaf i, fel yr ymchwilydd, yn gyfrifol am fwydo'r holl wybodaeth o'r astudiaeth (ar wahân i enwau a chyfeiriadau a gwybodaeth bersonol sy'n fodd i adnabod unigolion) i raglen gyfrifiadurol. Yna, byddaf yn edrych i weld a oes cysylltiad rhwng cymryd rhan mewn gweithgareddau menter a sgiliau a phriodoleddau staff academiaidd. Wedi i'r data gael ei ddadansoddi a'i gynhyrchu ar ffurf adroddiad, bydd y canlyniadau ar gael i'r cyhoedd wrth i mi gyflwyno fy fersiwn derfynol o'r thesis Doethur mewn Addysg.

A oes unrhyw fanteision o gymryd rhan?

Fel y nodwyd yn flaenorol, er bod gennyf gyfrifoldeb yn fy swydd fel Cyfarwyddwr Menter yn Ysgol Addysg Caerdydd, rwy'n ymgymryd â'r astudiaeth hon fel ymchwilydd, ac er nad oes unrhyw fanteision uniongyrchol i chi o gymryd rhan gallai'r astudiaeth hon helpu i wella'r cymorth sydd ar gael i sicrhau bod Arloesi ac Ymgysylltu yn bwnc y bydd staff academiaidd ym Mhrifysgol Fetropolitan Caerdydd neu staff mewn prifysgolion eraill yn genedlaethol ac yn rhyngwladol yn dewis gwneud gyrfa werth chweil ohono. Pan fydd yr astudiaeth wedi'i chwblhau a'r canlyniadau wedi'u cyhoeddi, byddaf yn rhoi gwybod i chi beth oedd fy nghanfyddiadau.

Sut y byddaf yn gwarchod eich preifatrwydd:

Bydd yr holl wybodaeth a ddarperir gennych yn cael ei chadw'n gwbl gyfrinachol, a chaiff eich preifatrwydd ei barchu. Byddaf yn cymryd camau gofalus i sicrhau nad oes modd

eich adnabod o unrhyw ddarn o ddata a ddarperir neu unrhyw wybodaeth gyfrinachol amdanoch a gaiff ei chasglu/cadw yn rhan o'r astudiaeth.

Byddaf yn sicrhau bod eich enw a'ch manylion personol yn cael eu cadw ar wahân i'r wybodaeth y byddwch yn ei darparu'n wirfoddol ar gyfer yr astudiaeth. Caiff data ei godio er mwyn sicrhau na fydd modd eich adnabod.

Wrth gyflwyno'r canlyniadau ar ffurf adroddiad, ni fydd modd adnabod unigolion. Mewn achosion lle gallai fod yn bosibl adnabod unigolyn (er enghraifft, oherwydd natur unigryw prosiect menter), trafodir hynny â'r aelod o staff academiaidd, a rhoddir cyfle iddo dynnu'n ôl o'r astudiaeth.

Pan fyddaf wedi gorffen yr astudiaeth ac wedi dadansoddi'r wybodaeth, bydd yr holl ffurflenni a ddefnyddiwyd i gasglu data yn cael eu dinistrio'n llwyr. Byddaf yn cadw copi o'r ffurflen gydsynio sydd ynghlwm am 10 mlynedd, gan fod y Brifysgol yn mynnu bod yn rhaid i ni wneud hynny.

Sylwer: *Mae cydsynio deallus wedi'i gynnwys yn yr holiadur ymchwil. Byddaf yn gofyn i'r sawl sy'n barod i gael eu cyfweld lenwi ffurflen gydsynio'r cyfranogwr.*

Manylion cyswllt: Gill Jones, Swyddfa: C2.11 (Campws Cyncoed), Ffôn: 6548, E-bost: GLJones@CardiffMet.ac.uk

Gellir cael y wybodaeth hon mewn ffurfiau eraill, gan gynnwys yn electronig, mewn print bras, ar ffurf sain neu yn Saesneg. Cysylltwch â Gill Jones ar GLJones@CardiffMet.ac.uk / 029 2041 6548 os byddai'n well gennych ei chael mewn ffurf arall.

FFURFLEN GYDSYNIO'R CYFRANOGWR

Enw'r cyfranogwr:

Teitl y prosiect: **Menter – her yr academydd**

Enw'r ymchwilydd: **Gill Jones**

Dylai'r cyfranogwr lenwi'r adran hon, gan nodi llythrennau cyntaf ei enw ym mhob blwch.

1. Gallaf gadarnhau fy mod wedi darllen a deall y daflen wybodaeth ar gyfer yr astudiaeth uchod. Rwyf wedi cael cyfle i ystyried y wybodaeth a gofyn cwestiynau, ac rwyf wedi cael atebion boddhaol i'r cwestiynau hynny. ☐
2. Rwyf yn deall fy mod yn cymryd rhan yn wirfoddol a bod hawl gennyf dynnu'n ôl unrhyw bryd heb roi rheswm. ☐
3. Rwyf yn cytuno i gymryd rhan yn yr astudiaeth uchod. ☐
4. Rwyf yn cytuno i recordiad sain gael ei wneud o'm cyfweiliad. ☐
5. Rwyf yn cytuno y gall yr ymchwilydd wneud nodiadau i gofnodi'r cyfweiliad. ☐
6. Rwyf yn cytuno y gellir defnyddio dyfyniadau dienw mewn cyhoeddiadau. ☐

Llofnod y cyfranogwr

Dyddiad

Enw mewn print bras

Llofnod yr ymchwilydd perthnasol

Dyddiad

Enw mewn print bras

Ar ôl llenwi'r ffurflen hon, bydd y cyfranogwr yn cadw un copi ohoni a bydd yr ymchwilydd yn cadw copi arall.

Menter mewn Addysg Uwch

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Croeso.

Diolch am gytuno i gymryd rhan yn fy ymchwil.

Mae eich ymatebion yn rhan annatod o'r Ddoethuriaeth Broffesiynol rwyf yn ymgymryd. A'ch hi ym Mhrifysgol Fetropolitan Caerdydd.

Mae'r arolwg ar-lein hwn yn cael ei gynnal ar weinydd allanol sy'n golygu y byddwch yn aros yn ddienw. Ni fydd yn bosibl i mi eich adnabod. Wedi dweud hynny, os bydd yn bosibl i mi eich adnabod o'r math o ymatebion a roddir gennych, sicrhau eich bod yn aros yn ddienw wrth adrodd yn A'ch ar y data yn fy thesis.

Gallaf sicrhau y bydd eich ymatebion yn cael eu trin yn unol A'ch Chanllawiau Moesegol Ysgol Addysg Caerdydd.

Dylai gymryd tua 15 munud i gwblhau'r Holiadur.

Atebwch bob cwestiwn.

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Mae'r holiadur hwn yn rhan o'r ymchwil rwyf yn ei gwneud fel rhan o'm Doethuriaeth Broffesiynol. Byddwch wedi derbyn Gwybodaeth i Gyfranogwyr. A ydych wedi darllen y wybodaeth a roddwyd?**

Dewiswch o blith yr opsiynau canlynol:

() YDW, rwyf wedi darllen y Daflen Wybodaeth i Gyfranogwyr

() NAC YDW, nid wyf wedi darllen y Daflen Wybodaeth i Gyfranogwyr

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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Mae'r Daflen Wybodaeth i Gyfranogwyr ar gael [yma](#). Darllenwch hi cyn parhau.

***Rwyf wedi darllen y daflen wybodaeth cyfranogwr**

Dewisiwch un o'r canlynol:

() Ydw

() Nac ydw

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Drwy barhau, rydych yn rhoi caniatâd hyddysg i gymryd rhan yn yr astudiaeth hon. A ydych yn fodlon rhoi caniatâd hyddysg?**

Dewiswch un o'r canlynol:

☐ YDW

☐ NAC YDW

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Ers faint o flynyddoedd rydych wedi bod yn gweithio i Brifysgol Fetropolitan Caerdydd (UWIC yn flaenorol) ?**

Dewiswch un o'r canlynol:

☐ Hyd at flwyddyn

☐ 2-5 mlynedd

☐ 6-10 mlynedd

☐ dros 10 mlynedd

☐ Arall. Eglurwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Bydd y sawl a gaiff gyfweiliad yn cael eu dewis o bob un o'r tair adran o fewn yr Ysgol. Os ydych yn gweithio ar raglenni o fwy nag un adran, defnyddiwch adran eich rheolwr llinell. A ydych yn gysylltiedig â:**

Dewiswch un o'r canlynol:

☐ Adran Addysg Athrawon a Hyfforddiant

☐ Adran Dyniaethau

☐ Adran Datblygiad Proffesiynol

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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*Pa fath o swydd academiaidd sydd gennych ym Mhrifysgol Fetropolitan Caerdydd?

Dewiswch un o'r canlynol. Os nad yw eich swydd wedi'i rhestru, defnyddiwch 'Arall'

- ☐ Darlithydd
- ☐ Uwch Ddarlithydd
- ☐ Prif Ddarlithydd
- ☐ Arall

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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*A ydych yn cyflawni prosiectau menter?

Dewiswch un o'r canlynol:

- ☐ YDW, rwy'n cyflawni gweithgareddau menter
- ☐ NAC YDW, nid wyf yn cyflawni gweithgareddau menter
- ☐ Nid wyf yn siŵr a yw'r gweithgareddau a gyflawnir gennyf yn cael eu hystyried fel gweithgareddau menter

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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*Rydych wedi ateb YDW. Pa weithgareddau menter rydych wedi bod yn rhan ohonynt yn ystod y tair blynedd ddiwethaf ?

Ticiwch bob un sy'n berthnasol i chi:

- ☐ Cyrsiau Byr
- ☐ Cynadleddau
- ☐ Arolygiadau
- ☐ Arholi Allanol
- ☐ Lleoliadau Mewnwelediad Strategol
- ☐ Rhaglenni Rhyngwladol
- ☐ Ymgynghoriaeth/Secondiad
- ☐ Cyrsiau Achrededig
- ☐ Prosiectau a ariannir yn allanol
- ☐ Arall - rhowch fanylion []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi dilyn cyrsiau byr a gynigiwyd gan Ysgol Addysg Caerdydd dros y tair blynedd ddiwethaf. Pa rai?**

Ticiwch bob un sy'n berthnasol i chi:

- ☐ Hyfforddi'r Hyfforddwr
- ☐ Sgiliau Cyflwyno Proffesiynol
- ☐ Addysg y Tu Allan i'r Ystafell Ddosbarth
- ☐ Athroniaeth i Blant
- ☐ Gwaith odyd
- ☐ Rheoli Ymddygiad yn yr Ystafell Ddosbarth
- ☐ Ffantasi
- ☐ Tolkein
- ☐ Agweddau ar Fywydau Plant yng Nghymru
- ☐ LIA^an Gwerin
- ☐ Arall, nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi dilyn y Rhaglenni Rhyngwladol a gynigiwyd gan Ysgol Addysg Caerdydd dros y tair blynedd ddiwethaf. Pa rai?**

Ticiwch bob un sy'n berthnasol i chi:

- ☐ Hyfforddiant Sgiliau Ymchwil
- ☐ Hyfforddiant Sgiliau Ymchwil Uwch
- ☐ Ansawdd ac Achrediad mewn Addysg Uwch
- ☐ Rheoli Ansawdd: Safbwynt Rhyngwladol
- ☐ Cynllunio Strategol mewn Addysg Uwch
- ☐ Arweinyddiaeth a Datblygiad mewn Addysg Uwch
- ☐ Cwrs Sylfaen Rhyngwladol
- ☐ Arall, nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi bod dilyn rhaglenni a ariannwyd yn allanol dros y tair blynedd ddiwethaf. Pa rai?**

Ticiwch bob un sy'n berthnasol i chi:

- ☐ Chwaraeon Cymru
- ☐ RhAG
- ☐ Cynllun peilot Gwaith Ieuenctid a Chymunedol
- ☐ Arian Grant Ysgol Goedwig
- ☐ Arall, nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi mynychu cynadleddau a gynigiwyd gan Ysgol Addysg Caerdydd. Pa rai?**

Ticiwch bob un sy'n berthnasol i chi:

- ☐ 14-19
- ☐ Lles
- ☐ Athroniaeth i Blant
- ☐ Seicoleg UG
- ☐ Bardd Plant
- ☐ Arall, nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi bod yn dilyn cyrsiau achrededig a gynigiwyd gan Ysgol Addysg Caerdydd dros y tair blynedd ddiwethaf. Pa rai?**

Ticiwch bob un sy'n berthnasol i chi:

- ☐ Anogwyr Dysgu
- ☐ Ysgrifennu Creadigol
- ☐ Tolkein
- ☐ Ffantasi
- ☐ ECDL
- ☐ Bancio Amser
- ☐ Ysgol Goedwig

[]SAPERE

[]Arall, nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi cyflawni gweithgareddau menter. Sut mae'r gwaith hwn wedi cael ei lywio gan eich ymchwil neu wedi ei ymgorffori wrth ddysgu ac addysgu'r rhaglenni/modiwlau a gyflwynir gennych?**

Defnyddiwch y blwch isod i wneud sylwadau [Uchafswm o 200 o eiriau]

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Mae'r ymarferion Costio a Phrisio yn dyrannu nifer o oriau (amser) i weithgareddau menter. Gan ystyried y gweithgareddau menter rydych wedi bod yn ymwneud â hwy, a yw'r oriau a ddyrannwyd wedi bod yn adlewyrchiad teg o'r amser roedd ei angen?**

Dewiswch un o'r canlynol:

() YDY, mae wedi adlewyrchu'r amser a dreuliwyd

() NAC YDY, nid yw wedi adlewyrchu'r amser a dreuliwyd

() Nid wyf yn siŵr

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Rydych wedi ateb NAC YDY. Pa ffactorau sydd wedi eich rhwystro rhag cyflawni gweithgareddau menter?**

Defnyddiwch y blwch isod i wneud sylwadau [uchafswm o 200 o eiriau]

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch nad ydych yn siâp a yw'r gweithgareddau a gyflawnir gennych yn cael eu hystyried yn rhai menter.**

A allech roi syniad o'r math/au o weithgareddau rydych wedi ymwneud Ȧ hwy.

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Yn eich barn chi, i ba raddau y mae angen y sgiliau canlynol arnoch er mwyn sicrhau y cyflawnir gweithgareddau menter yn llwyddiannus?**

Sgoriwch y canlynol o 1 (cwbl angenrheidiol) i 7 (ddim yn angenrheidiol)

	*						
	Cwbl		Angenrheidiol			Ddim yn	
	Angenrheidiol	Angenrheidiol	Angenrheidiol	Angenrheidiol	Angenrheidiol	Angenrheidiol	Angenrheidiol
	1	2	3	4	5	6	7
Sgiliau rheoli prosiect	()	()	()	()	()	()	()
Gwybodaeth am bynciau	()	()	()	()	()	()	()
Sgiliau rheoli amser	()	()	()	()	()	()	()
Sgiliau ariannol	()	()	()	()	()	()	()
Sgiliau rhyngpersonol	()	()	()	()	()	()	()
Sgiliau rheoli pobl	()	()	()	()	()	()	()
Dealltwriaeth o'r farchnad fasnachol	()	()	()	()	()	()	()
Sgiliau ymchwil	()	()	()	()	()	()	()
Sgiliau marchnata	()	()	()	()	()	()	()
Sgiliau cyfathrebu	()	()	()	()	()	()	()
Cysylltiadau personol	()	()	()	()	()	()	()
Rhwydweithiau proffesiynol	()	()	()	()	()	()	()

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Yn eich barn chi, pa gyfleoedd sydd ar gael i staff academiaidd ddatblygu'r sgiliau angenrheidiol i allu cyflawni gweithgareddau menter yn llwyddiannus?**

Dewiswch bob un sy'n berthnasol o'r rhestr ganlynol:

- ☐ Mynychu cyrsiau Allanol sy'n cael eu hariannu gan Brifysgol Fetropolitan Caerdydd
- ☐ Cyrsiau datblygu staff a gynigir yn fewnol gan Brifysgol Fetropolitan Caerdydd
- ☐ Cyfleoedd datblygu staff a gynigir gan Ysgol Addysg Caerdydd
- ☐ Arall (nodwch) []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Sut y gallai'r cyfleoedd sydd ar gael i ddatblygu sgiliau sy'n berthnasol i fentrau gael eu gwella?**

Defnyddiwch y blwch isod i wneud eich sylwadau [uchafswm o 100 o eiriau]

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Pa gymorth rydych wedi ei ddefnyddio o ran eich ymgysylltiad/ymgysylltiad posibl â gweithgareddau menter?**

Dewiswch bob un sy'n berthnasol i chi:

- ☐ Dim
- ☐ Cyfathrebu a Marchnata ym Mhrifysgol Fetropolitan Caerdydd
- ☐ Gwasanaethau Llyfrgell a Gwybodaeth ym Mhrifysgol Fetropolitan Caerdydd
- ☐ Cofrestrfa Academaidd a Gwobrau ym Mhrifysgol Fetropolitan Caerdydd
- ☐ Gwasanaethau Ymchwil a Menter
- ☐ Tŷ@m cymorth Ymchwil a Menter yn Ysgol Addysg Caerdydd
- ☐ Cyfarwyddwr Menter Ysgol Addysg Caerdydd
- ☐ Pennaeth Adran yn Ysgol Addysg Caerdydd
- ☐ Cymorth arall rwyf wedi ei ddefnyddio []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Yn eich barn chi, sut y gellid gwella'r cymorth sydd ar gael i staff academiaidd Ysgol Addysg Caerdydd a/neu Brifysgol Fetropolitan Caerdydd i'w galluogi i gyflawni gweithgareddau menter?**

Defnyddiwch y blwch isod i wneud eich sylwadau [uchafswm o 100 o eiriau]

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Yn eich barn chi, pa effaith allanol mae y gweithgareddau menter a gyflawnir gan Ysgol Addysg Caerdydd yn ei chael ar y gymuned ehangach?**

Sgoriwch y canlynol o 1 (effaith fwyaf) i 4 (effaith leiaf) ar gyfer y canlynol:

	*			
	Effaith fwyaf			Effaith leiaf
	1	2	3	4
Enw gwell i Brifysgol Fetropolitan Caerdydd	()	()	()	()
Enw da proffesiynol staff academiaidd	()	()	()	()
Ymgysylltu â'r gymuned	()	()	()	()
Ymgysylltu rhanbarthol	()	()	()	()
Ymgysylltu rhyngwladol	()	()	()	()
Masnacheiddio ymchwil	()	()	()	()

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Nodwch eich bod wedi cyflawni gweithgareddau menter. Sut mae'r canlyniadau wedi cael eu cyfleu i'r gymuned academiaidd ehangach?**

Dewiswch bob un sy'n berthnasol o'r rhestr ganlynol:

- ☐ Papurau Cynhadledd
☐ Gweithdai cynhadledd
☐ Prif Siaradwr mewn Cynadleddau
☐ Darlithoedd cyhoeddus
☐ Cyhoeddiadau
☐ Cylchgronau Academiaidd
☐ Gweithdai Cymunedol
☐ Arall - Nodwch []

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***Yn eich barn chi, sut y gallai Prifysgol Fetropolitan Caerdydd wobrwyo academyddion am gyflawni gweithgareddau menter?**

Rhowch y canlynol yn nhrefn pwysigrwydd:

	*						
	Pwysicaf		Eithaf pwysig			Dibwys	
	1	2	3	4	5	6	7
Prynu amser addysgu i gael amser rhydd i staff	()	()	()	()	()	()	()
Taliadau Gwobrau a Chymhelliant	()	()	()	()	()	()	()
Taliadau Goramser	()	()	()	()	()	()	()
Cydnabod amser yn erbyn llwyth gwaith	()	()	()	()	()	()	()
Cymrodoriaeth Arloesi ac Ymgysylltu	()	()	()	()	()	()	()

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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***A fyddai diddordeb gennych mewn cael cyfweiliad anffurfiol?**

Dewisiwch o'r canlynol:

() Byddai

() Na Fyddai

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

Page 28 of 31

***Diolch am ddewis BYDDAI. Gan fod yr ymatebion i'r arolwg hwn yn ddienw, a fydddech cystal Æ rhoi eich cyfeiriad e-bost fel y gallaf gysylltu Æ chi.**

Caiff ei ddefnyddio i gysylltu Æ chi yn nes ymlaen.

[]

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

Page 29 of 31

Diolch am roi o'ch amser i gwblhau'r arolwg ar-lein hwn. Bydd eich ymatebion yn rhan werthfawr o'r broses o gasglu data a gwerthfawrogaf eich cymorth. Gill Jones Ysgol Addysg Caerdydd.

