

Effective Learning Support in Higher Education:

*My living theory of student-centred learning support in
National College of Ireland*

by

Michael Goldrick Bsc

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School of Education Studies
Supervisor: Dr. James O'Higgins-Norman

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Acknowledgements

“Patrick watched him stride to where the road ended, a black silhouette against that bloody burning sky. He watched as Roland walked among the roses, and sat shivering in the shadows as Roland began to cry the names of his friends and loved ones and Kamates; those names carried clear in that strange air, as if they would echo forever...”

The Dark Tower (2004) by Stephen King

This journey is described using my own thoughts and ideas. Yet within these words lie the insights, encouragement, feedback and support of my friends and colleagues. I could not have done this without them.

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~

For my parents, who never doubted.

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LIST OF ABBREVIATIONS

<i>ALSON</i>	Academic Learning Support Officers Network
<i>CFLM</i>	Course code for the Certificate in First-line Management course in National College of Ireland.
<i>CUD</i>	Center for Universal Design
<i>ICT</i>	Information Communication Technology
<i>OECD</i>	Organisation for Economic Co-operation and Development
<i>SQRNR</i>	Survey, Question, Read, Note-make, Revise
<i>VARK</i>	A learning style test created by Neil Fleming.

Abstract

Effective Learning Support in Higher Education: *My living theory of student-centred learning support in National College of Ireland*

This thesis is the product of my living theory of effective learning support practices in National College of Ireland. As a journey of improvement, it describes how I came to be a learning support tutor and attempted to put in place educational practices and resources that were equally accessible, fair and supportive to all students.

This process of improvement is described using a self-study action research approach, which I used to reflect on my teaching practices. Using mixed methodology I combined my own self-reflection with the views of students, which together allowed me to identify areas where I needed to improve upon. Having then identified that I was living in a state of contradiction, I applied elements of universal design theory, inclusive teaching practices and concepts of equality, to create three principles of student-centred learning support.

Incorporating these principles into my living educational theory, I later attempted to improve my pedagogy, my resources and accessibility for all students in National College of Ireland. As a means to accomplish these goals I studied teaching and learning theories, developed a learning support manual based on national and international best practices and created a virtual learning support service.

The effectiveness of these activities were evaluated using self-reflection, surveys, interviews, peer review at conferences, as well as the quantitative analysis of student results. Through the use of these mixed methods, I make the claim that my efforts to improve my service were both qualitatively accepted by both students and my peers as well as quantitatively effective in helping to increase student performance.

In adopting paradigm relativism and mixed methodologies, this work seeks to develop a hybrid approach to practitioner research by incorporating elements of both traditional action research and self-focussed approaches.

As an insight into how student centricism can be improved upon in Higher Education, my research may have significance for other learning support tutors, directors of learning and teaching and faculty who wish to increase their own student-centred activities.

Introduction

Education, as a social institution, has sometimes been criticised for being slow to evolve, a stagnant organism that bears little resemblance to the real world (Amirault, and Visser, 2009). Whilst this perhaps may be true at an individual university level, the evolution of the university as a concept and European practice in this area has at several stages, evolved to meet both growing technology and the growing diversity of students (Saettler 1968, Cubberley, 1922). Most noteworthy of such periods of evolution to date have been the development of the moveable printing press, which transcended the need for parchment and quills (Cubberley, 1922) and the instructional usage of computers (Molnar, 1990, Levien, 1972). Without the adoption of such technologies, many isolated practices within the education spectrum would have shared a similar fate to the bardic system of education, which was predominantly aural (Kendrick, 1927, in McGrath, 1979 p18).

Since the development of both inclusive policies and economic strategies however, the field of European education has had to face a new challenge. Specifically, each individual institution has had to reflect upon how it can become a more inclusive environment and how also it can increase its revenue streams (Beede and Burnett, 1999). Yet behind these wider issues, there lies the individual educators who wish to evolve their practices not for the sake of policy or economy, but because they genuinely want to meet the wider educational needs of their students (Hardy et al, 2009). This bottom-up process of change is inspiring and has recently led the Higher Education Authority to begin listening to the ideas of Higher Education educators (HEA, 2009). What is even more encouraging is that such activity has helped manifest a national desire to share more expertise, to become more connected and to share ideas and strategies (Sligo IT, 2009).

Being one of these hopeful educators of students, I submit this thesis as a narrative of how I endeavoured to become better at what I do, sought to meet the needs of my students and attempted to realise the theory of student-centred learning support. As an extension of this desire, the following headings from Mc Niff et al. (2003) will be used to organise the core features of this research introduction;

1. What is this research about?

2. Why I did the research
3. What did I learn?
4. The potential influence of this research
5. An overview of the organisation of the material in this thesis

(0.1) What is this research about?

This thesis is an account of the research I carried out from November 2007 until December 2009 in National College of Ireland. Essentially it documents how I came to question and reflect upon my practice as a Learning Support Tutor in Higher Education. More specifically, the research will document the identification of a series of problems within my service and relate to the reader how I attempted to put in place peer-reviewed interventions to combat these identified problems and later evaluated their effectiveness. Given that the research describes both the identification of a series of problems and the intervention to the identified problems, the approach is classified as action research (Lewin, 1946). More particularly, the adopted framework can be described as an action enquiry approach that is structured by the works of Whitehead (1989), McNiff et al. (2003) and Whitehead and McNiff (2006). This particular methodology allows the writer to explore his or her passions, doubts and future goals by asking a simple but defining question, “how do I improve what I am doing?” (Whitehead and McNiff, 2006, p21). Essentially then basing itself on this template, my research is framed around the following research question;

“How can student-centred learning support be improved in the National College of Ireland?”

This question essentially marks the basis for my own *living educational theory* (Whitehead 1989) which encapsulates my personal and professional journey to improve my practice and essentially better support my students in National College of Ireland through incorporating *choice* into my service provision. Through this increased choice, students would essentially have more control of *what* strategies they use, *how* materials are presented and *why* they should be used (Burnard, 1999). In later chapters I will more fully illustrate how this student-centred process emerged but for now I will consider simply why I did this research.

(0.2) Why I did this research?

The particular reason why I began this research project can be linked to the concept of living *in contradiction* (Whitehead, McNiff, 2005, 2006). According to Whitehead (1989), when there exists tension between what you wish to achieve and what you presently are achieving in a professional manner, one can say that you are experiencing a living contradiction. This particular living contradiction manifested itself in relation to my professional activity as a learning support tutor, where I felt that it was not enough to present all NCI students with the generic concepts and strategies that make up learning support, but felt motivated to cultivate a practice that celebrates individual learning diversity and equality (Greene, 1995, Sullivan, 2006, Bernstein 2000). Taking then a ‘student-centred’ approach to support, I identified a number of issues which would affect the provision of my current and future service. This identification was achieved firstly through a process known as ontological self-reflection (Schön, 1983, Whitehead and McNiff, 2006), where I critically examined whether my actions as a support tutor were governed by the principles of *equality* and *effective learning*. As a means to support this process of self-reflection I sought to gather survey feedback from some of my students, who I felt were receiving less support, due to their part-time and off-campus status. This survey feedback was gathered as a response to an “Effective learner” workshop in November 2008, where I, along with colleagues in other off-campus locations, delivered a series of workshops on how to become an effective learner in Higher Education.

From this combined self-critique and student feedback I concluded that whilst my service was driven by the principles of equality and student-centrism there was noticeable deficits between what I wanted to offer and what I could offer. Finding myself then in a position of conflict, I choose to implement changes to both my knowledge and services.

(0.3) What did I learn?

The particulars of this intervention will be discussed more thoroughly in chapter’s four and five. In Chapter four, I will describe how I firstly piloted a virtual learning support service for students who could not attend live supports on-campus, whereas in chapter five, I will explore the process of how I constructed a universally designed (Mace et al, 1991) learning development manual for all students in my college. These activities,

although new developments within the field, are just some examples of how learning support services have evolved in recent years. For example, the work of Burke (1998) explored similar themes of conflict within her own services, whereby she moved from a deficit model of learning to one which embraced learner differences. Before adding then to this base of existing knowledge, my own decision to implement change led me to reflect on what principles or framework I would need to work from. In light of this needed step, I adopted Bernstein (2000)'s democratic principles of participation and enhancement. This adoption led me to envision a service that was based on three principles;

1. All students will be able to interact with learning support materials
2. All students will be offered guidance on which strategies and materials to use
3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

These principles were based upon the idea that each student should be offered an effective and enjoyable learning experience. Tapping into the practical implementation of such ideals as equality (Equal Status Act, 2000, Employment Equality Act, 1998) and lifelong learning (Schütze and Slowey, 2000), the principles would allow me to create a service that met the wider academic needs of all students. Despite this simple formula however, the realisation of these principles required a significant growth in my own knowledge in relation to universal design, the adoption of national and international best practices and the creation of a virtual learning support service. In thinking back then to how I created such changes to both my materials and services, I have learned that the word 'free' is a useful method to diffuse reluctance and hesitancy amongst many holders of copyrighted material. Similarly, many universities and individuals are more than happy to share materials and expertise once the goals of the research are obtainable, legal and beneficial.

Lastly, I have learned that my attempts to revise my services has noticeably increased levels of student satisfaction as well as positively affected course results, a fact that is relieving and sets my original 'living in contradiction' somewhat at ease.

(0.4) The potential influence of this research

The potential influence of this research can be seen firstly within my own personal development, essentially offering a window into how I became more confident and assured that my work is beneficial to the academic development of my students. This narrative inquiry (Clandinin and Connelly 2000) of my living educational theory (McNiff and Whitehead, 2006) is supported with aspects of more traditional action research theory. More specifically, it is supported with qualitative and quantitative. The qualitative data was gathered from peers around the materials utilised in this thesis as well as qualitative feedback from students about the effectiveness of the interventions devised. The quantitative data will be gathered using assignment results and exam results. Arguing then in part that this thesis has transferable qualities and findings, in the sense that other educators within my field can adopt or apply my understandings, materials or findings, my work is similar to Cahill, (2007 p15) who claims;

“my research has much to contribute to new understandings of organisational practices, in which practitioners can come to see how, by working collaboratively and with social intent (McNiff 2000: 217, McNiff and Whitehead 2005a), they also can form themselves into groups engaged in communicative action, with profound implications for the wellbeing of themselves and of the students in their schools. Further implications would involve contributing to the social formations of policy makers.”

Having a related perception to Cahill (2007), I acknowledge that whilst I originally started out to develop a service and practice that was beneficial for my own self and students, I somewhat consciously and almost casually set in place the beginnings for a national standardisation of practices for learning support in Ireland. Consequently, the findings and materials produced through this research are offered as guidance for any learning support tutor working nationally or internationally.

Finally, in relation to the generation of new educational practices and my own theories, I hope that as living educational theories becomes more popular within Higher Education research (Cahill, 2007, Farren, 2006 and Hartog, 2004) that I can add my own contribution to the field of learning support.

(0.5) An overview of the organisation of the material in this thesis

This particular thesis takes the form of an action enquiry and therefore asks a general question ‘how do I improve what I am doing?’ More specifically, the thesis will consider “*How can student centred learning support be improved in National College of Ireland?*” With this question in mind, I will aim to further highlight the reasons why and how this research was carried out. Moreover I aim to describe how the results of the research induced further questions and areas of concern and how they in turn were addressed. In essence, this thesis will present my living educational theory, from its original reflection to eventual presentation of new practices and insights.

As a framework for this living change process, the works of McNiff and Whitehead (2006, p79) again are utilised in order to frame the synthesis of the thesis itself;

- What is my concern?
- Why am I concerned?
- What kind of experiences can I describe to show why I am concerned?
- What can I do about the situation? What will I do?
- How will I produce evidence to show my influences in learning?
- How will I ensure that any conclusions I come to are reasonably fair and accurate?
- How do I modify my ideas, learning and practice in the light of the new learnings generated through my evaluation?

Using then the above headings for guidance the layout of this thesis is as follows;

Chapter one: What is my concern? Reviewing the Literature on Learning Support

This first chapter will present my concerns as a learning support tutor working in Higher Education. Specifically, the chapter will introduce why I chose to be a learning support tutor and chronicle the history of my service within Higher Education. Through this history, I aim to show why there is a need to improve learning support standards in order to achieve student centred learning.

Chapter two: Research Methodology

Having then identified a specific set of problems, chapter two will address the research question and the specific methodology of the thesis. Outlining the mixed methodology

used, introducing the participants, as well as providing a critique of the action enquiry framework, chapter two will provide a defence for my research activities.

Chapter three: *Why am I concerned? Exploring the effectiveness of off-campus supports*

Leading from chapter two, my third chapter will mark the beginning of the improvement process, where I will firstly present an example of my concerns within the context of my own college. Using both self-reflection and survey feedback, I intend to identify a number of support issues that inspired the creation of what I have called the three principles of student-centred learning support.

Chapter four: *Virtually there: Exploring ways to increase contact with students through a virtual classroom.*

The fourth chapter of the thesis will specifically explore the problem of academic isolation. Reviewing existing synchronous and asynchronous technologies, the chapter will argue that in order for off-campus students to receive an equal level of support, I needed to develop a virtual learning support service. Describing the creation of this virtual service, chapter four will outline how I needed to improve my understanding of pedagogy in order to become an effective online tutor and facilitator. Introducing links to recorded classes and providing screenshots of student interactions, this chapter illustrates how I created the first virtual learning support service in National College of Ireland.

Chapter five: *Effective Learning: Making improvements to my online resources and materials*

Continuing my story, chapter five will capture how I began to construct my service around a student-centred philosophy. Introducing a collaborative theme, the chapter will describe the production of my improved learning support manual, which was developed using national and international best practices. Whilst conceding its similarity with some other existing manuals, chapter five will maintain that 'Effective Learning' has developed new practices in learning support, by introducing inclusive reading strategies and developing the opportunity for students to actively reflect on their learning styles. Moreover, the chapter will further argue that through the use of universal design principles, my improved student resource is now accessible to all learners.

Chapter six: *How effective is Effective Learning?: Evaluating the impact of my actions through student feedback.*

Having then described the construction of a standardised and universally designed resource for students, chapter six presents the impact of this resource within National College of Ireland. Utilising student surveys, follow up interviews, examples of student works and recorded class responses, the chapter presents student reactions to my work as well as utilises my own reflections of the ‘Effective Learning’ workshops. Building on this qualitative data, chapter six will also introduce a neo-positivist analysis of student results, which I will use to argue that my improved service was both qualitatively well accepted and quantitatively significant in helping students become effective learners. Lastly, chapter six will present a review of my ideas from critical friends. Through this data, the chapter will suggest that my current research and future research ideas have contributed to new theories and learning support practices.

Chapter seven: *Reflecting on my journey: Implications of my research*

Chapter seven, being the final chapter describes the final modifications of my ideas and presents evidence for future initiatives. In particular the chapter will focus on my journey through the research and identify five areas where I believe I have contributed to new understandings. Following this, the chapter will introduce how I have modified my ideas, learning and understanding, by presenting four areas which I intend to research further. Finally, this thesis will end with a reflection on how I have grown personally through the undertaking of this journey.

(0.6) Conclusion

This thesis is presented as a journey of my personal and professional development, which has been both insightful and rewarding. As I conclude this introduction then and begin narrating this passage, I would like to outline my usage of the ‘plural structure’ (Winter, 1996). This principle advocates for the usage of not just narration, but a collection of fragments that support the texture of one’s action research. Having then an aim to foster this plurality I am submitting hyperlinks to the materials that have been collated through collaboration with other learning support tutors and wider experts in the field. Similarly, I am providing links to a recording of an on-line class, where I used some of these materials to help prepare my students for their upcoming exams. This

material is provided in order to convey what Bolter (1996) would describe as a *deeper perceptual experience*.

Chapter one: *What is my concern?* Reviewing the literature on learning support

This first chapter will introduce my concerns as a learning support tutor working in Higher Education. In order to establish these concerns, the chapter will firstly introduce why I chose to be a learning support tutor and document the history of my role within Higher Education. Through this history, I aim to show why there was a need to improve learning support standards in order to achieve student-centred learning for all students. Adopting a historic-critical approach to change (Foucault, 1984) I will explore some socio-political and pedagogic reasons why Higher Education, as an institution has attempted to become more inclusive. In doing so, I hope to illustrate that whilst current top-down strategies are crucial for success; such strategies must be combined with more localised bottom-up strategies.

Providing my own example of a bottom-up strategy, I will introduce the three principles of student-centred learning support, which I developed as a means to re-structure my service. Essentially acting then as a blueprint for evolution, this first chapter is considered to be the first stage of the change process (Fullan, 1993B, 1991), which houses the internal motivation and drive to improve current practices (Sullivan, 2006).

Considering that the earliest stage of change is an intrinsic process (Koshy, 2005), the first segment of this chapter deals exclusively with my own thoughts on education and why I chose a career in learning support. As a reflective episode, this part of the chapter will utilise a form of academic writing which is sometimes called subjective and personal introspection, (SPI) (Sherry and Schouten, 2002, Holbrook, 1995, 2002) or I-witnessing (Lewin, 2006). Owing its origin to the works of Malinowski, (1955, 1989) who offered both professional and personal accounts of his anthropological field trips, the reflective method's growing popularity is perhaps best described by Schnog (1997) who states;

“Today, it is not the first-person who speaks in academic literary criticism, but more radically, the first-person speaking about his/her own life story. The self-asserting “I” now stands at the center of a new genre of academic writing, one that blends intimate personal reflection with hard intellectual commentary.”

(Schnog, 1997, p4)

This writing formula is a crucial factor within McNiff and Whitehead's (2005,2006) action research paradigm as it offers the reader an insight into the origin of the problem at hand and documents the sociological and emotional factors that drive the need for change. Moreover, the writing method engages the reader on not only an academic perspective, but personal perspective, displaying a much deeper and arguably a more humanised construction of the research (Gorer, 1967).

(1.1) Me, myself and education: Why I chose to be a learning support tutor

As a forum to self-reflect, the usage of first-person introspection has been used effectively by many practitioner researchers who aim to change their own services, attitudes or teaching methods (Schön, 1983, Whitehead and McNiff, 2006). Surprisingly however, whilst this practice seems to be an easy process of biography or summary, the psychology behind such professional reflection is reliant upon not only the person's own experience, but the context which they work in, the role they are currently playing out, the expectation of that role and the social matrix of information regarding the topic available (Zanna and Rempel 1988). Existing then within the cavity between personal opinion and professional opinion, the professional reflector must first consider either consciously or not, whether they should give a true opinion or a popular opinion (Myers, 1993). In many cases, the pressure of this choice can lead to a splitting of allegiance and the creation of both a private opinion and public opinion (Cousins, 1989). In an almost comic sense then, a person can feel somewhat reluctant to give a true account of their feelings about their current role, perhaps put off by a utilitarian fear of what Orwell described as *Big Brother* (Orwell, 1949). Despite these influences however, the conscious decision to describe personal views and beliefs as being in opposition to those of an establishment or social institution can be a liberating experience. Used by many as a manifesto to bring about change, the popular amalgamation of this process is known as *living in contradiction* (Whitehead, 1993). As an example of this experience within learning support services, Sullivan (2006, p155) remarks;

“My values of social justice and equality required me to ensure equality of respect and equality of entitlement for all pupils. However, the institutional bureaucracy operational in the school meant that my values could not be translated into practice. In this context, I experienced myself as a ‘living contradiction”

In describing my own experiences, I would empathise with Sullivan's need and search for equality. Yet my own passion and search for equality, whilst being somewhat similar to Sullivan's, is not conflicted due to an adverse tension between my colleagues or management in National College of Ireland. In fact the mission of National College of Ireland is to increase participation and unlock each student's potential (National College of Ireland, 2007). No, my own feeling of contradiction surrounded a grievance I had with my own services and my own knowledge as a learning support tutor. Nonetheless, it could be argued that this conflict is more widely framed by current political trends, technology and practices outside of my own service, but for the moment I want to reflect on why I was conflicted with my own work. In order to do this, it is perhaps best to outline just what I do as learning support tutor for National College of Ireland.

My role

As a learning support tutor, it is my role to help each individual student realise their own potential for success, by offering either one-to-one supports and/or group workshops in a host of academic-related areas. As a service leader, I offer individual and group support to all full-time, part-time and off-campus students within the School of Business, the School of Computing and the School of Community Studies. The service is promoted strategically during the full-time and part-time orientation process through the mediums of posters, leaflets and a Student Services movie. In support of this initial contact, my service also conducts class visits and accompanies the Library, IT and Student Services on a "Road show" to several off-campus locations. The present framework of support is operated on an open door policy, with office hours from 9.00am-5.00pm three days a week and 11.00am-7.00pm for the remaining two days. These later hours are set to cater for part-time learner needs. Before any interventions were implemented as a result of this research, my service was delivered through two formats; Individual Support and Workshop Support.

Individual Support

Individual support is offered to all students in National College of Ireland, including those students registered with the Disability Service, international students and off-campus students. Individual Support sessions can focus on Dyslexia support, academic

guidance, developing study skills, one-to-one mock exams and essay support. All students can either self-refer for this service or be referred on by a member of faculty, student support or peer mentor. The average student typically receives three sessions, although the service can offer up to twelve sessions for those students registered with the Disability Service.

Workshops

As an extension of individual sessions, my service also delivers the Effective Learner workshops within the three Schools. These workshops generally cover Learning Styles, Academic Writing and Referencing, Exam Revision and Mock Exams, although can be tailored around a specific project. Examples of these tailored workshops include Technical Report writing for the School of Computing and Learner Journal writing for the School of Community Studies. These tailored workshops can be requested by lecturers, peer mentors, class reps or course directors.

Overall, learning support is perhaps one of the most rewarding roles within Higher Education, as it has visible and lasting effects on any particular student's own development. Subsequently, my attraction to this type of work is not unduly complicated. From a professional perspective, I would argue that I am open to diverse perspectives and am drawn to people-helping fields, such as support or counselling. Kolb (1984) would classify this personality or typeset as a Diverger. Indeed having carried out a Kolb learning preference test online, the following output was given;

“People like you tend to develop broad cultural interests, and specialize in the arts, humanities and liberal arts. Careers tend to be in the arts, entertainment, and people-helping fields.”

(Perryer, 2009)

It is little wonder then that my academic background is psychology, or that I have worked as an assistant psychologist. Taking then a Diverger view of education, I am drawn to student-centred models, where education is experienced and moulded around the wider needs of a student. Yet these terms and theories are relatively new to me and so my affection for their pedagogic principles runs deeper within my own experience. In fact, for me, inclusive student-centrism, simply means taking education to the student. This process can mean simply having patience or intricately presenting facts or ideas in a format which is graspable and memorable for each and every student.

My fondest memories of this as a student, like many others (Treffinger and Reis, 2004) are located within primary education and to a lesser extent the trauma that was secondary education. During these periods of my life there were some exemplary teachers who I remember turning dry facts into remarkable extensions of my imagination. From a Tyrannosaurus Rex that was not an abstract fifteen feet tall, but the size of my teacher standing on-top of a bookshelf, to the dangers of white bread on artery walls, illustrated by its' enduring stickiness to our blackboard. Such images have stayed with me and possibly have influenced my wish to replicate the same care and consideration for learners in Higher Education contexts.

The transformation of such energy within a third level context for me, simply means recognising that there are traditional and non-traditional learning needs and that all learning occurs as a result of internal and external factors (Illeris, 2003). What is interesting however, is that through my role, whether in a one-to-one capacity or workshop capacity, I try to create a deeper meaning of the various time-management theories, reading theories, exam approaches, referencing guidelines and writing strategies that make up the core mechanisms of my teaching. This compulsion is no doubt fuelled by my Diverger status but perchance is also influenced by a much older culture of teaching known as the bardic system (Kendrick, 1927, McGrath, 1979), where the providers of education, known as *Fili* ("to see"), held much respect for the act of storytelling, imagery and meaning (Caerwyn, 1992). In essence then, I aim at all times, to move beyond the dry facts or strategies of academic tuition, seeking firstly to consider the perspective of each individual student, by listening to their story, their experience and through such constructions, decipher their emotional motivation for learning (Damasio 1994, Illeris, 2003) and their current understandings. Yet regardless of why I seek to instil a personalised meaning, be it due to my own internal desires or a lineage of performing, the fact remains that I instinctively want to help students; help them to understand how to survive college, how to make the most of their opportunities and how to have an effective learning experience.

By this reckoning then, my inherent desire to successfully support the student body requires a self-belief that I can make learning meaningful to all students within my remit. Regrettably however, this practice is becoming more and more difficult for various reasons which I will later explore. As a consequence to this growing difficulty, I have developed what McNiff and Whitehead (2006) have classified as a living

contradiction, which in this case has acted as an inducer to explore how I can improve what I am doing. In order then to improve upon my own present service I feel it is somewhat beneficial to describe how my profession was first popularised within Higher Education.

(1.2) The origins of learning support

Barker and Crawley (2005, p3) define learning support as “strategies which empower learners to establish and fulfil their learning, career and personal potential.” This definition coincides with the most recently endorsed vision of learning support within the Irish Higher Education framework (AHEAD, 2009). Yet whilst the most current perceptions of the role reflect an inclusive approach to support, the origins of learner support can be traced back to the later nineteenth century (Barefoot and Fidler, 1996, Stahl and King, 2000, Keup and Barefoot, 2005) when the role was first envisioned as a means to provide extra tuition to traditional students (under twenty three year old males with no disabilities) who were deemed academically underprepared for college life (Dawkins, 1990). Originally designed as one-to-one support models, these early practices were eventually categorised into two schools of thought, Learning Strategies Instruction and Academic Socialization (Ryan and Glenn, 2004).

Learning Strategies Instruction

Offering practical study strategies and reading techniques, the learning strategies instruction model was adopted in American colleges due to the influence of cognitive psychology experts such as Pauk (1962) and Wood (1978) who focussed primarily on building competencies in time management, note taking, reading and test-taking (Ryan and Glenn, 2004). As a format to promote effective learning techniques, this model imbued the very essence of university learning which McGrath (1979, p1) describes as “the process by which knowledge is imparted to the mind with the twofold purpose of enriching it and of developing in it the power of enriching itself”. This process, is more often than not accredited to have been established in the middle ages, encapsulating the *trivium* (grammar, rhetoric, and logic) and the *quadrivium* (astronomy, geometry, arithmetic, and music) (Leff, 1992). Similarly, the model reflects a much older condition for learning, that of independent thinking;

“But in all he does, the educator should remember that his aim is not to ‘put into the mind knowledge that was not there before’-though he may do that within limits- but to turn the mind’s eye to the light so that it can see for itself”

(Lee, 2003, xxxviii, in Plato, 2003).

Rooted then within the very core principles of Higher Education it is no wonder that the Learning Strategies Instruction approach has remained a dominant fixture in any learning support role (Owen, 2002). Evidence of this can be noted within the models’ diffusion into UK and Irish frameworks which Earwaker (1992) describes as being part of a pastoral or Oxbridge model.

Catering for both traditional and non-traditional students, modern versions of this academic support service are now offered as both separate to the curriculum and as part of accredited modules in most Higher Education institutes (Warren, 2002). Yet despite their growing popularity and importance, there are those who would argue that the development of academic skills is not enough for successful transition into Higher Level education (Reay et al, 2001). Perhaps best described as a holistic view of student needs, this alternative model of support is known as the Academic Socialization model.

Academic Socialization

The academic socialisation model, being more holistic and sociological in nature, is rooted in the arguments of Willis (1981), Yorke and Thomas (2003), Crosling (2003) and Walsh (1991), who agree with Goffman that each individual experiences many contexts where they must adopt a set of specific roles, language and overall behaviour in order to succeed;

“A basic social arrangement in modern society is that the individual tends to sleep, play and work in different places, with different co-participants, under different authorities, and without an over-all rational plan”

(Goffman, 1961, p 17)

As Goffman highlights, each person must learn to act out not just one role in society but many roles, thus constructing an entity of selfhood that is non-unitary and relational, (Markus and Kitayama, 1991, p 226). This relational and non-unitary vision of selfhood is possibly categorised best by William James who argued that a person is who they think they are but is simultaneously who everyone thinks they are as well (James, 1892, 1961). These multiple visions of selfhood then allow a person to fulfil both informal

roles such as son, father, or mother or spouse, as well as formal roles such as teacher or student (Mead, 1934). There are however some occasions when the transition from one role to another can cause a person to experience difficulty. For instance, the process of one's informal learning in the home environment or what Bronfenbrenner (1979) calls the Mesosystem, can affect the self's perceptions and expectations when going into a more formalised education environment;

“The influences of family, community and school act simultaneously and at times contradictorily, mirroring the cross-currents of hegemony and the multiple subject-positions that social identity entails for each individual.”

(Levinson et al, 1996, p241)

Elevating this example into what Bronfenbrenner (1979) calls the Macrosystem, it is also possible to perceive how the adoption of Eastern or Western principles of pedagogy can affect a student studying in a foreign country. For instance, whilst the western educational system may be based on Platonic systems, which encourage self-reflection and critique, some eastern cultures, especially Chinese, favour a more Confucius-type system which places a strong emphasis on rote learning (Cortazzi and Jin, 2002, Watkins and Biggs, 2001).