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

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Diolch am gymryd rhan yn fy ngwaith ymchwil. Rwy'n gwerthfawrogi'ch cymorth a byddaf yn cysylltu Æ chi cyn bo hir ynghylch eich cynnig i gymryd rhan yn y cyfweiliadau anffurfiol rwyf wedi eu cynllunio. Gill Jones Ysgol Addysg Caerdydd

[Cwestiwn nesaf >>]

Menter mewn Addysg Uwch

Page 31 of 31

Yn anffodus, mae angen i ymatebwyr roi caniatâd hyddysg sy'n cydymffurfio â chanllawiau moesegol y brifysgol. Serch hynny, diolch am ddangos diddordeb yn fy ymchwil. Os ydych wedi gwneud dewis anghywir, gallwch fewngofnodi a dechrau eto.

[Cwpla]

Menter mewn Addysg Uwch

Arolwg yn gyflawn

[Cwestiwn nesaf >>]

Appendix 14: Request to Participate in the Study English/Welsh

From: Jones, Gill L.
Sent: 11 September 2012 16:29
To: CSE Academic Staff
Cc: Laugharne, Janet; Fleming, Scott; Jones, Gill L.
Subject: EdD Research

Colleagues

Enterprise: The Academic's Challenge

I am undertaking the Professional Doctorate at Cardiff Metropolitan University. The focus of my research is 'enterprise', or innovation and engagement, as it is more currently recognised.

The study relates to the Cardiff School of Education and as an academic member of staff within the School, I am inviting you to be a participant in the research. I intend to garner the perceptions of academic staff in relation to innovation and engagement and use the findings as a vehicle to inform future practice and policy.

I recognise that time is precious but would very much appreciate your support. I have attached the Participants' Information Sheet, for your consideration. If you are willing to participate in the anonymous on-line questionnaire, one of the questions relates to informed consent.

The survey can be accessed from this hyperlink:

<http://checkboxext.uwic.ac.uk/checkboxext/Survey.aspx?s=259b4ac76edb4c43be1cb257a97e8159>

If you would like to discuss this with me before making your decision, I am happy to answer your questions. I can be contacted on 029 2041 6548, or you can email me at GLJones@CardiffMet.ac.uk.

Many thanks and kind regards
Gill ☺

Gill Jones MA Ed, Cert Ed (FE), FHEA
Director of Enterprise
Cardiff School of Education
Tel: 020 2041 6548
Email: GLJones@cardiffmet.ac.uk



From: Jones, Gill L.
Sent: 11 September 2012 16:29
To: x
Cc: Laugharne, Janet; Fleming, Scott; Jones, Gill L.
Subject: EdD Ymchwi

Gydweithwyr

Menter: her yr academydd

Rwy'n ymgymryd â'r Ddoethuriaeth Broffesiynol ym Mhrifysgol Fetropolitan Caerdydd. Mae fy ymchwil yn canolbwyntio ar 'fenter', neu arloesi ac ymgysylltu fel y caiff y maes ei adnabod erbyn hyn.

Mae'r astudiaeth yn gysylltiedig ag Ysgol Addysg Caerdydd, ac rwyf i, fel aelod o staff academiaidd yn yr Ysgol, yn eich gwahodd i gymryd rhan yn yr ymchwil. Rwy'n bwriadu casglu safbwyntiau staff academiaidd ynghylch arloesi ac ymgysylltu, a defnyddio'r canfyddiadau yn gyfrwng i ddylanwadu ar arferion a pholisïau yn y dyfodol.

Rwy'n cydnabod bod amser pawb yn brin, ond byddwn yn gwerthfawrogi eich cymorth yn fawr iawn. Rwyf wedi atodi'r Daflen wybodaeth i gyfranogwyr i chi gael ei darllen. Os byddwch yn barod i gymryd rhan yn yr holiadur dienw ar-lein, mae un o'r cwestiynau'n ymwneud â chydysyniad deallus.

Gellir cyrraedd yr arolwg trwy glicio ar y ddolen gyswllt hon:

<http://checkboxext.uwic.ac.uk/checkboxext/Survey.aspx?s=40eea31c2693477aa0999187e7e30b8c>

Os hoffech drafod hyn â mi cyn penderfynu, byddwn yn falch o gael ateb eich cwestiynau. Gellir cysylltu â mi ar 029 2041 6548, neu gallwch anfon e-bost ataf ar GLJones@CardiffMet.ac.uk.

Diolch yn fawr a chofion gorau
 Gill ☺

Gill Jones MA Ed, Cert Ed (FE), FHEA
 Cyfarwyddwr Menter
 Ysgol Addysg Caerdydd
 Tel: 020 2041 6548
 Email: GLJones@cardiffmet.ac.uk



Appendix 15: First Reminder to Participate in the Study

From: Jones, Gill L.
Sent: 26 September 2012 19:13
To: CSE Academic Staff
Cc: Laugharne, Janet; Fleming, Scott; Jones, Gill L.
Subject: Reminder - EdD Research

Enterprise in Higher Education

Colleagues

This is a gentle reminder for those of you who have yet to complete the research questionnaire I sent out earlier this month.

I realise that this is a busy time in the academic year but I would appreciate your time and value your thoughts regarding innovation and engagement in the context of the academic role. I am interested in the perceptions of everyone – you don't need to be enterprise active to participate.

I realise that some of you will have already completed the survey. One of the disadvantages of ensuring anonymity has been the inability to identify those of you who have already responded. So thank you and apologies if you have already completed it.

You can access the questionnaire from this hyperlink:

<http://checkboxext.uwic.ac.uk/checkboxext/Survey.aspx?s=259b4ac76edb4c43be1cb257a97e8159>

Many thanks
Gill ☺

Gill Jones
Director of Enterprise



Appendix 16: Second Reminder to Participate in the Study

From: Jones, Gill L.
Sent: 18 April 2013 17:04
To: X
Cc: Jones, Gill L.
Subject: EdD Research

Hi All

I am hoping you can help. As you know, I am undertaking the EdD. I currently have a 54% return for my questionnaire but my supervisors and Director of Studies are sticklers 😊

I am interested in everyone's viewpoint.

If you have already responded, apologies - a big thank you – if you haven't, I would really appreciate your help in getting me beyond the 54% return 😊

Here is the hyperlink to the survey...

<http://checkboxext.uwic.ac.uk/checkboxext/Survey.aspx?s=259b4ac76edb4c43be1cb257a97e8159>

As always, many thanks.

Gill 😊

Gill Jones

Director of Enterprise



Appendix 17: Testing the Interview Guide

Testing the Interview Guide

Interview 1 with Pilottee

Held 14 May 2013 (21.44 mins)

Interviewer – italicised text

Respondent – normal text

1. Defining enterprise

How would describe or define enterprise in the context of higher education? (0.00-1.35)

Enterprise is, in my experience, the part that basically brings in money to the university that comes from any external sources other than the normal funding routes for the core business for the university. How I would define it, I think is: more and more essential in a university context particularly with different funding issues that seem to be cropping up in the UK. I think that it can be quite taxing for people engaged in enterprise because often I think that there is a slight mismatch between the way that the university views the core business as opposed to the way it views enterprise. Particularly in [REDACTED], we straddle the two quite a lot and so there are the occasional mismatches there.

2. Strategic importance of enterprise

In terms of strategic importance, how important do you think enterprise is to the role of the academic in the University and/or Cardiff School of Education? (1.35 -4.23)

To the role of the individual academic or the role of academics in the school?

I am quite happy for you to talk about both...

Okay I would say to the role of academics, I think it is again crucial it can feed into mobility it can help to support courses that are very worthwhile but not perhaps lucrative and may not be able to survive without input from enterprise projects. On the other hand in my experience to the role of the individual, I feel that there is a kind of rift and a resistance to enterprise, I believe firmly that it is a very difficult marriage between enterprise and education in general. I don't really like sponsorship as they had in the millennium dome back in 2000. I think that in the view of academics is very much it is commercialising everything and tearing down the tenants of education, but in the real world it has to be there and is crucial for academics to keep functioning as they do and to support them to do that.

Prompt - How important enterprise is to the academic department, (I know you are not linked to an a department but an academic [enterprise] centre – how important is that ?

██████████ it is absolutely vital. I think that in a lot of ways it is very good. It causes us to be highly innovative, we are very, very responsive. It does make it difficult to strategise ██████████ and running academic department as well it has a direct impact on my role because I have two hats within ██████████. I am the programme director for an academic course and at the same time I need to be very mindful of the business case as well. The two don't always go very hand in hand. It can be quite difficult to walk that line and make decisions for the best to satiate the needs of both roles.

3. Entrepreneurial University

That is actually a good point because some of the current literature talks about the entrepreneurial university; in your opinion, would you consider Cardiff Metropolitan University to be an entrepreneurial university? (4.23 – 5.24)

I think it is – yeah. I mean I may have a more **eschewed** point of view ██████████, as I say, its 100%. I do think it is very enterprising but perhaps not holistically. I think some schools and some departments are really ahead with their enterprise goals and others, from what I know, are perhaps not quite so engaged. So the university, I think, tries very hard and again I think the university responds quite quickly to certain markets so overall I would say, yes.

4. Enjoyment of enterprise activities

I know that you have been involved yourself with lots of different types of enterprise activities; what would you say you enjoy them most? (5.24 – 6.15)

I think promotion really. I have recently been involved with promoting ██████████ with Cardiff Council and just getting out there are showing our capability, what we can do, our styles, our methods, those kinds of thing I think I enjoy an awful lot; and I think really, continuous improvement and just developing, innovating. I think those are the things I particularly enjoy.

5. Reward

I am talking about you personally - how would you best like to be rewarded for your enterprise activities? (6.15 – 8.22)

My pay cheque (laughs).

It's difficult to look at it and say I would like buy-out of time or whatever, because again, it is [REDACTED], so that would just mean more holidays. So, I think, personally I would like recognition for [REDACTED]; which I think we are gaining, but it takes a long time. I think we are growing with our reputation, both within the university and externally, as well, which is, of course, a great bit of job satisfaction.

Prompt - Looking the research fellowship or the learning and teaching fellowship, do you think that there is a role or what could there be in terms of a role for an enterprise fellowship?

In what sense?

As an award; people are awarded a research fellowship or a learning and teaching fellowship but there are no enterprise fellowships.

I think it is inevitable, yes. Of course, people want recognition for whatever they are doing. I think it might be nice rather than have discrete fellowship award, to perhaps join them together in some way; it could be research and enterprise. I think it would unite enterprise activity with the university a bit more strongly.

6. Wellbeing

One of the themes that came out of my questionnaire that I wanted to talk about a bit more was 'wellbeing'. To what extent do you think personal wellbeing is a factor in people's decision whether they engage or don't engage in enterprise activities? (8.22 – 10.30)

I think it is a massive factor. I think that... people have desks with large piles of papers all over them and then when there is an offer or request to then take something else on board, I think it will create a knee-jerk reaction. I also think that the world is necessarily changing since the economic downturn. There can be quite reactionary responses to these sorts of things. Perhaps back in the past we didn't have to do this and now we are being asked to do this and this. I think really, perhaps, there could be some kind of encouragement for dynamism - reaching out and going into new things. I find it hard to turn down opportunities. In doing something that is a bit different on top of what we already do... it can lead to a more enriching career as well. Generally, I think welfare and stress, as I say since 2008 everybody is working a lot harder for not much more financial remuneration, so I think the initial response would be to reject it perhaps just perhaps in a reactionary way.

7. Workload

This can be linked, to a certain extent, to 'workload'. I am exploring the academic role and if you look at the academic contract, academics have 550 contact teaching and a certain allocation for other duties; enterprise is one of the allocations of duties (10.30 – 11.33)

I am plucking this out of the air really. Do people think that that is a footnote on their contracts with enterprise, or does it broaden the forefront at all?

8. Support

With regard to research, enterprise, we are obviously very successful as a school in getting staff to engage in enterprise. Part of that is linked to the support that we get from the research and enterprise team. To what extent do you think the support provided by the team might be a factor in encouraging somebody to engage with enterprise? (11.33 – 13.30)

Definitely, I think it reduces workloads and that could be a factor in people not initially wishing to engage with enterprise. Even the smallest things really, can take an awfully long time; for example, preparing a computer room for an exam – just to run an exam and I know the support team do those kinds of things. These do eat into your day and they can disrupt what you are expected to do in that day, so having support in that way, I think is really, really useful. Of course, the size of the support team and the availability is another thing that can be an issue. Perhaps there is a need to draw a line – a large team in which case, possibly, things can take a little longer or whether it is a small team and they just can't manage as much as a larger team might be able to. Yeah, perhaps sub-teams within **support something** like that, so that people really know which department they are working with, what their needs are to help them most effectively.

9. Financial awareness

One of the other themes that came out of the questionnaire that I was surprised at was financial awareness. How important is financial awareness? (13. 30 – 16.07)

What do you mean by financial awareness? Do you mean funding that could be applied for?

It could be funding that could be applied for or managing budgets; financial noose.

Of course it is important.

It is hard asking you because your team is so successful at it.

Well this is it, but it wasn't always and we have had to be very careful. I think that sometimes we are too acutely sensitive and try to avoid spending where we might actually be able to and it could benefit the centre. Financial awareness is of course important in my centre because our centre depends on it. There is very little point in engaging in an enterprise activity that is discreetly and only enterprise if doesn't make any money – it is just an activity.

Prompt - Leading on from that, how important do you think financial awareness for managers and senior managers within the university?

Very important because, again, it is one thing to engage in an activity for kudos if it is above and beyond the regular academic role. However, if you are pulling in a lot of money then that is going to show, hopefully, with managers and they will recognise the work that's done. Maybe able to allocate more support, maybe able to allocate more time and also, it secures their positions too, I think. So yes financial awareness would be important for everybody nowadays. I think even outside the university.

10. QAA Guidance

Are you aware of the QAA guidance with regards Enterprise and Entrepreneurship Education? (16.07 – 19.49)

Yes. What particular part?

I just wondered to what extent you embed the QAA guidance for Enterprise and Entrepreneurship Education into your learning and teaching?

I am thinking of academic QAA guidance really because we have to work through QAA processes and so forth. The QAA guidance of Enterprise, and Entrepreneurship Education - I don't think I am aware of it, to be honest.

Fair comment; because it is a new piece of guidance that sits alongside the QAA Code of Practice and it encourages you to look at embedding Enterprise and Entrepreneurship Education into undergraduate programmes.

I think that is a really important point. I remember the old days of the Cardiff Institute of Higher Education and I remember I did a Art foundation and they had business studies on that which I think was most sensible, alright, I didn't think it was sensible at the time, but later in life, I think it is the most sensible thing you can possibly do. We've reflected

this in our courses because we do have business modules and even though our students go on to all different walks of life from our [REDACTED] course. Yes, I do think it is really important that we are in a position where we can pass on relevant information to students in a vocational setting.

11. Commercialising research

The university has aspirations in terms of research and I just wondered if you had any thoughts on the way in which research could be commercialised being at that is in our strategic plan? (19.49 – 20.25)

Here most academics are aiming to be published and I know we have got UWIC Press, but whether being able to publish in-house or something like that; a journal for example.

12. Any other questions

Do you think I have missed any questions that I should be asking? (20.25 – 20.30)

You may have to find a different form of words, but it would be interesting to find out what peoples' resistance is to enterprise in higher education setting, because I have experienced that most definitely and I think it is easy to shrug your shoulders and say it is only about money now, but I think that needs to be scratched a little deeper than the surface really.

Perhaps what the barriers are what the resistance is?

Yeah.

Discussion followed regarding time taken to inform detail included in the invitation requests to participate in the informal interview.

Interview ended 21.44

Appendix 18: Response to Testing the Interview Guide

From: Jones, Gill L.
Sent: 20 May 2013 07:03
To: XX
Cc: Jones, Gill L.
Subject: EdD Interview

Morning Ernest

Very many thanks for agreeing to help me with testing my interview guide. I have transcribed the interview and have attached it for your information. If you are happy with the information, this will form the basis of my pilot.

Just to remind you, the data will be presented in an anonymised form. However, should you feel that I have included some information that, on reflection you would rather I didn't use, if you could highlight it in red I will omit it from the final report.

My daughter had to help me get the file exported from the QuickVoice Pro App to i-Tunes. Still all in place now for the main phase of the interviews. Importing the i-Tune file into the Dictapad App worked quite well. I tried without first but with my typing skills found that I couldn't keep up with the audio file. The App allows you to play at 0.50 speed - much better :)

Thank you for the idea for further questions - I will look at how these can be incorporated.

Very many thanks - I owe you
Kind regards
Gill :)

From: X
Sent: 20 May 2013 08:27
To: Jones, Gill L.
Subject: RE: EdD Interview

Hi Gill,

Overall it looks fine to me but there are a couple of things that might have been mistranscribed:

Q2: I think I said 'tenets' not 'tenants'

Q3: I think I said 'skewed' not 'eschewed'

Q8: I'm not sure how you wanted to transcribe but maybe put a semi-colon between 'support' and 'something'?

Q10: Again, it depends on your transcription format but it might read a bit better if it were 'an Art foundation' (I may have said 'uh')

I hope this helps.

Kind regards,

[REDACTED]

Cardiff Metropolitan University
Tel: +44 2920 41 [REDACTED]
Web: www.cardiffmet.ac.uk

Appendix 19: Interview Guide

Enterprise: the academic's challenge

Interview Guide - Themes for discussion:

1. Defining enterprise
2. Strategic importance of enterprise
(prompts - University/School/Department/**barriers or resistance**)
3. Entrepreneurial university
4. Enjoyment of enterprise activities (prompt – **strengths of CSE**)
5. Reward (prompt – fellowship)
6. Wellbeing
7. Workload
8. Support (prompt – **potential improvements**)
9. Financial awareness (prompts – self/project managers/senior managers)
10. QAA Enterprise and Entrepreneurship guidance
(prompts - embedding enterprise in learning and teaching/curriculum)
11. Commercialising Research
12. Any other questions?

Appendix 20: Mapping Research Questions

Enterprise: The Academic's Challenge - Mapping Research Questions

	RQ 1: <i>How have the types of enterprise practices that currently exist within the Higher Education sector evolved?</i>	RQ2: <i>In what ways has the university promoted enterprise activities and how effectively are academic staff supported strategically and operationally to engage with them?</i>	RQ3: <i>How effective is the support available to Cardiff School of Education staff in achieving 'impact' in the wider community with the enterprise activities undertaken?</i>	RQ4: <i>How can the findings of the research inform change/s to future strategic planning within the Cardiff School of Education?</i>
Interview Themes				
Theme 1	X	X		
Theme 2	X	X		X
Theme 3	X			X
Theme 4		X	X	
Theme 5		X		X
Theme 6		X	X	X
Theme 7		X	X	X
Theme 8		X	X	X
Theme 9		X		X
Theme 10	X			X
Theme 11		X	X	X
On-line Survey Questionnaire *Question 1-4 relate to informed consent, **Questions 27-31 relate to the invitation to interview				
Question 5*				X
Question 6		X	X	X
Question 7				X
Question 8	X	X	X	
Question 9	X	X	X	X
Question 10	X	X	X	X
Question 11	X	X	X	X
Question 12	X	X	X	X
Question 13	X	X	X	X
Question 14	X	X	X	X
Question 15		X	X	X
Question 16		X		X
Question 17				X
Question 18		X		X
Question 19		X		X

Question 20		X	X	X
Question 21				X
Question 22		X	X	X
Question 23				X
Question 24			X	X
Question 25			X	X
Question 26	X	X		X

Appendix 21: Interview Sample and Profiles

Enterprise: the academic's challenge: Interview Sample (anonymised) and Profiles

	Not engaged with enterprise	Welsh speakers	0-1 Years employment	2-5 years employment	6-10 years employment	10 year+ employment	Lecturer	Senior Lecturer	Principal Lecturer	Not included in sample
Department of Humanities										
Jessica	*		*				*			
Brangwen		*		*			*			
Gethyn			*				*			
Margaret					*		*			
Elsie				*			*			
Matthew					*			*		
Janet				*			*			X
Ernest	Tested interview guide									
Department for Professional Development										
Vanessa	*					*		*		
Andrew	*					*		*		
Kate				*				*		
Joanne						*		*		
Harriet					*				*	
KI						*		*		X
SCv						*		*		X
KM-X						*		*		X
TEs				*				*		X
NK				*			*			X
Department for Teacher Education and Training										
Rhiannon		*			*			*		
Tracey				*				*		
Jayne					*			*		
Roger		*				*		*		
Fiona				*				*		
Grace						*		*		
Reginald						*			*	
TEb						*		*		X
KM		*				*				X
TV						*			*	X
TE-C						*		*		X
SDp				*				*		X

Andrew: does not have an enterprise profile. He has been employed by the university for more than ten years. He engages with activities that contribute to social enterprise targets. However, he has been unaware that these activities were relevant to enterprise.

Brangwen: speaks Welsh. She previously worked in primary school. Brangwen is a member of academic staff who has engaged with enterprise education which has led to her contributing to a limited number of enterprise activities in the School. She is a team player. She has a strong awareness of the need to make connections between Learning and Teaching, Research and Enterprise.

Elsie: is a Lecturer in the Department for Humanities. She is creative and has engaged with small, internally funded enterprise projects. Her engagement with enterprise has enhanced the learning experiences of her students.

Ernest: is a Programme Director and has substantial involvement with enterprise activity. Unusually, he understands the costing and pricing process and recognises the need to be customer focused when engaging with enterprise. He is reliable, has project managed a large number of enterprise activities and been successful, year on year in increasing the customer base for the projects he manages. He is a team player and is able to motivate and manage project teams.

Fiona: is an ideas person. She is willing to support her colleagues in any way she can. Fiona has an extensive professional network (regional, national and international) and has used this to enhance enterprise projects undertaken by the School. Fiona recognises the function of financial audit and has consideration, first and foremost, that enterprise projects to which she contributes, benefit the School. She is a positive person, a creative and innovative team player. Fiona has undertaken the role of project manager, has initiated international enterprise activity, has engaged with internally funded enterprise initiatives and contributed to large Welsh Government tenders, relevant to her expertise.

Gethyn: is a newly appointed Lecturer in the Department for Humanities. He enjoys engaging with his students and observing their achievements. He recognises the connectivity between Learning and Teaching, Research and Enterprise and has been proactive in engaging with internally funded opportunities to engage with enterprise. He has also offered viable ideas for enterprise.

Grace: Is a Programme Director, a Senior Lecturer and has been employed by the university for more than ten years. Grace is both a willing and reliable contributor to enterprise activities. She has a professional network relevant to her expertise which has led to grant funding for a substantial enterprise project. The project involved the coordination of external contributors and made a substantial financial contribution to the School's financial targets and enhanced the employability skills of students. Year on year,

approximately 200 students have benefitted from the enterprise project. Her success has led to ongoing grant funding.

Harriet: has come to the Cardiff School of Education from a university in England and has experience of senior management. She has a large professional network. She has had involvement with the School's international portfolio and has a strong understanding of the international market. She is a team player and competent project manager. She has strong negotiation skills and strong views regarding the quality of enterprise provision i.e. it must be excellent.

Janet: is an expert in her field. She is creative, innovative and engages with learning and teaching experiences that have been founded on her ICT competence. She has the skills and attributes of the entrepreneur. Her family are business orientated. She has engaged in a number of enterprise activities, is an 'ideas person' and able to solve problems and find solutions to the challenges associated with enterprise activity that is 'cutting edge' and breaks new ground.

Jayne: is a Senior Lecturer in the Department for Teacher Education and Training and has worked at the university between 6-10 years. During the period of the research, she made a substantial contribution to the School's Research and Enterprise financial targets. Amongst other enterprise activities, she participated in a substantial secondment opportunity that enabled her to work on a project of national significance. This informed her learning and teaching and enhanced her professional reputation.

Jessica: is a member of the Department for Humanities and a newly appointed Lecturer. At the time of the research, she was a Deputy Programme Director. Whilst a non-engager with enterprise, she has the attributes of the entrepreneur, innovative, creative, enthusiastic and positive. She is representative of what Lord Young (2014) refers to as 'a cup half full person'.

Joanne: is a Programme Director and Senior lecturer. She has worked at the university for more than ten years. She is a regular and reliable contributor to short courses. She is comfortable working independently and competent managing projects she has responsibility for. She has not been involved in the costing and pricing of enterprise activities. As a member of academic staff with a full teaching workload, she usually undertakes enterprise activities linked to her core teaching.

Kate: is a regular contributor to enterprise. She has a strong profile of engagement with international enterprise projects. Kate is an excellent project manager and able to coordinate internal and external contributors to the enterprise projects she manages. As a Programme Director, she is aware of the ways in which enterprise initiatives integrate into the curriculum and has been at the forefront in facilitating this across the School. This has been particularly relevant to the accredited enterprise provision. She mentors external stakeholders and coordinates assessment and moderation of assessment.

Margaret: is a Lecturer from the Department for Humanities. She is passionate about her enterprise activity. She is a team player and contributes to team initiatives. She has a strong professional network and her willingness to see a job well done marks her out as an effective academic entrepreneur. She has a strong awareness of the role her subject expertise plays in contributing to the Learning and Teaching, Research and Enterprise nexus. Margaret communicates her enterprise activities through research conferences and seminars.

Matthew: is a Lecturer from the Department for Humanities. He has a strong focus on social enterprise. He is an ideas person. Matthew encourages others to participate in enterprise. As a willing project manager he is a good role model.

Reginald: has project managed a number of enterprise activities. His skills lie in motivating project teams.

Rhiannon: speaks welsh and is a Senior Lecturer in the Department for Teacher education and Training. She has worked at the university for between 6-10 years. She has been involved in small enterprise projects and a substantial, national enterprise project based on professional standards.

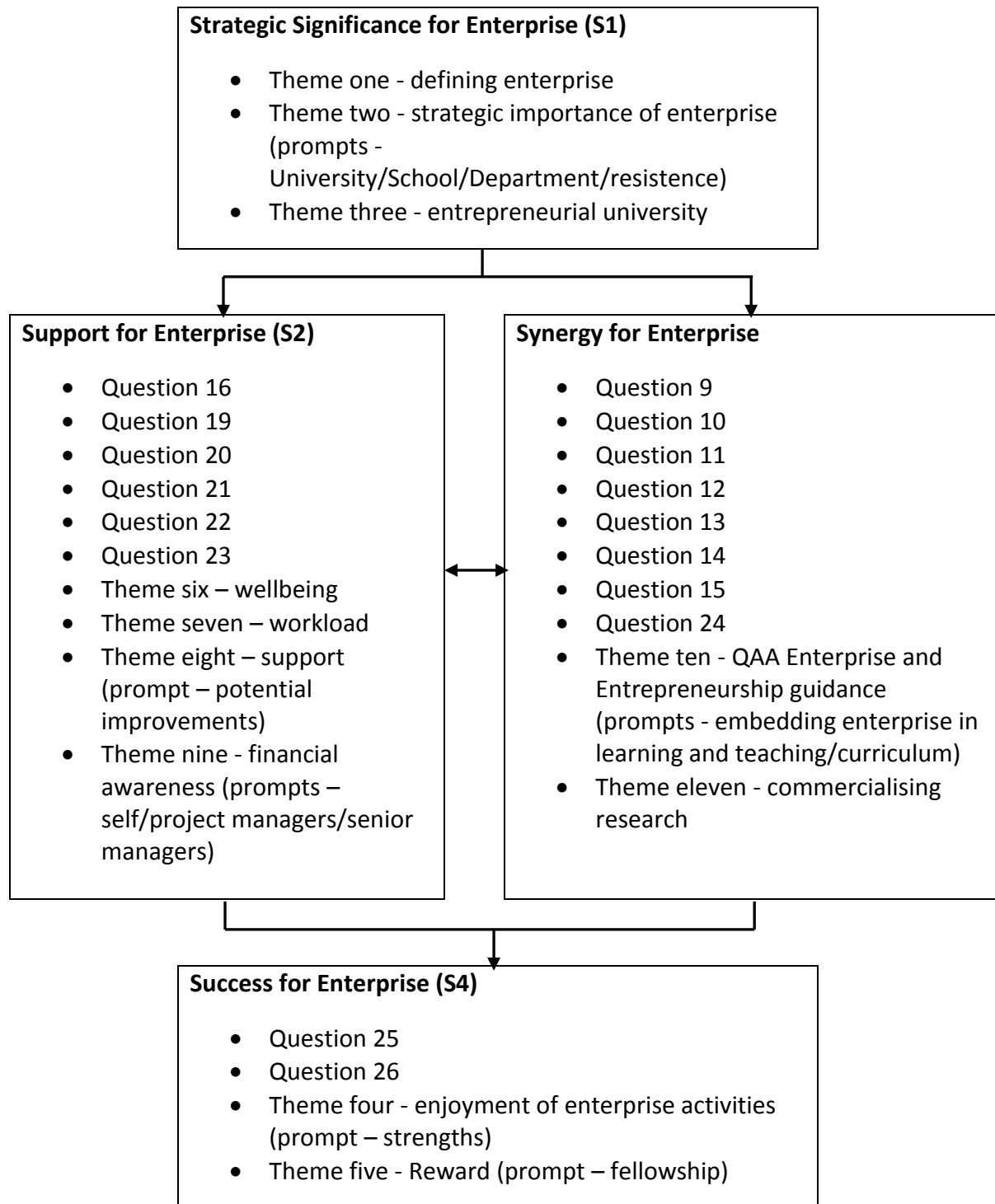
Roger: is passionate about sharing his enterprise activities, with academic staff, with students and with stakeholders. He has a strong reputation in his field. He has project managed a number of enterprise activities and been successful in securing internal funding (SIPs, TDFs, REIF). He has written papers which have been published by stakeholder organisations. He has attracted external funding for enterprise activities. His endeavours contribute to social enterprise as well as income generating enterprise. His activities have enhanced student employability and successfully integrated into the curriculum.

Tracey: is an active academic member of staff with regard to enterprise. She has the quality of persistence which she combines with hard work. She has experience of business which she has been able to apply to her role as an academic entrepreneur. As a Teacher Trainer, she has been involved with a national scheme for newly qualified teachers and has contributed to large Welsh Government projects. Tracey is proactive in generating new enterprise activities and has a large professional following.

Vanessa: does not have an enterprise profile. However, she engages with activities that have potential to contribute to social enterprise targets.

Appendix 22: Mapping to S⁴E Model

Mapping the on-line survey questions and interview guide themes to the S⁴E Model used to present the results and analysis



Appendix 23: Enterprise Activities in the Cardiff School of Education

Enterprise Activities in the Cardiff School of Education

Academic Staff Involvement with Specific Enterprise Projects

Enterprise and Engagement Category	Project	Number of Respondents
Short courses Question 10	Train the Trainer	R20
	Professional Presentation Skills	R20
	Education Outside the classroom	R9; R37
	P4C (Philosophy for Children)	R21
	Kilnwork	
	Managing Behaviour in the Classroom	R21
	Fantasy	R1; R5; R28
	Tolkein	R1
	Aspects of Children's Lives in Wales	R41(w)
	Folklore	R1
	Other: Action Research and Reflective Practice	R4; R27
	Other: Pre-sessional	R7
	Other: Creative Music Making in the Foundation Phase Classroom	R25
	Other: Sports Teaching	R29
	Other: Musical Futures	R34
	Other: Research methods Training	R35
	Other: More Able and Talented	R36
International Programmes Question 11	Research Skills Training	R1; R4; R5; R10; R18; R27; R28; R31
	Advanced Research Skills Training	R10; R18; R31; R45(w)
	Quality and Accreditation in Higher Education	R6; R10; R16; R18; R31; R45(w)
	Managing Quality: an international perspective	R6; R10; R18; R31; R38; R39; R42(w)
	Strategic Planning in Higher Education	R10; R14; R31
	Leadership and Development in Higher Education	R14; R30; R31
	International Foundation Course	R7; R11
Externally Funded Projects Question 12	Sport Wales	R22
	GTP	R25; R42(w)
	Youth and Community Work Pilot	R10; R15
	Forest School	
	Other: ESCalate	R10
	Other: WAG School Liaison Evaluation Project	R18
	Other: PISA	R24; R30; R36; R38;

		WR2
	Other: Estyn Training Materials	R25; R41(w)
	Other: Welsh Medium Improvement Scheme	R44(w)
Conferences Question 13	14-19	R19; R35
	Wellbeing	R12; R17; R30
	P4C (Philosophy for Children)	R12; R19; R21; R30; R37
	AS Psychology	
	Children's Laureate	R19; R21; R37
	Other: SE Youth and Community Work	R15
	Other: Partnerships conference	R19
	Other: Community Partnership (Building Bridges)	R27
	Other: Planning an academic conference 2013-14 (Berger).	R28
Accredited Short courses Question 14	Learning Coaches	R11; R20; R44(w)
	Creative writing	R13
	Tolkein	R1
	Fantasy	R1; R37
	ECDL	R11
	Other: Forest School	R9; R35
	Other: Dynamo	R11

Professional Development Portfolio

Gillian Jones

Submitted in conjunction with
the Doctoral Thesis for the award
of Professional Doctorate

Cardiff Metropolitan University

Cardiff School of Education

December 2014

Note to reader:

This work is a personal account of the journey undertaken for professional doctorate. The journal entries that form part of the reflective narrative are relevant to the time in which they were originally written. As my doctoral journey progressed, my understanding of research developed and my research skills became more proficient. I have, however, chosen to present these journal entries in their original format, as I believe this illustrates the extent of my professional growth as a researcher.

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Section One: Introduction

This section of the doctoral thesis is a personal account of the journey I have taken from enrolment to submission. Whilst personal, reflective and reflexive, it has been written in the knowledge that it will be made available to other students via the university's DSpace and through inter-library loan.

I chose to identify Cardiff Metropolitan University as the organisation in which this research was undertaken. This was based on an internet search using 'Gill Jones' (student name) and 'Director of Enterprise' (professional role) that resulted in seven matches to information readily available in the public domain, identifying Cardiff Metropolitan University as my place of work (see PDP Appendix One: Internet Search, page 420). Likewise, the names of my Director of Studies, Emeritus Professor Janet Laugharne, and Supervisor, Professor Scott Fleming yielded eighteen and seven hyperlinks, respectively, further corroborating the identity of the university. This may be the case for many doctoral students; for me, however, it made no sense to adopt a pretence with the use of a pseudonym for the university. That said, the approach required rigour in maintaining the anonymity I assured those who contributed to the research.

Throughout, I completed the Annual Monitoring Reports and made notes of meetings with my supervisory team. When attending training sessions I dated and annotated handouts for reference and inclusion in this account. In addition, I used personal notebooks to record thoughts; more latterly, engaging in electronic journal entries. These

documents are referred to, where relevant, throughout the personal development portfolio.

The account is presented in five sections. This section provides an introduction to the narrative. Section two, examines the theoretical approach adopted in reflecting on my experience as a researcher. It offers an insight into the way in which my upbringing and background shaped the approach to both my career to date and doctoral journey. This section also examines the changes that impacted on enterprise practice and research activities during the period of study, 2009-2013. Section three reflects on my doctoral journey. It covers the taught element and professional development activities I experienced to develop and enhance my knowledge and skills as a researcher. It explores the research skill set and takes the reader through the somewhat painful journey undertaken to gain a greater understanding of what I have referred to as 'the hardologies': ontology, epistemology and methodology. This section also includes the contribution to date that I have made to the research community which has been regional, national and international. One of the key areas of this section relates to the writing retreat undertaken to analyse the research data and engagement with a daily, 'Dear Diary' dialogue with my supervisor, Professor Scott Fleming. Section four explores my professional future. It considers the skills I have developed in relation to the Researcher Development Framework (Vitae, 2010). It considers the potential of the S4E model (Strategic significance for Enterprise, Support for Enterprise, Synergy for Enterprise, and Success for Enterprise) as an original contribution to knowledge and enterprise practice in Higher Education. This section concludes with an exploration of

enterprise as a vehicle for curriculum enhancement, the learning, teaching, research and enterprise nexus. The final section provides a summary and conclusion to the narrative.

Section Two: Reflection as Part of the Doctoral Journey

Since the 1990s, there has been an increased interest in the use of professional development portfolios for those engaged in professional learning (Hall, 1997). Professional development portfolios provide a record of key events but more importantly, provide a structure to record the process of professional learning, facilitate reflection on experience and promote future career planning (Hall, 1997; Moon, 1999; Malthouse and Roffey-Barentsen, 2013). As a lecturer of post-compulsory education and training, I have been well versed in extolling the benefits of the professional development portfolio with my own students. This did not, however, suppress the initial response to the task of the PDP assignment as *“...a bit of a nightmare. I can do the bits about skills development and professional planning but making sense of emails, notes and diaries... will be a challenge”* (notebook entry, 17th April 2014).

When teaching, I could relate to Schön (1991) who talked of ‘reflection in-action’, which I applied to changes I made whilst in the act of teaching, and ‘reflection on-action’, that I considered post-session, looking at ways in which I could improve my practice next time. In the context of the personal development portfolio, the reflection was of my experience and learning as a researcher, particularly as a participant-observer (Fook and Gardner, 2007).

The doctoral journey is personal and different for each individual. In this case, however, it also fed into targets set in the Corporate Strategic Plan 2012-2017, for 50% of staff to

have/achieve a doctoral qualification by the end of the planning period. In 2012-13, 34.9% of staff in the Cardiff School of Education had a doctoral qualification. Progress by department at this time was variable, namely 16.7% in the Department for Teacher Education and Training, 30% in the Department for Professional Development, and 63.6% in the Department for Humanities. Across the School, there was a mix of those with a PhD and those with the Professional Doctorate. Controversially, Murray (2002) suggests that it is the PhD that makes the contribution to knowledge with the professional doctorate improving practice within the profession. The Professional Doctorate has matured and Murray's (2002) perception may well have altered over time, however, I disagree with her generalised statement. Whilst my research improved practice within and across the Cardiff School of Education, it also made an original contribution to knowledge in the field of enterprise practice in Higher Education.

PDP: 2.1 Career Background

O'Leary (2004, p.1) describes research as a "thinking person's game" but, in the context of researching enterprise, that approach creates a divide between those who engage with the practicalities of enterprise, 'the doers', and those undertaking research, 'the thinkers'. Whilst I preferred the notion of exploring something (enterprise) that I was excited about (Clough and Nutbrown, 2007), I was also aware that the journey could be daunting (Phelps, Fisher and Ellis, 2007). There were many instances in my doctoral journey when I related to both those emotions.

My career in Higher Education has been based around the role of lecturer for post-compulsory education and training alongside engagement with enterprise. For me, research has been an outcome of enterprise, rather than enterprise being an outcome of my research. I have attained success through enterprise achieved by hard work, a strong work ethic and a positive attitude.

I had an 'alternative route' to Higher Education. Having had my children first, and also set up a small business, I returned to education as a means of teaching the skills I had learned through my business venture. These business skills helped me in my role as Director of Enterprise. I am aware of my strengths and I am comfortable recognising the boundaries of competences and asking for help. One such incident was linked to my struggle to understand what I referred to as the 'hardologies' (ontology and epistemology). This led to the task of writing a biographical piece about 'me and my values' (see PDP Appendix Two: Me and Understanding Me, page 422) as a means of understanding the way I look at the 'world'. In *The Sociological Imagination*, Wright Mills (2000) highlights the connections between the personal, historical and social dimensions that drive and propels us in life. The account I wrote as part of doctoral journey was personal and very open, and unbeknown to me at that time, made these links. The account revealed many aspects of 'me' that I otherwise would not have shared with a wider audience but also made me realise the extent to which my life experiences have influenced me. The task was enlightening; on reflection it made me realise that I had many skills that were relevant to research. For example, being hardworking, loyal and committed, a people person, well organised and practical. It also made me reflect on the

things I did not do so well. For example I noted that I had difficulty at that time working with statistics and grappling with theoretical concepts.

This led to the task of explaining what a theory was (see PDP Appendix Three: A theory is..., page 428), which made me realise the importance of common sense reflection (Moon, 2004). Observing at the time:

...when I said that I liked to know how and why things work and fit together I was thinking of the relationship with practice and doing... I simply haven't given enough thought to the need to organise my observations of 'doing' into any sort of order so that I can relate them to what other 'doers' are doing and see if there are similarities or unusual happenings that could be explained (Journal entry, 19th May 2012).

Moon (2004) describes common sense reflection as a form of thinking, mental processing that can sometimes result in an unexpected outcome. I liked this approach, as it allowed for free thought and the element of creativity. There was no expected result, so therefore, no failure. Whilst I 'rambled' in my reflection, it led to a personal definition of theory at that time that I would have been unlikely to reach otherwise.

A theory is something that is based on observed practices which have been organised and categorised to form a truth (Journal entry, 19th May 2012).

Engaging with reflection also made me realise that there were elements of 'me' that I wanted to keep. I recognised that I often put the needs of others before my own. Writing: "I am not good at saying 'no'. I am not good at prioritising myself", but also acknowledged that this stemmed from "my upbringing. Big families are 'teams'. Farming

families are 'communities'". However, this is a value that makes me, 'me', it is linked to my identity and something I do not wish to change.

PDP 2.2 Managing Change

The first module undertaken as part of the professional doctorate was 'Contextualising Professional Change' although, at that stage, I was unaware of the extent to which change would impact on my professional role and ultimately, my research. This lack of awareness, in some part, reflected Fullan's (2007) suggestion that we become so accustomed to change that we rarely stop to think what change really means. This is relevant to a School of Education well versed in managing changes brought about by updated professional standards, Welsh Government priorities, Estyn inspection and QAA Institutional Review. Changes I encountered included those that were planned at institutional and School level and those that were unique to my professional perspective (McCaffery, 2004).