In order then to help both traditional and non-traditional students with the sociological transition to Higher Level Education, new models of support needed to be introduced. These new holistic areas focused on developing social relationships with other students, promoting self-advocacy, building awareness of university resources and raising student diversity acceptance (Ryan and Glenn, 2004, Crosling, 2003). Through these practices it was hoped that a sense of community could be fostered within each first year cohort, where each individual could learn to problem-solve as well as to work respectively and collaboratively with both their peers and professors (Askham, 2004, Kosir and Pecjak, 2005, Earwaker, 1992).

In comparing both models of support, one could argue that Learning Strategies Instruction supports have traditionally been delivered through teacher-centred approaches, whilst Academic Socialization supports have been more student-centred (Yorke and Thomas, 2003). Beyond pedagogy however, the essential differences between both systems of supports lie in their values about what students need in order to become effective learners. On one hand, students need to know how to study, how to

write essays and how to pass exams. On the other, students need to feel motivated, need to feel a sense of belonging and need to understand their role as a student in Higher Education. Coming then from different assumptions of what constitutes academic success and integration, it would seem that both models are incompatible with each other. Fortunately however, this is now considered to be untrue:

“both social and academic integration into a higher education institution have a positive impact on their sense of belonging to (Reay et al., 2001), and ultimately retention within, that environment.”

(Yorke and Thomas, 2003, p12).

Having converged into an extended orientation process (Schnell and Doetkott, 2003), modern learning support services now value both academic and social development. This convergence is of particular interest to my own journey of self-improvement as it illustrates that my profession has previously evolved in light of the growing needs of students. In the hope of continuing this evolution then, it is important for me to examine what political, social and pedagogical factors have influenced my own particular decision to improve upon my service.

(1.3) Socio-political reasons for change

As illustrated in the previous subsection, learning support was originally envisioned to aid a specific group of students which are now known as ‘traditional students’. Such traditional students were recruited from the ages of fifteen to twenty four and were typified by their male, upper-class and able bodied status (Schütze and Slowey, 2000). Being then primarily elitist in nature, the earliest formalization of Higher Education assumed that those wishing to enter higher education would not be female, non-white, poor, or possess a mental or physical disability. Evidence of this exclusion can be seen not only in American Colleges but in Ireland’s first university, Trinity College (established in 1592), where female students were restricted from attending courses until 1904, becoming one of the first ancient colleges in Ireland and England to do so (Parkes, 2004).

These early victories for equality and equity within Higher Education led the way for today’s understanding of traditional and non-traditional students, which evidently have become so diverse that it is becoming increasingly difficult to define what a ‘non-

traditional student' is (Buskist and Davis 2006, p149). As evidence for this, below is an expanded list of Garvey's (2009) list of students entering Higher Education;

- 1 The 'traditional' student: being direct from secondary education, have average or above average cognitive, sensory and motor abilities, have English as a primary language, have no work related responsibilities, are of middle or upper class and are Irish or of similar cultural background.
2. The 'non-traditional student with a disability': students who present with a disability such as a specific learning difficulty, psychological, motor, sensory disability or 'other disability'.
3. The 'non-traditional mature student': mature students who return to education or who partake in part-time courses.
4. The 'non-traditional student from lower economic background': students who are classed as having a lower economic background.
5. The 'non-traditional international student': students who may not have English as a primary language or who may be of different ethnic or cultural background.

(Adapted and expanded from Garvey, 2009)

At a socio-political level, the above diversity of students entering Irish Higher Education can be directly linked to several policies; namely the Equal Status Act of (2000-2004) and the Employment Equality Act (1998). As then a product of such policies, Irish universities and institutes of education have adopted several strategies to promote wider access and support to all five classes of students under section 36 – 1 of The University Act of (1997);

“(a) access to the university and to university education by economically or socially disadvantaged people, by people who have a disability and by people from sections of society significantly under-represented in the student body, and (b) equality, including gender equality, in all activities of the university.”

Yet at a deeper sociological perspective, one must question why inclusion, equity and flexible education have become so important in recent times, considering that the support of students with disabilities was first considered by Socrates in ancient Greece (Schein and Stewart, 1995, p8). For origins of this increased interest, one can turn to the

Organisation for Economic Co-operation and Development (OECD) 2001 report entitled 'The new economy beyond the hype'. This report marked the beginning of a European evolution in terms of how Higher Education could generate a 'knowledge economy' and argued why each country needed to fully embrace Information Communication Technology (ICT). Listing two segments, 'things that cannot be done without technology' and 'things that can be done with technology' the report highlighted that the future of learning was located within the de-materialisation of time and space, where learning could take place anytime, anywhere. Coupled with this, the authors believed that through technology, students could become more reflective and utilise peer support as well as self-assess. As a final point, the report outlined the principles of mass education, where every person could potentially access education (OECD, 2001, p23). As a means then to increase social cohesion, reduce inequality and foster a knowledge-based economy (Krejsler, 2006), the process of increasing participation through policy and technology can be assumed to be the primary reasons why Higher Education has needed to move away from a more traditional model of learning, teaching and service provision. Yet as Richards (2004) suggests, 'technocratic' policies that focus on providing access to services and teachers are not sufficient enough strategies to transform education from old learning to new. Following this logic, it is important to question what value there is in developing new technologies if teachers are not willing or unable to use them effectively (Cuban, 2001, Thomas and Knezek 2002). Similarly, and perhaps more importantly, what benefit is there in widening participation if our teaching strategies remain unaltered (Illeris, 2001, 2003, 2009, Kress, 2003)? We must ask ourselves then, *what else is needed in order to bring about new learning?*

(1.4) 'Old learning to new'

In this time of technological growth, globalization and economic uncertainty, one could argue that the traditional theories of abstraction and scholarship, as set out by Plato, have needed to be somewhat replaced (Harkavy, 2004, Krejsler, 2006). In their place, the goals of modern Higher Education now seem to be driven by what Dewey (2001) would call an action-orientated focus. Moving then into a more civic-centered role in society, many universities and colleges are becoming more concerned with real life problems, ushering in a new era of education (Harkavy, 2006). Yet through this transition from 'old to new learning' (Richards, 2004), has our pedagogies changed?

Can we still apply the same mechanics of teaching and learning, or has the need to develop a nation of problem-solvers altered our approach to teaching itself?

From a pedagogic perspective, the process of moving from traditional old to new learning is summarised by Illeris (2003, p414) as the combination of two very different processes, which he describes as, the “external interaction process between the learner and his or her social, cultural or material environment, and an internal psychological process of acquisition and elaboration.” As a critique on the diversity of learning theories within educational psychology, Illeris (2003) classifies ‘old learning’ to be the adoption of a singular learning theory such as behaviourism and cognitive learning theory or the adoption of constructivism and social constructivism.

As the first learning theory, behaviourism tends to focus on observable phenomena, namely the behaviour of the learner in an environment. Originating from the assumption that people can learn to associate certain stimuli with desired outcomes (Pavlov, 1927), behaviourism relies on the role of conditioning through positive or negative reinforcement (Skinner, 1938). This view of learning, although remaining useful in today’s new model of learning, was originally critiqued by *cognitive learning* theorists who focussed more on the role of the learner, more specifically the role of the learners’ memory (Bode, 1929). Delving then beyond perceivable behaviour, cognitive theorists attributed learning to the acquisition of new knowledge through sensory organs, which is then processed, stored and retrievable (Baddeley, 1966). Concerning themselves with the physical process of how learning occurs either within the individual or because of the environment, these first learning theorists paid little attention to the connection between the individual and the environment. In fact, this connection was not deemed to be important until the works of Piaget and Vygostky, who argued that the individual constructs meaning by building upon prior knowledge and experience (Piaget, 1950 and Vygostky, 1978). This theory of construction has led to the fashionable view of educators as a facilitator of growth, scaffolding the incorporation of new knowledge into existing schemas or ideas.

Despite such polar differences in approach however, the combined benefit of some or all of these approaches have been considered crucially important to the success of ‘new learning’ theories (Illeris, 2003). These new learning theories place the student at the centre of education, where knowledge is not simply imparted but grown, through shared understanding with peers and educators, critique and eventual personalisation. Relying then on Biopsychosocial factors, the combination of such theories has led to the

understanding that learning is a complex process, requiring consideration of how a person approaches and perceives information, receives instruction, processes the information and makes the information their own. Yet as Illeris (2003) admits, this unified learning theory of ‘new learning’ has yet to be fully explored and we must, as educators move logically towards a comprehensive theory of learning.

Collectively speaking, the last decade has seen some innovative changes to education, where increased participation for both equality and economic gain has fuelled both pedagogical and technological innovation. These attempts however, to put each person regardless of age, background or disability, at the centre of educational pedagogy have not been easy. For instance, in the earliest attempts at implementing such visions in New Zealand, many educators felt that the political ideology of widening participation for economic gain made a promise that was not feasible. This doubt was inevitably proved to be true when “the miracle did not arrive” (Schütze and Slowey, 2000, p231). What Schütze and Slowey (2000) suggest is that whilst inclusive policies may in-fact increase student participation, there must be established mechanisms of support already established to deal with the extra academic and social support issues that will undoubtedly occur. Similarly, at a pedagogic level, critics of the inclusive educational model argue that the design of learning experience for each individual can be somewhat difficult and arguably, impossible;

“If each child is unique, and each requires a specific pedagogical approach appropriate to him or her and to no other, the construction of an all embracing pedagogy or general principles of teaching become an impossibility”

(Simon, 2005, p 18)

Evidence of such failures occurred early on in the UK when the promise of mainstreaming necessitated the usage of support tutors as an ‘extra pair of hands’ within the classroom (Moon, Ben-Peretz and Brown, 2000 p370), helping teachers or lecturers to cope with clusters of students that needed more support. It was precisely this generic activity that led some academics to criticise support tutors as not having the subject specific expertise to be a back-up educator (Moon, Ben-Peretz and Brown, 2000) and inevitably led to the belief that the field of learning support needed to become a more strategic influence within education;

“Unless we are clearer about what we want integration to achieve, particularly in the conceptualisation of learning difficulties and pupil’s attainments, and how to translate this into practical classroom strategies, then the role of learning support staff as a catalyst for changing the way teachers think about learning difficulties is likely to remain unfulfilled.”

(Munn, 1994, p212)

It would seem then that the original theory of student-centrism and inclusion was somewhat difficult to implement. Having experienced similar gaps between theory and practice within my own role, I have come to believe that learning support cannot simply be a source of remedial education or a bridge to partial equality, but must become a source through which learners could become confident, self-determined and effective learners. Having then a need to adopt Illeris (2003)’s concept of new learning, I decided to explore how a learning support service could become inclusive, equal, and effective for all learners.

Developing a student-centred learning support service

Following an ‘Effective Learner’ workshop in November 2008, (which chapter three will describe more fully), I felt motivated to explore how I could create an inclusive, equal and effective service for all students within National College of Ireland. Drawing from this motivation, I aimed to change my current practices in order to achieve *student-centrism*, (Brandes and Ginnes, 1986). Building firstly upon my own present theories and practices, I decided to establish a set of principles which would frame a new landscape for my learning support service;

1. All students will be able to interact with learning support materials
2. All students will be offered guidance on which strategies and materials to use
3. All students will be able to create effective notes and will be able to construct meaning through peer support and tutor support.

The implementation of these three principles would require what Brandes and Ginnes (1986) describe as top-down and bottom-up models of change, whereby innovation would be cultivated both within my own practice and adopted from external environments within Higher Education. The realisation of these goals however would require changes to both my own knowledge and current practices. As then an indicator

of such concerns, the following section will highlight the proposed principles in more detail.

Concern one: How can all students interact with learning support materials?

In questioning how all learning support materials can be made accessible for all students it is important to note that the majority of popular study guides and learning support materials are primarily focussed on traditional learners with no learning difficulties or disabilities. Aiming then to move towards a set of resources and practices that were inclusive, my first concern as a reflective practitioner was to identify a source of best practices within my field. Unfortunately, at the time of this first reflection, there was no national group within Higher Education where learning support tutors could disseminate or adopt best practices. This isolation is a common difficulty within the field, leading some researchers to describe learning support services as a ‘lottery’ with varying levels of quality (Sanderson and Pillai, 2001). Undeterred by this phenomenon however, I felt that the most practical step at this stage of exploration was to identify how I could make all materials accessible to a growingly diverse cohort of students. Through this reflection, I concluded that all materials for my service should be available in hard copy format, softcopy (digital), audio, screen-reader friendly format, and adaptable to dyslexic readers. These criteria were drawn, in a top-down fashion, from the theory of universal design (Mace et al, 1991).

Universal design, as the name implies, is a standard through which all learning content can be made accessible and flexible to all potential learners, including those students with disabilities (EDUCAUSE, 2009, Pliner, and Johnson, 2004, Scott, McGuire, and Shaw, 2003). Originating from the field of architecture (Mace et al, 1991), universal design is based on the belief that architectural and technological innovations that were once used solely to help people with disabilities could be used effectively by any person (Thirunarayanan, and Pérez-Prado, 2005). Ireland’s adoption of this philosophy has been personified by the recent Charter for Inclusive Teaching and Learning (AHEAD, 2009E), which represents the first nationally agreed upon goals to achieving a ‘designed for all’ education system. Stemming from the Bologna process (Bologna Declaration, 1999), the primary aim of this Charter is to help generate standards and quality assurance throughout all areas of learning and teaching by utilising the principles of universal design;

Principle 1: Equitable Use

The design is useful and marketable to people with diverse abilities.

Principle 2: Flexibility in Use

The design accommodates a wide range of individual preferences and abilities.

Principle 3: Simple and Intuitive Use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

Principle 4: Perceptible Information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

Principle 5: Tolerance for Error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.

Principle 6: Low Physical Effort

The design can be used efficiently and comfortably and with a minimum of fatigue.

Principle 7: Size and Space for Approach and Use

Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

(CUD, 2008)

On reflection on these principles however, I believe that the Charter's adoption of universal design theory, as a top-down strategy for change, raises some considerable concerns. In particular, I have difficulty with the implementation of principles 1-3, which denote that individual *abilities* and *preferences* and *knowledge* must be considered. Agreeing with the arguments of Field, Sarver and Shaw (2003), I would argue that universal design, as a strategy, is likely to increase achievement once it is coupled with *self-determinism*. This notion of self-determinism, as Rose (2002) suggests, must be guided by choice, whereby students are presented with a range of options for the access, usage and engagement with learning materials. Accordingly, Rose (2002) shares the beliefs of Hall (2002) that effective universal design of materials can allow students to choose whether hard copy, online, or audio versions of learning materials will suit their own needs and styles of learning. Through these activities, a person can not only access numerous versions of learning materials, but can in turn, choose to create memorable notes in either audio, visual, typed or hand written versions.

Yet as an envisioned practice, these activities are based around a number of requirements;

“The indication both from research and from practice is that for flexible delivery to be effective and to capitalise on its principal strengths, it must be designed with learner individual differences very much in mind. If truly learner-centred flexible learning is to be fully realised (along with the need for a recognition of learner differences) there is a need for specific strategies to be put in place both by designers of flexible programmes, and by people whose responsibility it is to facilitate and support flexible learning. Without those strategies in place, the research we have reviewed in this paper would suggest that flexible learning may not be able to deliver the outcomes expected of it.”

(Sadler-Smith and Smith, 2004, p 408)

It would seem then that this strategy for change, whilst being an immensely positive step towards student-centred learning and equality within Higher Education, presumes that both students and educators will have pre-existing knowledge and skills to interact effectively with universally designed materials. Such assumptions are common in top-down models of change in education, where training and support needs are inferred and sometimes neglected (Hopkins, 1987). In order then to utilise universal design effectively, I chose to initiate a second principle of student-centred learning support; that all students be offered guidance on which strategies and materials to use.

Concern two: How can I offer all students guidance on which strategies and materials to use?

Having committed myself to providing guidance to all learners on which strategies and materials would be most effective to use, the factor of most concern for me was how to effectively deliver this promise to several thousand students. Essentially offering an individualised and student-centred approach to study, this principle would primarily rely on the usage of learning styles and preferences.

The idea of learning styles and preferences can be traced back to ancient Greece, where Aristotle in 334BC, suggested that each person may learn differently (Reiff, 1992). In a modern translation of this assumption, various tests and assumptions about learning seem to stem into several brackets. Some of these presume to identify the stimulus or input of information most favoured, such as visual, aural, reading and writing and kinaesthetic (Fleming, 2001) whereas others seek to formulate a wider assumption of

the professional roles and activities that the person may work best in (Kolb, 1984), or even what attitude to learning will take place (Entwistle, 1981). The usage of learning styles and preferences in education, although becoming increasingly popular (Riding, 1999, Felder & Spurlin, 2005, Robotham, 1999, Bull, 2004, Kay, 1997) has met much resistance (Coffield et al., 2004). This resistance has essentially manifested for two reasons. Firstly, some researchers still question the test-retest validity of learning style results (Coffield et al., 2004), claiming that there is little or no scientific weight behind many tests. Secondly, in choosing to utilise learning style results, the question of how best to use a class's learning profile has caused much confusion (Dunn and Griggs, 2000). Should a lecturer aim to cater for all types of learning in his or her class, or should the onus be placed on to the student, to create their own individualised experience? Many current theorists seem to favour this second option, where students are expected to create their own individualised system of learning (Papanikolaou et al. 2006, Dunn and Griggs, 2000). Agreeing with the practicality of this perspective, I believed that each student could proactively explore their own learning styles and subsequently choose how to become more strategic in their learning. Nevertheless, despite my agreement with this perspective, two challenges seemed to be self-evident. Firstly, what strategies and technologies should students be directed to and secondly, how could they be trained to use such technologies without impeding upon their course timetables?

Concern three: How will all students be able to create effective notes?

Although isolated from other Learning Support Tutors, I was pleased to discover that my own practical concerns were echoed in Sadler-Smith and Smith (2004), who suggest that students need to be taught how to use learning technologies and interact with universally designed materials. This concept sometimes known as 'learning how to learn' is widely advocated within the literature as being of growing importance in Higher Education (Sadler-Smith, Down and Lean, 2000, Gropper, 1983, Boote, 1998) and has led many national and international providers of both learning support and assistive technology, to begin mainstreaming their services for all learners, under the banner of learning technologies (EDUCAUSE, 2009). Amongst the most popular elements of such programmes, students are instructed on how to reflect on their learning style and to develop the traditional learning instructional skills such as time management, reading techniques, as well as socialisation competencies such as effective

communication (Hofer and Yu, 2003, Manning et al. 2007). Coupled with these activities, some learning to learn models now seek to develop curriculum-bounded competencies (Tiana, 2004) such as the use of technologies like mind maps and audio-note making tools. Having then a reference for how students could be more fully supported through their individualisation of learning strategies, my last concern focused around the belief that some of my students were experiencing less peer support and learning support than others. More specifically, I believed that off-campus students, sometimes known as distance learners experienced an academic and social isolation.

Concern four: How can all students construct meaning through peer support and tutor support?

As the umbrella term for distance or off-campus learning, flexible education in Ireland, as in other countries, has received a particular surge in attention in recent times due to socio-political and technological reasons (Bowles, 2004, Simpson, 2002). This rise in frequency however has not fully equated to the original forecasts of the OECD (2001) report which predicted a simple process to increasing Europe's knowledge economy. Indeed many critics of this trend seem to agree that a flexibility of delivery does not encompass flexibility of learning (Edmondson, 2007). In-fact, Edmondson (2007, p 11), agreeing with Boettcher (2004), claims that;

“If flexible delivery is to become a pedagogically meaningful aspiration, it requires more explicit and sustained attention to learning outcomes. This is especially important for enabling recognition of some of the key differences between on and off campus learning experiences and the roles of individual students in directing their own learning and their relationship to specific learning goals.”

Perhaps the most obvious difference between both types of cohorts is the physical interaction which typifies the off-campus experience. Having little interaction with peers, lecturers and support staff, the off-campus or flexible learner is expected to be self-sufficient and aware of how to manage their own time effectively (Boyle and Boice, 1998). Yet, as Hardy and Boaz (1997) rightly ask, what supports are there for students who learn best through groups or aural learning, or who need regular guidance from educators? Boaz (1997)'s critique is not however unique. Many other researchers (Boyle and Boice, 1998, McGregor and Latchem, 1991) have criticised the flexible learning or distance learning paradigms for their negligence of what Becker and Watts

(2006) call 'academic isolation'. This social and academic isolation can have a highly negative influence the enjoyment of a course as well as self-confidence and can inevitably lead to high levels of dropout rates (Middleton, 2001, Sheets, 1992). In an effort to reduce such negative experiences, learning support practitioners have often attempted to bridge the geographical gap between the off-campus student and on-campus support. Primary examples of this lie in the incorporation of ICT in the early 1990's as way to initiate flexible learning opportunities (Harper et al, 2000, Collis and Moonen, 2001).

Despite such efforts to instil effective asynchronous efforts however, the move to universally design materials and provide learning to learn workshops or modules has necessitated a complete reflection on how learning support services can not only universally design course materials, but how they can become universally and equally implemented to all learners. To achieve such goals however, Higher Education will need to further embrace technological changes and perhaps embrace a virtual world which was once deemed to exist solely within science-fiction (Forster, 1909). This particular journey into virtual support will be explored more thoroughly in chapter four, where I will discuss how I piloted the creation of a virtual learning support service within National College of Ireland and sought a peer review of my research through both internal seminars and a national conference.

Together, these four concerns outline the particular trouble I had with my service, before any intervention or innovation. Interestingly enough, whilst I have been researching student support since 2006, the decision to improve upon my own efforts took place after a particular workshop in November 2008, when I first consciously imagined myself as a student and not as the tutor. This exercise allowed me to distance myself from my service, to view the known landscape of my role through a critical lens and to, as Derrida (1976) describes, *depart from the familiar*. It was through this process that I began to imagine the gaps between what I wanted to offer my students and what I presently could offer them.

(1.5) Conclusion

Illustrating the history and development of learning support within Higher Education, this first chapter has sought to introduce why I believed my current practices needed to evolve. Utilising the advice of Laidlaw (1996), my first section offered an insight into the internal driving factors of my career, perhaps which fuelled my desire to better my own professional activities. Following this insight, the chapter next introduced a short history of my role in Higher Education and offered a critical view of some of the political and pedagogical reasons why education has become more open and concerned with the individual. Through this critique, I later introduced why I believed learning support has needed to evolve to become a more strategic factor in student-centred learning and further introduced some concerns I had about this process.

As then the first step in McNiff and Whitehead's (2005, 2006) framework of improvement, this chapter has posed a problem, a living contradiction between what I wished to offer my students and what I could offer my students. This contradiction and evolving concern will be explored further in chapter three, where I will illustrate how both my own observations and student surveys induced this process of change. Before this however, I will introduce a defence for both the research methodology and theoretical framework employed in this research.

Chapter 2: Research Methodology

In chapter one, I utilised self-reflection to unearth why I was drawn to my present role in Higher Education. This reflective exercise, whilst simple, led to a conclusion that my own experiences of good learning and teaching practices, coupled with *Diverger* tendencies, have resulted in a desire to facilitate student-centred learning. This personal desire was later set within a national strategy to help students become more strategic and more competent in their approaches to Higher Education. Yet at its core, the focus of this research resides within my own development, whereby through reflective practice (Mac Suibhne, 2009) I identified a set of principles through which student-centred learning support could be implemented. The mechanics involved in such a process however, whilst seemingly easy in theory, reflect a complicated process of determining a problem (either through internal or external stimuli), deciding on an action to this problem, and in the case of choosing to act, examine whether such efforts have made an impact (McNiff, 2002). Examining these processes in more detail, this chapter will aim to explore how a reflective practitioner can implement needed changes to his or her service. Introducing the context of the research, the ethical usage of participant views, the critical usage of research methodologies and the limitations of the research, the chapter will examine the process of validating my experiences as a traceable and accepted form of action research. In doing so, the chapter will cover the following points;

- The context
- Research framework
- The participants
- How the data was gathered
- How the data was analysed
- How the data was organised
- Limitations of research

(2.1) The Context

As a symbol of growth and evolution, the Iris flower dominates the front entrance to the National College of Ireland's dockland campus. Unveiled in 2006, by President Mary McAlleese, the sculpture, alongside the college's entrance plaque, boasts the signage "A campus without walls". This slogan is synonymous with the college's overall mission:

"Our mission is to widen participation in higher education and unlock each student's potential. We offer students the opportunity to acquire the skills and self-confidence to change their lives, contribute to a knowledge economy and become responsible, active citizens."

(National College of Ireland, 2007-12)

As the learning support tutor for National College of Ireland, my role is to help facilitate this process for over three thousand students attending full-time, part-time and off-campus courses. Through self-reflection and student feedback however, I have decided that the achieving of the above practice is reliant on a number of student-centred principles.

1. All students will be able to interact with learning support materials
2. All students will be offered guidance on which strategies and materials to use
3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

In the next chapter I will describe how these principles were developed as a result of self-reflection and student feedback. Working then as a *practitioner-researcher* (Robson (1993) within NCI my first step in carrying out research was to identify a research framework through which I could disseminate my findings and actively describe my own self-development. This choice would then in turn identify my research question, participants, data gathering and data analysis.

(2.2) Research framework

By today's standards, the claim that we can separate the researcher from the individual is one which holds little merit (Schnog, 1997). For many, the fashionable opinion within academia is that each of us holds a certain lens from which we view the world and that this perception is intrinsically important to the research being carried out (Brown,

1997). This logic is derived from a post-positivistic philosophy of research which argues that there is no objective world, only one where facts are constructed through communication and supported by individuals. This is in stark contrast to a positivistic stance which argues that objective truths exist, independently of the views and beliefs of researchers. Based primarily on quantitative data, or percentages, a positivistic research paradigm would claim to generate findings that can be generalised into a different time and context (Kincheloe, 2003).

Unlike classic positivistic frameworks, my own research takes a mixed method approach (Tashakkori and Teddlie, 1998, Robson, 2002), using a neo-positivist analysis of semester results (Johnston, 2006) as well as the qualitative views of students, critical friends and my own reflections. Together these forms of data are used to tell a value-bound story (Fitzpatrick, 2004) of my own service development and personal growth. Despite its subjective focus, however, I make the claim that this journey can be of benefit to future researchers and tutors in similar roles. This is not to say that my own findings are completely replicable, but as Campanella and Owens (1999, p45) suggest, can be a source of mutual learning;

“No matter how much we tell you here of our approach, your own attempts at such change undoubtedly will be different. Every employee you involve in your initiative will bring his or her unique perspective, a true benefit of this work. We can all learn from one another about the best way to service our students, but we can also bring to it our institution’s individuality.”

Accordingly, this study is offered as my own institution’s attempt at change, my own service’s attempt to evolve. This attempt will be constructed through an action research paradigm. Action research, as a method to solve educational problems, can be traced to Stenhouse (1975) who adopted Lewin’s (1948) model into a focus on curriculum development. Utilising the presumption that some practices need to be improved upon through reflection and action, the model maybe perceived as being somewhat critical of existing practices, thoughts or policies. Building upon this framework, recent research from McNiff and Whitehead (2006) has argued for a more fluid concept of action research, one where the living “I” is placed at the centre of a cyclical process of questioning. Agreeing with this fluidity, I perceive the action research process to be a four stage model of identification, intervention, evaluation and reflection.

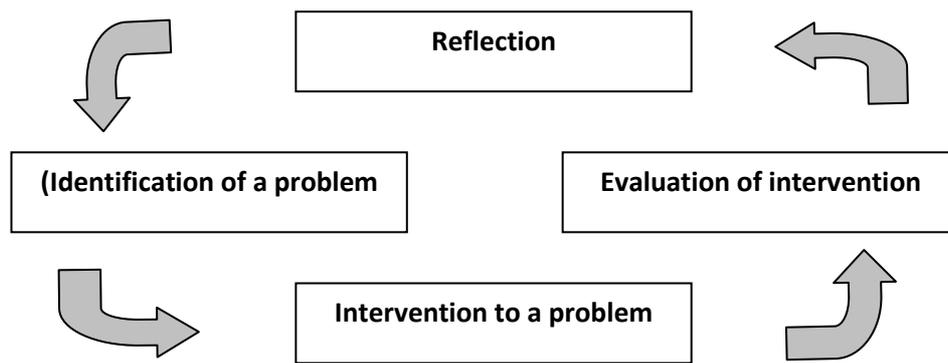


Figure 2.1: The Living Change Process.

My own interpretation of a change process is built upon the extension of existing models, which categorise a successful change process as something which must be initiated, implemented, continued and eventually reach a desired outcome (Fullan, 1993, 1991). Describing this extension process, Fitzpatrick (2004, p56) reflects; “Action research is a cyclical process whereby the researcher conducts a small piece of research, stands back from it and validates its effectiveness before revising the general plan and entering another cycle.”