At an institutional level changes included:

- Name change from University of Wales Institute Cardiff to Cardiff Metropolitan University (2013);
- Updated Corporate Strategic Plan (2012);
- Staffing change – Pro-Vice Chancellor for Research and Enterprise role replaced by Pro-Vice Chancellor Research and Pro-Vice Chancellor Enterprise (2012);

- Revised criteria for internally/externally funded projects (2010; 2011; 2012; 2013).

At School level changes included:

- Updated School Strategic Plan (2012);
- Staffing changes (ongoing);
- Enterprise Support Team incorporated research, becoming the Research and Enterprise Support Team (2011);
- Redesigned curriculum for the Enterprise International Foundation Course (Elective Review, 2010).

From a professional perspective changes included:

- My mentor for the professional doctorate retired (2009);
- Change in role, promoted to Director of Enterprise (2009; 2012);
- Change of supervisory team and Director of Studies (2011);
- Change in role, promoted to Deputy Dean: Learning and Teaching (2013).

On reflection, whilst an ongoing process, the changes encountered were multidimensional in nature (Fullan, 2007). Using Fullan's (2007) model for change situations, as Director of Enterprise I was in a position of authority, a 'planner' and 'policymaker' initiating change at School level but also in the position of 'coper with authority', responding to institutional change. As a student undertaking research, according to Fullan (2007) I was in the position of 'coper without authority'. However, given the duality of my position as

Director of Enterprise and student researcher, I was afforded a degree of autonomy in initiating and managing professional change across the timeline of my doctoral journey.

Section Three: Reflections on Undertaking the Professional Doctorate

Members of my current supervisory team were a major support mechanism; encouraging me and challenging me to do better. John Gill (2014), in his article in the Times Higher Education entitled *'The good, the bad and the ugly'*, talks of the role doctoral supervisors play in developing the next generation of researchers. He mentions the 'blessing' of an inspirational mentor and the 'curse' of being stuck in a relationship that does not work. Saying "an inspirational supervisor can nurture a career, while a poor one slows its growth" (Gill, 2014, p.5).

PDP: 3.1 The Doctoral Journey Begins

In preparing for growth, as part of the doctoral journey I needed to consider my existing research skills. Dawson (2009) suggests that this helps to establish the appropriateness of knowledge and experience in relation to the research focus. I could relate to 'enthusiasm', having an 'enquiring mind', a willingness to 'seek new challenges' and 'working with others', alongside more realistic elements such as reading and synthesising complex material and managing my workload (Boden, Kenway and Ellis, 2005). I was even happier to consider 'project management' and 'networking' (Phelps, Fisher and Ellis, 2007), as these were skills I was comfortable with through my Director of Enterprise role. However, as a novice researcher, I was relieved to note that possessing a full complement of research skills was not a prerequisite for undertaking doctoral research,

as the journey itself provided the opportunity to learn and hone these skills as part of the research process.

The structure of the professional doctorate included five core elements: Contextualising Professional Change; a Literature Review; Ontological, Epistemological and Methodological Perspectives; the Doctoral Thesis; and the Professional Development Portfolio. There were two aspects that made the programme manageable alongside a full-time managerial role. Firstly, that assessment was incremental, for example, the literature review assignment was the starting point for the thesis itself; and secondly, that it was based on my professional practice.

Having previously enrolled and withdrawn from the PhD programme, I was very aware of the importance of the role my peers would play in my professional doctoral journey. I am a social person. I like working with others. I need to feel part of a community. Reflecting on this, at this point in time, I realise that this is linked to my values, (see PDP Appendix Two: Me and Understanding Me, page 422). I commented on the initial induction programme in one of my progress reports, noting that it *“allowed me to network with others in the School... and in the broader academic community”* (Progress Report November 2009). Clearly my peer group were of a similar frame of mind as we made a commitment to become ‘study-buddies’. Jane Lark (a pseudonym) wrote that she felt fortunate to be with the group and Nial Badman (a pseudonym) set up a wiki for us to keep in contact with each other. This element of peer support was invaluable at the

outset and throughout the taught elements of the programme, in turn, deepening the level of reflection (Moon, 2004).

PDP: 3.2 Managing the Doctoral Journey

There are generic characteristics of research (Coe, 2012): it is critical, it seeks to scrutinise claims and assumptions; it is systematic, a deliberately planned activity that aims to consider all the evidence relevant to the research questions; it is transparent, in that any prior beliefs or conflicts of interest are disclosed, and the methods, arguments and data are clear enabling another researcher to replicate the study; it is evidential, based on evidence not opinion; it is theoretical, guided by and seeking to test theory; and it is original, adding to existing knowledge. One of the crucial facets I initially struggled with was the theoretical framework, being able to understand my own view and the views of others (ontology), how I knew about it (epistemology) and the different values (axiology) that underpinned my research.

As part of my continuing professional development, I attended a two-day workshop at Cardiff University, *'The Effective Researcher'*. At the time, I noted in my Progress Report, that it "was a big time investment". The course was strongly focussed on "a PhD approach [with] no recognition of a Professional Doctorate". That said, it made me aware of the need for research questions, as until that point, I had always worked with research objectives; writing "this was useful, although I am getting confused with the need for Research Questions and Research Objectives (something to clarify with my team)". One

of the very positive aspects of the programme was the discussion relating to management of the supervisory team. I reflected that I needed to do more to manage the situation I was in because the key message from the workshop was “I [was] the driver”.

As such, in my Annual Monitoring Report 2010-11, I mentioned the difficulty of being a busy student in a senior management position trying to arrange tutorials with a busy Director of Studies who was working on external projects:

The external commitments of the appointed Director of Studies have made scheduling meetings a challenge... Despite having agreed the schedule of meetings at the start of the year, these were constantly cancelled and rescheduling was made difficult. When work was submitted, feedback was delayed... the hands-off approach [was] demotivating... If I hadn't had a proactive supervisor I would have given up. This is not good for staff who are trying to combine work and study (Annual Monitoring Report 2010-11).

Following the submission of the annual monitoring report, I submitted an application for a Change of Supervisory Team in September 2011. In the words of John Gill (2014) I considered myself ‘blessed’ with the changes made. The turn of events had a positive impact not only on my outlook as an insider-researcher (Dandelion, 2000; Coghlan and Brannick, 2010) but also on my level of motivation and my willingness to reflect and engage in challenges to develop my repertoire of research skills. Reporting in the following year that:

I have engaged more fully with the PDP process in this academic year. Partly because of the encouragement I have received to write about things I find challenging and partly because it has enabled me to give myself time to reflect on my research... They have been very supportive of the progress I have made... and offer academic challenge with regard to 'hardologies' and taking my work into the

research community. They do not let me get away with things... they encourage me to engage with the aspects of research that I find difficult (Annual Monitoring Report 2011-2012).

It was in the academic year 2012-13 that the nature of my insider research changed. Until that point, the research undertaken had been private. Academic staff in the Cardiff School of Education were unaware that I was undertaking research. As an academic member of staff myself, it was 'insider-to-the-group' research (Dandelion, 2000). The release of my on-line questionnaire (in both English and Welsh) made my research public, overt insider-to-the-group. As insider research there was the advantage of access, being close to my potential participants. However, as a senior manager who knew every member of academic staff in the Cardiff School of Education, it was important that they trusted the motives of my research. I went to great lengths in my application for ethics approval to ensure that participants would be aware that I was undertaking the research as a student who was also the Director of Enterprise.

Reflecting on the release of the on-line questionnaire (see PDP Appendix Four: Journal Entry 12th September 2012, page 430) I noted that it "was quite unnerving... the 'teacher' and 'money-maker' playing at research – what would the 'real' researchers in the school say?" This was an important reflection, as it made me realise that this was a two-way process and that there were research active staff in the School who may want support with income generation. I was also pleased that I had taken the time to develop a Welsh medium version of the on-line questionnaire for the 15% of academic staff in the School whose first language was Welsh, commenting that:

...one of the most pleasing aspects of releasing the questionnaire has been the messages of goodwill I have received - particularly from those who have completed the Welsh version of the questionnaire and thanked me for providing it (Journal entry, 12th September 2012).

PDP: 3.3 Contributing to the Research Community

Whilst research involves systematic enquiry to find new knowledge and understanding, there is also a need to share research outcomes (Menter, Elliot, Hulme, Lewin and Lowden, 2011). This aspect of sharing research outcomes forms part of the Researcher Development Framework (Vitae, 2010). This is presented in the framework as public engagement, under domain D, sub-category D3 Engagement and Impact. Both my research and my enterprise activities have been shared via conferences and workshops. Over the timeline of this research, I presented regionally, nationally and internationally.

Regionally, I presented a keynote speech entitled *'Quality Assurance: developing the capabilities of academic staff and senior managers'* at the 3rd annual conference of the Arab Organisation for Quality Assurance in Education (AROQAE) hosted by Cardiff Metropolitan University in June 2011 (see PDP Appendix Five: AROQAE Conference 2011, page 433). This was my first experience of sharing research outcomes at a conference, with the added challenge of simultaneous translation for delegates whose first language was not English. Whilst presenting at the conference, it also provided the opportunity to listen to others and network (Rugg and Petre, 2004). I made mention in my notes at the time that it was "...useful to see how others approached the task. As a teacher, I want

delegates to understand me. Some presenters seem to be less worried about that” (annotated conference notes, 17th June 2011).

I also presented a one-day workshop on 18th July 2011 at the Cardiff School of Education International Summer School. The workshop, entitled '*Strategic planning: innovation and entrepreneurship*' (see PDP Appendix Six: CSE International Summer School Workshop 2011, page 435) was developed for a group of academic staff from Saudi Arabia who were visiting the university. The aim of the programme was to develop the strategic planning capabilities of its senior managers. The workshop linked directly to my research and included the followed learning objectives:

- To examine the concept of innovation and engagement in the context of Higher Education, regionally, nationally and internationally;
- To explore the strategic imperatives for staff engagement with innovation and engagement activity at School/Faculty level;
- To discuss the range of innovation and engagement activities undertaken within the Cardiff School of Education;
- To consider the potential for future engagement with innovation and engagement activities and the interrelationship this holds with strategic planning.

As part of the preparation for this workshop, I attended a conversational Arabic course. Whilst a basic programme that covered simple introductions and directions, delegates appreciated the additional efforts made.

This led to an invitation to present at the '*1st Learning and Teaching Forum*' held at one of the top universities in Riyadh, Saudi Arabia. The four-day conference, held in September 2011, included the presentation of two papers and two workshops. When reflecting on networking, professional reputation and esteem (Vitae, 2010), I realised the importance of international networks. Before leaving the UK, I had an e-mail from an agent based in Riyadh with an attachment of a newspaper cutting (see PDP Appendix Seven: 1st Learning and Teaching Forum Media Communication, page 443) announcing my arrival for the conference. I had several aspects of this international conference to reflect on. One of prominence was the effective use of technology to address the issue of distance between campuses as well a means of accommodating cultural and religious requirements. I was also impressed by the way in which all conference materials were made available bilingually, Arabic and English (See PDP Appendix Eight: 1st Learning and Teaching Forum Saudi Arabia, page 445 PDP). I was also somewhat flattered by the 'honorary' title of 'Doctor Jones'. The real title entailed a longer journey.

More recently, and with specific regard to the latter stages of this research, I presented at the Enterprise Educators UK conference at Bath Spa on the 8th April 2013. The presentation is available online via the EEUK website (Jones, 2013a). Following the

conference, I emailed my supervisory team to share my pleasure that the presentation had gone well and that delegates had considered the model of support that I had devised to be worthy of photographing (Jones, 2013b).

I realise that sharing the outcomes of my research is an area that I will need to focus on in terms of ongoing professional development, into the future.

PDP: 3.4 Dear Diary

The 'Dear Diary' stage of my research was linked to a ten-day writing retreat that I took in February 2014 to analyse my research data. The rationale that underpinned this approach was based on acknowledgement that work and life commitments made it difficult to set aside time to make sense of the data and make progress in writing up the doctoral thesis. I had become fixated on the need to write 20,000 words for this chapter, which made it difficult to begin writing the first sentence; I needed time alone to focus. The 'retreat' happened to be an isolated cottage on a cliff side in north Cornwall. The timing coincided with extreme weather conditions. Nonetheless, I booked annual leave, filled the car with books, files, papers and laptop. Just as I was about to 'escape', I received a request for a daily report on progress from one of my supervisors. Unbeknown to me at the time, this became part of my research journey, learning about myself as a researcher and complementing the evaluation of data; and ultimately, giving importance to reflecting on the process of engaging with the research outcomes (Fook and Gardner, 2007).

The drive to Cornwall, given the weather, was frightening and it was a cold, isolated and lonely cottage. My daily reporting became my link with the outside world and what began as a task to show that I had achieved something soon became a reflective dialogue linked to my research that I affectionately refer to as 'dear diary'.

My 'dear diary' entries (see PDP Appendix Nine: Dear Diary, page 447 PDP) articulated my thoughts and reflections at the end of each day. They were less structured than a formal journal entry (Malthouse and Roffey-Barentsen, 2013). However, standing back and reflecting on these diary entries at a later date, allowed for second order reflection (Moon, 2004), fostering mental processing and deeper learning with regard to my research journey.

This second order reflection brought home the reality of Maslow's hierarchy of needs (Maslow, 1970) as mention was made daily to the need for warmth, food or safety. With regard to physiological and safety needs, I mentioned arriving safely (Dear Diary 31st January 2014) and the need to buy firewood to keep warm (Dear Diary 2nd February 2014); even sharing that it was so cold I had purple knees. An effective element of encouraging in-depth reflection was my supervisor's engagement with me, for example, in the e-mail exchange, his noting that "purple knees are a small price to pay for pushing back the frontiers of knowledge". He also encouraged me to keep focussed. When I mentioned the challenges faced as a result of the weather (Dear Diary 4th February 2014) he responded, "hope weather continues to be too bad to do anything other than what you're there for". Having lapsed into an email exchange I was reminded to "stop wasting

time sending unnecessary emails". Whilst I recognised my tendency to procrastinate, I was also aware that it was difficult to maintain long writing days. Thankfully this was acknowledged – "even with good intentions, writing can be tiring and it's difficult to sustain output – especially... when it's a complex cognitive task".

One of the enlightening aspects of the 'dear diary' reflections was my approach to the task. What had begun as a simple diary entry that recorded research related and non-research related achievements soon became more enquiring and academically engaging. I began learning through self-disclosure and dialogue (Fook and Gardner, 2007). Initial entries focussed on the progressive record of word count. For example "I have managed to get 2044 words" (Dear Diary 1st February 2014), "I have managed to clock up 4906 words" (Dear Diary 2nd February 2014), noting the following day that I had "reached the dizzy count of 8069" (Dear Diary 3rd February 2014). On reflection, this approach was based on quantity and not quality. This was reinforced by the comments of my supervisor on the first submission of work to-date, when he indicated that it was "good but it's not right" (Fleming, 2014).

From day four onwards, whilst a focus on the word count did not completely subside, a meaningful exploration of the findings and an evaluative consideration of research methods began to emerge. I discussed the challenges of translating Welsh medium responses to the on-line questionnaire and the malfunction of the question word limit utilised for one of the open response questions used in the on-line questionnaire. I began to discuss the strategies used in analysing and presenting data noting that I had "ended up with a pile of post-it notes that... could be made into some sort of visual thing" (Dear

Diary 4th February 2014). Not academically articulate but my creativity was intensifying and reflection on my research skills was developing. I also began to challenge the research-enterprise nexus in the Cardiff School of Education and was reminded that research “affects our status as a university, and without it we wouldn’t be a university at all” (Fleming, 20014).

At this time, daily objectives mutated from word count to analysis of a set number of questions from the on-line questionnaire and interview guide. The diary entry for 5th February 2014 highlighted that I had “hit target, covering questions 17, 18, 24 and 25 and the interview questions 6 and 15” and that I had begun to apply the “relevant-interesting-important” guidance received on day four. With regard to analysing data, I recognised that I preferred to do this myself, noting “data crunching the old fashioned way suits me. I could have done it with Checkbox but am far more hands-on doing it this way” (Dear Diary 6th February 2014). I was not afraid to express that preference. I began to consider potential recommendations to address some of the issues I had identified. Whilst good progress was made, I nonetheless, fretted about having a ‘thread’ to tie the work together at the reporting stage.

When considering reflective practice, Malthouse and Roffey-Barentsen (2013) highlighted the challenge of being ‘stuck’ and this was a fair indication of where I was in relation to organising the reporting of data. I was striving to emulate Dr David Gibson OBE and his ELVIS model presented at the Future Directions for Skills and Employability conference (HEA, 2013). I reported on day one that I was “trying to get some sort of acronym for reporting my themes” (Dear Diary 1st February 2014), although it took a

‘blue screen’ moment to achieve this breakthrough. I shared my unconfident, initial thoughts: “[I] have thought of a way to present things... S⁴E... Four things beginning with S that will promote the longevity of enterprise into the future” (Dear Diary 8th February 2014). The four components included strategic significance, support, synergy (skills/knowledge of academic staff), and success.

Brockbank and McGill (1998) emphasise the importance of feedback in reflective learning and its need to be effective and constructive. My emergent model for enterprise was greeted with “I like the 4S’s very much. Very neat... this could become a spangly model that will appear in strategic documents for enterprise. If it works out well, it could be brilliant. Really” (Fleming, 2014).

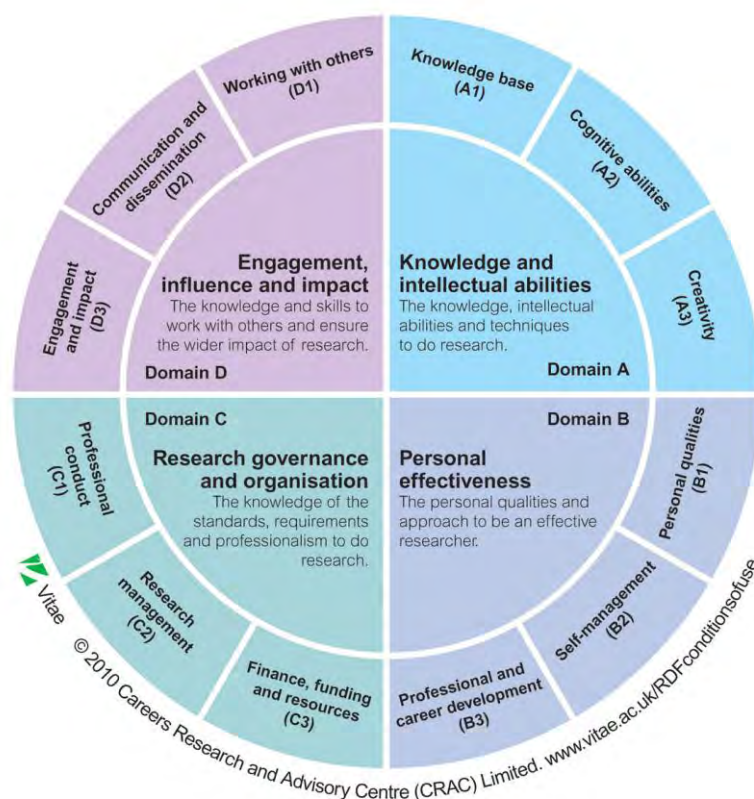
I had achieved my aim to analyse and organise the research data leaving me with a sense of fulfilment. Throughout my retreat I felt “loved and supported... I have so many people pushing me up this hill, willing me, gifting their time... I am extremely fortunate” (Dear Diary 4th February 2014). This was picked up by my supervisor who indicated that “the idea of going away to write is such a public display of your own commitment... it has inspired others to help in whatever ways they can”. He went on to note “*The trick will be not to lose [momentum] when you’re back in the real world*” (Fleming, 2014).

Section Four: Professional Future

I have encountered many changes along my doctoral journey. One such change has been the introduction of the Researcher Development Framework (Vitae, 2012). The framework is extolled as a new approach to developing the skills of researchers. It is based on four domains:

- Domain A – knowledge and intellectual abilities
- Domain B – personal effectiveness
- Domain C – research governance and organisation
- Domain D – engagement, influence and impact.

Each of the domains is split into sub-domains (see PDP Figure 1, below). The framework domains include descriptors/characteristics with regard to the knowledge, behaviours and attributes of successful researchers. The characteristics are expressed in phases that are linked to stages of development of the knowledge, behaviours and attributes. Alongside this, Vitae developed an Enterprise Lens (Vitae, 2011) that enables researchers to use the skills they have developed for enterprise activities. What was of particular interest to me was the acknowledgement that the knowledge, behaviours and attributes developed by researchers can also be achieved through engagement/experience with enterprise activity.



PDP Figure 1: Domains and Sub-groups of the RDF

(Vitae, 2014)

The framework enables researchers to evaluate and individualise personal development to focus on the area of expertise they wish to develop. I am late in engaging with the framework, hence its appearance in the latter section of the professional development portfolio. However, I was heartened to note that some phases can be reached through enterprise experience. Accordingly, I used the framework and mapped my knowledge behaviour and attributes as they relate to my research experience as well as my enterprise experience (See PDP Appendix Ten: Researcher Development Framework Personal Skills Audit April 2014, page 470).

PDP: 4.1 The Enterprise Lens (Researcher Development Framework)

It came as no surprise to me that my strongest area within the framework is 'working with others'. Additionally, I was more confident in assessing/auditing my knowledge behaviour and attributes as they relate to enterprise. There were a number of statements where I considered that the audit for research was counterbalanced by my audit of enterprise. For example with regard to Domain B- career development: networking and reputation/esteem, I felt it was quite natural for me to have a stronger enterprise network (phase 4) and reputation for enterprise (phase 5) as I had been Director of Enterprise for 4 years but am early career researcher and have to develop these further in that context (phase 2). Likewise, in Domain D – engagement, influence and impact: communication/dissemination; engagement/impact; global citizenship, I recognised that I have no publications to date linked to my research (phase 1) but have a publication linked to enterprise. Likewise, I have presented my research at a number of regional and national conferences (phase 2) but delivered key note speeches regionally, nationally and internationally for enterprise (phase 4/5). The one area for development that relates to research and enterprise is Domain B – self management: work life balance, I recognise the need for others to have a work-life balance but am poor at prioritising my own needs over the needs of others (discussed previously).

PDP: 4.2 The Learning, Teaching, Research and Enterprise Nexus

Along my doctoral journey, I have gained an increased insight into my own approach to research and the way in which both my research activities and enterprise activities enhance the student experience. Research continually reshapes knowledge (Jenkins, 2009) and much is made of the need for greater connection between research and learning and teaching (HEA, 2009). This not only enhances the student experience, it also offers opportunities to develop graduate attributes. The Higher Education Academy (2009) differentiates between research orientated learning and teaching (learning how to undertake research), research led learning and teaching (learning about the research of others) and research informed learning and teaching (learning that is informed by research). However, I believe that there is a need for greater synergy between research and enterprise and recognition that enterprise activities in the Cardiff School of Education inform learning and teaching and thereby enhance the student experience.

To illustrate this point, the Cardiff School of Education won the Welsh Government contract to design the training materials for the PISA (Programme for International Student Assessment) staff development programme. Whilst an enterprise activity, the knowledge gained as a result of designing and developing the bilingual training materials, informed the learning and teaching experience (research led) for trainee teachers. Subsequent activity involved researching the extent of the awareness of the materials allowing for research informed learning and teaching. In the same way as research active staff enhance student learning with new knowledge, enterprise active staff in a school of education achieve similar enhancement with new practices, using their first hand

experience in enterprise to promote good practice in learning and teaching. Enterprise informed learning and teaching, ELT. Of greater significance would be a move to re-categorise enterprise activity in the Cardiff School of Education as 'practice based research', facilitating a research, enterprise, learning and teaching nexus.

Section Five: Summary and Conclusion

Malthouse and Roffey-Barentsen (2013, p.16) pose the question “Do you learning by reflecting?” Well, in response, yes. Having stated at the outset that the idea of the professional development portfolio “was a bit of a nightmare” (notebook entry 17th April 2014), I now realise how much I have learned about myself and the journey I have undertaken as part of the Professional Doctorate.

I have had strong support from supervisors, colleagues, peers, friends and family. I have also recognised that many of the existing skills, values and attributes I possessed and applied to enterprise activities, were also relevant to research. I just had not realised their similarity.

I have learned many things about myself, for example, that I am persistent, ethical and want to achieve the professional doctorate. I also recognise that there are parts of ‘me’ that will remain unchanged; I am still ‘me’ and I quite like some bits of me. I like being a supportive colleague and cherish my informality; although I recognise that I need to articulate the outcomes of my research eloquently.

The task of reflecting on my research journey has enabled me to value the skills and knowledge I have gained. Into the future, I need to consider suitable goals to

communicate the outcomes of my research. These goals also need to reflect the change of role, from Director of Enterprise to Deputy Dean: Learning and Teaching.

PDP: 5.1 Action Planning: Short-term goals

My short-term goals include:

- Submission the thesis by the end of December 2014;
- Communicating the outcomes of the research to the Cardiff School of Education's Senior Management Planning Team in the autumn term 2014;
- Sharing the S⁴E model with Cardiff Metropolitan University's Research and Enterprise Services in the autumn term 2014.

These short-term goals will enable me to share the research outcomes with those responsible for School and institutional strategy in relation to enterprise.

PDP: 5.2 Action Planning: Medium-term goals

My medium-term goals include:

- Providing staff development within the Cardiff School of Education relating to the knowledge, skills and attributes that foster an enterprise culture in an educational context;

- Presenting the S⁴E model at an academic conference in the academic year 2014-15;
- Submitting the S⁴E model for publication in a peer reviewed journal in the academic year 2014-15;
- Submitting the 'Dear Diary' account for publication in a peer reviewed journal in the academic year 2014-15.

These medium-term goals will ensure that the research is communicated at School level and address the need for staff development recommended as an outcome of the thesis. The goals will also ensure that I continue to communicate the outcomes of my research.

PDP: 5.3 Action Planning: Longer-term goals

My longer-term goals include:

- Championing institutional acknowledgement for enterprise active academic staff;
- Embedding enterprise education across the Cardiff School of Education curricula by the end of the school's current strategic planning period (2012-2017).

The longer-term goals are more strategic, influencing not only the practices of academic staff but also providing them with the appropriate skills set to enhance the student experience. To embed enterprise and enterprise education in the curriculum; achieving a learning, teaching, research and enterprise nexus.

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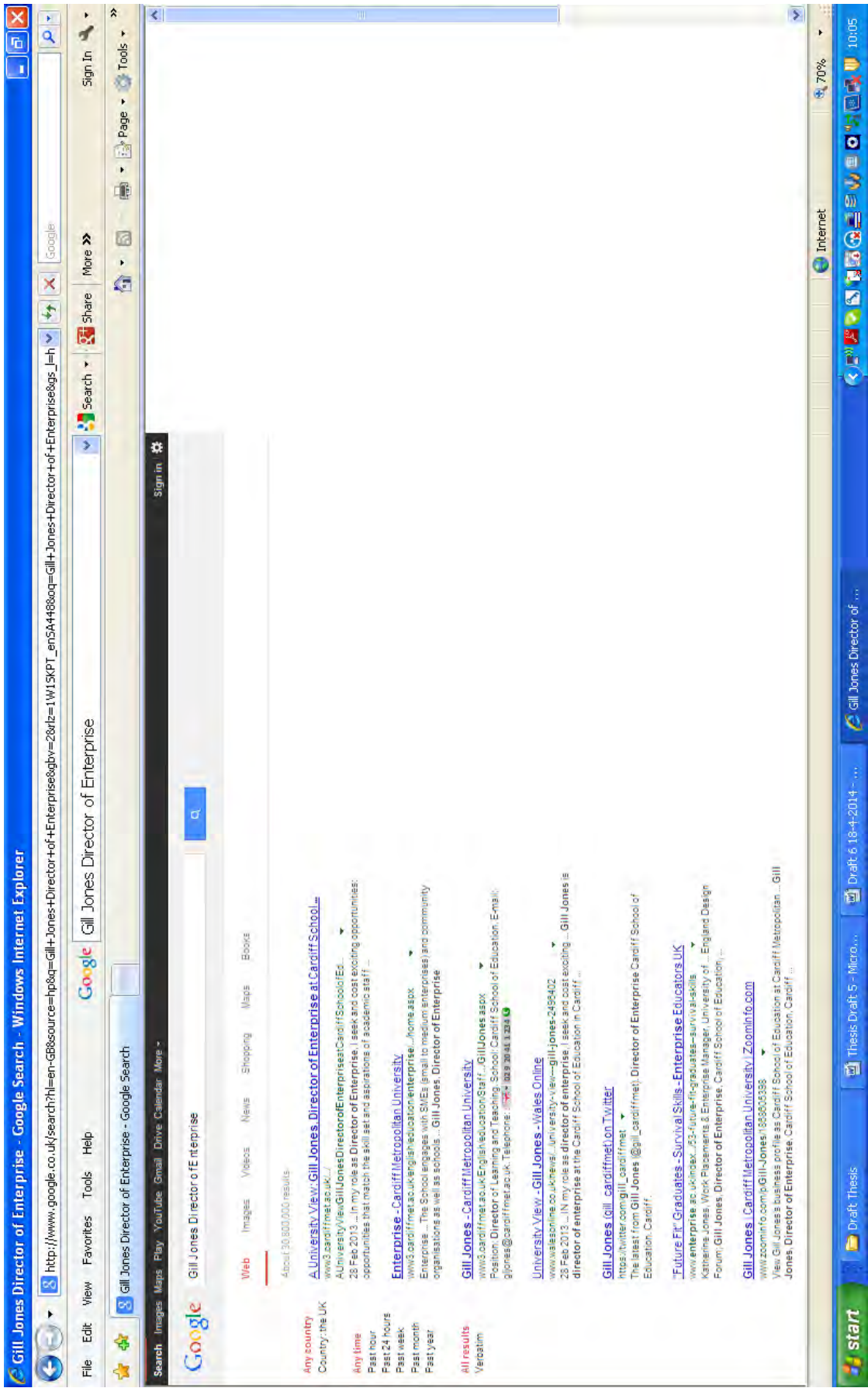
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PDP APPENDICES

PDP Appendix One: Internet Search



PDP Appendix Two: Me and Understanding Me

Journal Entry 16th May 2012**Me and understanding me in relation to the research problem.**1. My Background

I am one of six children. I have five brothers, (two with learning difficulties; and my eldest brother died 12 years ago – of a heart attack). My mother (86 and survived breast cancer) and father (88 and now has Parkinson's) have been married 60 years and have been a strong influence in what is the 'me' I am now. Particularly in relation to the role I undertake at Cardiff Met. and my application to things I take on board in life, in general.

When I was about three years of age, my parents invested their savings and bought what was then called a supermarket. Today it would be called a grocery store and on the radar of Tesco Express (am I digressing?). As children (teenagers) we were expected to help in the shop; my parents had (and still have) a strong work ethic. I remember once getting a Saturday job in Littlewoods and my dad blowing a fuse (yes, okay I am digressing). At one point, it looked as though two of my brothers would take over the family business but this was not the case as they set up their own businesses; one in Canada, a 'classic car business' and the other a 'landscaping business'. The family grocery business was sold approximately 12 years ago and then my parents retired.

In the middle of this, I got married and had three children. At this point I had no vocation, no profession. Things were financially tight and I started making and selling cakes and pastries. At the same time, I started knitting jumpers. My mother was clearly a strong influence here as she had taught me to cook and taught me to knit! If I am honest with myself there was probably a bit about being 'Gill' here because at this time I was 'mum' everywhere else. I realised that there was a market for knitwear and invested in a knitting machine. I taught myself how to use it. Then spent the next eight years or so designing, knitting and selling jumpers and had my own mail order catalogue. I was also part shareholder in a craft shop where I sold my work. I had Lady Diana to thank. When she wore her famous 'sheep jumper' I was working around the clock. I had three piece-workers [*workers paid by the knitted piece*] and had taught them how to knit exactly as I wanted. I didn't know about Quality Assurance then but I knew that you had to please a customer and same applies in enterprise today.

My husband is a farmer. Likewise, his mother (now 93) and father (now 91) have a strong work ethic. Farming is a 365 days of the year lifestyle. It is hard work and long hours. It is asset rich and cash poor. My in-laws are very traditional – the farmer's wife has a role to manage the home. Good farmers' wives do not get involved in the business and they do not go out to work. This has given me food for thought. It has made me realise that I am independent and strong willed. (Mmm not sure that that is a good research value/skill).

My children are all very different and yet all very similar. My son Matthew is married and works on the farm. He is the person who has all the professional development points as he attends all the compulsory training days that are required in the farming industry today (his dad gets away with 'grandfather rights'). Matthew has set up an energy company, which is a wind turbine that powers the farm. (I can begin to see the entrepreneurial theme coming through). My elder daughter Kate has a degree in fashion and works on the bread counter in Marks and Spencer. She is amazingly good with ICT and does all the IT networking for the farm business. She has pushed the use of technology forward on the farm which is useful as many processes are now 'on-line'. My younger daughter Jessie is manager of a skin clinic in Cardiff. She has bought and done up a house to make a profit and is soon off to Australia for a year

'Hard work' and 'chance of opportunity' [*opportunities that seem to appear by chance*] are two things that I strongly believe in. It was 'chance' that when at a craft fayre selling my work someone asked me if I could teach others to knit. It was hard work that took me into the profession of adult education tutor. I started with one class and three learners and by the time I finished, had 9 classes and over 90 learners. I was the first person to have an Open College Network accredited programme for machine knitting in SEWales in my own right (digressing again!). To teach in Adult Education, I was required to have a 'qualification' the FAETC (Further and Adult Education Teaching Certificate) which was then, stage 1 of the Certificate in Education (FE). This was the deal breaker. I had to have the qualification to teach. This was daunting. I hadn't done anything 'schoolish' since leaving school. I didn't have confidence in my ability to write/study. Having been successful with stage 1, a year later, I signed up for the Certificate in Education (FE) Two years later, I signed up for the MA Education (PCET). By this time, I was also working part time at Coleg Gwent as a Curriculum Development Officer. Again 'chance of opportunity' as the work I had done in getting my own programme accredited by the OCN was relevant to the curriculum transformation that was occurring across community education as part of the F&HE Act.

When I completed the MA (PCET) at UWIC in 1997, I was asked to teach part time on the PGCE/Cert Ed (PCET) programme (6 hours a week). At this point, my son was diagnosed with Hodgkin's lymphoma so part-time work was a good diversion. In 1999, I got my first full time job with the OCN. In 2000 two 0.5 jobs for the department of lifelong learning were advertised. By 'chance' I mentioned that I would have been interested in both, making 1.0. I realised that having only worked for the OCN for 15 months that it was not good to jump ship almost straight away but knew that I wanted to teach; and teach at UWIC. I got the job I engaged in varying activities that were 'enterprise', the biggest being Learning Coaches. At this point, the Deputy Head of Enterprise role was advertised. Latterly, the Director of Enterprise role was advertised. By this time, my line manager

was aware that my interview skills were rubbish and that I couldn't 'sell myself'. I was mentored and clearly improved as I got the job. But that may have been because no one else applied.

With regard to the MA dissertation that must have been chance of opportunity because I had a distinction (they must have confused the mark with someone else's). I remember sitting in the first lecture and making note of all the words I didn't know in the margin so I could look them up later. I knew I had a problem when my margin was full and I didn't have anything on the page. The first task was to write an abstract. You paint an abstract! The 'hardologies' bit in the MA dissertation was luck not understanding.

In 2005, I signed up for a PhD. It was the wrong thing for me. I didn't like admitting defeat but I withdrew and signed up for the Professional Doctorate. I hoped that by having 'study buddies' who were doing modules at the same time as me that I would be 'dragged along' when my confidence in my academic ability wavered, particularly when hardologies appeared!

Now I am grappling with the 'hardologies' and it is 6.30am (time for a rewarding cuppa).

2. My Values

I am hardworking. It has been expected of me and I expect it of myself. This makes me a 'yes' person. If someone asks me to do something or if I can see something needs doing, I will do it. I don't shy away expecting someone else to pick it up, nor do I try and get out of doing something. I see this as a valuable asset with regard to the research.

I am honest. I expect this in others.

I am loyal/committed. I don't like to give up on something. This can be good in terms of research as it means I will endeavour to see the research through and not try to take shortcuts or compromise the findings.

I am a people person. I like being with people. I like doing kind things for people. I like it when I can work with others. This was one of the factors that made me select semi-structured interviews. You can get more from asking questions directly as you can pick up nuances and intonation that won't be apparent in a questionnaire.

I am practical. I try to find solutions and am quite happy to roll my sleeves up and pitch in. Sometimes this is right as it lets colleagues know that you are not a shirker and expect the same from them. Sometimes it is wrong - I should step back and be more strategic and think about the ways in which I best utilise resources (including staff).

I want to know how/why things work. Sorry, this is the bit that probably has got me into most trouble with the 'hardologies' so I am not sure that this is a value you appreciate! The practical nature of making things means that everything fits. Everything has a

purpose. Things have steps along the way. I can relate this to the research process itself. But still waiting for the ontological awakening.

I am positive. The ontological awakening will come! I am a cup half full person. Things that have happened in my life make me realise that you live for today so pack as much in as you can (although sometimes this can mean I take on too much and work through the night to complete things). I will get respondents to my questionnaire and I will get participants for interviews. This is linked to what I do for others. It isn't about favours returned, I don't think it is that crude, it is more about being nice to each other. Although I am ashamed to say I can think of an instance where I may not have been nice.

I am organised. You said so – my office is tidy. I like to organise things so that I can put my hand on them when I need them. I cram as much as I can into my day so don't have the time to go hunting for things. Time wasted. This will be good in research. As a value – I expect others to be organised, but realise that this is something I have less control over. (Oh dear, does that mean I am a control freak!)

I am supportive of others. I like to help other realise their goals. This is part of the teacher in me. I have also applied this to enterprise. When people have an idea, I like to look at the ways it can come into fruition. I also realise that busy people need support. This sometimes is my failing as I put the needs of others before my own needs.

I put others before me. I am not good at saying 'no'. I am not good at prioritising myself. This comes back to my upbringing. Big families are 'teams'. Farming families are 'communities'.

I appreciate what others do for me. In my personal life I have had support from others that I have really appreciated. It has made a big difference to how I have coped with things that have happened from time to time. I realise how much this means to me and try to do the same for others. I try to make a point of thanking people for doing things. In a professional context, when academic staff undertake a particular project that goes well or when evaluation sheets have shown how well an enterprise activity has been received, or even when a project financial target has been exceeded, I make sure line managers and the Dean are copied in to a note of thanks.

I am fair. I don't expect anything from others that I am not prepared to do or have a go at myself. I try not to 'put on' one person or a particular team when considering enterprise activities. I ask staff if they are interested and then we look at how they can be supported to do a task. I want willing and able people rather than 'pressed or pressured' staff undertaking commercial work.

I am not good with theoretical concepts. No explanation here. Fact. Not good for research but to focus on the positive, I am good at the practical stuff. [*Note: since this original entry, my understanding of theoretical concepts has developed and grown*].

I am not a statistician. This may be because I am a bit cynical. I believe that statisticians can make statistics say whatever they want them to. For example, you can take the positive approach and report that 70% of staff in the Cardiff School of Education engage in enterprise or the negative stance in saying that 30% don't. Nonetheless, I am good at organising data and am good at crunching numbers.

I am knowledgeable about business skills. Well perhaps not [*as knowledgeable as a lecturer from*] the Cardiff School of Management, but I have an understanding of things such as negotiation on price, providing a quality product/service, preparation and planning, marketing, letting others know what you have achieved, seeking funding opportunities. This background knowledge will influence the types of question I will ask in my research.

I am knowledgeable about enterprise. As above, undoubtedly my role as Director of Enterprise has given me skills, knowledge and understanding that will influence the types of question I will ask. It will also help in that I have a strategic awareness of enterprise activities in the school. The network with other DoEs and DoRs via the R&E Board is also an asset as I am able to make comparisons with other schools in Cardiff Met. It also helps in that I have access to information that others researching this particular topic may not have access to.

PDP Appendix Three: A theory is...

Journal Entry 19th May 2012

A Theory is...

Well, I had to do a bit of reading here before I started.

Yes, I can see now, that if I like to see how and why things fit together then this sits hand in hand with 'theory'. An interesting snippet of information I found when reading was that it comes from a Greek word, *theoria* which means 'looking at/viewing' as opposed to *praxis* which means 'doing' (theory and practice). So perhaps when I said that I liked to know how and why things work and fit together I was thinking of the relationship with practice and doing (yes, I am a 'doer'). I simply haven't given enough thought to the need to organise my observations of 'doing' into any sort of order so that I can relate them to what other 'doers' are doing and see if there are similarities or unusual happenings that could be explained.

If my observations aren't in order, then I can't prove that something is true to someone else. This will be important at the reporting stage of my research (see, positive – not if I get there ☺). When you make Yorkshire pudding with self-raising flour, it doesn't rise. I know that this is the case from 'doing'; what I haven't done is carried out any experiments, or measured anything to formalise this – to find out why this is the case. I can't justify the statement that 'when you make Yorkshire pudding with self-raising flour, it doesn't rise' (as an aside, you have to use plain flour!).

Where the theorist comes in is that s/he specialises in finding patterns in experiments/observations which can be used as the basis to make predictions. So the theorist develops the theory. The theory forms the basis for testing 'truth'. There can be different theories about the same phenomena as theorists have different perspectives and have based their theory on their observations (the different coloured lenses and the paradigms). Cohen, Manion and Morrison (2007) describe theory as a tool of the researcher, and so:

A theory is something that is based on observed practices which have been organised and categorised to form a truth.