Stage one: Identification of a problem

The first stage of my own research within this particular framework is influenced by McNiff and Whitehead’s own first stages of research “What is my concern and why am I concerned?” (Whitehead and McNiff, 2006). In constructing my concern I used my own observations as well as the surveyed views of some of my students. In terms of recording these observations I provide five diary extracts in this work. These diaries will be set within a support context and document my experiences of carrying out ‘Effective Learning Workshops’ within NCI and presenting my research to other learning support tutors in Ireland. Presented as a form of ontological self-reflection, these diaries will demonstrate my in-class experiences, my usage of learning theories and my own reflections. As an added dimension to these, I have also provided a recording to a ‘virtual workshop’, which I hosted primarily for students who could not attend live services. This recording can offer readers a deeper perceptual experience of my teaching (Bolter, 1996): <http://www.wiziq.com/online-class/210147-how-to-create-effective-study-notes-for-exam-revision>.

Building on my own reflections as a tutor, I felt it was equally important to qualitatively evaluate my service from a student perspective. Surveying then the views of students enlisted on National College of Ireland's 2008-2009 Certificate in First-line Management course; I aimed to gather reactions to both the content and delivery of the workshops held across Ireland. As a means to provide students with anonymity I used the tool *SurveyMonkey*, (SurveyMonkey, 2009) inviting one hundred and fifty students to comment and rate their workshop experience. From this potential sample a third of students responded (Forty four). These responses were then analysed and used to confirm that my service (although positively evaluated) needed to be improved upon. Using these views and coupling them with my own in-class observations, I later created my research question;

How can student-centred learning support be improved within National College of Ireland?

This research question makes reference to a desire to improve student-centrism within my own service. In chapter one, I argued that although social policy has led to some top-down strategies for change, student-centred experiences of flexible learning and equality cannot be fully achieved without more localised bottom-up strategies. Having initially explored this critique in chapter one, chapter three will introduce an example of "why I was concerned" (Whitehead and McNiff, 2006) and establish why I needed to make changes to my own levels of knowledge, learning support materials and strategy for reaching all students.

Stage two: Intervention to a problem

Having established a need for change, the second stage of the living change process asks "what can I do about this?" (Whitehead and McNiff, 2006). Moving into the design phase of research, this stage housed the production of any knowledge, strategies and interventions that were used in order to bring about a change to my services in National College of Ireland. Specifically, stage two of my research focussed upon two distinct areas, the development of a strategy and the implementation of the strategy.

My particular strategy for change was influenced by the principles of equality (Equal Status Act of 2000) and the need to include students' views in any development or

innovation. Being similar to the work of Sullivan (2006), my goal was to create a practice of effective learning support that was accessible to all students equally. Critiquing existing top-down strategies, this strategic development resulted in the construction of four principles which were developed in reference to the fifteen student-centred teaching competences (Gillis *et al*, 2008). According to Gillis *et al* (2008) educators who aim to be student-centred need to be prepared and driven to self-critique, to explore their own teaching practices and to put themselves in the place of the student. Through this process, I identified changes I needed to make in reference to principles 8 and 9 of Gillis *et al* (2008)'s fifteen competences;

“8. To design an activating learning environment.

- Create an environment that facilitates student learning
- Use student characteristics as a basis for the design of a course component
- Develop support (content, teaching method and learning materials) and evaluation in such way that they are activating

9. To anticipate on the possibly different learning processes of students.”

- Check how (different) students react to an educational approach and take that into account during preparation.
- Use a variety of teaching methods, learning materials, ... to accommodate the variety of students' learning processes.”

(Gillis *et al*, 2008, p554)

These changes would allow me to offer a service that was universally designed and universally available to all students equally and would expand my own knowledge of teaching methodologies. Having then two goals, (1) to create a service that was accessible and activating to every student and (2) to create learning materials that anticipate learner diversity, I aimed to universally re-design National College of Ireland's Effective Learner Workshop by constructing new materials and teaching strategies.

In order to do this, I incorporated the views and works of other learning support tutors and learning theorists in Ireland and England. These processes will be described in chapters four and five, which document how I created a service that was accessible to every student equally and how all learning materials were universally designed using national and international collaboration. Following these actions, I would later

implement a new “Effective Learner” workshop in National College of Ireland and evaluate its influence on students.

Stage Three: Evaluation of intervention

Stage three of this living change process, which is described continually within chapters four, five and six, is rooted in traditional action research models which dictate that a change to practices must be evaluated in order to determine continuance. Inevitably then, this stage of change involves the implementation and evaluation of materials, strategies or practices in order to establish ‘how I will produce evidence to show my influence in learning’ (Whitehead and McNiff, 2006).

In chapter four, this evidence is presented as an analysis of how, as a reaction to a noticeable inequality in service to off-campus learners, I piloted a virtual learning support service in National College of Ireland. As a means to evaluate this activity, I decided to utilise the views of students within a full-time, on-campus course. This decision was grounded in the logic that if the technology was not effective I could provide live support as a back-up. In relation to the proposed technology itself, I used a virtual classroom known as *Wiziq*, a free virtual classroom that claims to offer the same experience as a live classroom (Wiziq, 2009).

Adopting this virtual class for my own means, I firstly carried out a set of recorded one-to-one sessions with one student. This allowed me to test the programs benefit for one-to-one appointments and utilise the co-constructive principles of what Burnett and Pantel (1999, p76) call User Centred Design; “UCD helps to ensure that applications are easy to learn and use, intuitive, engaging and useful”. Through this process I identified a workable strategy that allowed me to offer the same services to off-campus students as those that I offered to full-time on-campus students. From this successful one-to-one pilot, I later introduced *Wiziq* as an alternative/compliment to live workshops in National College of Ireland. Offering both Live workshops and recorded online workshops to one course (which I will identify as HC1) I evaluated the impact of my service upon the classes semester two results. This quantitative data, joined with my earlier qualitative analysis of *Wiziq*, provided me with the necessary data to write a research paper, which I later presented at a conference. This process allowed me to seek peer review from other learning support tutors in Ireland and gave me the experience of presenting to an academic audience.

Building on this experience, chapter five will introduce how I utilised my peer review experience to establish contacts within Higher education. These contacts were later used as a means to further peer review the changes I would make to my learning support materials. In particular, the chapter will describe how colleagues from Trinity College Dublin's Learning Support Service supplied materials which I would later use in *Unit four* of the Learning Development Manual 2009/2010, *Exam revision and anxiety reduction*. Building upon this national connection, the chapter will also document the on-line collaboration I developed with Giles Perryer, from The University of Birmingham. As an example of a community of practice, my e-mails to Mr. Perryer will demonstrate the growing and needed trend of collaboration in Higher Education. Together, these individuals acted as the primary source of peer review for my materials, helping to identify the structure and usage of learning strategies, learning preferences and learning technologies.

Having gathered peer review of the changes I made to my materials and teaching mediums, chapter six will relate how I choose to seek the evaluative views of National College of Ireland students who were registered on the 2009-2010 Certificate in First-line Management course. The rationale behind this was that this group of students would be the first students to experience the new "Effective Learning" workshops and that their demographic was a direct example of National College of Ireland's diverse student body. Coming then full circle to my initial evaluations in 2008, I aimed to gather reactions to both the content and delivery of the revised "Effective Learner" workshops held across Ireland through the survey tool *SurveyMonkey*. Inviting one hundred and twenty three students to comment and rate their workshop experience I gained fifty six respondents. These responses were then analysed and placed into grounded themes. Following this survey, I later gathered live interview data from a selection of three students on the CFLM course and two telephone interviews. These interviews were used in order to further explore whether the experience of the workshop had positively affected their learning experiences and to establish what areas they (A) *felt proficient in* and (B) *needed more support in*. The selection of these students was based upon a random selection of students (Robson, 2002) who attended one-to-one appointments following the "Effective Learner" workshop. Furthermore, I also believed it necessary to only interview students who had already signed or clicked on an Informed Consent form from the initial survey.

As an added means to measure the success of my efforts I chose to compare the semester results of the CFLM course with other first year courses in National College of Ireland that availed of my services. As a pilot group to the new “Effective Learner” series, I wished to see how the overall results average for the CFLM course compared with other courses which had not experienced the “Effective Learner” workshop as an embedded feature of their semester. Added to this, I also explored how students within the CFLM course who attended one-to-one supports, fared against the general class average. This would indicate whether increased contact with the service had a positive effect on student course results. Having gathered then both qualitative and quantitative information, the last stage of my living change process and my living educational theory, involved reflecting on the data and determining whether more research was required.

Stage four: Reflection on experience and future research

The last stage in this living change process is again rooted within McNiff and Whitehead (2006) who suggest that a living educational theory must anticipate a reaction to new problems and consequently, embrace new research goals. In this research, this final stage will be presented as chapter seven, where I reflect on the data I have gathered, my overall journey, and determine new areas of research and professional development.

Basing itself on these four stages, my living educational theory is expressed in relation to how I experienced a living change process. As a summary of this process the below table outlines each stage:

Stage	Participants
(1): Identification of a problem:	Chapter 3: Self-reflection and survey feedback from forty-four students.
(2) Intervention to a problem:	Chapter 4 and 5: Literature review, national and international collaboration.
(3) Evaluation of intervention:	<p>Chapter 4: One online interview with a student, combined with a quantitative analysis of semester results for one class who experienced virtual learning support.</p> <p>Chapter 5: Peer review of materials.</p> <p>Chapter 6: Self-reflection and survey feedback from fifty six students. Five follow-up interviews with students and Quantitative analysis of semester results.</p>
(4) Reflection on experience:	Chapter 7: Self-reflection and identification of new problems.

Table 2.1: Summary of my Living change process and living educational theory

Whilst each of these stages describe a process of self-reflection and change within my own professional knowledge and practice, it is important to also summarise the other voices used in this thesis.

(2.3) Participants

In total I sought the views of two hundred and seventy five students within National College of Ireland, through either survey or interview methodology. From these students one hundred and five students agreed to submit their views around their experiences of the service, their own strengths and weaknesses and their own thoughts on how the service as a whole could be improved upon. As informed participants, each student either signed a declaration of informed consent or ticked a digital version of the same form. These forms will be presented later on in this chapter in respect to survey methodology and interview methodology. Outside of these formal participants however, the views of my peers were also used as sources of advice, inspiration and *validation* (McNiff, and Whitehead, 2006, Lomax *et al.*, 1996). These views are replicated through e-mail correspondence, which I have compiled in Appendix E of this work. Besides this

compiling of correspondence, it is essential to examine how I captured the views of my participants ethically and how I examined class data (continuous assessments and exam results).

(2.4) How the data was gathered

Once a researcher has established what questions he or she intends to answer, why the questions are important to answer and to whom they will direct their enquiry, the task of creating a research framework moves into its final stages. At this stage, the investigator must choose how to gather the information required and what's more, in what style will this information be presented. In this particular case, the information gathered was both qualitative and quantitative; using diaries, interview methodology survey methodology and semester results. This multi-method, or triangulation (Robson, 1993) offered not only the qualitative narrative of the event but a substantial portion of data which could be used by Higher Education faculty or management to determine the benefits/limitations of adopting a similar change.

Drawing then upon the virtues of a multi-method approach, the following research techniques will be described and critiqued in the hope that a defence of their merits in educational research can be further established.

Self-Observation and critique (The Diary method)

Let us presume that *neutrality* in research is impossible (Myrdal, 1958, 1970). For instance, we each approach research with our individual gloss, our own cultural background, tastes, knowledge, prejudices and passions. Can such factors be removed from research? Should they be? Perhaps the most infamous defence for this critique on neutrality can be dated to Malinowki (1989) who once classed his participants as "Niggers", within his own diaries. However, upon its publication, this account was dismissed by the hierarchy of anthropology as non-related to Malinowki's earlier work, Malinowki (1955). This personal account, they believed, offered a window into Malinowki the man, not Malinowski the researcher (Gorer, 1967). Yet the clear distinction between the two embodiments has widely been criticised, and rightly so, as being interconnected and influential to one another, some even claiming to be shattering to the self-congratulatory image of anthropology as an objective science (Geertz, 1967).

Some twenty years after its publication, Geertz reflected upon what he calls this “back door masterpiece” and subscribed to the notion that this event was the first sign of the resulting breakdown of “epistemological and moral confidence” (Geertz, 1988). Lewin (2006) further comments on this issue, claiming Malinowski’s diary, as a process of reflection, led him to grow as both a person and as a researcher. Finding it to have similar benefits, many present academics actively promote the usage of self-reflection, to explore a person’s own beliefs, behaviours and experiences in learner journals or diaries (Jasper, 2003, Hill and Antonacopoulou, 2006). Offering some guidance on the process of using diaries or learning journals, Jasper (2003) suggests that for the observational process to be useful, it must identify learning that has occurred and provide a reflective account.

In adopting this form of qualitative data within my own research I have relied on in-class observations (both internal observations of feelings and external observations of class reactions, gestures, questions) and my own learning during these periods. Commenting on this combination of external and internal factors, Hastrup (1992, p116) suggests that “fieldwork is situated between autobiography and anthropology”. Being somewhat subjective then, this method allows the researcher to convey how their choices to change current practices are induced by not only external factors, such as growing diversity in student needs, but are morally informed by the participant-observers’ own sense of what is right, (Sullivan, 2006). This own sense of ‘rightness’ as a catalyst to change is supported by Nietzsche’s (1886) belief that all morality is subjective and Schopenhauer’s claim that the individual opinion can be the sole basis for change; “Intellect is a magnitude of intensity, not a magnitude of extension: which is why in this respect one man can confidently take on ten thousand and a thousand fools do not make one wise man”. (Schopenhauer and Hollingdale, 1970, *se*: 20).

Relying heavily then on a person’s own sense of morality, empathy and understanding of ‘good teaching’, the diary method, as a data capturing tool is reliant upon the researchers’ *observed* experience of class events and social discourse. As a qualitative method in its own right, observation enjoys the position of being one of the oldest and most influential forms of exploratory enquiry, (Banister et al 1994). Deriving from the Latin word to *watch* or *attend* to observation as a method in social research can be both a quantitative or qualitative tangent depending how the research has been framed. This

framing is punctuated by features of both philosophical and scientific consultation and ultimately relies upon what is being investigated, where it is being investigated and who is involved in the study.

On a more general note, Marshall and Rossman (1989) describe observation as, “a systematic description of events, behaviours and artifacts in the social setting under study” (Marshall and Rossman 1989 cited in Banister et al, 1994, p 17). This systematic description is one that seeks to record perceivable behaviour in individuals (i.e. verbal and non verbal communication, sounds, smells etc) within a natural and safe environment and is undertaken as unobtrusively as possible. To this end, a researcher must plan the observation, even one which bears an unstructured approach, to a degree that the observation process contains at least some attendance to the following;

“1. Structuring of the observation, 2 Focus in observation. 3. Knowledge of those being observed. 4. Explanations given to those being observed. 5 The time scale. 6 The methods used. 7. Feedback given”

(Banister *et al* 1994 p20)

Such attendance to these seven criteria can as Banister *et al* (1994) point out, be permuted in many ways and can be adopted for usage in such events as one on one interviews, group interviews, or any group activities as well as being of vital importance when a researcher enters a context which he or she wishes to record their own feelings, their own behaviours, their observations.

1. Structuring of the observation

With specific importance placed upon the first of these approaches where the investigating researcher must choose what type of observation to generate, Mulhall (2003) highlights the particular influences behind both structured and unstructured observation;

“Observation is used in research in two ways – structured and unstructured. Which of these methods to choose depends on the research question but will be defined predominantly by the paradigm underlying each study. Positivistic research generally uses structured observation and interpretist/naturalistic paradigms use unstructured observation.”

(Mulhall, 2003, P306)

This distinction is quite deceptive in its choice of words, namely due to the assumption that unstructured observations are without ‘structure’ which is not altogether true at all. In contrasting both forms of observation it is better to perceive each type as existing in different contexts; structured being in a positivistic or lab setting and unstructured being in a social environment where there exist wider levels of uncontrolled variance and spontaneity. In this study I opted for an unstructured approach, in so far as my observations were carried out in a social environment where my influence on the situations examined did not retract from the potential for spontaneous construction. This process was needed in order to evaluate (A) the *feeling* of being a tutor in National College of Ireland and (B) my projection of what I felt it was like to be one of my students.

2. Focus in observation

The usage of observation in this case study ranged from interpretative features of the college buildings and decor, to perceptions of students in my class, that together comprised a combination of physical inscriptions and dialogue transcriptions which Mulhall (2003) believes *enriches* a written account (Emerson et al 1995).

Specifically, in instances where there was interaction between myself and students or staff I looked for both *verbal phenomena*, (Bales 1950) and *non-verbal phenomena*, (Argyle, 1987) to construct scenes which I felt were important to reflect upon. Some examples of verbal phenomena I witnessed surrounded stories which students used as a way to describe how they learn best. These stories and discussion within the class were accompanied by non-verbal gestures such as nodding and smiling, which reaffirmed that the students enjoyed the process. Recording these instances as a researcher, my usage of these verbal and non-verbal phenomena raises some ethical and practical considerations.

3. Knowledge of those being observed

Ethical and practical considerations come into play when taking on board observation as a social methodology. For instance, there are many forms of researcher/observer roles, ranging around various levels of identity and disclosure of intentions which need to be considered before engaging with a group of students.

In this particular study I believe that it would have been near impossible to engage with students and colleagues in any other way than what is known as The Observer-as-

Participant role, (Gold, 1958) which as Robson (1993) rightly points out is the most aspired state by systematic observers. The states' most notable features lie in the fact that the participants being observed know both who the researcher is and what their intentions are which in principle seems the most ethical approach.

4. Explanations given to those being observed

The issue of disclosure and subsequent explanations go hand in hand with the type of observer role a researcher carries out. In this particular study I chose to explain my intentions as best as possible to both students and colleagues in National College of Ireland. Whether within an "Effective learner" workshop or carrying interviews or presentations, I identified myself as a postgraduate student from DCU and learning support tutor in National College of Ireland. At all times, I introduced to students that I was formally reviewing my practices so that I could improve upon what I was doing. From a co-constructive perspective, I felt this disclosure would remind students that their experiences were important to me and that any changes I made to my services would be based on their thoughts and beliefs as well as my own ontological self-critique and reflection.

5. The time Scale

As observation in one guise or another was integral to this study, marking both the beginning and end of the study itself which transpired over a two and a half year period (from November 2007 to early January 2010). Specifically the time scale of each observation was corresponded to the length of each workshop or presentation, which themselves had variant lengths ranging from forty minutes to two hours.

6. The methods used (Diary)

Methodology within methodology can be somewhat confusing, but generally what is referred to in this case, are the recording tools for each observation and self-reflection used in a study. In cultivating my own approach to this case study I formulated my observations around the following events which I took part in or literature that I reflected upon;

1. Becoming a learning support tutor (2007)

2. The Effective Learner Workshop, NCI (2008)
3. *Virtually There* presentation National College of Ireland (2009)
4. *Virtually There* paper presentation, CSSI Conference, Sligo (2009)
5. Is your preference our Preference? Presentation, National College of Ireland (2009)
6. The Effective Learner Workshop, National College of Ireland (2009)

Within these varied contexts, the methods of recording I used were known as field notes. These field notes were taken shortly after the events themselves. This I felt was appropriate as in all occasions I was recording my own beliefs, my own observations and behaviour and thus needed no external recording of the event. Such delays in transcribing are not methodological errors but when used properly can formulate both specific timeframes within broad concepts which emerge through reflection;

“Recording events as they happen or shortly afterwards ensures that details, and indeed the entire event, are not lost to memory. On the other hand, short or long-term reflection on observations may provide a different gloss on the events. Moreover, specifically detailed accounts of events may not be required, and capturing broad patterns may better be achieved at a longer distance from the field.”

(Mulhall, 2003, p 311)

7. Feedback given

As my particular observations were used as means to monitor my own self-development and my own beliefs about student needs I felt that all students in NCI should be made aware of the changes I made to my service. This was accomplished by placing all revised content and strategies onto the student portal (an internal website) and promoting the new materials and virtual service.

With regard to the generation of these diary accounts, Banister et al (1994, p24) suggest the following headings:

1. Describe the context.
2. Describe the participants.
3. Describe who the observer is.
4. Describe the actions of the participants.

5. Interpret the situation.
6. Consider alternative interpretations of the situation.
7. Explore your feelings in being an observer.

To some degree every researcher uses such a framework, giving their account of a particular event or sequence of events that has effected them, yet each researcher is different, is subjective in their own style of writing and perceptions and it is this notion of subjectivity that leads me now into the following subsection, which covers the benefits and disadvantages of observation as a method.

Benefits and disadvantages of the diary/observation as a method

I have used observation as a method many times, in both my professional reports and student experiments and from these experiences I believe it to be one of the most powerful tools in gaining an insight into human behaviour.

Many researchers point out the fact that views based on interviews or questionnaires alone are prone to discrepancies as people, especially ones who wish to appear helping may generate answers which either display their own best attributes or expected responses, (Agnew and Pyke 1982, Robson, 1993). It is important then to contrast these methodologies with the observational method, as a combination of both can reflect a triangulation that represents a 'real life' portrayal of events in all its complexities and contradictions. There are however problems with the observational method, namely those surrounding validity; in particular the reliance of the data and researcher in question. Banister et al (1994 p30) point out rightly that a person with particular interests may consciously or unconsciously influence his or her perceptions.

Another area of concern resides in the style of writing one chooses to use within the writing up of observations, which may be constructed over impressionistically or without an ecological consideration for factors outside of the context, thus re-contextualising the data in a format which may not be useful to others. Coupled with these concerns are the issues of time and the generation of data which can be quite enormous depending on issues such as experience of writing up field notes, constructing case studies and knowing what is important and what is not important (again a bias issue which needs to be validated through peer support or feedback from participants).

Essentially the observational method is one which brings a substance to research unlike any other method, bringing flavour and life to any study; yet concerns such as have been listed, must be attended to through experience of writing up case studies, self reflection on what is being wrote, feedback from the context's members to combat integral bias and a realisation that observations are constructions with many interpretations. However no method is without its criticisms. Commenting on the need for diversity, McNiff, Lomax and Whitehead (2003, p110) write;

“When your reader comes across such statements as ‘My patients said they were happier with the service’, or ‘Nurses learned the material more effectively through interaction with the video pack than from other resource material’, they will expect to see or hear evidence from the patients and nurses for themselves, and not just take your word for it. As a general rule, you should not speak on behalf of your research participants; otherwise you are potentially distorting the data and its analysis. You should find every opportunity for creating ways for them to speak for themselves.”

As evidence of this diversity and the usage of every opportunity, the next section outlines how I used interview methodology to capture the thoughts of my students.

Interview methodology

The interview method in qualitative research consists of fluidity, unpredictability and humanity that gives the qualitative methodology its’ social weight and support amongst research paradigms. Quite different from survey or experimental research the interview is a process that according to Robson (1993, p229) is; “A flexible and adaptable way of finding things out.”

This process of ‘finding things out’ is in general terms, particular to the type of interview taking place but can be hosted within a matrix of domains that Rubin and Rubin (1995) claim to be most commonly sought; 1. Narratives. 2. Accounts. 3. Fronts. 4. Stories. 5. Myths.

Types of interviews in educational research

In educational research there are many types of interviews, Semi-structured interview, In-depth interview Group Interviews/focus groups, Non-directive interview (Robson, 2002). For this research the following type was utilised;

- Semi-structured/in-depth

Both *semi-structured* and *in-depth interviews* (sometimes combined) are types of interviews that are mainly used as a platform to explore certain issues which the researcher may have some knowledge of but wishes to investigate through co-construction with an interviewee. Such a process requires the planning of questions into either a set list or *interview guide*, which is constructed in reflection of what Robson (1993, 2002) calls, a *situational analysis*. Together these steps represent the periods when the researcher evaluates the core aspects of the interview (phenomena of interest), the meanings, knowledge and understandings of the phenomena coupled with how these phenomena have affected those involved and will affect him or herself. This period of reflection is honed to a degree that the researcher can postulate a working plan of how the interview will evolve. There are, however, some cases where the working plan must be adopted. One such instance is when using telephone, or online conferencing equipment to carry out an interview. Due to the distance involved, many of the social cues associated with non-verbal behaviour are not observable. However, online, or telephone interviews do allow a researcher to conduct an interview, which due to geography or time could not be conducted in live settings (Robson, 2002).

With regards the writing up and management of data from all the interviews carried out, I adopted a transcription style outlined by Powney and Watts (1987) which focuses on the substance of the constructions, using extracts of dialogue to highlight points or confirm opinions. Similarly adopted were the open *coding* approaches of Strauss and Corbin (1990) and *chunking* identification of Birley and Moreland (1998) where the data was broken up into themes which were identified and used to discuss trends and possible avenues for further research. This coding approach was made possible through the recording of my interviews.

Advantages and disadvantages of interviewing

Gillham (2005) in *Research Interviewing* eloquently describes the balance and value of the type of multi-method approach endorsed by Brewer and Hunter (1989). In his account Gillham describes how a research reader can spend countless hours trawling through summaries of quantitative data but welcomes the complexity and depth of the

interview method. Agreeing with this perspective I have used interviews as a tool to complement survey methodology. This I feel will remind the reader that the source of data is from a real person, thus bringing a personality to an otherwise featureless set of numbers.

For this reason, interviews are seen to be one of the most valued forms of data gathering, having the scope and ability to extract the deeper facts of an institution that questionnaires and observations cannot (Vaughn, Schumm and Sinagub, 1996). Yet the success rate of such practices depends greatly on both the participant as well as the skill of researcher, who must at all times, apply what Wengraf (2001) calls *double attention*, the ability to listen acutely to what is being said to you as well as paying attention to your resources of time, structure and levels of knowledge needed. Bryman (2001) points out that the length and structure of an interview is very important as for every one hour of recorded discussion it takes up to four hours to transcribe the scene into workable material. Perhaps then the most accurate disadvantage of using interview methodology is the amount of time which is needed in order to produce a wide sample of research. For this reason, I chose to combine the method with surveys.

Survey methodology

At this point it is important to clarify the difference between using a self-created questionnaire for a survey and using a learning style questionnaire that has been constructed previously by a learning theorist. For this project both were used. The first of these was utilised to capture qualitative views and opinions around participants experiences and evaluation of the resource manual and workshop. The latter was utilised to capture each workshop attendees learning profile using established online tests that offer insights into a person's own learning styles and preferences (Perryer, 2009, Fleming, 2006). This reflective opportunity was offered to all students in NCI as a way to help individualise their learning experiences.

Designing the questionnaire

Following the steps outlined by Robson (1993, pp 133 -135) I reflected on the purpose of survey methodology in this work and what specific information was required from the data. As the survey was to be implemented as a reaction to the 2008 and 2009

Effective Learner Workshops, the purpose of the tool was to establish both groups' evaluation of the experience and to determine any possible limitations and benefits.

The construction of the surveys themselves was carried out using *SurveyMonkey*, an online survey tool for professional researchers. The benefit of this tool is that responses can be gathered either online or inputted manually from a paper based survey. As an ethical feature for both the online and paper-based versions, all students were asked to sign or tick a declaration of informed consent form. This form can be viewed in Appendix D.

Beyond the construction issues, the intended population of this survey was located within National College of Ireland. The sample size of participants was envisioned to be approximately one hundred and sixty students from the Certificate in First-line Management course in 2008 and a similar number for 2009. In relation to the specific demographic nature of the course, the CFLM course has historically received a high mature student intake and predominantly Irish nationality. However, with the current economic climate having induced an increased interest in Higher Education, there was an increased diversity in 2009, in terms of age ranges, disabilities and nationalities. Consequently, this course is a projection of the current levels of diversity entering National College of Ireland.

The implementation of the survey itself transpired after each "Effective Learner" day workshop, when students were asked to reflect upon their experience and offer some feedback in an anonymous fashion. This could be achieved either in a paper format or online at the students' discretion. With regard to the types of questions used in the surveys themselves there was some variation in how the questions were asked. For instance, whilst both the 2008 and 2009 surveys inquired about how effective the workshops were, the language used was somewhat different;

(Q4) Did you find the workshop useful? (2008 survey)

I believed at the time of this surveys' construction that a generic question on whether students found the workshop helpful or not was sufficient. This I believed would reflect a reaction to both the delivery of materials as well as the usefulness of the materials. Having become more focused on inducing effective and confident learning however,

my question in 2009 focused more on the retention of materials and growth in knowledge within the student;

(Q4) In your opinion, has the Workshop provided you with the tools to become a more confident learner? (2009 survey)

Despite these changes however, both surveys offered students an opportunity to describe their future needs and experiences in more detail. This decision I felt was important as it required each student to actively reflect on the day and their own needs. Both Survey designs can be viewed in Appendix H.

Advantages and disadvantages of survey as an approach and method

Surveying in general has the ability to illustrate common feelings, attitudes and beliefs of a large group of people in a manner that is not difficult to understand and is easily transferred to graphs and statistics. As Hakim (1987) comments, it is also one of the most transparent forms of data gathering in research, where its dynamics maybe viewed, attended to and replicated at will. However, the survey approach bears some disadvantages, namely the time it takes to plan, implement and analyse the data, which can be significant when working alone. Other critics of the method suggest that the usage of surveying can artificially force respondents into constructing opinions that might not be a true representation of their feelings (Garson, 2002). This critique is somewhat alleviated when offering student anonymity and sections within a survey that allow for more descriptive responses.