When researching, I will need to make sure that the outcomes of my research are related to a 'truth' so that peers will listen to what I have found should it be a 'new truth'.

PDP Appendix Four: Journal Entry 12th

September 2012

Journal Entry 12th September 2012

Well, the 'send' button has been hit and the electronic questionnaire has been released.

It was quite unnerving.

I had intended to release the survey on Monday 10th – a week after the first day of the academic year, so that staff would hopefully notice the request in their in-box and it not be lost in a plethora of emails that had been stored up over the summer break. I also baked 100 muffins so that I could send out the request with the suggestion that staff have a muffin whilst they completed it.

However, the template for the Welsh/English versions of the questionnaire had to be set to zero which ISD did on the 11th. So the schedule was a bit delayed. This posed a slight problem as muffins are never any good the day after they are made, so in the end, I decided to 'release' the muffins on the 10th without mentioning my research.

In some ways, this was almost a reprieve!

When ISD rang on Tuesday 11th to say that the hyperlinks were ready, it was a bit like getting a call from the dentist – saying you had to come in immediately and have a tooth extracted. I felt very nervous/anxious. Despite the preparation and multiple trials, I still 'wanted to be sure' that everything would work - particularly as the conditions and branching built into the survey were an integral part of the questionnaire design. I also realised that what I was doing would be public. Up until this point in time, only a few members of staff knew that I was doing the EdD but this was letting everyone know.

I made sure that both the English and Welsh versions were released together. I didn't want there to be a delay - so made sure that both English and Welsh email requests were written, with the relevant Participant Information Sheets attached so that they could fly into the 'electronic ether' together.

Despite Scott's suggestion that I should not be self deprecating, there was still that element of stepping into the unknown. The 'teacher' and 'money-maker' playing at research – what would the 'real' researchers in the school say? (What is a real researcher? ☺)

I realised that this was an important reflection and relevant to this stage of the process because if I was having these thoughts, then it would be likely that other staff in the school who put learning and teaching and enterprise before research, may also have these feelings. It may also be the case that academic staff, whose focus is research, have similar feelings about engaging in enterprise activity – so I will embrace my thoughts for the moment. They may be pertinent in the analysis phase.

Afterthought:

One of the most pleasing aspects of releasing the questionnaire has been the messages of goodwill I have received - particularly from those who have completed the Welsh version of the questionnaire and thanked me for providing it.

PDP Appendix Five: AROQAE Conference 2011

Towards Harnessing Quality in Education and Research

16 – 17 June 2011, Cardiff, United Kingdom

الجمعية العربية لضمان الجودة في التعليم
The Arab Organization for Quality Assurance in Education

AROQAE

Venue:

Llandaff Campus, Cardiff

School of Management

building, University of

Wales Institute

Address

Western Avenue

Cardiff,

CF5 2YB

Contact: Office@aroqa.org

Day 1: Thursday, June 16, 2011

14:00 – 15:00 Welcome coffee - Registration

15:00 – 17:00 Opening

- Dr. Saleh Hashem, Secretary General of the Association of Arab Universities
- Dr. Faeqa AlSaleh, Senior Advisor to Secretary General/ League of Arab States
- Dr. AbdelQader AlFantookh, Deputy Minister of Planning and Information, Ministry of Higher Education, Saudi Arabia
- CEB Peter Williams, UWIC Governor, former Chief Executive - Quality Assurance Agency in the UK
- H. E. Chairman Tahlil Abu-Ghazaleh of TAG Org, Chairman of AROQA

Keynotes:

- Dr. Gill Jones, Director of Enterprise, Cardiff School of Education, UK
"Quality Assurance – Developing the Capability of Academic Staff and Senior Managers"
- Prof. Marco Winzler, Ass. Dean, Bonn-Rhine-Sieg University of Applied Science, Germany
"Quality requires Change: Adding Problem Based Learning Modules to an Engineering Curriculum"
- Dr. Tariq M. Al-Sindi, Senior Director, Higher Education Review Unit, Quality Assurance Authority, Bahrain
"The Impact of Quality Assurance Authority for Education and Training (QAET) Reviews on the Higher Education Sector in Bahrain"

17:00 – 17:30 Discussions

17:30 – 19:00 Open AROQA Board Meeting

19:00 – 21:00 Reception and Dinner Hosted by The US Naval Postgraduate School

Day 2: Friday, June 17, 2011

08:30 – 10:30 Session 1: Technologies, Standards, and guidelines for quality assurance and accreditation

Keynote:

- Mr. Tom Hazard, Naval – US Partnership for Peace Training and Education Center
"Academia as a means for Promoting a Collaborative Approach to Global Security"
- Mr. Jack Wills, International Conference, Workshops, and Exhibitions, GmbH, Germany
"The learning outcome gap: fostering technological innovation whilst maintaining quality - the potential, the pitfalls and the lessons learned"

Papers:

- Dr. Ellis Chouhri, Lebanese Canadian University, Vice President Lebanon
"Quality Assurance in Higher Education: Basic Concepts"
- Dr. Abdalmonem Tamam, Dublin City University - Ireland
"Quality Assurance in Irish Higher Education as a Sample"
- Dr. Reymon Malouli, Damascus University - Syria
"Education for total quality"
- Mr. Husan Al-Mughaini, Mascot College - Oman
"E-learning & technology interface: challenges of implementing e-learning systems in Oman"

PDP Appendix Six: CSE International Summer School Workshop 2011

UWIC, Cardiff School of Education

4/26/2014



STRATEGIC PLANNING Innovation and Entrepreneurship

- Developing a Culture of Staff Engagement
- The Strategic Cycle of Innovation & Improvement
- Looking to the Future

Gill Jones
Director of Enterprise
July 2011

Intended Learning Outcomes

- Examine the concept of innovation and engagement in the context of Higher Education, regionally, nationally and internationally;
- Explore the strategic imperatives for staff engagement with innovation and engagement activity at School level;
- Discuss the range of innovation and engagement activities undertaken within the CSE;
- Consider the potential for future engagement with innovation and engagement activities and the interrelationship this holds with strategic planning.



Background/Context



Corporate Strategic Plan



- http://www3.uwic.ac.uk/English/uwicresearch/publications/Documents/uwic_corporate_strat_final_lores.pdf

Strategic Planning: Day 6 - Innovation & Entrepreneurship

1

UWIC, Cardiff School of Education

4/26/2014



**Corporate Strategic Plan
The Vision:**

To be a premier provider of:

- Higher education that promotes student employability;
- Applied research & knowledge transfer.

Corporate Strategic Plan 2007-2011



**Corporate Strategic Plan
Delivering the Strategy:**

- Internationalised curricula
- Increased overseas student numbers
- Portfolio of flexible CPD provision
- Staff engaged in research - 50%
- Staff engaged in 3M activity - 25%

Delivering the Strategy 2008

CSE Strategic Objectives: 3M

O1: To increase the volume of enterprise activity and the contribution that this generates

- Proportion of CSE staff engagement in enterprise activity to reach/exceed 22% by 2012 (10% category 3)
- Reach/exceed CSE financial targets;
- Sustain/exceed 12% return of contribution

CSE Strategic Objectives: 3M

O2: To develop a portfolio of attractive CPD provision

- Validate and expand the MA CPD Framework;
- Increase number of postgraduate students by 10% annually;
- Market single modules/specialist courses;
- Hold two conferences per year.

CSE Strategic Objectives: 3M

O3: To play a leading role in supporting the WAG health agenda

- To contribute to the development of the Academy Health Wales providing expertise in the area of children's services and integrated centres.

CSE Strategic Objectives: 3M

O4: To gain wider recognition for our cultural and social contributions to the City of Cardiff and the wider region

- To continue to engage staff and students of CSE in third mission activities, as resources allow, to impact on at least 500 and adults annually;
- To improve the marketing and publicity of CSE third mission activities.

Strategic Planning: Day 6 - Innovation & Entrepreneurship

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4/26/2014



- Staff engaged in 3M activity - 25%

→

- Proportion of CSE staff engagement in enterprise activity to reach/exceed 22% by 2012
- 10% category 3

Standard 11: Relationships with the Community

Significant and appropriate contributions should be made to the community within which the institution is established drawing on the knowledge and experience of staff and the needs of the community for that expertise. Community contributions should include both activities initiated and carried out by individuals and more formal programs of assistance arranged by the institution or by program administrators. Activities should be documented and made known in the institution and the community, and staff contributions appropriately recognized within the institution

CSE Strategic Objectives: 3M

O1: To increase the volume of enterprise activity and the contribution that this generates

- Proportion of CSE staff engagement in enterprise activity to reach/exceed 22% by 2012 (10% category 3)
- Reach/exceed CSE financial targets;
- Sustain/exceed 12% return of contribution

CSE Enterprise Target

Set by Research & Enterprise Office:

2007-2008 £80k
 2008-2009 £80k
 2009-2010 £80k
 2010-2011 £120k
2011-2012 £130k

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Entrepreneurial activity ...

In what ways can a University or Faculty generate income?



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UWIC Funded Opportunities

- SIP** Strategic Insight Placement
- CPPD** Continuing Personal & Professional development (secondment)
- TDF** Training Development Funding
- NEF** New Enterprise Fund
- EEL** Extended Enterprise Leave
- KEPs** Knowledge Exchange Projects
- R&EIF** Research & Enterprise Investment Fund

Higher Education Funding Council, Wales

stimulate and direct the application and exploitation of knowledge to the benefit of the social, cultural and economic development of our society.

http://www.hefcw.ac.uk/docs/Circular%20W09%20HE%20Innovation%20and%20Enterprise%20Fund%20to%202013_14.pdf

Focus for Funding 2011/14

- Employability and working with employers
- Increased levels of HE-Business interaction (A4B)
- Widening access
- Internationalisation
- Research and the commercialisation of research

UWIC RANGE: INNOVATION & ENGAGEMENT

CSE Business Units

Education Specialists @ UWIC

ELTC UWIC

UWIC

14-19 Conference

14-19 Conference: Education for All

Strategic Planning: Day 6 - Innovation & Entrepreneurship

4

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Training Development Fund

Short Course Development

- Preparing for Higher Education
- Education Outside the Classroom
- Philosophy for Children (P4C)
- On-line Fantasy programme



Winding House Museum Forestry Commission RCT Community Arts

Wider Enterprise Portfolio ...

- Graduate Teacher Programme
- ECDL (IT)
- Learning Coaches
- Estyn training materials
- Education Outside the Classroom (INSET)
- Centre for Applied Educational Research
- International Staff Development

The Entrepreneurial University

- Growing importance of the knowledge economy
- Capacity to commercialise research
- Need for stronger research performance with 'greater scope for knowledge exploitation and spin-outs'

TASK: Innovation & Engagement

Consider the idea of 'organising and managing a commercial venture within the context of Higher Education':

- What knowledge, skills and attributes would you need?

King Khalid University



Entrepreneur

'The stereotypical entrepreneur is someone who is always bursting with new ideas, highly enthusiastic, hyperactive and insatiably curious'

Barrow et al. (2005, page 23)

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4/26/2014

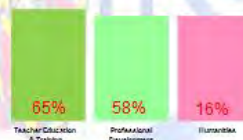
Where we were at 2009-10...

- 54.3% enterprise active
 - 44% L2
 - 36% L3



Where we are at 2010-11...

- 54.3% enterprise active



The Culture of Innovation & Engagement

- Variety – something new to learn
- Job satisfaction
- Challenge
- Working with interesting people
- Never short of work!
- Learn project management skills**

Barker and Cole (2007: 6)

Benefits of engagement with Innovation & Engagement

Hard targets

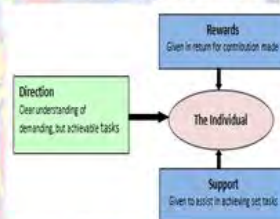
- Financial targets
- Strategic planning – increase numbers of enterprise active staff

Soft targets

- Sharing expertise
- Increased awareness between Faculties

35

Wickham's Model for Motivation



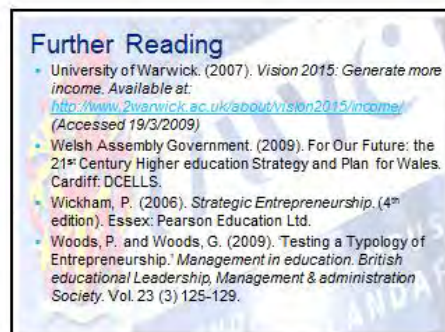
Wickham (2006: 22)

Strategic Planning: Day 6 - Innovation & Entrepreneurship

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Strategic Planning: Day 6 - Innovation & Entrepreneurship

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PDP Appendix Seven: 1st Learning and Teaching Forum Media Communication

دعوة عامة
للمهتمين بالتدريس الجامعي

جامعة الملك سعود
وكلية الجامعة لتطوير الجودة
عمادة تطوير المهارات



برعاية معالي مدير جامعة الملك سعود
الأستاذ الدكتور/ عبد الله بن عبد الرحمن العثمان

ونحو تدريس جامعي أفضل

تقيم

عمادة تطوير المهارات

الملتقى السنوي الأول للتدريس الجامعي

خلال الفترة ١٢-١٤ / ١٠ / ١٤٣٢ هـ الموافق ١١-١٢ / ٩ / ٢٠١١ م



**الملتقى
السنوي
للتدريس
الجامعي**

يقدمه نخبة مميزة
من خبراء التعليم والتعلم



د. عبد الله السلمان
رئيس الجامعة للتقنية والتربية



د. علي الفارسي
رئيس الجامعة للدراسات العليا والبحث العلمي



د. فهد المنيش



د. هاني الجارrah



د. هuda المنيش



د. هuda المنيش



د. هuda المنيش



د. هuda المنيش



د. هuda المنيش

محاضرات عامة

ورش عمل

شهادات للحضور

يقدم الملتقى بقاعة حمد الجاسر بالدرعية

وقاعة خديجة بنت خويلد بعيشة

وقاعة المسرح بالمر

للاستفسار والتسجيل زوروا موقعنا على الإنترنت
dsd.ksu.edu.sa

PDP Appendix Eight: 1st Learning and Teaching Forum Saudi Arabia



(د. حوثر)
جامعة ويز - كلية التربية
كارديف، المملكة المتحدة

فن التدريس

The Art of Teaching

التعليم في المدارس والتعلم

ذلك محاولته لاختيار أفضل الطرق والممارسات للأداء الجيد، وتنمية وتعزيز مهاراته التدريسية، وإلهام طلابه وتأثيرهم فيهم وكسب ثقة الزملاء وإعجابهم (نايت ٢٠٠٢).

وقد أوضح أرميتاج وآخرون (٢٠٠٧) أن للأستاذ الجامعي دوران رئيسيان يمثل الأول منهما في التخطيط الجيد لمحاضرات فاعلة ذات غايات وأهداف محددة، وتقييم واضح لمخرجات التعلم، بينما يمثل الدور الثاني في إدارة بيئة التعلم التي تمكن الطلاب من تحقيق أهدافهم الأكاديمية وتساعدتهم في التعبير عن قدراتهم ومهاراتهم العلمية والعملية، وذلك من خلال تحفيزهم على التعلم، إن تعين الأستاذ الجامعي للعمل في بداية حياته يركز بالدرجة الأولى على تميزه العلمي في مجال التخصص أو البحث العلمي، دون النظر بشكل أو آخر إلى قدرته ومهارته التدريسية رغم أن التميز في مجال التخصص لا يعني بالضرورة التميز في التدريس الجامعي، لأن تقديم تدريس متميز في قاعة الدرس يحتاج إلى جهد من نوع آخر مختلف تماماً.

ويبرز تساؤل هام عن الكيفية التي يتمكن الأستاذ الجامعي من خلالها أن يجعل التعلم والتدريس أكثر فاعلية، حيث يجب عليه أن يبني بيئة تعليمية محفزة ومشجعة، كما أن على الطلاب أيضاً أن يستجيبوا وأن يشاركوا في تلك البيئة التي تم بناؤها، وهذا ما يشار إليه بالتعلم المتمحور حول الطالب (كانون ونيويل ٢٠٠٠)، وهو ما يدفع الطالب لبذل مزيد من الجهد والمشاركة، وعند مقارنة طرق التدريس التقليدية بتلك التي تعتمد على الطلاب بصفة رئيسية، فإن دور الأستاذ يصبح مرتبطاً أكثر بالتوجيه والإشراف وإدارة عملية التعلم، بينما يكون الطالب هو الفاعل الحقيقي لعملية التعلم، وعليه يجب أن يكون التخطيط للتعليم أكثر منه تخطيطاً للتدريس، وبهذا الصدد يمكن ربط مفهوم العمل والتعلم من خلال الخبرة بدورة التعلم التي اقترحها كولب والتي تتكون من أربعة عناصر هي: إجراء التشاؤم (ويُقصد به التعلم من خلال العمل أو الأداء)، الانعكاس أو التغذية الراجعة (ملاحظة الأداء بطريقة التحسين المتوقعة).

سيتم من خلال تلك المقالة مناقشة مفهوم فن التدريس، ودور الأستاذ الجامعي ومناقشة مسؤوليات الأستاذ الجامعي في تقديم تدريس فاعل وتسهيل عملية التعلم وإسهاماته في أنشطة الجودة، واستعراض عناصر فهم نظرية التعليم التي تقود الأستاذ إلى ممارسات تدريس جامعي جيدة وتشجع على التميز في التدريس، وحث السبل والاستراتيجيات التي تدعم الممارسات الجيدة في التخطيط والإعداد للتعلم والتدريس الفعال، وأخيراً استعراض الاستراتيجيات التي تشجع الطلاب على المشاركة في عمليتي التعلم والتدريس.

وتتمثل تلك المقالة أهمية كبيرة لكل عضو هيئة تدريس وبخاصة من تم تعيينه حديثاً في وظيفة أستاذ جامعي، وللمهنيين بتدريس هذا الأستاذ في مجال التعليم الجامعي، ولئن لديهم الرغبة في العمل بمجال التدريس أو إلقاء المحاضرات بقطاع التعليم الجامعي، وأخيراً من لديهم الرغبة في صقل مهاراتهم وتحديثها مع يعملون في مجال التعليم الجامعي.

كما نركز أيضاً على انقصوص بمصطلح فن التدريس ونطرح



التخطيط للمحاضرة وتقديمها بشكل فعال



(د. حوثر)
معهد جامعة ويز - كلية التربية - كارديف - المملكة المتحدة

التعليم في المدارس والتعلم

الحاضر إلى ذاكرة الطلاب دون مبرور على عقل أي منهما^١. وبالرغم من ذلك، نقل المحاضرة من أكثر طرق التدريس شيوعاً في التعليم والتدريس، ومن الأهمية بمكان أخذ إعجابنا بها وسلباتها في الاعتبار كأحد أشكال التعلم، وهناك ثلاثة عناصر هامة يجب أن تؤخذ في الاعتبار عند الإعداد للمحاضرة كي تكون فاعلة، وهي الطلاب والمادة العلمية والموارد والمعدات.

ماذا تستخدم المحاضرة؟

عندما تقدم معلومة للطلاب فإننا نقدمها بالطريقة التي نجب أن نستقبلها وتعامل معها ونعالجها بها، فإذا كنا مستمعين جديين، فإننا نستخدم المحاضرة كطريقة رئيسية لتقديم معلوماتنا ومعارفنا للطلاب - ولكن يبقى السؤال هل كل الطلاب مستمعين جديين؟ واعتماداً على هذا القول، فقد قدم بيتي (٢٠٠١) هرم التعلم والذي قسم فيه عملية التعلم إلى قسمين رئيسيين هما: استقبال المعلومات وتطبيقها. وقد أثبتت دراسة أجريت في معمار التدريس القومية بالولايات المتحدة أن التعلم يحتفظ بعنواي ٣٠٪ فقط من المعلومات التي استقبلها ولم يمارسها، بينما يحتفظ بعنواي ٩٠٪ مما استقبله ويمارسه فعلياً من معلومات ومعارف. ونستخدم المحاضرة عندما نريد:

تعتبر المحاضرة إحدى طرق التدريس الأكاديمي الأكثر شيوعاً في العالم، وفي الأصل فقد أشق مصطلح محاضرة من الكلمة اللاتينية "Lecture"، حيث أن الحاضر Lecturer يقرأ بصوت عالٍ ومسموع ويمكن للجمهور الاستماع وإجراء المداخلات والتقاش (أكسيلي وديليك ٢٠٠١).

وتعرف المحاضرة بأنها تقديم لمفاتي موضوع معين باستخدام وسائل بصرية تتضمن نواصلاً وخطابياً بالتجاء واحد من الحاضر لطلاب، ولذلك يعتبر تقديم المحاضرة بشكل فعال ومتميز كما يتوقعه الطلاب من أكثر الخبرات تحدياً وإجهاداً لعضو هيئة التدريس (فيل رات، ٢٠٠١). وللمحاضرة أسلوب ودرجعة تاريخية تمتد إلى الحقبة التي كان بها ندرة في الكتب، فلم يكن هناك الكثير من الكتب ومصادر المعرفة كما هو الحال الآن، ومن ثم فقد كان الاعتماد أساساً على المحاضر كي يقدم المعرفة والخبرة للآخرين، ومع اختراع آلة الطباعة بالقرن الخامس عشر، ظل مفهوم المحاضرة موجوداً حتى يومنا هذا، بفرض مشاركة الطلاب في ما نطرحه من معلومات.

وتعمل المحاضرة كطريقة للتدريس والتعلم، الاتصال من جانب واحد، ويشار إليها في بعض الأحيان بكلام الأستاذ Teacher-talk (جيتي، ٢٠٠١)، وهذا ما حدا ببعض إلى وصفها بأنها "تتحدث إلى الناس"، بينما وصفها آخرون بأنها "نقل المعلومات من ذاكرة

10

أحد الطرق...
التي تستخدم في التعليم في المدارس والتعلم

PDP Appendix Nine: Dear Diary

Journal Entry February 2104**Dear Diary**

From: Jones, Gill L.
Sent: 31 January 2014 18:52
To: Jones, Gill L.
Cc: Fleming, Scott
Subject: Dear Diary

Dear Diary

Having booked house packed car etc, finally made my way to blustery and wet Cornwall for my writing retreat. Thought to self, could have picked a better weekend the drive down was a nightmare. BUT I have arrived safely. I have printed out the questionnaires and interview transcripts and put everything on to USBs so that I can access everything I need for this chapter of the thesis. I even brought the past assignments, just in case I need some inspiration. I have umpteen carrier bags of books.

So, as I said, arrived safely.

Looked at the view I wanted to inspire and motivate me and set up my desk - I can see out over the Camel estuary. Lovely.

Have sorted out wifi access for all electronic gizmos so I am impressed with myself.

All set to go.

Hopefully there will be a few words in the word count basket tomorrow.

In the meantime, just rewarding myself with a cuppa

:)

From: Fleming, Scott
Sent: 01 February 2014 11:51
To: Jones, Gill L.
Subject: RE: Dear Diary

Splendid.

Daily updates would be really good ... seriously.

Don't make a burden of it, just tell me what you've done.

HAND

From: Jones, Gill L.
Sent: 01 February 2014 21:25
To: Jones, Gill L.; Fleming, Scott
Subject: Dear Diary

Dear Diary

The weather hasn't improved and I succumbed to watching the Wales Italy match. That aside, I have managed to get 2044 words (don't forget the 44) and have just covered the introductory analysis. Found that if you are employed as a lecturer, in the Department of Humanities with less than five years of employment at Cardiff Met, you are less likely to engage in enterprise. So that is my 2000 words in a sentence.

Also trying to get some sort of acronym for reporting my themes.

So far have ARCS CARS SCAR for...

Awareness (RILT EILT and commercialisation of research, professional network)

Confidence (skills set)

Reward (financial reward, reward and recognition rather than reward and incentive as current Costing and Pricing, professional recognition, institutional recognition, fellowship, thank you)

Support (workload, well being, developing skills)

SCAR seems a bit well you get scarred by enterprise

CARS driving enterprise???

ARCS - well I am in Cornwall thinking about Noah and his ARK. Thinking of arcs as in arcs to build bridges to success.

All not very catchy. was so impressed by model put forward by the chap from Queens Belfast of ELVIS I wanted something equally memorable.

Okay. Enough.

Gill :)

From: Fleming, Scott
Sent: 02 February 2014 20:16
To: Jones, Gill L.
Subject: RE: Dear Diary

Gill,

Thanks for this - interesting and amusing. Looking forward to next instalment - and if you want to send anything through, please do.

I understand weather in SW England isn't getting better. Good - no distractions from the main event.

Scott

From: Jones, Gill L.
Sent: 02 February 2014 21:29
To: Jones, Gill L.; Fleming, Scott
Subject: Dear Diary

Dear Diary

Feeling good as I write this. I have managed to clock up 4906 words. So far, not today, don't get excited. Lots of 'ands' 'ifs' 'buts' and other such small words. Can't vouch for their overall coherence but at the moment, my objectives are linked to word count. I have worked my way through pages 1-8 of the questionnaire and through questions 1,3 and 5 of the interview guide. Yes I know they are not in order but it seemed to make more sense to report them that way. I am aiming to cover pages 9-14 of the questionnaire and questions 4, 2 and 7 from the interviews tomorrow. Maybe a bit ambitious. We'll see. That could be two days worth.

Decided to go for a walk mid day, partly because the heating goes off in this place and it gets freezing and partly to buy logs so I could light a fire. Yes carried a sack of logs up the coastal path. Just goes to show how blooming cold I am. Purple knees very fetching. Still glad this place is on a cliff as the high tide came up over the road and into a couple of the shops.

No overall feelers for today. A couple of little gems but there is an awful lot of the interview stuff that I am not using. Going back and reading it, I realise that as far as strategy goes, no one answered the question. And as for deciding if Cardiff Met is an entrepreneurial university... Being as there are 18 questions from the interviews and some 30 pages of the questionnaire I think I need to get a wiggle on or I am not going to get to the end of this by next Sunday.

Over and Out

From: Fleming, Scott
Sent: 03 February 2014 07:52
To: Jones, Gill L.
Subject: RE: Dear Diary

Dear Gill,

OK – all good; in fact better than just ‘good’. If you can do one of these reports per day, that would be excellent. Perhaps even with a reflection on two on the responses (see below). I’m serious.

In the words of a former Dean, ‘Don’t get it right, get it wrote’. Key point here, I think, is neither the number of words (though that can be motivating) nor the tightness of the argument. Rather, it is the fact that you will have the material to turn into an argument that is coherent and tight. This is the first drafting stage – but it’s the most difficult.

And you must decide (as part of the analysis) on the best order. There are all sorts of ways you can do this – and probably a number of different ‘orders’ for things. But this seems pragmatic and sensible.

Importantly, you won’t need to report every single thing you find. You need to analyse the lot, but then apply the three-part test to each item / point:

- (i) Is it relevant?
- (ii) Is it important?
- (iii) Is it interesting?

If the answer to any of these is ‘no’, think carefully why you’re reporting it. In other words, if there’s a ‘no’, why’s it going in?

On the strategy question, and while the data are ‘fresh’ in your mind, consider why this is the case. Whose fault? Theirs – because they don’t understand entrepreneurialism or an entrepreneurial University? Yours – because the questioning isn’t clear or you expected too much? You’ll need to defend this at the viva. Much better to ‘come clean’ than blag it.

And remember, all artists suffer for their art. Purple knees are a small price to pay for pushing back the frontiers of knowledge.

Scott

From: Jones, Gill L.
Sent: 03 February 2014 08:32
To: Fleming, Scott; Jones, Gill L.
Subject: View from my workstation

Hi Scott

Thanks for the advice re strategy.

I realise I need to include why I asked these questions. I didn't know these things before I was DOE so why would they. Will write more on that this in this evenings diary

From: Jones, Gill L.
Sent: 03 February 2014 21:24
To: Jones, Gill L.; Fleming, Scott
Subject: Dear Diary

Dear Diary

I giggled when I put the work so far onto my USB to email it. My daughter had renamed the folder Dr Gill. Anyway, as usual, I digress - more rain, more wood for the fire.

I didn't get as far as I wanted, in terms of analysing interview questions today only managed two of the three I had planned. However, I did crunch all the data up as far as page 14 of the questionnaire.

Thoughts today...

The data is only as good as the person providing it. Some frustration where I know things are inaccurate but I have been truthful and included these.

Highlights...

As a school we engage most in short courses and the International Summer programme. Strengths include staff expertise, a willingness to engage and support provided to academics. Support comes top. In terms of the importance of enterprise to the school it was things like credibility, competitiveness, impact and personal and professional development.

Have reached the dizzy count of 8069. So 53 or was it 52 I lost count, words to sum up the 3000 I have written today. I need to get a life. What am I doing counting the words in my diary entry.

I haven't planned tomorrow yet. I think it needs to be Q15 from the questionnaire and Q7 from the interviews and the financial crunching if I can find all the files (otherwise I will do that when I get home). From there I will suck it and see.

Happy reading
 Gill :)

From: Fleming, Scott
Sent: 04 February 2014 09:55
To: Jones, Gill L.
Subject: Re: Dear Diary

Dear Gill,

More interesting fodder. Thanks.

In response to the questions and confession in red, some points:

1. You can assume that material covered in previous chapters will not need to be repeated (even for sign-posting purposes). So no need to have an explanatory section about use of questionnaire instruments. As you suggest, this is a given. You will have already told the reader about it.
2. Regarding research Qs popping up in every chapter, in the words of the Boomtown Rats (circa 1978) 'don't believe what you read'. Just exercise some common sense about the way you present the work. Sign-posting can become OTT and a distraction if it's not elegant. So if you don't think it works, leave it out. We'll tell you if we think it's needed.
3. Re. original names. In some ways, anonymising these can be done last of all (alongside other cosmetic stuff). As long as the raw data are password protected, this isn't really a problem. The key point is that when your work is available for wider consumption (as it soon will be), the identifiers will all be removed. My own experience of this is that when I look at quotations (even now) I can see in my mind's eye the person saying them and the context etc. So even though they are anonymised for publication etc., I still think of them as they were spoken at the time.

I'll read through the rest of the text when I get a chance, which may not now be as soon as I'd hoped. Watch this space.

Your daughter is a wise young woman.

BWs

Scott

From: Fleming, Scott
Sent: 04 February 2014 12:22
To: Jones, Gill L.
Subject: RE: Dear Diary

In the words of Roy Walker – 'it's good but it's not right' ... as you know.

Can you make sure you keep all my messages to you while you're on your holidays?

I'll explain all on your return.

Scott

From: Jones, Gill L.
Sent: 04 February 2014 13:00
To: Fleming, Scott
Subject: Re: Dear Diary

I always save all your pearls of wisdom :)

From: Fleming, Scott
Sent: 04 February 2014 13:01
To: Jones, Gill L.
Subject: RE: Dear Diary

Stop wasting time sending unnecessary emails...

From: Jones, Gill L.
Sent: 04 February 2014 13:04
To: Fleming, Scott
Subject: Re: Dear Diary

Ah not really wasting time. Been emailing other DoEs to see what support staff have at school level
:)

From: Fleming, Scott
Sent: 04 February 2014 13:05
To: Jones, Gill L.
Subject: RE: Dear Diary

Stop it. Tell me later. Do not reply.

From: Jones, Gill L.
Sent: 04 February 2014 22:36
To: Fleming, Scott; Jones, Gill L.
Subject: Dear Diary

Dear Diary

Hope you aren't reading this at the moment - hope you are celebrating that significant birthday.
However, I did say I would keep you updated.

Today I haven't gone out at all. Beautiful sunshine this morning then it tipped down. Well not just tipped - it's like a hose pipe in the sky. It's so windy it blew my fire out - so back to purple knees. Digressing again.

Progress today.

Today I have enjoyed the pleasures of Google translate for the responses given in Welsh. Some I managed. The ones that formed sentences I needed help with. Text image to John (a pseudonym) - he translated and emailed back.

I also realised that when talking of support, this need not necessarily be the same for all schools so emailed DoEs and asked. Only waiting for CSM - all others provided. This wasn't included in my methodology but it was something I thought about in relation to being able to replicate an approach in another School. Felt right so I did it.

You helped reading the good but not right stuff :-)) just need to know how to get the good bits right. Note to self - must do better.

Feeling loved and supported even though I am top of a windy cliff (with purple knees). I have so many people pushing me up this hill... willing me, gifting their time, the effort, offering fresh eyes to look at something that would take me days to read, and I am interested, can you imagine if you aren't interested... heyho forget you do research lol not enterprise. I am extremely fortunate. Just need to whip the goods into shape.

Back to more mundane matters

Although I have clocked up 5000 word today (yes, I have a square butt from sitting at this desk) this has only brought the word count to 10,730. I am not unhappy with that its good progress. 2,500 of the 5000 words were used up collating individual responses to the open question Page 15. The 200 word limit function of checkbox clearly doesn't work. One person wrote 313 words. I had to type every darned one of them!! What I am struggling with is organising my thoughts and themes. This is the first opportunity I have had to be immersed or is that emmersed with the data and themes keep popping in and out of my head. Do I organise the reporting in relation to the research questions or in line with the sequence in which they were asked? Or do I totally ignore that. One of the dangers here is that these themes keep bobbing up and down like an apple bobbing competition.

Using the get it wrote approach at the moment ready for serious redrafting/editing.

I have also covered Question 7 from the interview - what did you most enjoy? Ended up with a pile of post-its so have thought about how this could be made into some sort of visual thing. At the moment it is a crude load of post-its which you probably won't be able to read but wanted to take a photo before they got moved. Attached it but likely you wont be able to read it. Can read it on the iphone but I like to share my pain.

Anyways things that I have thought about today...

I should have asked about team work/mentoring/buddying as a means to support confidence building and succession planning when I interviewed staff. Something I didn't do but team work was one of the things staff said they enjoyed about enterprise.

There is a need for enterprise projects to be relevant and to match the skills/knowledge of academics within the school. Alignment of projects to skills/school objectives and passions of those doing it.

In the CSE there is a need for research to come out of enterprise. To make the research element more relevant to enterprise practitioners.

We need some fancy fandangled term that addresses the divide between research active and enterprise active staff in CSE. [There is a perception that research active staff are in some way superior. My thoughts... enterprise active staff generate income. This income enables attendance at research conferences. More needs to be done to value research and enterprise more equitably.] One person completing Q15 called themselves a practice led researcher. I think we need to develop something like that further. I also think there needs to be something about creativity and innovation time. This is what drives enterprise (apparently). Absolutely sure I haven't captured this in the work to date.

Gosh its been a long day.
Happy Birthday to you...
Did they sing that in QAAG?
Bet you didn't tell them.

From: Fleming, Scott
Sent: 05 February 2014 08:13
To: Jones, Gill L.
Subject: RE: Dear Diary

Dear Gill,

I'll scan and send some scribbled comments on the draft you sent through yesterday. It's a good platform for a clear results chapter. There are some questions that follow from it (e.g., will there be a separate results and discussion chapter or a single integrated 'discussion of results' chapter? What's going to be the best internal structure for the chapter – whatever it is?) There are also some suggestions about, for example, use of first person, sharpening the writing, making the analytical points more explicit. Hope it's all (a) legible, (b) helpful.

As for the stuff in yesterday's update...

Use of Google translate is interesting. You probably need to take Jan's advice on how others have used translated material – and it's even more complicated when the researcher isn't the translator. I think you should satisfy yourself that the translation is an accurate one – perhaps by enlisting the help of someone who is bi-lingual. Jan might be able to help with this too. It's an added methodological point for you to write about, and shows the 'trade off' between the stuff you wrote about in the early part of the chapter you send through and the loss of some 'control' as a data manager.

The motivational driver is an interesting one. We'll return to this. But the idea of going away to write is such a public display of your own commitment to the task that I think it has probably inspired others to help in whatever ways they can. So it all helps with generating momentum. The trick will be not to lose too much of it when you're back to the real world.

For the collation of individual responses and their analysis, you need to remember that interviews are very wasteful. In the end you'll only use a small fraction of what you have. Use the 'relevant-interesting-important' test on the data. The material you have has to be a 'yes' on all three. And you can't report everything. You'll need to be selective. So when you have the data set in a state that you can begin to try to make sense of it, there's a simple start that might guide the analysis. 'Tag' all the data with a keyword or short phrase. In the old days, it became a physical sorting process. Having tagged all the data, cut up the hard copy into the tagged data chunks, and put them in cognate piles. See if there are piles that are linked – if so, put them together. You'll have different bundles of data chunks. Decide which are the most important in terms of your overall aim and the specific objectives. Hey presto, data organised. Select from the piles the raw data that are most illuminating – you won't be able to report every response on every theme (hence wastefulness). Craft the narrative around what you think are the key headlines.

It's not the old days, and you may not have a printing facility. So colour coding the raw data does the same job. Then organise the colour codes into electronic piles of data. The post it's do pretty much the same thing – if I understand correctly the way you're using them.

The things you've now realised you could (should) have asked about are fair enough. One of your questions at viva will probably be something like 'if you had your time again, what would you do differently?' And the answer 'nothing' is seldom a good one. So you're identifying the shortcomings of what you've done. Good. Don't have too many though, or you shoot yourself in the foot.

The E-R links are a good overall finding from the study. My hunch is that this is true of all Schools. And even in RES we are not as familiar with what the others do. And this perception of researchers' arrogance isn't news either. In many places researchers are perceived by others (often with good reason) as a privileged and arrogant bunch. I guess part of the reason for that is that for some it's a personal career enhancing activity (leading to awards and titles along the way), for some it's a crusade in the pursuit of knowledge (which often includes selfishness), and some just think they're the only ones capable of this activity – so they must be special. The point about researchers being supported by income-generating colleagues is also not unusual. Whether it's L&T or E that does it, research and researchers benefit from being supported – and it cultivates the silo mentality. We should have a chat about the benefits of research (corporately) when you get back – but bluntly, it's something over which we can exercise some control, it affects our status as a University, and without it we wouldn't be a University at all.

One of the things I say to new PhD candidates is that research isn't difficult – anyone can do it. It's just elaborate problem solving and most people do that on a daily basis in their work. It becomes difficult because of the way researchers talk about it – often only for the consumption of other researchers. For PhDs and Prof Docs, it's also an endurance event. Hence the importance of motivation (above).

Practice-led research is a nice term. And it's what many people do (whether or not they call it that). And makes the point about the research-practice interface being reciprocal. It's clear to see how research can inform practice.

Be careful of falling into the trap of agreeing with what you've heard from the respondents to the point where you 'go native' – in other words, lose the analytical plot. The trick here is to make sure that all your findings and conclusions are evidence based – and that you're appropriately critical of the evidence.

Enough now. Have a nice day – hope weather continues to be too bad to do anything other than what you're there for.

Scott

From: Jones, Gill L.
Sent: 05 February 2014 23:49
To: Fleming, Scott; Jones, Gill L.
Subject: Dear Diary

Dear Diary

Best part of today was finding out what was wrong with the fire. Rubbish wood. It wasn't seasoned.

Have a lovely roaring fire. Have just finished for the day and just about to celebrate with a cuppa.

I found it hard to get going today. The weather has been particularly bad but I think it was probably because I worked all day yesterday, early morning to late evening and the brain just shut off. Went on the wood run but headed to Trebetherick for a change of scene. Should have thought of this before. Walking to Polzeath meant I had to carry the sack uphill, going to Trebetherick gave me a downhill run. Brain - engage! Anyway. benefits all round as I am nice and toasty.

Where are we at with the results and analysis...

Thank you for the feedback. I haven't done anything with it yet but do agree. And thank you; all annotations were clear and easy to read - well easy on the eye haha.

In terms of my goal for the day, I hit target, covering the questionnaire pages 17, 18, 24 and 25 and the Interview questions 6 and 15. Okay I hear you say - what does that mean in terms of content?

Looking at staff perception of the impact enterprise achieves - its local - within the organisation. Enterprise has least impact with regard to commercialising research. The

most popular means of communicating enterprise activity seems to be conference papers and conference workshops. Least popular, public lectures, and academic journals.

Looking at the interviews and commercialising research - if we are hoping to do this a school we need help. I think Jasmine (a pseudonym) hit the nail of the head - capacity building and good role models. We are sadly lacking. Lots of enterprise lots of personal research but no joined up thinking.

Have jumped ahead to the QAA question (apple bobbing). Well they either admitted they didn't know about the document or said they did and blagged - blagged miserably.

In their defence, it hadn't been brought to their attention. I just wanted to explore the impact of enterprise as a concept embedded into learning and teaching, rather than it relating to specific projects. The more generic stuff.

So, up to 13750. Probably about half that will end up being good and right. I think that is going to be my aim... good and right. We'll see.

Anyway, to answer some of your questions...

Google translate - I have only used it for the multiple choice questions to check that I am getting the data recorded accurately. I enlisted the help of John (a pseudonym), who is bi-lingual to translate sentences. I trust John (a pseudonym). He is the R&E administrator but did the maternity cover for the R&E manager post last year. So yes, you are right, there is that bit about loss of control as data manager but I wanted someone I felt comfortable with and trusted = hence asking John (a pseudonym). But you are right, I could have asked Jan. Have to say John (a pseudonym) was really quick. He has done 4 bits for me so far and normally turns then around within 30 mins. Best not tell his new boss. LOL PS he only charges Feddo chocolate bars so additional benefit over using the Welsh language unit. I really would have feel like I had lost control of the data there.