In general, surveys have the air of assurance that they will produce a great deal of data to analyse and this promise can draw many inexperienced researchers into creating questionnaires which are either not engaging, boring, too long, unethical or even leading. It is prudent then for any researcher, despite their experience to be aware of the fact that surveys are implemented in the real world (Groves et al 2004), where spontaneity and subjective reactions to questions can induce feelings and beliefs that may require more discussion than a survey can capture. It is advisable then to triangulate this method with follow-up interviews or other forms of quantitative analysis such as exam results or continuous assessments. It is for this reason that I chose to not only gather the qualitative reactions to my service, but sought to quantitatively examine the *effectiveness* of my service.

Student results

McNiff and Whitehead (2006) suggest that student results in exams or continuous assessments can be used as a method to confirm that perceived improvements in support or teaching are not just ‘wishful thinking’. Within my own research, I used this type of data to determine the effectiveness of my *service delivery* and *materials*. In terms of evaluating delivery, I analysed the 2008 semester results of one student in National College of Ireland who utilised the virtual learning support service and compared his performance with the overall class average. This unobtrusive data analysis (Robson, 2002) allowed me to reflect on whether virtual support, as a medium for my service was an effective strategy that could be applied as a wider initiative. Having later confirmed the possible benefits of this virtual service, I initiated a wider testing of the virtual learning support service in 2008, where I compared one class’s pre-support scores against their post-support scores in order to establish whether there was any noticeable difference in class performance.

In an effort to evaluate the effectiveness of the new “Effective Learner” day workshop in National College of Ireland (which incorporated new materials and virtual learning support), I compared the overall class average of the Certificate in First Line Management Group, with other first year groups in National College of Ireland who did not experience the workshops as part of their formal course delivery. These other classes were however offered individual elements of the Effective Learner day workshop throughout semester one of 2009, (such as learning preferences, academic writing and referencing in first year, and study skills), but such contact was not scheduled as an embedded part of their curriculum; instead it was offered as group workshops for self-advocating students. Consequently, I believed that the CFLM1 group, as a whole, would do significantly better in their first semester than other first year courses that did not experience the “Effective Learner” day workshop. I based this belief on the findings of Hofer and Yu (2003), who claimed that a stand-alone learning support course can positively affect student performance. A visualisation of this result is provided below:

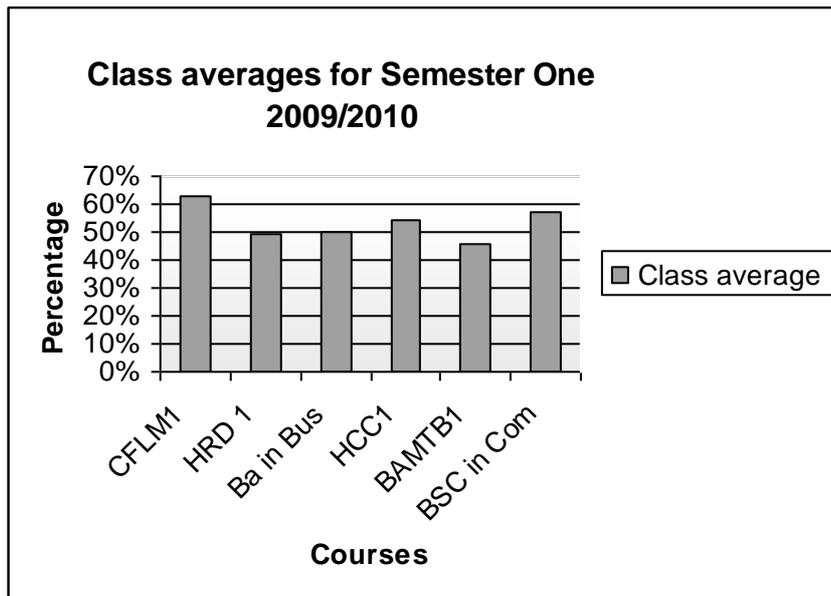


Figure 2.2: Class average of CFLM pilot Group vs. Self-advocating class averages

As an added analysis, I identified those students outside of the pilot group (CFLM) who had experienced some elements of the “Effective Learner” day workshop in semester one, either through individual or group appointments. Having done this, I then compared these students’ results average with their own class average. I felt this would allow me to identify whether I had a statistically significant impact on those students who did attend my ‘redesigned’ service. An example of this is provided below;

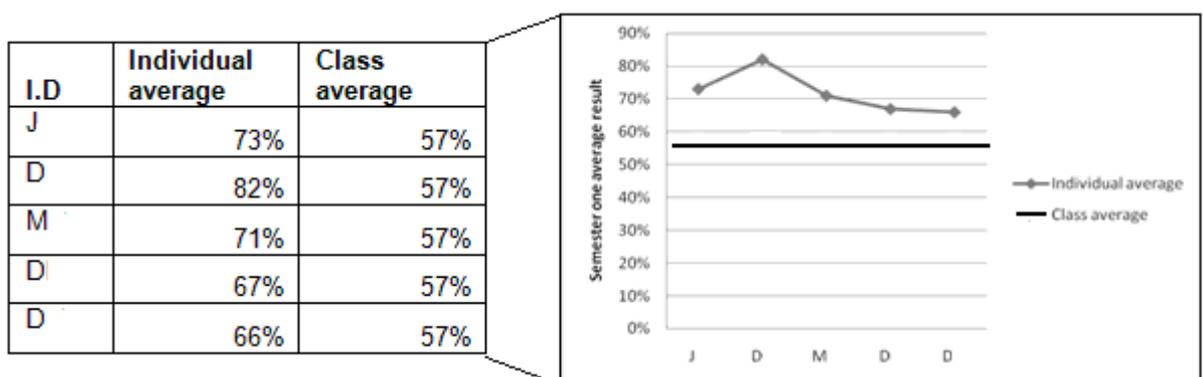


Figure 2.3: Learning Support Attendee vs. Class Average

My last usage of this type of data gathering occurred in January 2010, where I compared the individual performance of CFLM students who attended supplementary

“Individual appointments” against those students who did not. As an overall hypothesis, I hoped to illustrate that increased contact with the learning support service can positively affect overall semester performance. The details of these practices will be more fully explored in the next section, which presents how the gathered data was both qualitatively and quantitatively analysed.

(2.5) How the data were analysed

The analysis of data in Higher Education research has generally fallen into two distinct areas, that of qualitative and quantitative. Quantitative analysis is most commonly used to describe the analysis of numbers or percentages, whereas qualitative analysis describes the process through which discourses and observations are coded, grouped and grounded into themes.

Quantitative analysis of both surveys

The analysing of surveys in a research study usually involves the aid of computer programs. The most commonly used packages to date are, SPSS (The Statistical Package for the Social Sciences), (www.spss.com) and more recently, SurveyMonkey (SurveyMonkey, 2009) which is an online tool that processes completed surveys and provides statistical results. In choosing which statistical package to use, it is vital for the researcher to consider what type of data is being presented (i.e. experimental results, survey responses). In this particular case, Survey Monkey was employed to present the results of both the 2008 and 2009 surveys. Both surveys sought to establish the following key areas:

1. Where there any academic areas that the student had concerns about before the workshop?
2. Did the workshop and manual alleviate any of these concerns?
3. Were there any academic areas particular to the student that the workshop or manual did not cover?

Through the answering of these questions, the questionnaire would allow me to establish hard data (frequency) on the types of difficulties the students envisioned as

well as establish how well the workshop and manual could combat such difficulties. For illustrative purposes, both questionnaires (2008, 2009) can be viewed in Appendix H of this thesis.

Quantitative analysis of semester results

In relation to the statistical analysis of semester results, the particular methods I used were based on two principles. Firstly, I wanted to visually present data in a format which could be read easily. Secondly, I wanted to statistically analyse whether my contact with students had positively affected their semester results.

In order to visually present my findings in an easily accessible manner I choose to create Bar Charts and line charts, which allow the researcher to display individual scores against the arithmetic mean (average) scores of a group (Brace, Kemp and Snelgar, 2006). For example, if a student receives 54% in a Marketing exam, 59% in a Law exam and 66% in a Communications exam, their individual semester average would be 60%. This individual average is then combined with other students' individual averages to obtain an overall class average for the semester. This process can be achieved either through SPPSS or in excel using a short formula such as =(AVERAGEA1:A5). Having then an individual average and a class average, the researcher can then create a data set, which in turn can be used to create a line chart. An example of this is provided below;

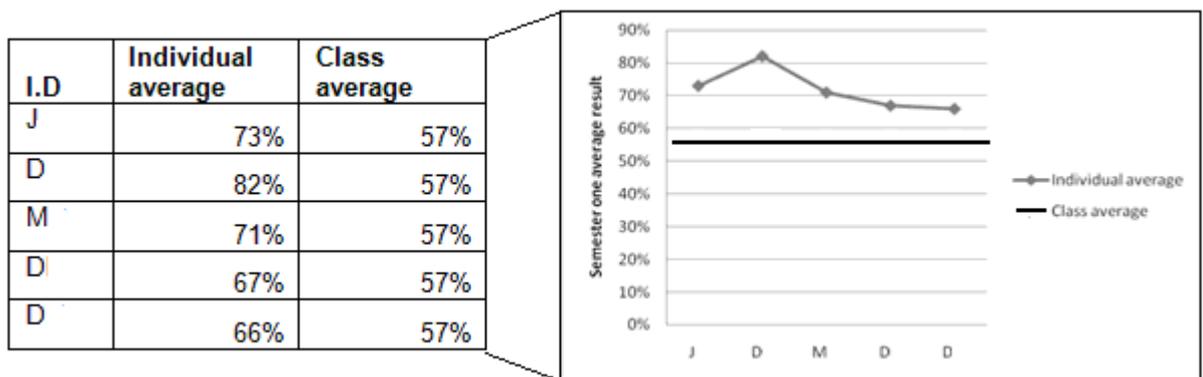


Figure 2.4: Learning Support Attendee vs. Class Average

In this particular example, we can see that all individuals who attended learning support sessions achieved better results than the class average. This cannot however be used to

claim that attendance at learning support workshops or individual sessions was the only reason for this success. For instance, one could argue that student success and failure is perhaps more reliant upon self-motivation than any type of support (Ahl, 2006, Aire, and Tella, 2003, Maslow, 1987). Yet one could counter argue that through learning support, students can become more motivated to succeed by becoming aware that they can improve their performance, which can induce social competitiveness (AHL, 2006) or increase their desire to feel more connected with their peers (Rhem, 1999).

Despite this critique however, the line-graph analysis does provide a visual indication of student success. Elevating this usage into a wider domain then, it is possible to create further analytical correlations. For instance, in this research I was interested in how those students, who were part of the Certificate in First-line Management course (CFLM), performed in relation to other first year courses. This was interesting for me as I felt that the “Effective Learner” day workshop should become a fixture in every first year course so that each student could be taught how to become an effective learner in Higher Education. As a defence for this belief, I hypothesised that each student who had experienced the “Effective Learner” workshop would perform better than those first years that did not. As can be seen from fig (2.4), the visual representation of this trend is easily accomplished using a line graph. Despite this ease however, I felt that I should carry out a more statically accurate analysis of this trend by carrying out a Chi-square analysis of semester one results.

Chi-square analysis of results

The Chi-square analysis, in particular the ‘Goodness of fit’ Chi-square analysis test allows a researcher to explore the relationship between what they *predict* will happen and what normally would happen through chance or probability (*expected pattern*) (Greenwood and Nikulin, 1996). For example, let us suppose that the *expected pattern* of class results was that 50% of students will pass and 50% of students will fail a particular module. If I believed as a researcher, that my activities as a tutor would affect this rate I would create a hypothesis to test. In this case I hypothesized that those students who attended the “Effective Learner” day workshop would achieve higher results than other first year students who did not.

As a basis to test this hypothesis I analyzed semester results for the CFLM pilot group, comparing those who attended and did not attend the “Effective Learner” day workshop. In this case the null hypothesis was that there would be no statistical difference between pass/fail rates in both attended and non-attended groups. Elevating this analysis to my contact with other first and second year students, I chose to analyze whether students who attended three or more workshops of the Effective Learner Day workshop done better than those students who did not. I felt that this analysis would offer a broader insight into my predicted influence in National College of Ireland.

Together, these hypotheses and null hypotheses encapsulate my efforts to statistically analyze my influence in National College of Ireland. Beyond the statistical significance of exam results however, the qualitative reaction to both my delivery methods and materials was equally important to me in terms of knowing that my current levels of knowledge and practices were appropriate for individual students.

Qualitative analysis

The generation of material from qualitative methodology is vast and can be as Miles (1979) suggests an *attractive nuisance* which roughly translated means that aspiring researchers and even experienced ones face problems such as *overloading*, *aesthetic formatting* (mostly when more than one researcher produces separate cases that need to merge seamlessly into an over-all case study) and *reliability*.

As earlier indicated with regard to data management in interviewing, I utilised set procedures of coding, chunking and theme labelling, which are regularly used in order to compensate for the subjective nature of qualitative research. What is meant by this is simply that if a researcher wishes to as Robson (1993, p370-371) puts it; “persuade scientific or policy-making audiences, there are ways in which qualitative data can be dealt with systematically.”

In my search to frame and organise the analysis of qualitative data from interviews and observations in this study I followed Robson’s (1993) *basic rules for dealing with qualitative data*. These rules advocate immediate analysis of gathered data of some form, indexing data before it is lost, generating themes, categories etc., becoming reflective about the data and questioning your findings, order and file your data, pick what types of information are important to look at and effectively take apart the data in

various ways and compare what you find (Robson 1993, p377). In order to help with this process, I used what is known as *Grounding*.

The grounding conflict and theme generation

As a means to identify common themes within a case study, interview or observation, social scientists sometimes rely on what is called grounded theory. The most popular of these structures originate in some form or another from the work of Glaser and Strauss (1967), who in later research fractured their unification of what grounded theory was and how it should be used. Specifically, Glaserian grounding, (Glaser, 2001, 2003, 2005), involves conceptual emergence within the data, suggesting that explanations to phenomena be formulated as a *process* using inductive reasoning. On the other hand, Straussian grounding (Strauss & Corbin 1997), concerns itself with validation and comparison of theory in different contexts. Simply put, Glaserian theory has been used to make assumptions that phenomena in one context will exist in similar or exact formats in another context whereas Straussian grounding establishes the need to constantly test this assumption with further investigation.

These grounding techniques, *data collection, note-taking, coding, memoing, sorting* and *writing*, have in recent years come under analysis from social constructivists, who present a constructivist grounded theory framework (Charmaz, 2000). Through these techniques objective truth becomes questionable when presenting coded research themes. Specifically, constructivists seek to highlight the influence of context, expectation and researcher perceptions on data gathered.

Such concerns have popularised the usage of the program Nvivo or NUDIST (Richards 2002) which aids in activities such as coding, chunking and formulation of themes. Although this sorting can be done without computer programs, many researchers find that the usage of coding programs gives methodological weight to their theme's construction and supports the researchers own coding process. Through these grounding processes, it is possible to generate themes that can be placed within larger existing or emerging themes. In my own work, some examples of these themes were *academic isolation, digital literacy* and *written English difficulties in international students*.

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Having described how the data was captured and analysed, the final section in this chapter examines how the data was organised logically within a case study format.

(2.6) How the data was organised

Whilst McNiff, Lomax and Whitehead (2003) advise students to find their own structure in organising their case study of experience, they do caution the potential researcher to make sure that each ‘job’ is done properly. Examining then the overall structure of my data and analysis, I have chosen to label my journey as a case study; a critical narrative of how I changed my current activities through action research. This narrative, as I describe it, is framed by my own voice and evolution as well as the voices of others, my participants and *critical friends* (McNiff, Lomax and Whitehead, 2003) who acted as sources of guidance, critique and validation. Taking then the advice of McNiff, Lomax and Whitehead (2003), I sought firstly to examine what a case study is, from a social science perspective.

Writing a *case study* is not by any means an easy process, nor is it infallible. By all measures it is a complicated hybrid of subjectivism and objectivism where the researcher must produce a constructive account which is useful to not only him or herself but to others who either determine the future of policies/practices or who carry out future research in a similar area.

Highlighting this barbed issue in the preface to his book *Case Study Research: design and Method*, Yin (2003) warns the potential researcher about using case studies;

“Do case studies, but do them with the understanding that your methods will be challenged from rational (and irrational) perspectives and that the insights resulting from your case studies may be underappreciated.”

(Yin, 2003, p Xiii)

Yin reflects upon not only the earliest criticisms of qualitative research, but the present day conscious ignorance which he claims, highlights that even though qualitative research is in fashion as of late there will always be critique which one must prepare for. To aid in this preparation, Yin suggests that the potential researcher needs to be extra vigilant throughout each stage of case study production which he earlier outlined in Yin (1984) as; *designing, conducting, analysing and developing* (conclusions, recommendations and implications).

The reasons why Yin (along with Stake) is generally considered to be the defining authority on case study construction surrounds the rigor outlined above which illustrates

the role he played in transporting the case study from a *narrative story* into a cumulative and replicable method that exhibits validity and reliability (Yin 1989).

In order to transform the case study from a narrative account to a systematic study the researcher must first as Yin points out, *design the case study* which incorporates a decision on such matters as its questions, what it proposes, its unit of analysis, its linkage of logic drawn through the data and propositions and the final interpretation of the findings (Yin, 1994).

In formulating this strategy, the researcher then adopts one of the many of the types of case study which Yin (1993) advocates such as *Explanatory*, *Exploratory* and *Descriptive*. These archetypes however are not rigid outlines but descriptive of the types of uses the case study approach may be put to. Stake (1995) has added to these listings by including *Intrinsic*, *Instrumental*, and *Collective*.

With relation to *the conducting of a case study* it is assumed best practice to triangulate your research strategy, which is seen by many as being a format through which a study can accumulate accuracy and alternative explanation for emergent phenomena by combing such methods as surveys with observation, or interviews with observation. In total, Denzin (1984) identifies four types of triangulation in research which surround the *investigator*, the *applied theory*, the *context* and the *methods* within a study.

Triangulation then surfaces as a means to magnify the real life application of the research in what Yin (1984) has called *Analytic generalization*, where a study's findings may be successfully linked to existing theories from earlier research.

Taking then into consideration the advice of McNiff, Lomax and Whitehead (2003), Yin (1989, 1993, 1994), Stake (1995) and Denzin (1984) I find that my own usage of case study as a manner to tell my story is divided into a *descriptive explanatory and exploratory study*. In simpler terms, my story, beginning in chapter three, will outline why I was concerned and what induced my concerns as a learning support tutor. From here the case study will describe in chapter four how I firstly put in place interventions to my identified problems, using both national and international collaboration, so that I could feel comfortable that all my students could access my service equally. Having done this, chapter five will continue the story by exploring how all my materials were universally designed and how I collected a new set of learning technologies for all my students, so that they could become more strategic, more aware of their learning styles and more flexible in how they approached study. Through these changes to my delivery mediums and materials, the next chapter, chapter six, will identify how I redesigned the

“Effective Learner” day workshop and sought feedback from my students about their experiences. In this same chapter I will also present a quantitative analysis of my students’ performance, accessing an alternative means to measure the success of my delivery and used materials. Concluding this experience, chapter seven will extract the grounded themes of my narrative, my living change process. Through this I will explore my own reflections and student data in order to examine areas which require further research. On this note, it is important for me to comment on the limitations of my current research and to reflect upon those areas which I would like to further research in future studies

(2.7) Limitations of research

Being limited to the confines of National College of Ireland, my own evolution cannot be described as a blueprint for all similar tutors in Ireland. It can only, as Campanella and Owens (1999) suggest, be used as guidance and mutual learning. Further limitations I have identified are related to my participants, who are limited to undergraduate students. These I felt were the most important cohort of students to examine, as they exemplify the transition into Higher Level education. That is not to say however that I wish to ignore the needs of postgraduate students. In-fact as a future initiative I aim to explore the support needs of graduate students in National College of Ireland, from both internal matriculation and from international transfer. A final possible limitation to action research, as I see it, surrounds its cyclical process, which some could argue gives any action research process an undefined ending. Yet as action research reflects a real world application of findings and a logical understanding of change, it would perhaps be unrealistic to have a definitive ending to all avenues that have been explored.

(2.8) Conclusion

This chapter has sought to introduce the context of my research within National College of Ireland, offering our mission as a college and as a learning support service. From here, I chose to explore the theoretical framework of my thesis, describing the roots of action research and McNiff and Whitehead’s (2005, 2006) own brand of action research. As an integral factor of this particular brand of action research I introduced the need for my own voice and my own self evolution, but concluded that this reflection is sometimes best seen through the eyes of others. In this case, the others I have introduced in this chapter are both my co-constructive participants and critical friends

who helped guide my re-designing process. In a more mechanical and methodological sense, I next covered how I gathered and analysed both quantitative and qualitative data and explored how this data should be organised and presented as an action research case study. Finally, this chapter has presented some limitations to my work, presenting the belief that any action research project can never conclude a story as there will always be new challenges to be met.

Having presented the mechanics of how I constructed my story, the next chapter will in turn mark the beginning of my living change process, where I first describe how I began to question how I could improve upon my present services.

Chapter 3: Why am I concerned? Evaluating the effectiveness of off-campus supports

Following on from chapter two's insight into the specific methodology employed in this research, this chapter will provide an example of the concerns I developed in my role as learning support tutor. Offering an insight into my support service in National College of Ireland, the chapter aims to portray how the evaluation of a national off-campus workshop inspired my own ontological reflection. Utilising qualitative feedback from off-campus students, as well as my own diary of the event, three specific themes will be introduced as inhibitors to student-centred learning support. As examples of my concern, these inhibitors will be used to frame three principles which would in turn lead me to carry out research to improve my practices.

As a prelude to this activity however, the first section of this chapter will expand upon chapter one, by giving an insight into why I was intrinsically motivated to help students and how I became the Learning Support Tutor for National College of Ireland. Through this, I hope to relate to the reader how my own choice to improve upon my present practices was influenced not only by a professional commitment to my students, but also by my own understandings of moral behaviour, support and equality for all students.

With this said, the organisation of this chapter is as follows;

- Becoming a learning support tutor
- The design of the Effective Learner Workshop
- Diary of the Workshop
- Evaluation methodology
- Findings
- Grounded themes
- The establishment of new principles

(3.1) Becoming a learning support tutor (2007)

During the period between 2005 and 2006, I began early work on my thesis topic, exploring my own interests into normality, student support and the construction of policy. Having been drawn to psychology and people-helping fields, I felt that above all other careers, a support, or supervisory role would best suit both my aptitude and learning preference. During this period I learned how to critique the works of others, immersing myself in the works of Nietzsche (1886, 1881) and Foucault (2001, 1990, 1975), who together offered a critical and post-modern lens through which to examine normality and education. From these works and the works of Goffman (1963, 1961), I developed my own writing style, which uses a *stream of consciousness* (James, 1950, Sakita, 2002) to highlight my perceptions, experiences and reflections of particular social events, books, or my own thoughts. I use this literacy method in accompaniment with more structured observations, surveys and interviews, to communicate that I am not withdrawn from my own subject, but am impassioned about my area of research. Like Gorer (1967) I believe that this allows for a more humanised construction.

With regards to this passion I feel for learning and the support of the individual, I have already theorised that my own early experiences of ‘good’ teaching has affected my desire to help others. Whilst this is evident to me, I must concede that there have been other reasons why I consciously decided to apply for a Learning Support post within National College of Ireland. In thinking about this, I recall that, apart from the obvious financial incentive to acquire a stable position, I wanted to help students; particularly those students who, traditionally speaking, did not receive adequate support. Having at the time, little knowledge of the span of “non-traditional” students, these hypothetical students which I envisioned, were based on my reactions to the treatment of some international students, whose stories were documented by *Prime Time* (Prime Time, 2006). This particular Prime Time special focussed on the treatment of some international students in Ireland, who were treated like “Cash Cows” (Friga et al., 2003, Ryan, Neumann and Guthrie, 2008, MacFarlane, 1995, Hazeldine and Morgan, 2007).

As an example of what Winter (1996) calls the plural structure, readers can access this Prime-Time special at the following address;

<http://www.rte.ie/news/2006/0314/primetime.html>.

Through watching this broadcast, I came to realise that some colleges in national and international Higher Education, have become fixated on making money at the expense of their students' international status. Looking into this practice within a European context, I discovered that colleges who recruited international students did not require as much state funding due to the high levels of fees acquired (OECD, 2008). These discoveries *intrinsically motivated* (Deci and Ryan, 1985) me to explore the process of recruiting students and supporting international students entering Irish colleges.

In order to actualise this, I interviewed an ex-employee of *Euro-College* and recorded their experiences of recruiting and supporting international students in Ireland. This participant agreed to be recorded and signed a declaration of informed consent. They also suggested that they did not mind being identified. Despite this however, I have chosen not to identify the participant and have given them a sexually-neutral pseudo name.

Interview with Sam (November, 2007)

Having discussed my initial questions previously over the phone, my recorded interview with Sam (Pseudo name) took place in their home. In total I asked Sam four questions. Of these four I have chosen to replicate two of these. My reasons to withhold the remaining two are due to the fact that Sam phrased some answers around her current teaching position and I felt it inappropriate to reproduce these. Consequently, the first question which I am presenting surrounded the student visa process, which I felt was a major issue to international students.

Q1. Is there a limit to how many years you can have a student Visa?

With a distinct passionate tone, Sam reported that there didn't seem to be any limit to the visa process as long as students continued to enter courses. Sam felt that this cyclic process was a farce, as a great many foreign students are continually searching for a way to gain a work Visa in Ireland, which would provide them with a heightened sense of security. In Sam's opinion the government really needs to look at this issue, as a great deal of foreign students never reach the degree stage of certification (which would enable them to seek a higher paid job and a work Visa), due to the high cost of fees. Consequently they are faced with a seemingly unending cycle of education;

Sam: *“It’s a revolving door trap.”*

Focussing next on the application process I was interested in Sam’s opinion on what needs to be changed in order to become more student-centred.

Q2. In your opinion what changes need to be made in both the application procedure and in student selection?

Sam seemed to automatically respond to this question with vested interest, listing specific revisions which could be put in place for both regulation and for successful education experience. To begin, Sam suggested that foreign applicants should be filtered into English language courses and specific skills courses (such as learning support workshops, study skills). Notably, Sam suggested that if foreign students are seeking to come here to learn English then they should be accepted into an English language school whereby they are tested and supported, but most importantly made understand, that they are in the country for a limited time period. Sam also suggests that a revision to the student Visa structure should be made. This revision should be adopted from France’s model, which Sam believes is based on a two year limit where students cannot work. In this adaptation Sam reckons the two year window period could be broken up into one year academic (Student Visa) and one year work experience (Work Visa).

This limit is needed, in Sam’s view, because many students, having been here for more than five years, have no intention or wish to go back to their native country;

Sam: *“Our students aren’t going home, they’re just going round!”*

What concerns Sam the most is that many of these international students are faced with 3 choices; 1. Follow the rigid rules of the colleges whose reports in-part influence Visa renewal, 2. Go home to their country of origin, or 3. Go off the radar in Ireland and become unaccounted for, going as Sam put it *“underground”*.

In branching off then into a discussion about the regulation of courses and foreign students I noted Sam’s comment that the whole recruitment process is an economic exercise, and that, in reality, it is a needed resource of income for private colleges, universities and VEC’s;

Sam: *“It’s a money making thing”*.

Agreeing with this point, I ended the interview and thanked Sam for talking with me. Reflecting on our discussion on the way home I recalled one student’s phrase from the *Prime Time* special which seemed to summarise the angst I now felt towards the recruitment process; *“I was cheated by the West”* (Prime Time, 2006).

This interview is particularly important to my living education theory, as it represents a choice I needed to make in relation to my research direction. Looking back on the person I was in 2007, I can remember feeling angry about the treatment of non-traditional students in both Further and Higher Education and was determined to identify the failings of our educational systems. Yet as the months passed, it became increasingly clear that this critical path would eventually lead to me to become a philosopher of education rather than a practitioner of education, which I truly wanted. Aiming then to combine both fields, I began to search for a role within Higher Education that would allow me to help all students with their academic and social transition into college life.

Six months later, having found what I believed to be the perfect position, I attended a second interview for the role of Learning Support Tutor in National College of Ireland. During this interview I was asked to describe my vision for the role. For me, this was an invitation to convey what I believed to be the wider academic needs of all students and described my intention to create a sustainable, effective and equal service for all students entering the college. Offering me this opportunity, National College of Ireland later employed me in September 2008 and invited me to create my vision for Learning Support.