Re viva question - I wouldn't do things differently. You can't turn back the clock without some sort of consequence. I will say what I have learned from my mistakes. And I have made plenty so will stick to key themes.

Yes - to motivational drivers. Not sure how to manage this. I have been advised that there are bookable rooms in the library that I can lock myself in. I think once I have mentally got over this hurdle of analysing the data I will be better placed to spend a day a week to tart it up (technical term) whereas I couldn't even begin to think of doing that with all the data. I wouldn't have been able to follow any thread at all with my apple bobbing tendency and with NSS/APR/QAA blahblah. At least this way I have been able to be single minded.

I have tried to apply the Relevant-Interesting-Important criteria to the interview material today. I think I am getting better at culling stuff but watch me miss a gem! Have to say there are certain people that say a lot (I am one of them!!!)

Enterprise and Research links - the more I am working my way through this - the more missed opportunities for research coming out of enterprise I am seeing. We do have

some very nice researchers in the school. When you say things like research being elaborate problem solving and an endurance event - you make it sound achievable. That is what we need in CSE. Someone to break down the barriers make people believe in themselves.

So overall, questionnaire pages 1-18 covered. have 19-26 to go and interview questions 1-7 and 14 covered with 8-16 (minus 14) to go. So about half way through. Anyway a cuppa is calling... how was QAAG?
:)

From: Fleming, Scott
Sent: 06 February 2014 09:35
To: Jones, Gill L.
Subject: RE: Dear Diary

Dear Gill,

You left it late sending the daily update yesterday. Stayed up in eager anticipation until 11.45...

Fancy not seasoning the wood? Who'd have thought? Tut tut. (I don't know what this means, but I'm being supportive.)

There's a second point about motivation you've identified here. Even with good intentions, writing can be tiring and it's difficult to sustain output – especially, I think, when it's a complex cognitive task as well as a bit of a chore. Remind me to tell you my Amstrad story from my own PhD.

And when you're back, if any scribbles need deciphering, let me know. I'm sometimes even able to read my own handwriting.

The progress update is interesting – really. There seems to me to be quite a bit to say here, and you need to be careful with your own involvement (back in the day before you took up 'high office'). I know what you mean by the role model point, but I don't agree that they are 'lacking' – if by that you mean there are none. I don't know enough about who does what in CSE, but it seems to me that there are some good 'product champions' for enterprise – but not in what I think of as the conventional 'sense' of enterprise. I'll explain what I mean (if you're interested) when you're back.

The point about the failure to R & E to talk to each other is well made.

The rationale for choosing John (a pseudonym) is good, and you can defend it if asked. You might still ask Jan to offer a view – and perhaps act as an independent bi-lingual expert who can verify the nuanced accuracy of the translations. And a problem of using a 'translation service' is a loss of empathy and understanding of the material.

I like the turning the clock back answer – I suppose the point is about identifying the things that you now know, and perhaps they weren't knowable at the time. I do think the first phase of your supervision experience wasn't good. My impression is that your motivation for the task is very different from how it was when I first talked to you about it. The writing is better and the thinking clearer. Nothing to do with me, more about the period of 'semi-detached' (partial) supervision. And I imply no criticism of Jan here.

Regarding the way you seal the deal when you're back, some ideas

- Block out days in your diary and make them public (I assume your PA, personal private secretary and other staff have access to your electronic diary). Have a rule that only Paul, Julie, Jacqui and Prof Chapman can contact you.
- Turn email off unless you need to use it. Have an out-of-message on email and on your phone. To all intents and purposes you're 'off limits'.
- Also manage the expectations of your nearest and dearest. Let them know these days are precious to you to get the job done.
- Recognise that this is a task that has to be 'good enough', not perfect.
- Remember that the end is now officially in sight.
- Only go back if you have good reason to. Not for idle curiosity. (That way you'll never know if you miss a gem.)

So come home with this particular job done, you can't afford another day of carrying wood – seasoned or otherwise.

As for QAAG, Bev in charge. So instead Duncan played the trombone, Kelvin the spoons and Colleen the comb and paper, and the rest sang 'Happy birthday' and 'For he's a jolly good fellow' with four-part harmonies. Honest.

Have a productive day,

Scott

From: Jones, Gill L.
Sent: 06 February 2014 23:46
To: Fleming, Scott; Jones, Gill L.
Subject: Dear Diary

Dear Diary

Yes apologies, I worked late last night. Seem to have managed the same trick tonight as well.

Will remind you of Amstrad/Product Champions when I get back.

It has been another productive day.

I have attached work to date - only changes to front bit has been the inclusion of paragraphs so really its only the later 8000 words to look at if you can bare it. Up to

16,500 and am down to the last 9 bits, so I am really impressed with myself. Not the bit about it needing to be good and right, just grappling with the data will do for now. Beginning to get the elephant into the room.

You can't afford another day of carrying wood – seasoned or otherwise. Sorry - its cold without it :) so I ignored this bit of advice. The walk in the wet and wind clears the mind. I will share my windy photos with you when I get back. They are part of my diary. Anyway, I came back and made a list that I share here:

Things I am thinking about with regard to conclusions and recommendations

1. Potential career route linked to organisational structure - currently only DLT can be DD. Thinking there should be D, DD and three directors. That would give each area of the universities work equal status as in DoR DoE or DLT could aspire to be DD instead of (like me) having a role change.
2. At CSE there needs to be a termly 'clinic' where Enterprise Practice Led Researchers can discuss the viability of their enterprise for a research output. That should give a win-win because Research staff may be encouraged to reflect and consider the way their research can be commercialised.
3. We have support for early career researchers - there needs to be a similar model for Enterprise (that would address new staff not engaging)
4. Need to develop a snazzy title for Enterprise practice led researchers
5. Clinics at school level will help with communicating wider impact of enterprise but think there needs to be some mechanism, possibly tied up with costing and pricing so that more money comes back to the school where staff turn their E into R. At the moment it is job done. End of. There isn't a pot to support the E active staff to turn it into R.
6. There needs to be public recognition of E. The changes to the professorial criteria is a start but no one is publicly acknowledged at graduation for their enterprise.

Reflections on process...

Data crunching the old fashioned way suits me. I could have done it with Checkbox but am far more hands on doing it this way. It suits me.

Giggle of the day...

I asked John (a pseudonym) to translate a response to Q21

He replied 'I am not sure'

I replied 'What do you mean you are not sure'

He replied 'I am sure its says, I am not sure'.

The joys of a bi-lingual approach.

So what have I found out today...

Much as I expected, the enterprise competencies of finance and marketing are not high priorities for staff. The financial one could be [relevant] particularly for those aiming for promotion. Some interesting answers - not an accountant etc.

In terms of improvements with regard to staff development that develops enterprise competencies, I have identified three key themes: i) promotion (need to tell people what is there), ii) training (to up-skills staff), and iii) time to do these things
Just realised I forgot the lovely gem about a fund for CPD so that staff could learn skills that could be offered as enterprise. Will need to go back to that tomorrow.

Couple of boops on my part - 1. didn't ask about leadership - particularly as project managers are leaders Bums cant go back. 2. Asked about awareness of staff development opportunities rather than taking up staff development opportunities so not overly useful.

These entries are getting long. You will fall asleep before you have got to the end.

I am gutted that I missed the opportunity of seeing Duncan playing trombone, Kelvin, spoons and most especially Colleen the comb and paper. Don't believe the four-part harmonies. lol

Tide wasn't as high today. Waves are a bit calmer. Forgot to say that when I tried to go out first yesterday I couldn't get around the corner of the house. The wind was so strong I couldn't walk against it. My mother has called twice because she is convinced the house with me in it is going to slip down the side of this cliff because she has seen big waves in Plymouth. Okay, Polzeath has a 'p'.

Time for bed

zzzzzzzz

From: Fleming, Scott
Sent: 07 February 2014 07:55
To: Jones, Gill L.
Subject: Re: Dear Diary

Morning Gill,

Excellent progress. I'm impressed. Won't be able to get to the new work for a day or two.

When Maslow constructed the hierarchy of needs it had shelter and warmth as two of the basic physical needs. But that was in the days before Prof Docs, so he would have included 'doing a load of writing' as even more fundamental than wood for fires had he been alive today. True.

But you're right about clearing the mind - sometimes we just need to put a bit of daylight between ourselves and our writing to come back to it with a clear (but not empty) head and fresh enthusiasm. So well done for carrying logs. This was also part of Rocky Balboa's training regime in the frozen wastelands of Siberia in preparation for his successful fight against Ivan Drago (cf. Rocky IV). Also true.

Re. Key points:

- You're preaching to the converted on the DD point. There is no logically good reason for DLT to be DD. And a very illogical one about DVC carrying largest (L&T) portfolio. This

argument will need to be drafted carefully.

- Beware the risk of constant comparison with research and concluding that enterprise is the poor relation. It makes your analysis look one-eyed. If it's all true, just be aware of how it looks. And what's the special treatment for ECRs? What would something similar for enterprise look like?

- Costing and pricing is under review with an updated form and clearer understanding of R and E distinction introduced.

- Big point about the interface between R and E is well made, and the synergistic benefits seem to be one-directional. Develop this theme.

A lot of what you're saying seems or be about recognition and PR about E...

Findings look interesting. Don't beat yourself up about opportunities missed. They're just some of things that you can talk about at viva.

Blondie had plenty to say about tides being high in about 1979. Didn't realise you'd gone to Polzeath. Went there on a walk from somewhere last year and sat in the balcony of a bar overlooking the waterfront drinking draught Rattler in the evening sun - very agreeable.

Have a good day,

Scott

From: Jones, Gill L.

Sent: 07 February 2014 19:29

To: Fleming, Scott; Jones, Gill L.

Subject: Dear Diary

Dear Diary

An early finish this evening.

Up to 19500 words and just four questions left.

Slight bit of panic as laptop screen went a fetching shade of blue.

Rang daughter who said as long as there isn't any white writing you should be okay.

Daughter...'Is it green-blue'

Gill...'no, more of a royal blue'

Daughter... 'mmmm did you back it up?'

Leaving it alone now because I don't want to be fretting. Just relieved that I have been backing up work regularly to a USB.

Anyway, walked down to Polzeath. Had a nice ginger beer at the waterfront, so chink and cheers to your rattlers.

Today,

Whilst most staff said they wanted time off their workload to do enterprise, this wasn't confirmed in interviews. More interested in intrinsic rewards ?????

Hopefully laptop will behave in the morning. Fingers crossed.
Ps doing this on iPad
:)

From: Fleming, Scott
Sent: 08 February 2014 07:20
To: Jones, Gill L.
Subject: Re: Dear Diary

Dear Gill,

Splendid progress.

Pesky pooters are the bane of the life of the creative genius. Think of it as another challenge that you can reflect upon later... It also relates to my Amstrad story (which, I should warn you, is not very interesting).

If laptop continues to be troublesome, use the ipad to do something useful!

If you're working today, an 80 minute (plus injury time) interlude is permitted this afternoon at 2.30.

When are you back?

Scott

From: Jones, Gill L.
Sent: 08 February 2014 08:33
To: Fleming, Scott; Jones, Gill L.
Subject: RE: Dear Diary

Morning Diary

Rather than wait until tonight, thought I would let you know...
Pesky pooter is okay
Panic over.

Did give me time to do some marking up of useful material last night. So now I can use it this morning when looking at the role support plays.
Also gave me time to think of the way forward.

Overall - talking of enterprise being the academic's challenge - between 2009 and 2013 we have become really good at it and created a will do and can do culture. The things that have jumped out is maintaining that momentum to ensure longevity of the culture and as you say creating the synergy with research (and L&T) so that it isn't bolt on to day job but integrated into what staff see as their role as rounded academics.

Have thought of a way to present things but not sure if this relates to the analysis of the material, the discussion or the discussion leading to the way forward...
Or even if its rubbish - sure you will let me know lol

S4E (meant to be a subscript 4 but heaven knows how that is achieved in an email!)

Four things beginning with S that will promote longevity of Enterprise into the future.

S1 - Strategic significance - (University and School) and communicating this clearly not just through brochures but actively in emails etc. Instead of you might be interested in this email you might be interested in this because it feeds into blahblah. This is currently included in the L&T APR - PDs are asked to link their work to school strategic objectives and I made them look at all three missions rather than just L&T. Also training line managers within school to discuss this more fully in staff performance so that it feeds into S2.

S2 - Support - to include promotion of what is there what others are doing; training opportunities available centrally and creating them more formally at school level. Creating time in workload for creativity and innovation. Creating a financial thinking pot that gives people the opportunity to explore creative ideas their feasibility and viability. Make link between project manager and leadership aspect (this could be S3).

S3 - Synergy and alignment of projects with the skills and knowledge of staff in school; with research and also with L&T Use of Enterprise 'clinics' to share work that is occurring not just for R but to highlight support available should anyone have ideas.

S4 - Success. Celebration and promotion of success (which we already do via marketing) but including a school conference that is based on the integrated missions. Run by staff for staff. Feeding in to S1/2/3 as well. Feeds into opportunities to say 'thank you job well done'. Additionally creating awareness of new Reader Professorial opportunities. Also scoping (centrally) Enterprise fellowship. Or should fellowship become more about the rounded academic????

Anyway welcome your thoughts

Glad you have given me permission to watch match. It will keep me focussed this morning.

Wont be going out - the sea is bouncy again and wind, wild. Time off for focussed behaviour.

Home stretch...

Starting to do things like pack books that I have finished with back into bags. Haven't used as many as I thought I would. Might have to revisit that in redrafts/edits. I am going to travel back tomorrow night. Don't fancy my chances on the M5/M4 on a Monday morning ready for a 9 am start. So, I will have achieved what I set out to do: crunched

the data and do some sort of analysis. Elephant nearly eaten, just the trunk to finish off
haha.

Now going to get on with the 'day' job
E-speak later
:)

From: Fleming, Scott
Sent: 08 February 2014 08:53
To: Jones, Gill L.
Subject: Re: Dear Diary

Morning again Gill,

All good. I like the 4Ss very much. Very neat. S1 is a challenge because it seems to be conceptual ... winning the battle of hearts and minds etc.

And this could become a **spangly** model thing that will appear in strategic docs for E. If it works out well, it could be brilliant. Really.

H A G D,

Scott

From: Jones, Gill L.
Sent: 08 February 2014 21:21
To: Fleming, Scott; Jones, Gill L.
Subject: Dear Diary

Dear Diary

Writing this with a sense of achievement and a sense of fulfilment.

I have eaten the elephant.

I know there is still a lot of tarting up to do but at least I have worked my way through the data and taken all the best bits from it. I may not have presented it as I should, good and right, but at least I have something to start editing to make it goodish and rightish.

Things I found out today - we are doing it right - some suggestions for improvement but all achievable. It's the strategic, central stuff that will be more ambitious to address. I have lots of people that I need to thank and will - family for giving me the freedom to sit on a windy cliff, colleagues who completed the questionnaires and gave very freely with interviews and more especially those that supported me this past week when it was lonely and cold. Leanne for her 'you are nuts Mrs' texts, John (a pseudonym) for his translations, Paul for not 'bugging' me with any work stuff and most especially, dear

diary, you; for listening and guiding. For motivating and challenging. For making me believe that I could do it. I know it was above and beyond the day job. I can't begin to thank you enough.

Glad that you like the idea of the S4E - well quite proud of myself lol.

The work needs pulling together... but right now - time to start packing up my 'gear' and think about wending my way home.

The wind is really wild again...

Words that spring to mind...

Words; Wood; Wind; Wild sea; Cold; Dark; Quite; Happy

So here is the ugly baby, ready for a bit of liposuction and face lift.

Goodnight

:)

From: Fleming, Scott
Sent: 08 February 2014 21:27
To: Jones, Gill L.
Subject: RE: Dear Diary

Dear Gill,

Well done.

Have a safe journey back.

Scott

From: Jones, Gill L.
Sent: 10 February 2014 13:19
To: Fleming, Scott; Jones, Gill L.
Subject: Dear Diary cont...

Hi Scott

Back in the land of the living having travelled back through an inch of snow just outside Port Isaac.

With the results and analysis, to date – shall I email to Jan – as a warts and all version as is or should I use the S4E model as themes to present my findings and then send it to her?

Something like...

Context of Engagement

- Staff profiles
- Engagement in Enterprise
- Discussion re findings

Strategic Significance

- Enterprise
- The Entrepreneurial University
- Significance to CMU
- Significance to CSE
- Discussion re findings

Don't want to lose the momentum – If I can nail the structure of the Results and Analysis bit I can back track to the methodology and include the post pilot stuff about implementing the questionnaire and the themes for the interviews.

Hope you are having a good day
Gill ☺

From: Jones, Gill L.
Sent: 10 February 2014 17:48
To: Jones, Gill L.
Subject: My Ed D

Hi Everyone

My EdD Journey

Having just returned from Cornwall, having had a productive trip (well in terms of word count – can't vouch for word quality) I wanted to say a big thank you to you all. Some of you (well one of you!) planted the idea that being on a cliff top on the coast in the worst storms ever was a good idea – isolation and focus. Some of you made time to answer my questionnaire and others of you volunteered to be interviewed. Some of you answered further emails last week and others of you translated emails last week. Some of you looked after my wellbeing texting and emailing keeping me in touch with the outside world and others made sure I was free of hassles, letting me get on with the job in hand. Some of you provided essentials – like a torch – heck its dark in Cornwall and others of you 'listened' daily to my mutterings with patience and fortitude. Having 'crunched' all the data, I have hopefully got the basis for a half decent thesis.

Thank you for the part you played.
One step closer to the finishing line
Gill ☺

Gill Jones MA Ed, Cert Ed (FE), FHEA
Deputy Dean: Learning and Teaching
Cardiff School of Education

**PDP Appendix Ten: Researcher
Development Framework Personal Skills
Audit April 2014**

Researcher Development Framework Personal Skills Audit					
Mapped against research (R) and enterprise (E)	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5
Domain A: Knowledge and intellectual abilities					
A1 Knowledge Base					
A1.1 Subject knowledge				E/R	
A1.2 Research methods, theoretical knowledge			R	E	
A1.3 Research methods, practical application			R	E	
A1.4 Information seeking			R/E		
A1.5 Information literacy and management			R	E	
A1.6 Languages			R/E		
A1.7 Academic literacy and numeracy			R/E		
A2 Cognitive Abilities					
A2.1 Analysing		R			E
A2.2 Synthesising			R/E		
A2.3 Critical thinking			R	E	
A2.4 Evaluating			R	E	
A2.5 Problem solving				R/E	
A3 Creativity					
A3.1 Inquiring mind				R/E	
A3.2 Intellectual insight					R/E
A3.3 Innovation					R/E
A3.4 Argument construction			R/E		
A3.5 Intellectual risk				R/E	
Domain B Personal Effectiveness					
B1 Personal Qualities					
B1.1 Enthusiasm			R		E
B1.2 Perseverance					R/E
B1.3 Integrity					R/E
B1.4 Self confidence				R	E
B1.5 Self reflection			R/E		
B1.6 Responsibility				R/E	
B2 Self Management					
B2.1 Preparation and prioritisation			R	E	
B2.2 Commitment to research			R		E
B2.3 Time management			R/E		
B2.4 Responsiveness to change				R	E
B2.5 Work life balance		R/E			

B3 Professional and Career Development					
B3.1 Career management			R		E
B3.2 Continuing professional development			R		E
B3.3 Responsiveness to opportunities			R/E		
B3.4 Networking		R		E	
B3.5 Reputation and esteem		R			E
Domain C: Research Governance and Organisation					
C1 Professional Conduct					
C1.1 Health and safety				R/E	
C1.2 Ethics, principles and sustainability			R	E	
C1.3 Legal requirements			R		E
C1.4 IPR and copyright			R/E		
C1.5 Respect and confidentiality				R/E	
C1.6 Attribution and co-authorship			R/E		
C1.7 Appropriate practice				R/E	
C2 Research Management					
C2.1 Research strategy			R		E
C2.2 Project planning and delivery			R		E
C2.3 Risk management			R	E	
C3 Finance, Funding and Resources					
C3.1 Income funding generation			R/E		
C3.2 Financial management				R/E	
C3.3 Infrastructure and resources			R		E
Domain D: Engagement, Influence and Impact					
D1 Working With Others					
D1.1 Collegiality				R/E	
D1.2 Team working				R/E	
D1.3 People management				R/E	
D1.4 Supervision			R/E		
D1.5 Mentoring				R/E	
D1.6 Influence and leadership				R/E	
D1.7 Collaboration				R/E	
D1.8 Equality and diversity				R/E	
D2 Communication and Dissemination					
D2.1 Communication methods				R/E	
D2.2 Communication media				R/E	
D2.3 Publications	R		E		
D3 Engagement and Impact					
D3.1 Teaching				R/E	
D3.2 Public engagement		R		E	
D3.3 Enterprise				R/E	
D3.4 Policy					
D3.5 Society and culture			R	E	
D3.6 Global citizenship		R		E	