(3.2) The design of the Effective Learner Workshop

As a starting point for this vision, I firstly chose to gather all existing strategies and expertise within the college and critically evaluate whether they could be adopted to my own vision or replaced with new strategies. As the first test of my service, I was asked to re-design the college’s *Effective Learner* workshop, which acted as a day course in

academic skills for all off-campus students who were registered on the Certificate in First Line Management Course (CFLM). To tackle this task, I worked closely with the Off-Campus Manager and the Student Support team who helped me explore the possibility of designing an interactive off-campus workshop for the CFLM students. Interestingly, I discovered that the CFLM management course had traditionally been marketed towards existing professionals who wished to gain more experience in management theory and practice. With this particular cohort of students in mind then, I continued to meet with the Student Support team, Off-campus manager and the college's Educational Psychologist. Through these meetings the following Program was designed over a four week period;

- How do we learn?
- Study Skills and Time management
- Academic writing and Referencing
- In-class test

The design of the course itself involved a varied style of presenting; using self-reflection, in-class testing and Socratic pedagogy (Dunne et al, 2000). The details of the course itself are embodied within The Learning Support Kit, which interacts with a set of PowerPoint workshops available on the NCI website (Goldrick, 2008). Using Blooms (1956) Taxonomy, the specific outcomes of the Effective Workshop were:

- Describe what learning styles, differences and preferences are
- Create a realistic study timetable
- Read books using the SQNR Method
- Write an academic essay
- Reference in the Harvard Style
- Prepare for exams and in-class tests

Implemented on the 1st of November, the day workshop was initiated in six locations throughout Ireland; Dublin, Carlow, Galway, Letterkenny, Tullamore and Sligo.

The workshop was delivered by six tutors, including myself.

(3.3) Diary of the Day workshop (31/10/2008)

The first workshop (*How do we learn?*) was framed around the history of learning styles and included a VARK learning style test (Fleming, 2006). This workshop lasted 30 minutes and included a discussion on how as learners, each person has a preference for how they like to learn new things, whether it be visually, aurally, by doing, or by reading and writing. As a way to allow each student to explore their own styles and preferences, I handed out VARK worksheets, which are similar to the online tests and give an indication whether a student has preferences for visual learning, aural learning, reading and writing learning, kineasthetic learning, or multi-modal learning (which is a combination of more than one style). This however, proved to be a difficult procedure as many students found the paper-based test quite puzzling and different to the online examples I had provided. Eventually however, each student managed to carry out the test and the group were encouraged to contact me if they wished to talk about their results in a confidential setting.

Moving on from this point, I posed a question to the group; '*What is intelligence?*' Asking for suggestions on this, the students centred on literacy skills and numeracy, the two of the most commonly known and tested indicators of intelligence. Agreeing with the group I then asked the group whether any of them could play an instrument. If I remember correctly, two people said they could, which allowed me to pose another question about the nature of intelligence and whether we should classify the ability to play an instrument as a form of musical intelligence. Holding that thought, I lastly asked the group which professions, generally speaking, earned the most money. Some responses included footballers, actors, to which I added salespersons. From this bank of professions, I finally asked whether these jobs could be examples of physical and interpersonal intelligence. I was pleased to see that the group did not resist this idea and felt that I had sufficiently added to their concepts of intelligence and could introduce Howard Gardner's theory of multiple intelligences more easily. I believe this was important for the students in this group as some of them might have pre-existing ideas that they were not traditionally 'smart' in terms of literacy or numeracy. Presenting Gardner's theory, I emphasised that whilst education, as an institution, pays more attention to literacy and numeracy domains, it is imperative that each student reflect on the inter-personal and intra-personal domains. These fields, I suggested, are equally

important to the future success of the individual's career, as they will allow a person to self-critique, adapt to difference environments and work effectively with others.

Having then introduced *how we learn*, the next workshop explored methods which could help individualise the learning process whilst studying in Higher Education. Covering *Study Skills and Time Management*, this workshop was my least favourite, as I remember feeling quite limited in what technologies or software I could provide for students. I felt that I wanted to do more for my students, by providing them with software and strategies that could help them study in ways which suited them, which adequately allowed them to personalise the learning process. Whilst I partially achieved this through presenting established reading strategies such as Survey, Question, Read, Write (SQRW) and visual strategies such as spider-diagrams, I felt that suggesting group work as a strategy to off-campus learners was somewhat inadequate and impractical as they had very limited time together within college. I will need to explore whether students have found this limited time together to be a problem. This workshop lasted just under thirty minutes.

Moving on to the next workshop (*Academic Writing and Referencing*) my mood seemed to lift considerably as the group's engagement increased and their body language seemed a lot more responsive. Going through the basics of essay writing and referencing in NCI, I spent forty minutes discussing writing and I created practical examples of how to research online. Following this, I gave the group a choice to either take a short break and leave early, or take a full one hour lunch break. In offering this choice, I hoped to instil an element of control within the group and to put them at the centre of the learning process. Choosing to take a full lunch break, the group left and went to lunch. I felt this was a good decision, as it was important for the group to discuss the workshops, to become familiar with each other in a less-structured environment and to socially create a shared experience of the day.

Returning back for the afternoon session I was happy to see every student arrive back in their seats as I took it as a sign that they were interested. As a bridge between both sessions, I reviewed the first half of the day and asked the group was there any questions about any of the previous workshops. After briefly clarifying some simple

questions I then opened up the last session of the day, which covered Exam strategies (this workshop lasted an hour). The final workshop introduced my own reading technique which I developed as an expansion to the popular SQRW method. Talking the students through the SQRNR (Survey, Question, Read, Note-make, Revise) method, I introduced the prospect of using traditional written notes such as the two-column method and audio/visual notes such as spider-diagrams and audio notes to create a source of notes that could be used to develop a comprehensive set of resources for exam revision.

As an exercise to demonstrate the benefits of this, I gave the group a page of text to read (page 6 Of the Learning Support Kit) and I suggested that they re-read the material a number of times as a way to remember key facts.

“Chapter 1: Aggressive R&D policies

The financial marketing strategy for Tempest Industries Ltd reflects an abnormal internal network of accounts known as the Voltaire Rift (a dynamic strategy using an overlapping accounting method).

Pioneered by Ronald Stark in 1979, the Voltaire Rift has gained little use in the wider western markets, but remains a near mythic model due to its’ success rate, which although is very high, requires high training levels and auditing rotation every set week. Most highly revered has been its’ profit margin safe-fall, which is noted to reach a 97% flat rate.

Criticized most notably by C.J Stone, CEO of Bio-Stone, competitor of Tempest Industries, the Voltaire Rift and consequently Anne Walker-Anderson, Managing Director of Tempest, has come under heavy fire recently due to the company’s closed policy on research findings and development outlines, which Dunne believes to exist within the public domain and infringes upon the CITD’s fair-trade policy, affectionately known as the “Play nice rule”.

(Goldrick, 2008, p6)

This was an interesting segment for me as I was conscious that there was at least one student in the group who had requested a meeting with me regarding a specific learning difficulty (Dyslexia). I wondered whether this student, or any other student with reading difficulties, would need more time to read the page. Also I questioned whether the text was suitable for Dyslexic readers in general and made a note to explore this further. The

passage itself was made to be hard to read, with overly long sentences and complex terms, dates and percentages. This was an effort to replicate some of the harder materials that the students would encounter.

After a period of just under eight minutes I asked the group to close their Learning Support Kits. This period of time was appropriate considering that the average reader can read 200 words per minute (Buzan, 2006) and the passage of text was 160 words. This allowed for multiple re-readings, even for students who I believed may have Dyslexia or any reading difficulty. Having then closed their books, I proceeded to ask the students three questions about the page.

Question 1

Who pioneered the Voltaire rift accounting strategy?

Question 2

What is Voltaire's flat rate profit margin safe-fall?

Question 3

Why has Tempest Industries Ltd come under fire recently?

(Goldrick, 2008, p7)

Members of the group were able to answer the first question easily but had difficulties with the second and third. Having then identified the limits of passively reading a page of text, we re-opened the Learning Support Kit and explored how SQNR and spider-diagrams could be used to extract some of the key elements of the page. Turning to pages 11 and 12 of the kit I asked the group to complete the Spider diagram on page 12, using the content from page 6. Through this construction exercise (as can be seen below), I hoped that the students would see the benefit of diversifying their study practices.

The Spider-diagram note method

(See Ausubel, D, 1962, 1978)

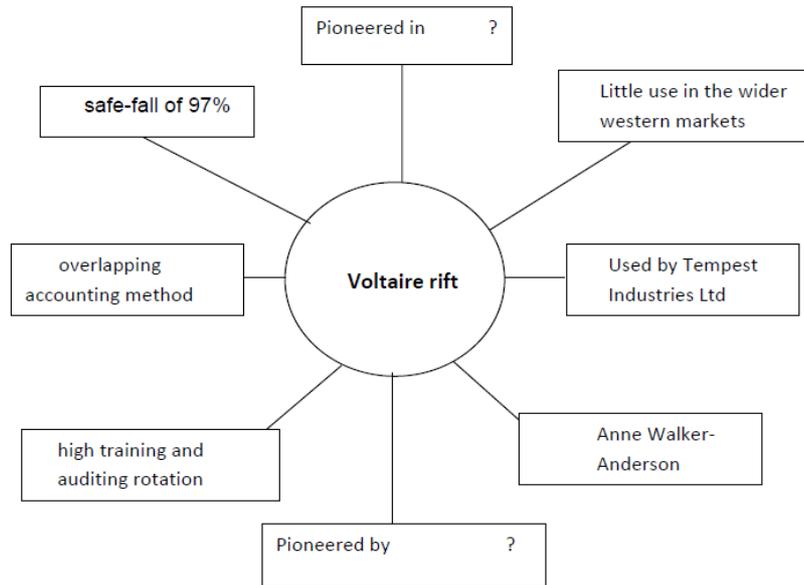


Figure 3.1: The Spider-Diagram Note Method

Keeping with this theme of diversity in note-making, I next demonstrated how narration could be added to PowerPoint slides in order to create a multi-sensory learning object. Looking back on this segment now however, I think that whilst this was interesting for the group, I need to develop and improve audio, visual and audio/visual tools and resources for my students. As a conclusion to this last workshop I reinforced the need to diversify study strategies, by asking each student to consider their own learning styles and to use their results as guidance on which study methods would suit them best.

Having covered the four workshops then, I concluded the day by highlighting that if any student had any query or needed advice then they could make an appointment, call me or e-mail me. Ending the Effective Learner workshop, I thanked the group for their attention and wished them well with their studies.

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Overall, I was happy with how the Effective Learner workshop went. Students engaged with the material, created discussion, asked questions and were noticeably interested. Since the workshop I have received quite a few thank you e-mails from students and other tutors which I take as a sign of having, at some level, made a positive impact. I

still however feel ill at ease regarding a few issues. One major concern for me is whether part-time and off-campus students need more contact with me? I find myself now questioning whether it is possible to offer an effective learning support service by phone and e-mail alone.

Looking back on this diary now, I can see why I wanted to extract student opinion on the workshop, on learning support in general. For myself, I knew what areas I wanted to improve upon (more learning technologies, more reading strategies, more contact). I felt it important however, to gain a student perspective to reinforce this self-critique and so I chose to carry out an evaluation survey.

(3.4) Evaluation Methodology

The process of evaluation was carried out using survey methodology (Robson, 1993), which offered quantitative and qualitative data regarding both the student's experience of the material and the delivery of the workshop in each location. This was important for me, as both the designer of the material and the presenter in Dublin, as I had only questioned the materials and the reach of contact, not the quality of that contact.

Rather than a paper-based survey, I opted to gather views using an online survey, which allowed the students to rate the workshop as well as offer some subjective reasons for this rating. Care was taken to construct a survey that included sections on any future or existing support needs that are not presently being catered for. In order to avoid bias or influence on participants, the students were offered the opportunity to avoid identifying themselves through the survey, but were encouraged to email the learning support tutor with any further suggestions, complaints or queries.

The Survey sample

A selection of students from each location (numbering 150), were e-mailed the survey and cover letter which outlined the nature of the inquiry and processes of anonymity which could be utilised if desired. As expected, the reply rate was just under a third,

(44) which although quantitatively quite low, offered a considerable qualitative source of information due to the nature of the survey itself.

(3.5) Findings

Overall, the Effective Learner workshop was accepted very positively by both students and tutors and reflected a need for assignment structure as well as identifying an interest into the theory of learning styles. As a starting point for the short survey, the quality of the experience for each surveyed student was gathered through both quantitative and qualitative means. This was achieved by firstly asking the student to firstly indicate whether or not they found the workshop useful.

Q: Did you find the workshop useful?

		Response Percent	Response Count
Yes		86.1%	31
No		13.9%	5
	<i>answered question</i>		36
	<i>skipped question</i>		7

Figure 3.2: Response Rate for question one

As can be seen in Fig 3.2 above, 86% of students found the workshop useful to their learning development. In order to explore this trend in more detail I found it helpful to create a scale of reactions that students could use to rate the effectiveness of the workshop. Ranging from *Terrible* to *Very Good*, the majority of responses were positive, with over 60% of respondents claiming the workshop to be Good and 25% claiming it was a Very Good experience.

Q: Could you please rate the workshop by choosing one of the below options?

		Response Percent	Response Count
Very Good		25.0%	9
Good		61.1%	22
Ok		8.3%	3
Poor		2.8%	1
Terrible		2.8%	1
<i>answered question</i>			36

Figure 3.3 Response Rate to Question Two

Having gathered quantitative responses, the survey then allowed the student to offer some reflection of their experience in their own words. These open ended questions allowed for comments on both the materials and delivery style for workshops in Dublin, Carlow, Letterkenny, Tullamore and Sligo.

Qualitative feedback regarding content and materials

The material created for the workshop was received positively from the majority of students who responded to the survey. Below is a summary of the feedback offered from the students when prompted to elaborate on the grading of the workshop:

Positive Feedback	Negative Feedback
<p>‘The material re-studying was very interesting.’</p> <p>‘It gave me a better understanding of preparing for my project.’</p> <p>‘Content was very relevant and effective for those who have not written essays or studied</p>	<p>‘Very basic, nothing we don't already know. Could have been covered in class in 10 minutes.’</p>

<p>in quite some time.’</p> <p>‘Presentation and explanations clear and understandable, useful handouts, have referred to them on occasion’</p> <p>This is my first time back to college in ten years and I was unfamiliar in how to study again after all them years. I found this course very helpful and beneficial.’</p> <p>‘I found out that I learn more through visual content’</p>	
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Table 3.1: Qualitative feedback regarding content and materials

Whilst a great deal of the feedback was positive, there were some major concerns raised also. Most notably for me as the developer of the course, were concerns raised regarding the length of the workshop and the reaction of a minority of students who did not enjoy the materials used. These students, although in a minority (5.9%), raised some further speculation regarding the delivery of the material itself. In an effort to organise these subjective reactions, the next section will compare feedback I obtained from Dublin students and those I gathered from other off-campus locations (Sligo, Letterkenny, Galway, Tulamore).

Delivery feedback for NCI’s “Effective Learner” workshop in Dublin

The feedback from the Dublin workshop was very positive from both those students who disclosed their ID and those who withheld it. The ratings overall reflect this experience;

NCI Ratings

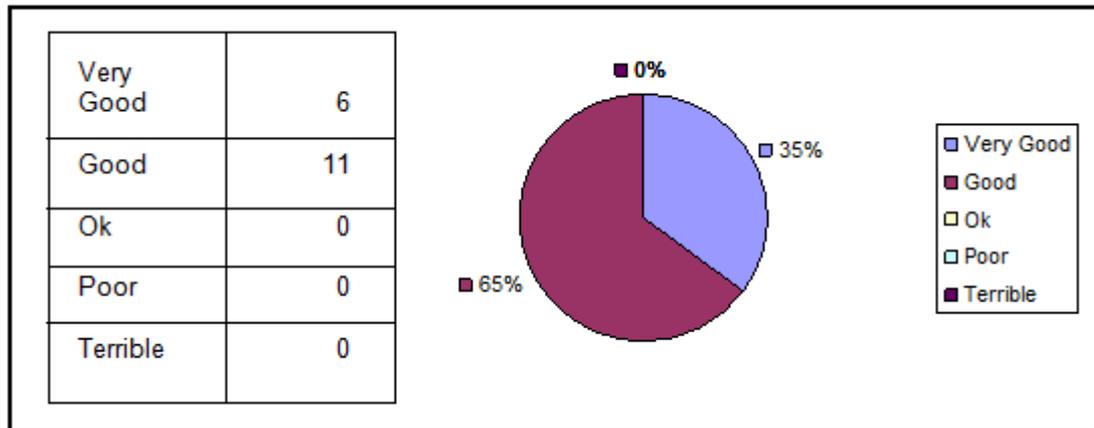


Figure 3.4: Ratings of NCI workshop

Feedback regarding the delivery of the material was equally quite positive with most respondents reporting a genuine effective experience:

Positive Feedback	Negative Feedback
<p>‘enthusiastic, funny energetic presentation’ (Dublin Student)</p>	
<p>‘The tutor was excellent, young, dynamic and made a boring subject lively. In short he kept our attention.’ (Dublin Student)</p>	<p>‘This workshop was helpful but if I had this information before starting my course I could have been better prepared for it.’ (Dublin Student)</p>
<p>‘Informative, helpful, easy to understand.’ (Dublin Student)</p>	
<p>‘Mike presented in a way that kept our attention and allowed people to ask</p>	<p>‘I thought the workshop went on for too long.’ (Dublin Student)</p>

<p>questions.’ (Dublin Student)</p> <p>‘I enjoyed and felt motivated by the day. thank you’ (Dublin Student)</p>	
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Table 3.2: Feedback of NCI workshop

Delivery feedback for NCI’s “Effective Learner” workshop in other off-campus locations

The feedback from a national perspective was in general quite similar to the experience in NCI, where students felt engaged with and supported at a high level.

There were, nevertheless some variances in the experiences at the Galway site which indicated a possible delivery problem on the day.

National Ratings

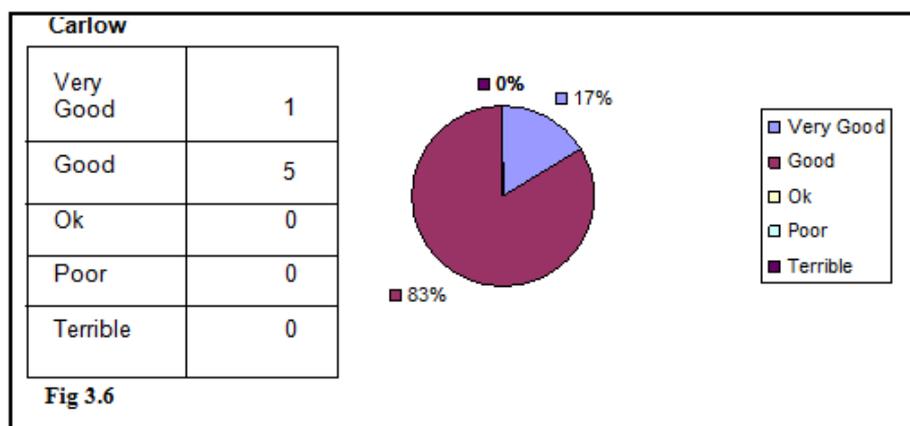


Figure 3.5: Ratings of Carlow workshop

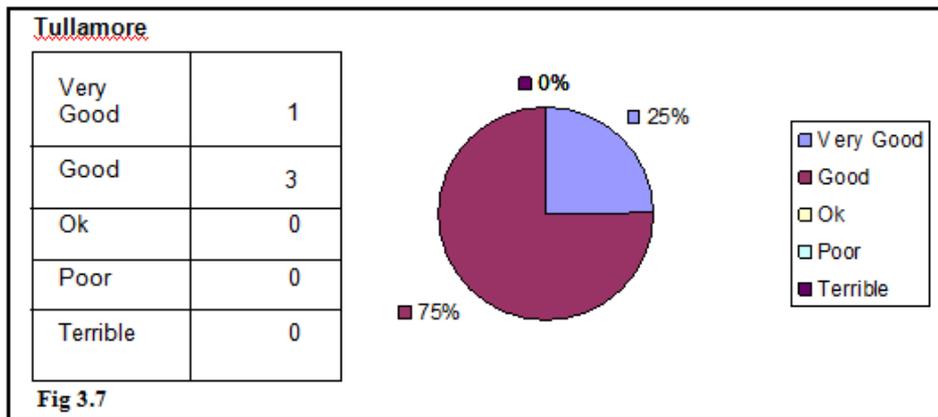


Figure 3.6: Ratings of Tullamore workshop

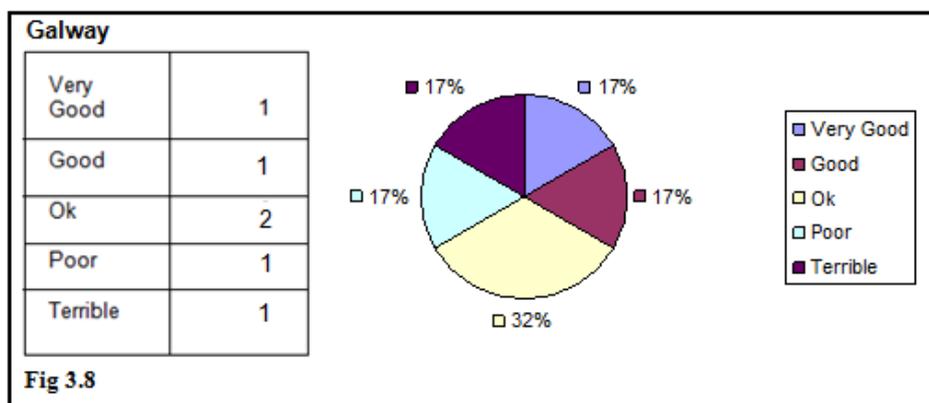


Figure 3.7: Ratings of Galway workshop

As evident in Fig 3.5-3.7, response rates were small for off-campus locations outside of Dublin. For instance, in some cases (Sligo and Letterkenny), only one student responded, which does not give us a true projection of the experience. Nevertheless, it is worth bearing in mind that the class sizes were also smaller in number. On the other hand, the individual data sets illustrate that students in other locations were generally impressed with the materials and delivery. Despite this however, there were some qualitative anomalies which should be explored further:

Positive Feedback	Negative Feedback
‘the teacher was very helpful’	“There was no proper structure in place, the room was too big and could not hear the

<p>‘Lecturer was approachable and interested’</p> <p>‘I found the info about % of content for introduction, main content and conclusion when doing an assignment very useful and also the info on referencing.’</p> <p>‘I thought that [the tutor] was very direct and portrayed a good image of what would be required on the course and also how to complete’</p> <p>‘The tutor gave useful information and support around assignments especially the one that was due at the time. we were not getting that support of information from the tutor who we had in class’</p> <p>‘method of studying and study tips very useful’</p>	<p>tutor. I feel the tutor was not qualified to give this Workshop. It was a waste of a half day!’”</p> <p>‘I found it did not cover anything about how to study effectively, what we should concentrate.’</p> <p>“The lecturer was more like think of how you will feel after achieving one hours study and go with that feeling and this will make it easier to approach study!!!!</p> <p>Not my style at all. I needed to know how to learn effectively any power reading tips etc’</p> <p>‘Attendance was small and expensive in relation to having to find cover at work to attend workshop’</p>
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Table 3.3: Feedback from national workshops

Following these reactions to both the materials and delivery of the “Effective Learning” workshops, the survey next asked students to comment on whether they required any further support, or to present any further comments.

Q: Is there any further support you feel could be helpful?

‘maybe specific workshops course related? Part time courses (day released in my case) can feel quite fast paced and extra support would be appreciated’

Dublin Student

‘if instead of spoon feed tutors will give opportunity to students to do work on their own.’

Galway Student

‘Not at this time, but one to one support next term does seem appealing’

Dublin Student

‘We are out in Tallaght and at times feel at bit out of the college but I don’t have any suggestions as how this could be overcome’

Dublin Student

‘I feel that there could be a more co-ordinated approach to providing all students with additional reading material, which becomes relevant on a daily basis. This is especially true in the current environment’

Carlow Student

‘Yes, I would like NCI to keep in touch with students, to track progress. Furthermore to find if students have problems with their studies and how student/tutor relationship is working!’

Galway Student

Table 3.4: Areas for further support, arising from workshops

Combining these comments and statistics with my diary extracts I later employed a grounding technique to create ontological themes. These themes allowed me to identify areas of my service which I was concerned about and needed to change.

(3.5) Grounded Themes

McNiff (2000) argues that the creation of themes can help a researcher to develop their own visions of connectedness, equality and fairness. My own visions of connectedness and equality are related to my belief that student-centred education is possible in Higher Education, but requires both top-down national policies as well as more localised bottom-up educational practices. As evidence for this need to develop more localised practices, I present the following themes which I have developed from the data using grounding principles (Glaser and Strauss (1967, Glaser, 2005);

- Theme 1: The need to connect learning styles with learning technologies
- Theme 2: The effect of isolation on distance and part-time learners
- Theme 3: How can I assure that my materials are a reflection of best practices?

Theme 1: The need to connect learning styles with learning technologies

Through an initial self-reflection, I came to believe that students who reflect on their learning styles need to be shown how to adapt their learning strategies to suit their own needs. Whilst I believed I had begun this process in 2008, I felt that I could offer students more choice, more technologies and more strategies. Supporting this self-critique, the views of students further indicated that providing a learning style result is perhaps only the first step in individualising education;

‘I found out that I learn more through visual content.’

(NCI Student, 2008)

‘Not my style at all. I needed to know how to learn effectively any power reading tips etc.’

(NCI Student, 2008)

‘I found it did not cover anything about how to study effectively, what we should concentrate.’

(NCI Student, 2008)

‘Very basic, nothing we don't already know. Could have been covered in class in 10 minutes.’

(NCI Student, 2008)

From these insights, I began to ask myself how I, as a support tutor, could help these students develop an improved learning strategy that met their own needs? Within the 2008 workshops, my attempt at this process was to present a study strategy that used traditional reading methods, such as scanning, with more visual learning such as spider-diagrams. What I did not offer them was links to any speed/power reading, or learning technology software that could help them create visual notes, or audio notes. Upon further reflection, I concluded that my *Study kit* was very much directed towards students who had no learning difficulties or visual disabilities. This was very important to me as my role was to support each student in becoming an effective and confident learner. How could I achieve these goals if my materials were not inclusive to all learners with either specific learning difficulties such as Dyslexia, or visually impaired learners?

Becoming determined then to develop a new manual which would be of equal value to every type of student, I identified a number of action points that I would need to follow-up:

- Learn more about learning styles and how they are used in Higher Education
- Identify learning technologies that can be used to individualise education
- Learn how to create a support manual that can be accessed by all students

Theme 2: The affect of isolation on distance and part-time learners

The second theme that I extracted through my own observations and survey data surrounded the difficulty of isolation, which has received some attention in relation to distance education and part-time education. For me, this theme was epitomised by the following comments;

‘We are out in Tallaght and at times feel at bit out of the college but I don’t have any suggestions as how this could be overcome’

(NCI Student, 2008)

‘Yes, I would like NCI to keep in touch with students, to track progress. Furthermore to find if students have problems with their studies and how student/tutor relationship is working!’

(NCI Student, 2008)

These comments, for me, highlighted a gap in these students’ experience of *Academic Socialisation* (Willis 1981, Walsh, 1991), of belonging to a college, belonging to a culture of learning. From a *Learning Strategies Instruction* perspective (Ryan and Glenn, 2004), another student’s comments highlight their needs for increased contact;

‘Not at this time, but one to one support next term does seem appealing’

(NCI Student, 2008)

Although offering e-mail and phone support to students in off-campus locations, I began wondering about how I could further connect with all my students and how they too could have more contact with each other. As a related issue, I also looked at how I could support students who could not attend “Effective Learner” workshops due to work commitments or family obligations;

‘Attendance was small and expensive in relation to having to find cover at work to attend workshop’

(NCI Student, 2008)

This concern was valid as 12% of students who responded to the questionnaire did not attend the Effective Learner workshop. Based on these points, I identified further action points which I intended to explore further:

- To explore the consequences of academic isolation
- To introduce interventions that can reduce isolation and increase collaboration

Theme 3: How can I assure that my materials and delivery are a reflection of best practices?

The last theme that I extracted through my own observations and survey data reflected the importance of peer review within my role. Was it enough that I felt competent in my own teaching strategies, my own materials, or should I aim to benchmark my activities against a more national framework? As I have said earlier, good teaching experiences in my own schooling influenced my decision to work in education. Having then a passion for good teaching and learning, I wanted my materials to be presented through the most relevant teaching and learning theories, theories that would facilitate a positive learning experience for all learners;

‘Mike presented in a way that kept our attention and allowed people to ask questions.’

(NCI Student, 2008)

‘I thought that [the tutor] was very direct and portrayed a good image of what would be required on the course and also how to complete’

(NCI Student, 2008)

“The lecturer was more like think of how you will feel after achieving one hours study and go with that feeling and this will make it easier to approach study!!!!

(NCI Student, 2008)

“There was no proper structure in place, the room was too big and could not hear the tutor. I feel the tutor was not qualified to give this Workshop. It was a waste of a half day!”

(NCI Student, 2008)

For me, the above comments were somewhat indicative that learning support, as a profession, is at times a type of ‘lottery’ (Sanderson and Pillai, 2001). In order then to improve the consistency and quality of both the content and delivery of programs, I

believed it necessary to source and disseminate best practices within learning support. Without these best practices, my own strategies and my own presenting style would be governed by my own beliefs, which I felt were too isolated. As can be seen through the above quotes, the establishment of best practices would also allow me, as designer of the Effective Workshop, to develop standards of delivery which I could later record and make available to other off-campus centres. Going forward then, the action points I would aim to achieve were;

- Source best practices in Learning Support
- Develop an inclusive teaching and learning delivery based on best practice

Together, these seven action points from the three emerging themes encouraged me to redefine the principles that guided the material and delivery of my service.

(3.6) Establishing new principles of student-centred learning support

As highlighted by Nyambe and Wilmot (2008), it is important as a reflective practitioner to compare one's own views on learning and teaching with other sources. This allows the educator to perceive any contradictions between what they believe about themselves and what others believe regarding their role as an educator. Considering this logic then, I find myself asking, what are the guiding principles of my service?

I believe my service to be student-centred, in so far as it facilitates the growth of confidence, self-reflection and academic efficiency within the learner. This relationship between me and students I believe is collaborative, as I help generate shared understandings of learning styles, study techniques, academic writing and exam preparation techniques. Having presented qualitative evidence that a majority of students agree with this collaborative environment, I can be sure that in terms of delivery, I am meeting my own criteria. Despite this however, I have also illustrated that there were several areas where my principles were contradicted by student experiences, in relation to the national delivery of my service and materials which I have provided. These types of contradictions are evident in the literature (Nyambe and Wilmot, 2008) and are crucially important in considering how to improve upon present practices.

Going forward from this, I chose to improve upon my role as a Learning Support Tutor and to improve the student-centred experience in National College of Ireland. As a means to fulfil this goal, I concluded that my service needed to be framed by three further underlining principles;

1. All students will be able to interact with learning support materials
2. All students will be offered guidance on which strategies and materials to use
3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

(3.7) Conclusion

Building on my earlier reflections in chapter one, this chapter has presented how a desire to help college students led me to join National College of Ireland and has illustrated how I began to put in place a vision for student-centred learning support. Highlighting specific student feedback, the chapter introduced student survey results, which indicated that whilst my service was well received by students, improvements were necessary in order to become truly student-centred. These improvements were grounded in a set of revised principles which would guide me in developing an inclusive and student-centred service. As a means to achieve this goal I identified a number of action points which would later affect how materials were constructed and made accessible to all students, how new learning technologies needed to be sourced and offered to students and how contact with students could be increased.

As a means to begin this process of improvement, the next chapter will introduce how I firstly researched the consequences of academic isolation. Having better understood this difficulty, the chapter will then present how I began to explore the area of virtual support and later pioneered National College of Ireland's virtual learning support service.

Chapter 4: *Virtually there*: Exploring ways to increase contact with students through a virtual classroom

This chapter intends to address the theme of social and academic isolation, as outlined in chapter three. In doing so, the chapter explores how I employed a virtual classroom to reach each student in an equal manner through the creation of a virtual learning support service. Utilising screen-shots and recorded sessions, I intend to demonstrate how I effectively used a virtual classroom (Wiziq, 2010) to offer individual support and workshop support to students in National College of Ireland. Intended then as evidence of my professional evolution and innovation, the development of the virtual learning support service will be chronicled from its inception as a theory, to practice and eventual peer review. As an insight into this peer review process, I will later present a diary of my experiences at the Confederation of Student Services Conference in July 2009, where I presented a paper based on this chapter (Goldrick, 2009).

Before introducing this reflective innovative procedure however, I will return to the first action point that I identified under the theme of academic isolation; namely, the consequences of isolation. With this said, the organisation of this chapter is as follows;

- Exploring Academic Isolation
- Current strategies to reduce academic isolation
- The Search for a Virtual Classroom
- Testing the virtual classroom
- The Role of the online tutor
- Piloting the Virtual Learning Support Service
- Presenting the Virtual Learning Support Service for Peer Review

(4.1) Exploring Academic Isolation

In my previous chapter, I presented data which suggested that some students in National College of Ireland were experiencing academic isolation (Becker and Watts, 2006). The difficulty of academic isolation is not a new phenomenon, especially within off-campus or distance learning, where the limited opportunity for live interaction has been noted as having hindering effects on the learning process (Smyth, 2005, Rowntree, 1992). As a means to explore just what these negative impediments are, it is important to firstly consider whether off-campus students need to interact with, and feel connected to, their peer group and educators.

In examining the importance of this point, one must examine the design of off-campus and distance courses and the specific pedagogy which surrounds them. Interestingly enough, this pedagogy, which is primarily geared towards mature or adult learners, is sometimes known as *androgogy* (Knowles, 1975). As an adult-orientated theorist of teaching, Knowles (1975) believes that adults learn differently from children. Specifically, he argues that the adult learner is one who is self-directed and motivated by internal incentives rather than external incentives such as rewards and punishments, which Knowles perceives to be the case with younger students. Having this increased control over their own learning experiences, the adult learner is thus perceived to need less instruction from the educator.

Considering this, I would argue that this thinking could lead to a belief that the adult learner does not need to work collaboratively with other students or educators. Commenting on this, Brookfield (2009) suggests that it is indeed wrong to think of the adult learner as a *Robinson Crusoe*, working in isolation. Brookfield argues that the adult learner is responsible for the level of contact he or she has with peers or educators and is not forced into isolation. Based on such thinking, we can assume that adult learners, whilst having a predisposition towards self-directedness should be offered the opportunity to interact with other students and educators when needed. This is an important factor as it reinforces my own belief that, whilst a student can work effectively on their own, they must be offered support from both their peers and educators. These beliefs are supported by the third layer of Abraham Maslow's 'Hierarchy of needs', which he classifies as love and belonging (Maslow, 1943). According to Maslow, all humans need to feel a sense of belonging, need to be

accepted, whether in large social settings such as clubs or teams or smaller groups such as classmates or work colleagues. It could be argued then that students do need to feel connected to their peers and educators, especially those students who learn best through group or aural learning, or who need regular guidance from educators (Hardy and Boaz, 1997).

Exploring this concept further, I next found it necessary to question what difficulties can occur if students do not receive this opportunity to socialise with peers and faculty. Commenting on this scenario, Lee and Chan (2007, p86) suggest that isolation can significantly reduce both motivation and enthusiasm;

“In addition to the practical problems of contacting academic and administrative staff, obtaining study materials and gaining immediate access to resources such as laboratory equipment and library books, distance learners endure the disadvantage of being unable to interact with other students, which can put a significant damper on their motivation and enthusiasm.”

Related to this need to connect with other students, Wood (1995) suggests that distance learners also miss out on the opportunity to verbally interact with lecturers. This lost opportunity can lead to students mispending their time exploring activities which are deemed less important or even futile and can ultimately induce feelings of inadequacy, reduced self-confidence, depressive tendencies and other social anxieties (Woods, 1995, Maslow, 1943). Hindering the academic socialization process (Ryan and Glenn, 2004), or what Lee and Chan (2007) calls the acculturation into institutional Life, academic isolation has many significant consequences, which if left ignored, can result in an increase of drop-out rates (Middleton, 2001 Sheets, 1992).

As a means to reduce and avoid these consequences, Higher Education institutes have continually aimed to bridge geographical gaps using technology (Harper et al, 2000, Collis and Moonen, 2001). Emulating this need to bridge the gap, I aimed to expand upon existing interventions in NCI, which required me to firstly critically assess the need for further innovation.

(4.2) Reviewing current strategies to reduce academic isolation

As a parameter for student-centeredness, a researcher should always be guided by the view that innovation should not be driven by the latest technological product or fashionable concern, but should be driven by the educational needs of students (Hardy et al, 2009). Similarly, I agree with the claims of Brooks (2003) and McSporrán (2004) who advocate that any new technology must be trialled and evaluated, by both educators and students. Taking these two factors into account, my first activity was to review how technology was currently being used to support off-campus and distance learning students. To do this, it was important to examine and categorise the types of supports that institutes can presently utilise, namely asynchronous and synchronous communication.

Asynchronous communication

As a form of education, distance learning and off-campus learning can be traced back to the late 18th century, when Caleb Phillips began offering home study courses on shorthand through the Boston Gazette (Holmberg, 2005). This asynchronous delivery of materials would become the basis for all distance learning courses and was first embraced by the University of London, who began offering distance learning degrees as early as 1858 (The University of London, 2009). These mail-based mechanisms are still an intricate part of the distance learning process, allowing learners to receive hard copies of text and other necessities of college life.

Building on this initial structure, the role of technology has further increased the levels of asynchronous communication that can occur between students and colleges. Most notable of these advancements has been the use of e-mail, audio cassettes, videos and most recently web-based courses, which allow multiple users to work at their own pace and contribute to online forums and discussions at staggered intervals (Fusco and Ketcham, 2002). In my own service, asynchronous support was delivered through e-mail communication, the postage of support materials and downloadable presentations through the student website. Through these communicative tools, one can argue that off-campus learners did receive adequate learning support guidance.

Yet despite these efforts, Shearer (2003) claims that distance and off-campus learning is just as complex as face-to-face interaction and educators should be concerned with how best to engage students studying through distance learning. Essentially, Shearer (2003)

ponders whether educators can really relate to students through asynchronous communication. Barnes (1995) does not think so, highlighting that asynchronous tools do not capture non-verbal communications, the posture, sense of attention and perhaps most importantly the 'light bulb' effect, which identifies the grasp of an idea. Similarly, Power (1990) concludes that it is through the spoken word and synchronous discourse that content is personalised, through subtle nuances and emphasis. Having my own memories of good teaching, I can still remember the body language of some teachers, the use of volume, facial gestures and physical performance to articulate a particularly tricky or interesting fact or story. From a constructivist perspective, this synchronous communication (Fusco and Ketcham, 2002) is perhaps the most valuable tool an educator can possess and one which is even more important when trying to scaffold a person's understanding of their learning potential or learning difference. With that said though, how can educators use technology to synchronously communicate with students?

Synchronous Communication

Bearing in mind the critiques of Barnes (1995) and Power (1990), it is possible to create two prerequisites for effective synchronous communication when applied to off-campus or distance learning;

1. Students can see each other and the tutor in real time
2. Students can hear or read instructions from the tutor in real time

These prerequisites are not however easily accomplished and have required the development of technology that many would still associate with science fiction. Perhaps this is not an altogether illogical conclusion, considering that many of the technologies available today, were first imagined within science fiction writings;

“She touched the isolation knob, so that no one else could speak to her. Then she touched the lighting apparatus, and the little room was plunged into darkness.

"Be quick!" She called, her irritation returning. "Be quick, Kuno; here I am in the dark wasting my time." But it was fully fifteen seconds before the round plate that she held in her hands began to glow. A faint blue light shot across it,

darkening to purple, and presently she could see the image of her son, who lived on the other side of the earth, and he could see her.

"Kuno, how slow you are." He smiled gravely.

"I really believe you enjoy dawdling."

"I have called you before, mother, but you were always busy or isolated. I have something particular to say."

"What is it, dearest boy? Be quick. Why could you not send it by pneumatic post?"

"Because I prefer saying such a thing. I want----"

"Well?"

"I want you to come and see me." Vashti watched his face in the blue plate.

"But I can see you!" she exclaimed. "What more do you want?"

"I want to see you not through the Machine," said Kuno. "I want to speak to you not through the wearisome Machine."

"Oh, hush!" said his mother, vaguely shocked. "You mustn't say anything against the Machine."

"Why not?"

"One mustn't."

"You talk as if a god had made the Machine," cried the other.

(Forster, 1909, p2)

Predating the invention of asynchronous e-mail (what he calls pneumatic post) and synchronous videoconferencing, Forster (1909) introduced the immediate benefits and potential danger of over-relying on technology. This is not to say however that such practices have become common place. For instance, within my own service, the only forms of synchronous tools available to me were phone support, which allows tutors to talk with a student about any difficulties they are experiencing, or to offer advice on how to approach a particular project.

Other present forms of synchronous communication that are available in Higher Education include instant messaging systems and videoconferencing (Fusco and Ketcham, 2002), which has evolved as a result of computer systems (Bitzer, Lyman and Easley, 1965), teletext/videotext (Muter, Treurniet and Phillips, 1980) and the internet (Abbate, 2000). Yet whilst phone, facsimile and internet usage became popular across all sectors of education in the twentieth century, the cost and quality of early videoconferencing packages seemed to hinder their incorporation into many off-campus locations (Smyth, 2005). In more recent years, these initial difficulties have seemed to be adequately combated through broadband technology which, being faster and cheaper, has allowed universities and schools to more fully explore the benefits of using videoconferencing as a means to decrease isolation (Bates, 1997).

Much like Forster's (1909) vision, the videoconferencing system has been most commonly used to connect main campus centres with more remote centres, as well as to facilitate virtual or electronic field trips (Newman et al. 2008). Speaking of the potential benefits of the technology, Howard-Kennedy (2004, p17) claims,

“Without a doubt, videoconferencing benefits all who are involved. Most importantly, it enriches the curriculum by allowing students to connect to the whole world... from the comfort of their classroom.”

This particular quote, for me, exemplifies both the positive benefits of videoconferencing as well as its limiting factors. For instance, when Howard-Kennedy (2004) refers to the class's connectivity to the whole world, she illustrates the financial implications of using videoconferencing systems, which must be installed within college classrooms and other centres which are to be connected. Grounding then the pragmatic cost of implementing a videoconferencing service for National College of

Ireland, I quickly realised that I could not afford to implement this type of virtual service. Similarly, I could not afford the server costs of Interwise.com, which Hibernia (2010) use to facilitate their online lectures. Questioning this further however, I decided to seek further advice from my colleagues in National College of Ireland who had many years experience of the application of technology.

(4.3) The search for a virtual classroom

Through these discussions with my colleagues, I began thinking about other ways to see and talk with students. One possibility that was suggested through these meetings was to use the program *Skype* (Skype, 2009) which allows a person to talk with, see and message a person through a webcam and broadband connection. Having used Skype before at a personal level, I began reviewing some of the existing literature on the usage of Skype in the classroom (Goodwin-Jones, 2005, Pan and Sullivan, 2005, Manning, 2007). From this review, I concluded that Skype could be a possible way to increase synchronous communication within my service and I started testing the program in late 2008 with a UCD postgraduate student, who acted as a critical friend (McNiff, Lomax and Whitehead, 2003). These initial sessions tested Skype's ability to operate in an educational context and allowed me to explore the limits of the program. From these sessions, I quickly learned that Skype was not suitable for my vision of a virtual support service. Whilst it allowed us to discuss, see and message each other, I could not identify an appropriate plug-in program that would allow me to present PowerPoint workshops and materials as I would in a live session. Moving then away from Skype, I adapted Glenford et al.'s (2004 p124) methodology to identify what needs I had as a computer user and created six program objectives;

1. The program should not require complicated downloads or operations
2. Students would have the option of seeing me
3. Students could talk to me
4. Students could message me
5. Materials could be presented and corrected online
6. Online classes could be recorded and used for revision

Continuing my search with these criteria, I later identified similar programs to Skype which identified themselves as a virtual classroom (Wiziq, 2009, DimDim, 2009, Elluminate, 2009). Not to be confused with a Learning Management System, or a virtual learning environment such as Moodle (Moodle 2009), or Blackboard (Blackboard, 2009), a virtual classroom is used to facilitate live interaction between peers and/or tutors, who can collaborate as they would in a live classroom (Fusco and Ketcham, 2002, Roxanne Hiltz, 2006). This specific interaction is achieved through text, speech and visual communication which can, depending on the provider, be recorded for wider distribution or revision.

Meeting all my criteria, the virtual classrooms allowed features that Skype could not. Most notable of these features were the provision of a virtual whiteboard and the ability to upload a selection of Word files, PDF's and PowerPoint files. Comparing this expansive functionality with my program objectives (Glenford et al. 2004), I was confident that I had found the right type of program, but needed to choose the most suitable product for my service. As a way to help me choose between Wiziq, DimDim and Elluminate, I attempted to source best practices in other institutes. Using the survey tool *SurveyMonkey*, I contacted a colleague in Trinity College Dublin, Mary (Pseudo name), who acts as the Chair of the ALSON group. Through *SurveyMonkey*, Mary agreed to share her own experiences of searching for a suitable virtual classroom and offered me an insight into her own future research directions:

Question 1: Do you use any programs that promote online collaboration with students (such as virtual classrooms)?

“No but would like to. Looked into using Second Life but would be too complex for some specific difficulties.”

In her own service, Mary had begun to explore the use of technology to increase contact with students, but had not, as of yet, identified a suitable program. In my second question to Mary, I asked:

Question 2: Is there any particular area of learning support that you are interested in developing or exploring further?

“Screening and assessment, use of 3rd space environments such as online communities”

Indicating her own desire to use technology more in her own service, Mary’s replies gave me hope that the future of learning support in Higher Education is becoming more student-centred and innovative. Despite this positive insight however, I came to realise that my own work might be the first virtual learning support service in Irish Higher education. Determined then to find some critique of the potential technologies I next sourced a Moodle discussion which debated the strengths of the three virtual classrooms (Gates, 2008). In light of these debates, I chose to test the virtual classroom *Wiziq*, as it had received the most positive replies with regard to Moodle integration, its low cost and ease of use. Building on this evaluation, I again sought the help of a critical friend in UCD who helped me to *Acceptance test* (Glenford et al. 2004) the classroom in terms of accessibility and quality.

(4.4) Testing the Virtual Classroom 21/1/09

As a testing procedure for *Wiziq*, I initially wanted to determine two factors. Firstly, I wanted to establish whether the virtual class was easy to use. Secondly, I felt it important to check whether the sound and video quality was of sufficient standard for presentations or essay reviewing. As a way to explore these issues, I planned a virtual session with a critical friend, who had no experience of the program. As the class would be automatically recorded I informed Katie (Pseudo name) that I intended to use our session as a formal testing of *Wiziq* and asked her to sign an informed declaration of consent.

Following this consent, I later launched the class from National College of Ireland and invited Katie (who was at her home) to attend by sending her an e-mail. To begin, I uploaded a PowerPoint presentation and talked through some of the slides as I would in a real session. Moving through the slides, I asked Katie a number of questions which acted as discussion points about the usability of *Wiziq*.

Question 1: Is the layout easy to understand?

“It has a ‘Fisherprice’ feel to it, if you know what I mean? The buttons are easy to see and everything seems to be self-explanatory. The work-page, whiteboard thing is very much like the program Paint, and that’s not a bad thing, cause most people will be comfortable with using that.”

With this question, I wanted to see whether the design of Wiziq was self-explanatory and easily operated. This was a crucial factor as any negative experience of the technology could affect the experience of virtual learning support. Of equal importance to me was the speed of the program and the quality of sound and picture.

Question 2: How is the sound and picture, are you experiencing any delays?

“There was some delay right at the start, but I can type and hear you perfectly. My webcam isn’t working for some reason but that could be my settings. The PowerPoint slide viewer is perfect, it’s as clear as it would be on my own laptop. There is no delay with the slides and I’d imagine nobody would have a problem with that at all.”

As an example of the types of difficulties that can occur when using technology, Katie’s experience of initial delay and difficulties with her webcam reflect a potential negative experience of the technology. For me, the interesting point about this was that Katie’s initial difficulties did not deter her from further exploring the program. It could be argued however that Katie’s interest was influenced by my own need to find a suitable program and therefore was not a true reflection of a student’s experience or motivation to participate in an online support session. In order to explore this area of motivation further I next asked Katie for her own opinion on virtual lectures.

Question 3: Would you find it helpful to have virtual lectures?

“I think that you’re right; this could be the way to go in the future, especially for people who physically cannot make it in to a lecture or workshop. I’ve never seen it advertised before, but I reckon I’d go to an online lecture. I’d also think that anybody who is shy or who doesn’t work well with others might really enjoy the comfort of being able to participate in their own environment. I know if I was sick or couldn’t make it in cause of work I’d like to have this option.”

Looking back on Katie's response to this question, I think she really captured the exact reasons why I believed in virtual support. Potentially this type of support could help any number of students, from those that physically could not make it into college, to those who have Asperger's Syndrome or any disability that hinders their ability to work in a live group environment. Interestingly enough, the usage of virtual environments to help develop social skills in students with Asperger Spectrum difficulties has been tested by a number of other researchers (Cobb et al. 2002, Parsons, Mitchell and Leonard, 2004).

Reinforced by Katie's own belief about the potential of virtual support, the final question I asked her focused on features that she would like to have seen in the program. This allowed me to further critique the virtual classroom as an educational tool.

Question 4: Are there any features that you think are missing or that you would like?

“Eh, I dunno, it would be great if you could type over Word documents and make changes to essays, but I guess you can't have everything. I think it would be the same story though if a person came to you with a print-off of their essay and asked you to look at it, you could only mark on the paper, so its fine the way it is, I'm just being picky. Also I like the way you can get a recording; that is great, especially for people who don't take good notes in class.”

In reply to question four, Katie was referring to the usage of the virtual whiteboard, which can be used to generate spider-diagrams, pictures and can be used to draw over Word documents. Below is a screenshot of our testing.

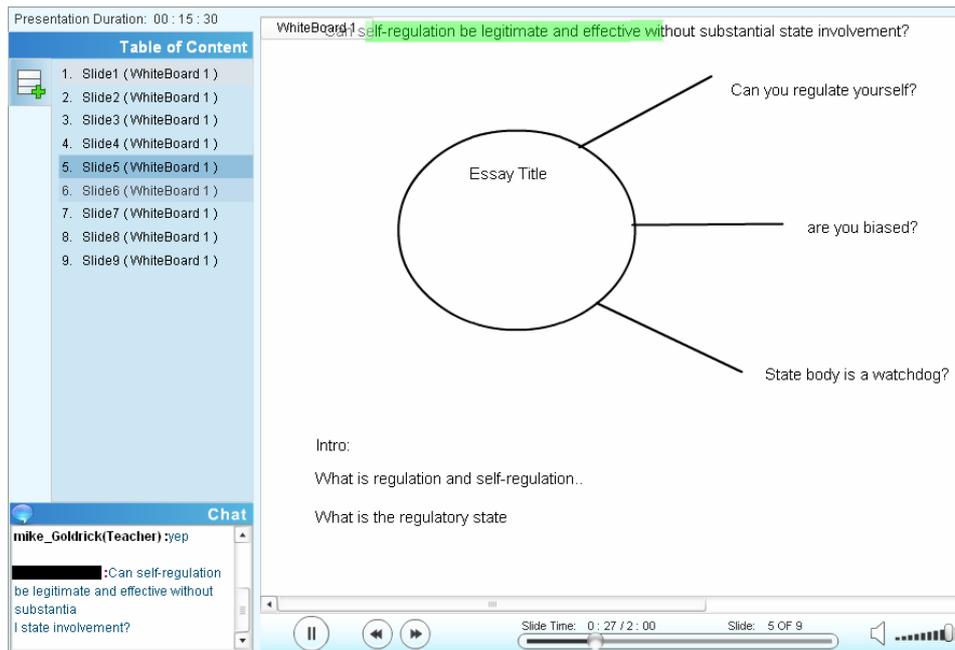


Figure 4.1: Testing Wiziq

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Thanking Katie for all her help with the testing procedure, I ended the class and reflected on my own thoughts about using Wiziq as a synchronous tool. For me, the problems did not lie in the quality of technology; I was quite confident that my students could navigate the program with minimal instruction. No, what concerned me was what would happen when they did access the program; what type of lecture or workshop style would suit the e-learning process? These concerns were important and I agreed with McPherson and Nunes' (2004, p1) belief that;

“designing and delivering e-learning is not simply a matter of selecting a tutoring team with subject matter expertise and/or technical skills, but is also choosing educationalists with pedagogical, information and communication skills that are required to manage and facilitate online learning. Thus, the choice of a suitable tutor team with appropriate skills, or at least the willingness to acquire these, is essential to successful online learning.”

For McPherson and Nunes (2004) and McPherson et al (2003), the approach and leadership of the tutor is the most important predictor of any e-learning or virtual activity. This responsibility was somewhat disconcerting as it forced me to reflect upon

the idea that my teaching technique may not directly be transferred into a virtual setting. Moreover, it inspired me to explore how traditional face to face teaching differed from virtual or E-learning.

(4.5) The role of the online tutor

Agreeing with McMann (1994), Gerrard (2002, 2005) claims that face-to-face teaching and online teaching have many similar traits. Gerrard (2002, 2005) does however make the point that there remains a significant set of differences which should not be ignored or avoided. In particular, Gerrard (2002, 2005) and McPherson and Nunes (2004) argue that online learning generates multiple discourses and multiple starting points for individual students and feel that an online tutor must be prepared to work collaboratively with students, scaffolding their knowledge appropriately and non-linearly. For me, these points still sounded very much like a physical classroom that must accommodate for late entrants. Yet, I was sure that an online tutoring experience would also present me with an opportunity to see students helping each other understand the content, drawing me into their socially constructed conversations when appropriate (Zuccheromaglio, 1993). For me, this was the prime attraction of virtual support, as it could essentially allow all students to construct meaning through peer support and tutor support, regardless of whether they could physically meet up with each other. From a constructivist learning perspective then, the belief that I could help all students to increase their levels of connect with their peers and my service was a welcoming and exciting factor and I found that my enthusiasm to try out the technology significantly outweighed my fears of not coming across as an effective online tutor.

In order to somewhat pacify my fears, however, I decided to gain the advice of my colleague, Dr. Leo Casey, who is the Director of Learning and Teaching in National College of Ireland. Through these discussions, I came to realise that my skills as a live and virtual tutor could be further improved upon by studying the content on Dr. Casey's module on Teaching and Learning Theories. This module can be taken as part of a Post Graduate Diploma in Learning and Teaching or a Master of Arts in Learning and Teaching. Studying the content for this module, I came to understand the importance of using a blend of learning theories in order to firstly grasp the attention of learners and to maintain that attention throughout a workshop. Perhaps most important about this

process was that I became interested in the works of Gagne (1985) and Illeris (2001, 2003). For instance, I began to think of ways to combine Gagne’ events of instruction with my pre-existing teaching strategies (Constructivism and Behaviourism).

Through this experimental process, I believe that I in some small way began to create what Illeris (2001, 2003) described as a unified concept of learning and teaching. Using Gagne’s first event of instruction, I began to think about how I could induce interest in each learning support workshop, through introducing humour, a provocative opening statement, or asking an intriguing question. From here, it could be possible to induce a self-directed or collaborative form of problem solving (Problem-based learning) (de Graaff and Kolmos, 2007), where I facilitated a journey of active learning. As a final approach, I intended to use behaviourist principles of motivation in order to reinforce how to use available time effectively and to impress upon students the need to reference appropriately in their projects and essays. As a visualisation of my thoughts on this process, I have provided a mind-map plan which I used to create a lesson plan for my first workshop ‘How we learn’:

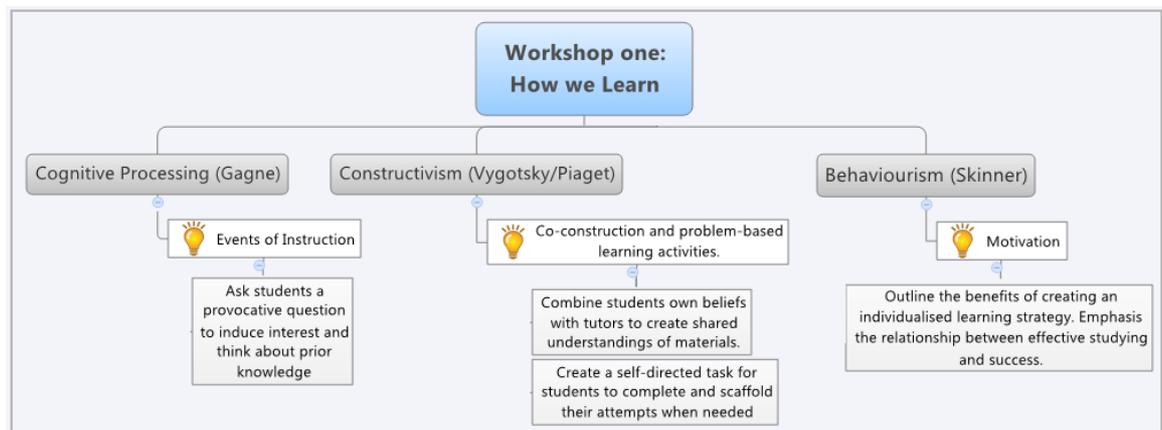


Figure 4.2: Using three learning theories to form a lesson plan

As can be seen from this map, my knowledge of the processes behind learning and teaching had grown. Empowered by this growth, I later took the decision to pilot National College of Ireland’s first virtual learning support service. As a precautionary factor however, I did not target the CFLM (Certificate in First-line Management) course, but chose to target on-campus courses. My defence for doing so was that I should first test the usability of the program in an environment where I could supplement a negative online experience with a live experience if needed. This initial

safety net would allow me to test the program comprehensively without jeopardising the quality of support provided in National College of Ireland.

(4.6) Piloting the virtual Learning Support service 12/02/09

As a first step in this pilot, I identified two first-year courses, (Higher Cert A and Higher Cert B). I chose these two groups as they were experiencing noticeable difficulties with in-class tests and writing assignments.

Meeting the groups separately with their lecturer, I introduced the idea of virtual support to them and suggested that if they wished to take part in the pilot that they would need to log on and register with Wiziq. I assured the students that this was completely free and easy. For ethical reasons, I also explained to both groups that this work was part of my ongoing research to improve the Learning Support Service in National College of Ireland and asked their permission to use the automatically recorded group classes to reflect on the effectiveness of the virtual classroom. Due to the fact that I wished to publish the results of this evaluation, I also suggested that if any individual would like to take part in a private individual support session then I would need them to sign a declaration of informed consent beforehand.

From these sign-up sheets, twenty four students identified as wanting to take part in the pilot and were given instructions on how to set up an account. As a preliminary pilot to a campus-wide service, the decision to exclude Wiziq from Moodle was thought to be best practice. This precautionary isolation, offered the benefits of a later dissemination and further championing if the pilot proved to be successful or, if unsuccessful, would avoid mass technology contamination within both faculty and students. This measure was deemed vital, as a negative experience of Wiziq, as a medium, could potentially have a negative impact on future technology initiatives (Newton, 2003, O'Quinn and Corry, 2002). Having then taken the precaution to test the program both outside National College of Ireland using a UCD colleague, I later enlisted the help of a final year computing student and the Computer Support Tutor in order to test whether Wiziq would be hindered by the college's IT firewall. Having successfully tested the program from a purely technical perspective, the Virtual Learning Support Service was then piloted on the 12/02/2009, when I carried out an individual support session using Wiziq.

As outlined in chapter one, individual support sessions allow me to reinforce support materials and strategies with a single student, giving them the opportunity to ask questions and develop their own understandings. In this particular case, I was attempting to reinforce elements of critical thinking and exam revision with a student who was studying for a Business Communications exam. Working from material that I gained permission to use from the lecturer (Hurley, 2009), I hoped to scaffold the student's understanding of the material, by getting him to critique the theories and form his own opinions.

Individual virtual support in Business Communications

The first instance of virtual support was scheduled on the 12/02/2009, with a first year student who had expressed a growing concern about an impending Communications exam. Having missed his lecture on the topic itself (Assertiveness and influence), the student in question had made an attempt to study from home but had encountered difficulties in understanding the topics themselves. Encountering then a situation where a face-to-face meeting with the student would not be possible (as he remained absent from college), it was suggested (over the phone) that an online collaborative session could be of benefit to his revision strategy. Using the virtual classroom, the student (who had previously signed a declaration of consent) was talked through the steps that were needed in order to register for the revision class. Having then completed the registration process and checked his internet connection, an e-mail invitation was sent to his account, which loaded him onto the classroom platform and marked the beginning of the forty five minute session.

The session itself was broken up into two sections;

1. A review of the in-class lecture slides
2. A set of sample exam questions

A Review of the in-class lecture slides

The first stage of this process worked very well where, after some initial voice delay, the experience of the virtual environment proved to be both novel and plainly advantageous for the student. Adapting well to the interaction process, the student felt comfortable in asking questions throughout the presentation phase and was receptive to both encouragement and self-evaluation.

As a visual descriptor, the layout of the program itself can be seen in the following screenshot. At the time of capture, I was presenting the PowerPoint lecture slides to the student and answering any questions that he had in real time. It is worth noting that had the student wished, he could have also typed any query during the presentation, which would indicate some possible extra benefit for students with vocal disabilities.

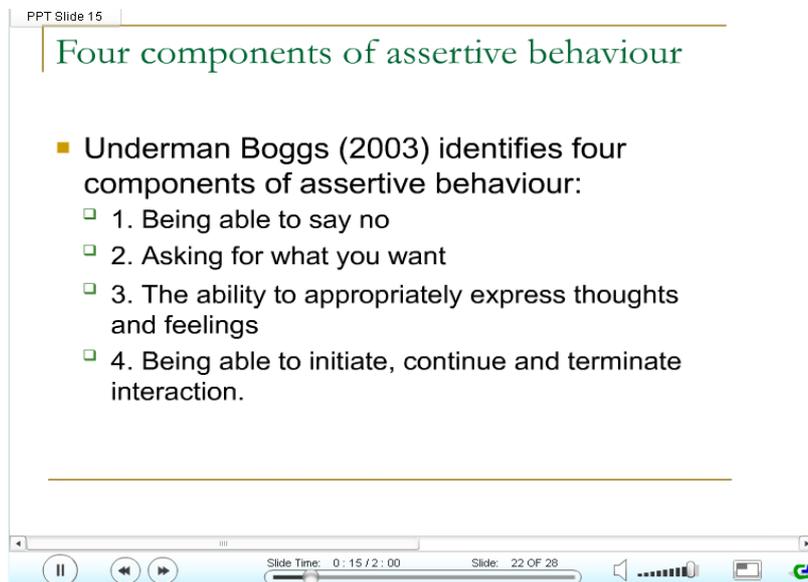


Figure 4.3: screenshot of virtual class

As can be seen from the above figure, the content of the lecture slides focussed around a number of contemporary communication theories that the students were expected to both understand and retain. With this task in mind, the student agreed to explore the differences between aggressive and assertive behaviour, in a mock exam scenario which would determine his own understanding of the presented material.

A set of sample exam questions

After going through the PowerPoint presentation, the student and I began to formulate example exam questions based on the information at hand. As the test itself was scheduled as a CA (Continuous Assessment) class test (worth 25%) the potential questions asked would require concise answers. One example of these questions was;

Mike: ‘What are the four components of assertiveness?’

In attempting to answer this question, the student had some trouble in organising the material into his own words effectively, which in turn required both of us to talk about assertiveness as a concept;

Mike: ‘Alright Liam (Pseudo name), let’s think about this for a moment. What does it mean to be assertive? [pause] I think being assertive means being honest with a person about what you want, without being aggressive or ignoring another person’s own desire.

Through this dyadic, the student began to internally process the concept of assertive behaviour in a professional context and ultimately began to form his own understanding of the material. In order to test this understanding, the student was then asked to write out his answer to the following question as he would in a real exam situation;

Mike: Give an scenario of an aggressive, passive and assertive response in a person?’

In the next screenshot, this very process can be seen, where both the student and I utilised the communal whiteboard;

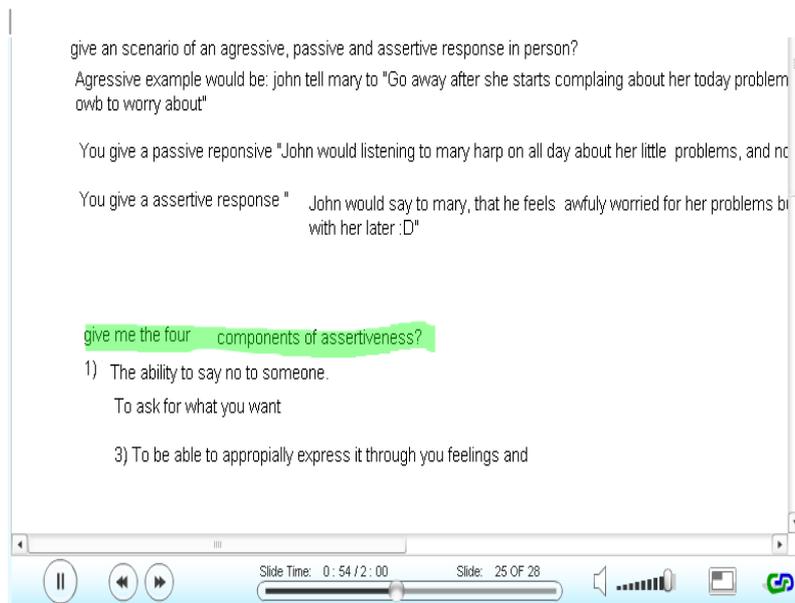


Figure 4.4: screenshot of online interaction

Taking the writing controls, the student then wrote out what he believed to be an aggressive, passive and assertive response;

Student: “An aggressive example would be, John tell mary to “Go away after she starts complaining about her today problems.”

Passive response: “John would listening to mary harp on all day about her little problems and not say anything.”

Assertive response: John would say to mary, that he feels awfully worried for her problems but can’t talk about them now but maybe will talk them over with her later.”

As can be seen from Fig 4.4, the whiteboard area is a vital component of the virtual classroom’s unique benefit, where the tutor and student can potentially use the same space to both pose questions and construct answers in real time. Continuing with this, the next question I asked the student was in relation to the four components of assertiveness. In this particular example, the student had some difficulty in organising the question into a concise answer and felt that the required statements were hard to recall;

Student: ‘The last one is kind of hard isn’t it?’

Having explained to him that in a short-question based exam the need for short and accurate sentences was vital for high marks, I instructed the student to practice this style of answering on his own and to get comfortable with composing short answers without the aid of the presentation slides. Shortly after this, I thanked the student for attending the class and scheduled a follow-up appointment in college.

Student Feedback

The feedback from this student about his virtual session was very positive and addressed some operational and accessibility concerns that the program might bear;

Student: “Yeah it is helpful, yeah, it’s pretty good, I enjoy it.

As an added feedback measure, the Wiziq program allows students to rate their experience from 1-5 and also allows a text box area for qualitative comments. This particular student’s feedback page can be seen below (For security reasons, I have blanked out the students’ name).

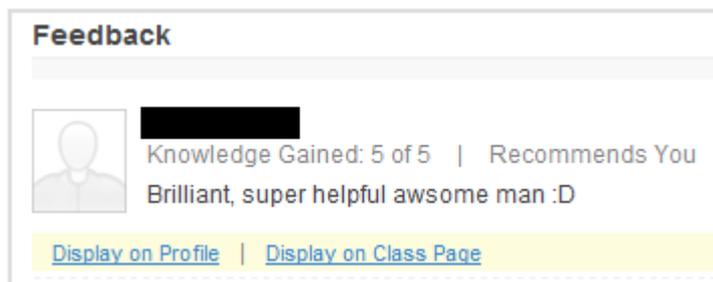


Figure 4.5: Feedback from virtual support

Beyond these qualitative measures, I felt it important to reflect upon the wider effectiveness of the program itself. To do this, I adopted a quantitative methodology similar to Wiesel (1998), Kaufman et al. (2000) and Zywno (2002), who suggests that previous results can be used as a benchmark or predictor of future academic performance.

The quantitative effectiveness of the support throughout semester two

In order to carry out this level of analysis, I unobtrusively collected the students' Continuous Assessment scores for Communications (from the lecturer) and compared them with the average mark of the Higher Cert A class. In comparing the students' achieved mark of 54.00% with the overall class average of 58.50%, it could be argued that the virtual workshop, as the only form of support, provided the student with enough structure and guidance to help him reach a grade that was just short of the average class score.

This progress was further tested during the end of year exams in Communications, where using three traditional and two virtual support sessions, the student achieved a module grade of 45.5%, which was an increase of 5% from his semester one result of 40.5%. In this particular case, the use of technology increased the potential for the student to attend support sessions, having attended only two traditional sessions in semester one. It could be argued then, that in this case, the usage of technology widened the field of support, from which there was a positive impact on the students' semester performance.

Despite the popularity of this type of analysis however (Wiezel 1998, Kaufman et al. 2000, Zywno 2002), I have difficulty accepting the credibility and overall importance of such measures of success. In-fact, when considering just what a measure of success should be, I find that I agree with Entwistle (2008), who believes that each student should be allowed to construct a meaningful learning experience for themselves and not be expected to passively learn through rote. This is not to say, that every student will always thoroughly enjoy each support class or session, but rather each student should be encouraged to actively reflect on how each session impacted on their knowledge and skills. Moreover, I empathise with Gardner's (1999) approach to intelligence and feel that, as educators, we place too much emphasis on linguistic and numerical intelligence and ignore equally important abilities such as social and emotional intelligences.

As a reflective practitioner who operates from a strengths-based approach (Linley, 2008, Linley et al 2007), I believe that seeing my student's grow from a position of self-doubt or distress, to one of confidence and joy, is perhaps a greater measure of success than the quantitative analysis of exam results. Yet, I also realise that the social institution of Higher Education remains very much a behaviourist system, based on

performance (Genovese, 2005, Cole and Tufano, 2008, Weiner *et al.* 2003) and therefore concede that the analysis of student results may be necessary in order to gauge the impact of support strategies. As a means then to illustrate a wider performance based analysis, I chose to offer online and recorded workshops to groups of students in Higher Certificate B who wished to access my service.

As outlined in chapter one, workshops allow me to present learning strategies and technologies to small or large groups of students in National College of Ireland. These workshops generally relate to core academic skills such as learning styles, study skills, academic writing and exam revision. In these next examples of virtual support, I am attempting to reinforce exam skills by catering workshops around a specific theme or subject. This was achieved using slides gained from the Lecturer (Hurley, 2009, and Hurley, 2009B).

Group support for Organisational behaviour and Business Communications in Semester two 2009/2010

As an intervention to a collective poor performance in first year Organisation Behaviour 1 in Higher Certificate B, I initiated a set of support workshops that presented strategies on how to approach continuous assessment exams and how to prepare for semester exams in Organisational Behaviour and Business Communications. These sessions catered for twenty-two full-time students who signed up for group support (three traditional sessions, mirrored by three virtual). For continuous assessments, two workshops were created that married lecture material and sample questions from the lecturer. Both of these workshops incorporated an in-class mock examination using a simplified voting system of hand raising or letter calling to signal their choice of answer. This method sought to infuse a ‘gaming culture’ within the tutorial, a method becoming increasingly popular as a format to increase attention and aid recall (Dror, 2008).

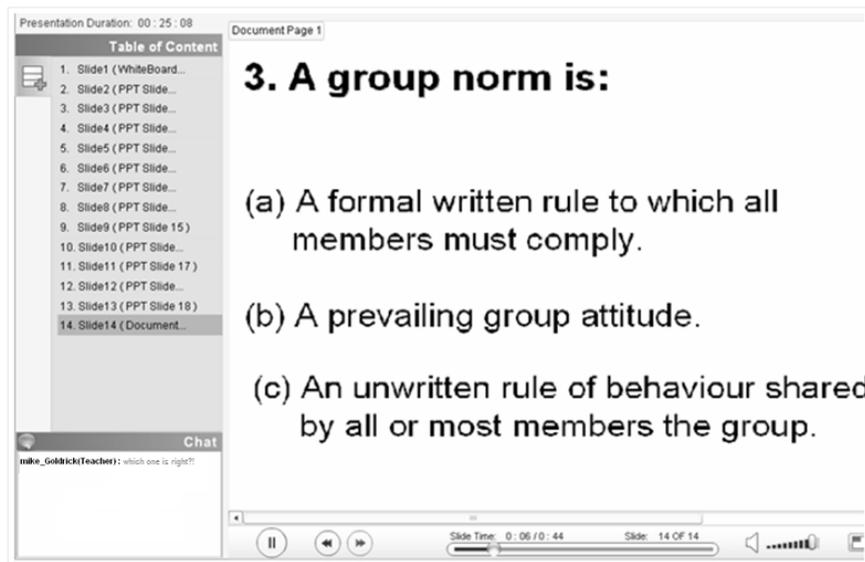


Figure 4.6: screenshot of online exam

Using this method, one question with three possible answers was firstly posed to the group. Following this, each attendant in both live and virtual sessions were then asked to raise their hand, call out or type A, B, C, (in a virtual setting) for whichever option they felt was the correct answer. Correct answers were then presented and followed by a virtual applause using PowerPoint sounds, which in many cases added an element of fun and a ‘game show’ type construction to the support session (as an added tool, I discovered that Wiziq can develop multiple choice tests).

The final two workshops (one live and one virtual) focussed on how to plan and write out exam answers effectively, offering example introductions, paragraph building advice and time-keeping techniques. For any student who could not attend either live or virtual sessions, a pre-recorded version of the class was sent to their e-mail accounts. These recordings were also e-mailed to part-time students who could not attend live or virtual support lectures due to work commitments. It is important to note however, that the recording facility motivated many students to directly request a link to a pre-recorded version of tutorials, which were then used in connection with traditional sessions.

Quantitative effect of support tutorials

Using similar logic to individual support sessions, I examined the effect of the Learning Support Services’ blended intervention, using the groups’ semester one’s results as a baseline of performance (Wiezel 1998, Kaufman et al. 2000, Zywno 2002). Bearing in

mind that the pre-intervention group average was 42%, the post-intervention scores of 56% indicate a significant overall improvement in semester two of 14%, within both the Continuous Assessment's and exam results. This significant improvement is gathered from the scores of the twenty-two students who utilised three exam revision workshops in semester two (either live, virtual or both versions). In order to critically assess whether this improvement was due to the impact of the service or merely through chance, I chose to use a Chi-square, non-parametric test, to examine pre-intervention pass rates and post intervention pass rates. A social scientist could use this test to either confirm or reject the hypothesis that attendance to Learning Support sessions can directly affect pass rates. However, as a constructivist and post-positivist researcher, I used the test to reaffirm the benefits of creating a collaborative and constructivist environment for students to create meaningful learning experiences (Entwistle, 2008).

As a reaffirmation of my beliefs, the Chi-square results as seen below (11.45833333, where the rate of probability was calculated at 10%) offers a statistically successful acceptance of the idea that learning support workshops can positively affect exam performance.

		<u>Observed</u>		
		PASS	FAIL	
ATT		21	1	22
NATT		11	11	22
		32	12	44
		<u>Expected</u>		
		PASS	FAIL	
ATT		16	6	2
NATT		16	6	43
		25	20	45
		<u>Chi-Square for Independence</u>		<u>Null Hypothesis</u>
(Obs-Exp)/Exp		1.5625	4.16666667	
		1.5625	4.16666667	
		Chi	11.45833333	
		DF	1	
10%		CRITICAL	2.706	

Figure 4.7: Chi square

Furthermore, whilst it cannot be claimed that such a significant result was solely due to the virtual/live intervention, it can be argued that the consistency of improved scores indicates that those students who attended both the live and/or virtual sessions, received the same quality of support. For me, this is a more interesting and exciting possibility.

What is perhaps a testament to this theory, has been the consistent requests from students who have asked for a link to a virtual session, when work or illness prevented their attendance.

~

Believing that I had created a new and effective way to support students in National College of Ireland, I was interested in receiving other viewpoints and critiques from my peers in Higher Education. I identified this as a critical step in order to ensure that my conclusions were both fair and accurate (Mcniff and Whitehead, 2006);

“I have consistently placed my work in the public domain for critical response. I have checked my provisional findings, and their evidential base, against the critical scrutiny of others such as my peer group of university-based practitioner researchers and the critical insights of my doctoral programme supervisor.”

(Cahill, 2007, P41)

As a means to gain these added perspectives, I submitted and presented a working paper to the Confederation of Student Services in Ireland entitled ‘*Virtually there*’, which was based on the activities described in this chapter (Goldrick, 2009). The conference paper, which uses the data from this chapter, is presented in Appendix B.

(0.1) Presenting the Virtual Learning Support Service for Peer Review: Sligo, 15/06/09

Overall feedback was very positive, with some questions being directed in relation to the price of the program and how I felt the classroom could be used. From a critical point of view, one commentator asked whether students would fixate on the technology, rather than the information being presented. Whilst I agreed with the spirit of the question, I argued that all new technology had such periods of fascination, before students learned to see beyond the technology and focused on the information being constructed. I did suggest however that this settling in period would take a few sessions before students became socialised to the medium. As a lead on from this I also suggested that we shouldn’t be afraid of using technology because it is fun for students. On the contrary, if fun can be injected into the classroom, then why not embrace it? As

examples of this I gave examples of ‘clicker’ technology, currently being tested (Dror, 2008).

As a means to socially air my ideas, I think the conference was the most collaborative forum to choose, as I have now made a number of contacts which I hope will allow me to popularise virtual learning support and develop more inclusive learning support materials.

(4.7) Conclusion

In many ways, it seems that the future of education is set to be increasingly technology driven (The Economist Intelligence Unit, 2008, Looney, 2005). Yet as I have attempted to show in this chapter, evolution should not occur for the sake of evolution, but should be put in place as a direct result of student need. Created as a direct result of academic isolation, this chapter has documented the construction of a virtual learning support service.

Examining first the consequences of academic isolation, this chapter discussed how technology has been currently used to contact all students in Higher Education. Exploring these asynchronous and synchronous communicative tools, I introduced the history of videoconferencing as a science-fiction idea which has been finally realised and used to great effect. From a pragmatic and financial perspective, I presented reasons why I needed to look beyond videoconferencing and described how I first learned about virtual classrooms. Having settled on the product Wiziq, the chapter later described how I tested and piloted a virtual learning support service in NCI. This section provided qualitative and quantitative evidence that students both enjoyed the experiences and improved their grades after experiencing increased contact with my service and each other.

As a reaction to identified problems in chapter three, this chapter has taken the first step in improving my service and establishing the third principle of learning support which I introduced in chapter one;

3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

The next chapter continues this journey, by presenting how I created a learning support manual that is both inclusive and based on national and international best practices. From this manual, I will later document how I revised the Effective Learner workshop for Off-campus students in order to offer students more learning technologies and strategies to individualise their learning experiences.

Chapter 5: *Effective Learning*: Making improvements to my online resources and materials

As the learning support tutor for National College of Ireland, my role is to help students become effective learners, critical thinkers and problem solvers. To achieve these goals, I adopt what Shim (2007) would describe as a synthesis of western and eastern learning philosophies, borrowing from the works of Plato, Confucius and Buber (Hall and Ames, 1998). In carrying out this role, I feel that I make a positive impact on each of my student's educational journey, yet at times, my job can induce a feeling of inadequacy or what McDonagh (2007) calls *learned helplessness*. For instance, you cannot individually tutor every student in a large, or even a small college. Neither can you offer a monopoly of support to one cohort of students or be responsible for their desire to learn. Yet in some way, you try and you feel that you are. Through the use of learning strategies, workshops and practical guidelines, you try to offer students the best advice and links to the most up-to-date technologies.

In chapter three, I recounted my experience of presenting such tools to CFLM students, whose views were positive and reassuring, yet induced a feeling of living in contradiction (Whitehead, 1993). The specifics of this living in contradiction related to my desire to help each student become an effective learner, by facilitating an inclusive and student-centred learning experience of my services. Based on both my own self reflections and feedback from students however, it became clear to me that I could not offer the service I wanted to. Faced then with the prospect of either ignoring my feeling of contradiction or improving upon present activities, I, like McDonagh (2007, p 173), chose to change, by openly questioning my use of pedagogy, written materials and learning support theories;

“By questioning my pedagogy, I demonstrated a metacognitive awareness of the need for openness to change. When I adopted an internal locus of control I demonstrated a belief in my own capacity to think and change my situation. My commitment to a self-questioning methodology about my practice and thinking is grounded in the values of respect for the uniqueness of the individual and their capabilities to think, learn and change.”

Continuing then from chapter four's attempt to improve student centred learning support in National College of Ireland, this chapter will focus on two themes which were identified in chapter three:

1. How can students individualise their learning through technology?

2. How can I assure that my materials and delivery are a reflection of best practices?

As a means to address these concerns from a pedagogic perspective, this chapter will firstly explore the area of ‘learning to learn’, outlining the growing importance of learning styles, intrapersonal competences, and their growing prominence within education. Throughout this section, I will describe how learning support tutors and similar educators are aiming to foster the development of critical thinking, self-reflection and problem solving skills alongside more generic academic skills. Following this insight into learning to learn, the chapter will introduce how I sought to gather the views of other support tutors in Ireland in order to produce a comprehensive manual on ‘Effective Learning’. Documenting the production of this manual and the accompanying workshops which I later implemented, this chapter will illustrate how each unit was designed using universal design principles, and constructed using resources obtained from experts in learning and support. This process is presented as evidence that I have attempted to improve upon present practices by evolving my own knowledge and understanding (Whitehead and McNiff, 2006).

Having given an account of this process, the last section of this chapter will present a revised module descriptor for the Effective Learning workshop, which makes use of constructivist and behaviourist learning theories.

To review, this chapter will cover the following activities;

- What is ‘learning to learn’?
- Establishing links with other professionals
- Unit One: Learning Preferences and Styles
- Unit Two: Creating Effective Study Notes
- Unit Three: Academic writing and referencing
- Unit Four: Exam revision and anxiety reduction
- Developing an improved module descriptor and learner outcomes

(5.1) What is learning to learn?

For centuries, one question has been the source of much dispute for educators and philosophers: *How do we learn* (Illeris, 2006, Kessels, 1996, Plato, 2003, Shim, 2007)? Yet in recent times the nature of learning has received new interest, not from the academic community, but from politics (Eurydice, 2002, DeSeCo, 2005). Within the last ten years, the European Council and European Parliament have tried to define what key skills are and how educators can help produce workers that are self-aware, critical thinkers and problem solvers (Hoskins and Fredriksson, 2008). In short, Europe has aimed to produce an economy that is based on knowledge and supports learning as a life-long activity.

What is perhaps most groundbreaking about this renewed interest in learning is the emphasis which is now placed on the ability to adapt to new technology, new environments, new practices and new understandings (Hoskins and Fredriksson, 2008). Described as ‘key competences’, the attainment of knowledge, the development of cognitive skills, practical skills, attitude to learning, emotional intelligence, values, ethics and motivation are amongst the most valued elements of the new learning process (Salganik, 2003). Whilst rooted in the advancement of learning theory (Illeris, 2003), principles of active learning (Bonwell and Eison, 1991) and multiple intelligences (Gardner, 1999), the growing interest in such competences has been triggered by three European socioeconomic interests:

- The development of the knowledge economy
- The establishment of life-long learning
- Achievement of social cohesion

(OECD, 2001)

Together, these European interests envision a cohesive European society where people have competent interpersonal skills, intrapersonal skills, ICT skills and academic skills that allow for the successful acquiring of a job, the maintaining of that job as it evolves, and interacting democratically within a more diverse professional and social environment (OECD, 2001). As a key factor in the fostering of such transferable skills, it seems that the idea of learning has changed (Richards, 2004); regarded now, not as a system through which established knowledge is imparted and passed down, but as an

evolving system which can help produce critical thinkers and reflective problem solvers (Hoskins and Deakin Crick, 2008).

On reflection, these processes are, like many things in education, not a new concept. In fact, Plato, perhaps first noticing the need for this type of scaffolding, suggested that true education is helping individuals to turn away from ignorance (Plato, 2003). Bearing this in mind then, how can learning support tutors help each individual realise their full potential? Concerned with this issue, many ‘learning to learn’ or academic skills courses (Boote, 1998, Manning et al., 2007) and ‘good study guides’ (Northedge, 2005, Simon, 2002) have sought to help students to firstly self-reflect and digest materials in a manner that best suits their own needs or preferences. From here, such books and courses tend to focus on reading skills, IT skills and writing skills, before introducing exam preparation skills (Manning et al., 2007, Hofer and Yu, 2003).

Using this established template to reflect on my own existing support materials (Goldrick, 2008), my first intention was to establish a generic framework for my new learning support manual, which I would later name ‘Effective Learning: A Learning Development Manual’.

(5.2) Establishing an outline for the Manual

As a means to develop this template, I identified a network of experts and peers. This network, or what McConnell (2008) and Price (2005) call a *Learning community*, was a central component in helping to ground my service in national and international best practices. In an effort to begin this process, I contacted other learning support tutors through the ALSON (Academic and Learning Support Officers Network) e-mail list and asked the group whether any members would like to collaborate on the development of a learning development manual for Higher Education. Identifying four areas which I believed to be of crucial importance for academic survival, I set out my intentions to source resources and best practices in relation to:

1. Learning Preferences and Styles
2. Creating Effective Study Notes
3. Academic writing and referencing
4. Exam revision and anxiety reduction

This outline was adopted after consideration of some of the many templates in other existing study guides available in Ireland (Van Blerkom, 2006, Northedge, 2005, Simon, 2002). Of these, the *Good Study Guide*, by Andrew Northedge was used as a primary baseline from which to consider factors such as content, size and language style. These factors then framed the tone of the manual, the types of content which would be used and finally the usability of the manual. This last factor proved to be the starting point of the planning, where the size and manageability of the resource itself was considered in relation to the physical time each student would allocate to browsing through the manual.

In framing this consideration of time and length, I used my own reflections of being a student and teaching in Higher Education. From these reflections one important belief was established; *modern students need a concise manual which can be navigated easily*. This belief would later lead to the production of a resource which was considerably shorter than commercial products but which would hold the most relevant sources of advice and learning technologies from experts around the world. A defence for this reduced but concise position is advocated by Inoue (2006, p8);

“Based on my observations as a college English professor for more than a decade, students are prone not only to read fewer books, but shorter ones. There is increasing resistance to longer works of literacy or philosophical content. This resistance was a problem I observed in the mid 1980’s before the popularization of the internet, which means that other pervasive cultural and socio-economic factors were attenuating college students literacy, such as television viewing, the popularity of home video systems and obligations to part-time jobs.”

With this plan in mind, I invited each member of the ALSON group to contribute to the project either through advice or direct contribution of material. In most cases, contribution to the project manifested as either advice or permission to use information or materials, because of the individual workloads of the ALSON group. One exception to this was Trinity College Dublin, whose Learning Support staff contributed to the Exam revision and anxiety reduction section of the manual.

To offer a more comprehensive account of this process of construction, the following four sections will outline the stages involved in developing the content for the new manual. These four sections will outline the reasons why each of the units was developed and perhaps more importantly how each unit was developed. After each unit,

I intend to reflect on how I have contributed to new theory and practice by asking, “*What is new here?*”

(5.3) Unit 1: Learning Preferences and Styles

What is perhaps most impressive about Andrew Northedge’s *Good Study Guide* is the vital importance which he places on the relationship between self-advocacy and self-reflection;

“To become an independent learner you need to be a reflective learner. By reflecting on your study experiences, you develop insight into the ways you learn.”

(Northedge, 2005, p20)

Using the Kolb model of learning as an example, Northedge indicates to the reader the types of learning styles there are and encourages each learner to reflect upon how they learn best by examining their past experiences and using a diary or learning journal. What the guide does not provide however, is a means to carry out a learning style test/preference test. Building then upon this critique, I wanted the Effective Learning manual to provide this exact experience. However, there were pragmatic points to consider; what tests should be used and how expensive would it be to host these tests? Also, and perhaps most importantly from a strategic perspective, how should the tests be used?

What tests should be used?

Being conscious of the fact that many learning style tests are not free to publish and administer within a college, I priced some of the more common models utilized internationally. One example of cost was benchmarked by the Kolb learning style inventory, which was estimated to cost just under \$7,000 a year to use. As I had a limited budget, I thought it best to source any institutes that already used the instrument and attempt to share their resources. The reason I had chosen to use Kolb’s model of learning styles was due to its practical usability and popularity in Higher Education (Perryer, 2009).

Having then an aim to instigate a collaborative connection, I found one college, The University of Birmingham, who had developed an online tool using Kolb's instruments. Through e-mail communication, I obtained permission to use the existing test from its creator, Giles Perryer (A full list of e-mail communications is presented in Appendix E).

"That would be fine Mike. However, please note it only runs in internet explorer, not firefox, safari etc. It is also worth explaining that the closer to the "centre" you are, the more of a well rounded learner you are, whereas the learning style descriptions assume you are near the edge.

Best wishes
Giles"

Having secured the usage of the online Kolb test, I next contacted the creator of the VARK learning style test, Neil Fleming, who gave me permission to link to his online test (Fleming, 2006). As a different learning style test, VARK offers students some insight into the habitual ways through which knowledge is best assimilated (McLoughlin, 1991). I felt that this type of test, when combined with the Kolb test, would present a student with a self-reflective exercise that:

- Gave them an understanding of their strengths and weaknesses.
- Outlined what types of teaching and learning environments would suit them best.
- Illustrated to them what senses they favored when learning a new skill or fact.

Through this exercise, I hoped to facilitate a deeper sense of self-reflection, elevating the concept of self-hood to a Confucius understanding of the self as a solitary person and the self as a social person within a classroom with other individuals (Hall and Ames, 1998). Having then located two reflective tools, the next stage of unit one's development surrounded how I intended to use such tests within National College of Ireland.

How should the tests be used?

Whilst presently receiving increased attention in Higher Education, the history of learning reflection can be traced back to early Greece, when Aristotle first considered that every person learns differently (Reiff, 1992, p7). As a modern day practice however, this simple concept has sparked several different tangents and induced considerable debate around the usage of such reflections. Specifically, learning styles as

a research topic has diversified into five divisions, each viewing the practice in a slightly different fashion. Coffield et al (2004) typifies these as being either stable or non-stable, or more simply, models that suggest that development and change is either not possible or possible. Within the spectrum of all such theories, Acharaya (2002) reflects on the dimensions and factors that need to be considered; the personality of the person, the way that person processes and stores new information, the persons' social interactions with others and the instructional methodology used to teach the person. Similarly McLoughlin (1999) classifies preferences as favoring one method of teaching over another, whilst styles reflect a habitual style of acquiring knowledge (e.g. visual, aural).

Typically, when discussing the merits and limitations of learning preferences and styles, many academics agree that the results of such tests should be used to offer the student an insight into their potential strengths and weaknesses as well as their style or preference for learning (Felder and Spurlin, 2005, Robotham, 1999, Bull, 2004). What is perhaps not so universally agreed upon is what should be done once this reflective activity has taken place. Primarily, the argument seems to surround whether learning reflection should play a role in the design of teaching and assessment in Higher Education. In particular the debate surrounds three choices. The first of these would be to design instruction that matches learning styles and preferences, secondly, would be to design instruction that mismatches learning styles and lastly, design instruction irrespective of preferences or styles (Sadler-Smith & Riding, 1999, Honey & Mumford, 1992). Being a reflective practitioner, I believed it was important for my service to identify which choices were most appropriate for National College of Ireland to work towards. As a means to explore this issue, I chose to host a lunch-time seminar on the 16/10/2009, where I invited faculty and management to present their beliefs on how learning styles and preferences should be used in the college.

“Is your preference our preference?” 16/10/2009

Today's seminar was attended by members of faculty, the Director of Student Services, the Director of Learning and Teaching and postgraduate students of NCI. As a new initiative within the college, all public seminars are now recorded using Camtasia software (Camtasia, 2009), which allows present and absent members to later retrieve and experience the event. I find that this recording is helpful for any presenter who

wishes to reflect on the experience or who needs help when constructing a diary or blog of the event.

The seminar opened with two questions, what is a learning profile and why is it important to the future of Higher Education support? These questions were intended to frame the tone of the seminar, by offering a background to the concepts of learning styles and preferences and introducing some current debates about the usage of such tests. The purpose of this introduction was to gauge the thoughts from lecturers and management on how the college would proceed in relation to the usage of learning profiling. This exploration was facilitated through the presentation of two arguments (A and B). These arguments, or options, represented the contemporary questions facing all educators in Higher Education and would encapsulate the future usage of learning profiling within my service.

Argument A: “Learning profiles should be used for student reflection only”

Argument A, as the title suggests, presented the option that learning results could be in the future, directed solely to students, who would then use such information to construct an individual learning strategy. As an insight into how such activities could be carried out, I described a possible orientation practice, where each first year Full-time, Part-time and Off-campus student could be offered the opportunity to write a learner journal reflection which made use of two learning style tests and a class discussion. In presenting this argument, I suggested that, as a self-advocating process, a learner journal can help students to identify their strengths and weaknesses as well as help identify what types of learning strategies to use.

Argument B: “Learning profiles should be used for both student reflection and lecture design”

Having summarised the benefits to argument A the counterargument, option B was then presented to attendees. This extension to argument A proposed that learning profiles can be used effectively for not only student reflection but for lecture design and assessment consideration. In proposing this extended option, I presented a sample template to the attendees which was used to illustrate how learning data could be presented to course directors and lecturers at the start of semester one. The template itself consisted of a procedure page, a learning profile page, a list of learning resources and the learning profile results in graphical form (the template is discussed in more detail in chapter 6).

In reviewing the example report itself, the seminar attendees put forth their own opinions on what future direction would best serve the present and future students of National College of Ireland. Considering student and lecturer perspectives, the discussion captured some of the complex issues facing Higher Education institutes who wish to become increasingly student-centred. In the next section these comments are presented and are localised within grounded themes (Glaser and Strauss, 1967, Glaser, 2005).

Supporting Diverse teaching practices

As a window into the internal change process of National College of Ireland, this public seminar illustrated the college's openness to new ideas and innovation. Yet whilst being thoroughly positive in their acceptance to change, a number of interesting points were made in relation to the practical implementation of becoming more student-centred;

““Teaching staff need to be fully supported in creating diverse learning experiences, such as PBL, and effective group work.”

(Seminar attendee).¹

Reflecting the HEA's own beliefs, this comment captured the many layers of change that are necessary in order to achieve student-centred teaching in any college (HEA, 2009). As part of this support, another attendee offered the following suggestion;

“Maybe we could use the Kolb test as part of a lecturer's induction, or training?”

(Seminar attendee)

This point, having not been considered by me, was received warmly within the attending group as an initial step in providing teaching support for lecturers in the college. What is perhaps most interesting about this comment however is that the Kolb test can be used to offer specific feedback to teachers on their teaching preferences.

Moving from this topic, the next discussion turned to barriers that could affect the implementation of argument B. In particular, the group raised two issues relating to the gathering and management of the data necessary to create class profiles.

¹ As an ethical feature I have not identified any individuals who made comments during the public meeting

How can learning profile data be captured and managed?

Whilst agreeing with the spirit of argument B, some attendees rightly pointed out that successful implementation of this option would require the capturing of each individual's data into a database or program which could easily create a class profile. In discussing this operational concern, the group explored the usage of *Moodle* (Moodle, 2009) as a mechanism for collating individual profiles into class profiles and agreed that this system would need to be set up and tested before argument B could be fully considered. Related to this capturing of data, it was also suggested that a class profile would be determined by voluntary uploads from students. This would necessitate a motivating introduction to learning styles and their benefits to students. As a final point, one attendee asked a very important question which related back to the general critique of learning styles and their use in Higher Education;

“Why are learning results important? Could you do a test-re-test analysis from first year to final year? Like to show how the students have progressed through the system?”

(Seminar attendee)

Test-re-test analysis

Specifically relating to the ideal that each student should aim to become a more ‘well-rounded learner’, the test-re-test data could provide a direct window into the impact of Higher Education on a person's professional and social development. Yet in order to be confident that the re-test results are directly linked to the influence of Higher Education, the group agreed that there would need to be increased measures of re-test validity carried out each year (assuming a course was more than two years long). For instance in a four year degree course, a favourable course of testing would be as follows;

- First Learning reflection: First year (orientation)
- Second Learning reflection: Third Year (Freshers week, Reading week or equivalent)
- Third Learning reflection: Final Year (Freshers week, Reading week or equivalent).

Having then identified a possible future research project, I concluded the seminar and thanked attendees for their comments and suggestions.

~

Bearing in mind the prerequisites for implementing argument B (Learning profiles should be used for both student reflection and lecture design), I decided to create a learner journal exercise that would allow each new student to self-reflect on their learning styles and identify their strengths and weaknesses (argument A).

Creating a learning journal exercise

The purpose of this exercise was to induce self-reflection within the learner. Specifically, the exercise would ask the learner to write a short journal on how they learn best by encouraging them to write a brief summary of the following;

1. A summary of how you studied in the past, what strategies you used.
2. An example of any lesson you remember particularly well and enjoyed.
3. A brief description of the online tests you have taken.
4. A critical reflection of the results. What can you learn from this experience?

To accomplish these tasks, the student would have to engage in a process of writing that makes use of the first person perspective and which draws upon subjectivity as its only source of evidence. This subjective and personal introspection, sometimes called SPI (Sherry and Schouten, 2002, Holbrook, 1995, 2002) or I-witnessing (Lewin, 2006) is perhaps best described by Schnog (1997) who reflects;

“Today, it is not the first-person who speaks in academic literary criticism, but more radically, the first-person speaking about his/her own life story. The self-asserting “I” now stands at the center of a new genre of academic writing, one that blends intimate personal reflection with hard intellectual commentary.”

(ibid, 1997, p4)

Schnog, in describing this process as a new genre in academic writing, rightly highlights the fact that few aspects of academia will have adopted this style. It can be argued however, that earlier writers such as Freud and Nietzsche used this type of self reflection quite often in their own work. However, the subtle differences between 19th century psychology and philosophy and present day academia lies in the need for both quantitative and qualitative evidence and not just the single voice; “attempts moreover have been made to accommodate the concerns of its critics; such as employing it as part of a package, or repertoire, of interpretative research procedures.” (Belk, 2006, p442).

Testing the exercise

As a means of providing an example for students, I carried out the set tasks and provided my own results as an example journal. The finished product is presented below;

My memories of the Leaving Cert surround late nights and writing out chapters over and over again. I sometimes underlined parts that I thought were important and tried to pick out key words to remember, but for the most part I found myself re-reading the text books. One particular lesson I remember fondly was when my Biology teacher used real life examples to underpin theories.

One moment that stands out was when he threw a piece of wet white bread against the blackboard to illustrate how it sticks to artery walls. In order to become a more effective learner, I decided to utilise the VARK questionnaire and the Kolb learning style test. Having completed both, here is what I found;

<i>VARK</i>	<i>Multi-modal learner</i>
<i>Kolb</i>	<i>Diverger</i>

Having firstly taken the VARK test, I discovered that I have a broad sensory approach to learning. What is interesting about this is that in the past I have never utilized visual techniques such as mind-mapping or spider-diagrams, nor even considered using audio notes. I have begun using these now however, to great success. The results of the Kolb test indicated that I had a slight preference for the Diverger Type. In this case the results offered the following response, which I found interesting;

“People like you tend to develop broad cultural interests, and specialize in the arts, humanities and liberal arts. Careers tend to be in the arts, entertainment, and people-helping fields”

Working within support and coming from a psychological background, I would have to agree with the results overall.

Box 5.1: Example Journal

Using this exercise as a starting point and following Fleming (1995)'s suggestions, the manual's second unit would introduce to the student how they could begin constructing their own individualised learning strategy by creating notes that suited their learning profile. In the next section, the particular note-taking methods outlined in the manual will be discussed using relevant literature. Before moving on to unit two however, it is important for me to clarify what I believe is new about this first unit.

What is new here?

Whilst many of the most current commercial study guides will refer readers to the idea of learning styles (Northedge, 2005) and give abridged versions (Cottrell, 2008), I have not encountered a book which provides a link to carry out any tests, or gives specific advice on what to do with the results of these tests. Indeed, many of these guide books seem to merely hint that there are resources 'out there':

“Today on the internet, there are a variety of surveys which will help you to start thinking about your preferred learning style. Just types 'Learning Style Survey' into a search engine and see what comes up. I have tested two of these surveys and they are both fairly accurate in terms of my learning style. Have a go at filling them in – it's an interesting exercise because it makes you think about the way you retain information.”

(Dawson, 2006, p 6)

Addressing this absence or vagueness, unit one of 'Effective Learning in Higher Education' will allow all students to gain specific learning style information from two tests and will encourage them to critique that information through the use of a learner journal.

(5.4) Unit 2: Creating effective study notes

Bridging the gap between theory and practice, this second unit was designed to introduce each student to the mechanisms of note-taking. More specifically, the unit would aim to outline both traditional note-taking procedures, as laid out by several study strategy theorists (Manning et al. 2007, Northedge, 2005), as well as introduce new innovations. The reasoning behind this design was essentially to allow each learner to create a system of notes that play to their individual strengths, whether they are visual, aural or traditional (reading/writing) (Fleming, 1995). Having then multiple

ways to produce notes, the reader of this resource would be encouraged to explore the diversity of note-taking tools, in turn mirroring the goals of learning preferences and active learning, which is to develop a well rounded learner (Bonwell and Eison, 1991).

Mind Mapping

The first of these note-taking methods to be presented would be Mind-maps (Buzan, 2000). Mind-mapping itself as a theory, argues that the human brain can store information in related clusters, much like grouping computer files into the one folder (Woolfolk, 1998).

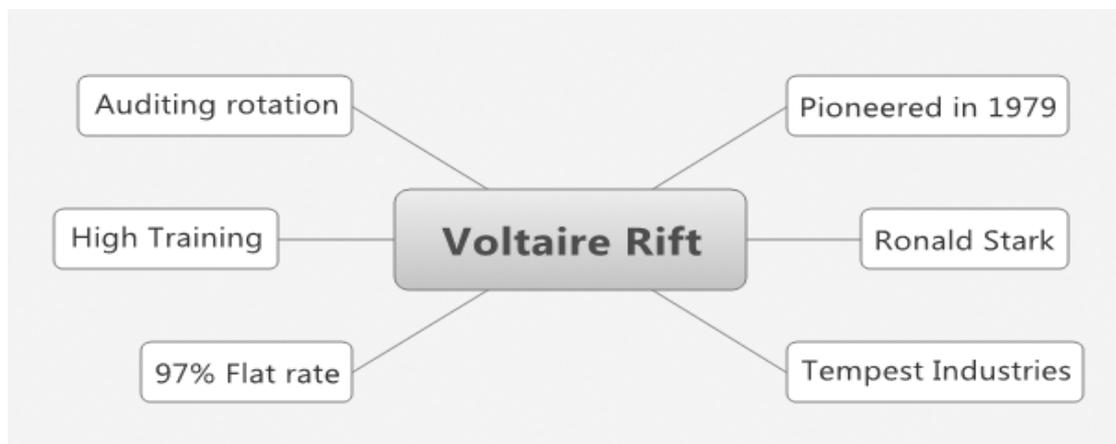


Figure 5.1: The Mind Map

Based upon information processing theory, the mind map tool assumes that the usage of colour and semantic association can trigger a memory, thus providing an increased chance for retention and retrieval of information (Collins and Quillian, 1969). This assumption has been recently supported by research that suggests the usage of mind-maps or spider-diagrams can significantly aid recall and improve exam performance (Farrand, Hussain and Hennessy, 2002). Beyond their use as a memory aid however, mind-maps can also be used to encourage active learning tasks such as collaboration, debate and problem solving (Willis and Miertschin, 2006). In keeping then with my aim to emulate principles of learning to learn (Boote, 1998) and active learning strategies, I performed a literature review on mind-maps, locating several downloadable programs for my students in National College of Ireland. Having informally discussed the benefits of these mind maps with assistive technology colleagues in Trinity College Dublin and NUI Maynooth, I settled on the below links;

Title	Address	Freeware/ Commercial
Inspiration	http://www.inspiration.com/Inspiration	Commercial
Xmind	http://sourceforge.net/project/platformdownload.php?group_id=246829 or http://www.xmind.net/	Freeware
FreeMind	http://freemind.sourceforge.net/wiki/index.php/Download	Freeware

Table 5.1: List of Mind map programs

As these links themselves did not utilise a direct service, it was unnecessary to contact the product creators as the list of products themselves appear quite frequently across the internet. This decision was framed by national and international understandings of copyright law, which state that permission is not needed for a regular hyperlink to another person's website (Stanford University, 2009).

Beyond the mind-mapping framework, I wanted unit 2 to highlight the most effective styles of traditional note-taking within lectures and tutorials. I felt that this was necessary in order to cater for learners who had preferences for more traditional learning strategies (Fleming, 1995). Relying then on established best-practices, the most favourable model for taking such notes was described in the manual.

The Cornell method

Despite the growing diversity of teaching techniques being used in Higher Education, live lectures and tutorials are still the most valued platforms for learning (Armbruster, 2000). As a key part of this process, the art of note-taking is still viewed by many as being the most effective way to capture the construction of knowledge (Dunkel and Davy, 1989). Possibly the most well known and popular method for taking in-class notes was pioneered by Pauk (1962) and is known as the Cornell or two-column method. In adopting this method, a student is advised to break his or her page into two sections, a left hand column for the topic being studied and a right column for an explanation or summary. In this way the structure of note taking is systematic and therefore easy to follow;

The Cornell Two-Column note taking method

Question 1, What is VARK?	The VARK Questionnaire is a learning style tool which allows the learner
	to explore their own learning preference. Highlighting visual learning,
	Kinesthetic learning, Aural Learning and Reading and writing Learning, the
	tool also offers a list of study strategies that relate to each learners
	Strengths.
Question 2	

Figure 5.2: The Cornell System

The Cornell system is believed to increase efficiency and cognitive skills by facilitating the production of meaningful and structured notes (Forget, 2004). As a written method, the Cornell system is often cited as having no disadvantages, when compared to other written notes such as the outlining method or charting method (California Polytechnic State University, 2009). Despite its immense advantages however, I believed the method to have one critical flaw, it could not cater for students who are blind. This of course is a failing of all written note systems, when viewed from an accessibility perspective. In thinking about this prospect then, I decided that I would need to cater for any visually impaired or blind student who would need to take study notes at home. Similarly, I agreed with Hopper (2009) that students should be encouraged to create notes that best suit their sensory modality preferences (learning style). For this reason, the unit would next introduce the use of audio notes.

Audio note tools

Having historical roots in asynchronous education (Moore and Kearsley, 2005) and having recently been made popular through ipod casts of recorded lectures (Hopper, 2009), the self creation of audio notes has many potential benefits;

- They can reduce the possibility of eye-strain if using the computer to type notes.

- They allow for increased flexibility (study on the train, the bus, on the couch).
- They can be used to rehearse speeches or presentations.

Perhaps most attractive of these three benefits is the increased flexibility which can occur through using audio notes, where students can feel free to study on the move;

“Rather than writing out his notes in condensed form he read his condensed notes onto cassette tape. These notes were learned, wandering the campus with headphones on - listening to his own summaries.”

(Fleming, 1995, p4)

There is however one important drawback to the introduction of audio notes; some students and educators are not completely comfortable in using technology;

“With the constant advances and changes in hardware, software, and applications it is critical that institutions of higher education prepare their teacher candidates for the complexity of teaching and learning using technology integration as an everyday tool.”

(Moore, 2009, p63)

Bearing this in mind, it was essential for me to ensure that the technologies utilised, whilst being the most up-to date advancements, were as simple and easy to use as possible. Most important for this process was that each learning technology could be accessed from home or any location outside of college, thus providing a place of comfort for practice. Basing then the development of this section on this criterion, the manual would focus on two areas of audio-notes, using your own voice and using a synthetic voice.

Option 1: Using your own voice

Whilst there are many recording programs available, the manual aimed to provide a short list of products to the prospective student. In particular, the manual would provide current examples of freeware and commercial products that could be downloaded by the learner. With this in mind, the following programs were discussed with learning technology experts in National College of Ireland and Trinity College Dublin:

Title	Address	Freeware/Commercial
Inspiration	http://www.inspiration.com/Inspiration	Commercial
Audacity	http://audacity.sourceforge.net/	Freeware

Table 5.2: Audio Tool Notes

These programs would allow the person to use their own voice to produce an mp3 file which could be later located to any mp3 player, modern mobile phone, or Compact Disc. Whilst assuming then that this option may be of benefit to the majority of students, I also needed to be conscious of the need for a product that could produce audio notes for students who had low levels of digital literacy, or who could not speak.

Option 2: Using a Speech engine

As a more inclusive option then, I needed to source a program which was not only easy to use, but which would allow students who could hear but not speak, to produce audio notes. In carrying out a search for such a program, the Robbobraille initiative (Robbobraille, 2009) was discovered. Robbobraille, which has won several innovative awards, is a ‘text-to-audio’ e-mail service which allows any individual to send a variety of documents, (for example, Word, Pdf, HTML page) as an attachment. This attachment, after a period of time (subject to the size of the file sent) is then returned to the sender as an mp3 file, which can be listened to on the computer or downloaded to an external device.

As a prospective alternative to voice recording, the creators of Robobrainle were contacted by email and asked to become collaborators of the project. In reply to this request, Lars Ballieu Christensen, granted me the permission to place a link to the initiative within my proposed manual. The benefits of securing this collaboration were exceptionally important as the manual could now provide a high-tech learning technology which required a low level of digital literacy.

Having secured the needed technologies and strategies to create a concise and helpful second unit, I next turned my attention to the topic of academic writing in Higher Level.

What is new here?

Note-taking is regarded as one of the oldest and most important academic skills which students need to develop (Northedge, 2006, Ryan and Glenn, 2004, Pauk, 1962, Wood, 1978). Building on this tradition, I have attempted to offer students an insight into

traditional note-taking methods such as the Cornell system (Pauk, 1962) as well as introducing methods to create visual and aural forms of note-taking. What is perhaps most innovative about this second unit is the partnership that I have fostered with Robboblaille, who have publicly allowed me to link to their text-to-speech service and now consider National College of Ireland to be a partner in Europe. This partnership will be showcased in July 2010 at the 12th International Conference on Computers Helping People with Special Needs (ICCHP, 2010).

(5.5) Unit 3: Academic writing

It is generally accepted within the literature that assignments, such as essays or research projects are expected to encourage students to actively engage with course materials (Newstead, 2003, Ramsden, 1992). Through this engagement, students are expected to both describe theories or phenomena as well as critically evaluate any sources. Whilst I recognise that these principles relate to Blooms taxonomy and the evolution of learning, I find myself asking, *who tells this to the student?*

Reflecting on my own transition from second level to higher level, the area of writing was perhaps the hardest adjustment to make to my overall idea of learning. Suddenly, authors and texts were not taken for granted and passively reproduced in descriptive essays, but were analysed and contrasted with different theorists and models. Where once I was expected to simply describe and reproduce extracts from text books, I was now expected to quote, paraphrase and find my own voice. Looking back on the transition now, I believe that I was lucky, I found my voice, and learned how to critique. Some of my new friends did not and their seats became vacant over time and their faces are now lost to memory.

My own experience of making the transition from second to third level writing is a common story. In 'Getting started: Academic writing in the first year of University Education' Kruse (2003) describes a similar scenario, describing the experiences of one student, who becomes disillusioned with the process of writing. For Kruse (2003), learning how to write in the academic world is more than a learning skills task; it is embedded in the wider process of academic socialisation (Ryan and Glenn, 2004). In order then to more clearly understand the writing process it is important to identify how students can become academically socialised into higher level writing. Thinking about this, Kruse (2003) suggest that the most important task for students to achieve is to

recognise that knowledge is very seldom represented as being the ‘right answer’. Instead, Kruse suggests that knowledge is constructed, argued for and critiqued using your own voice and the works of others. As a further point, Kruse (2003) argues that students also need to form a textual awareness, which will allow them to conform to academic writing styles and standards, yet which also can allow them to capture their own voice.

Thinking about these prerequisites for academic writing, I began to wonder about how I could further support students returning to education (Dawson, 2004), and students studying through a foreign language (Belcher and Braine, 1995), whose writing acculturation would be equally as difficult, or perhaps even more difficult than a ‘traditional’ transition. In doing so, I decided that a unit on academic writing should cover some basic elements of how to use a word processor, how to find resources on the internet and how to translate words into different languages. Aiming then to improve upon my earlier support efforts in Goldrick (2009A), unit 3 would offer the following supports:

Learning Skills Instruction	Academic Socialisation
How to use the internet effectively	Essay Structure
How to reference in the Harvard style	Writing Introductions
How to use Microsoft Word effectively	Paragraph Building
Translating text into another language	Critical Thinking

Table 5.3: Supports in Unit 3

Targeting undergraduate students as a primary audience, this academic writing unit would aim to provide some initial support to students who were constructing Higher Level essays for this first time. Focussing on some factors of style, structure, research skills and referencing, the unit was constructed to offer the student some guidance on tackling short essays (1500-2000 words). Based primarily upon the works of Marshall and Rowland (1993), the unit would first introduce to students the importance of audience reflection; who would be reading the essay, what assumptions should be made and what style of writing to adopt.

In similar fashion to Northedge (2005), the unit would also provide sample introductions to students for the purpose of illustrating the use of direct and indirect approaches to a particular question. Similarly, the unit would provide advice on paragraph building and the use of transitional words to aid synthesis and essay flow;

Illustration	Thus, for example, for instance, in other words, in particular, such as
Contrast	On the contrary, contrarily, but, however, in spite of, conversely, yet
Addition	And, in addition to, furthermore, besides, also, likewise, consequently
Time	After, Afterwards, Before, once, next, at last, subsequently, previously
Concession	Although, at least, still, granted that, in spite of, of course, at any rate.
Similarity	Similarly, likewise, in like manner, analogous to
Emphasis	Above all, indeed, truly, of course, certainly, surely, in fact, in truth
Details	Specifically, especially, in particular, to explain, to enumerate, namely
Examples	For example, for instance, to illustrate, in other words,
Summary	Therefore, finally, consequently, thus, in conclusion, accordingly
Suggestion	For this purpose, with this in mind, therefore,

(Adapted from Student Support 2008, pp20-22)

Table 5.4: Transitional words to aid for paragraph building

In addition to these starting points, the unit intended to present some reflections on the usage of research materials, asking the student to ponder the source of their materials as well as highlighting the pitfalls of using Wikipedia as a research tool. This was particularly important for me to highlight to students considering that “Wikipedia’s content can be copied, modified and put up elsewhere by anyone else at any time” (Zittrain, 2009, 178).

In relation to constructing citations and putting together a bibliography, the unit also aimed to introduce students to the Harvard style of referencing, which is used in National College of Ireland.

Referencing, citing and bibliographies

Concerning itself with the issue of referencing in Higher Education, Unit three’s outline on how to reference incorporated the features of the Harvard system, covering short and long quotes and summarizing text as laid out in Nolan (2006) and Buckley (2009). Providing a sample bibliography, the unit would also outline some of the many online referencing tools available at present;

Name	Address	Commercial/Freeware
Endnote	http://www.endnoteweb.com/	Commercial
Refworks	http://www.refworks.com/	Commercial
Wikindx	http://sourceforge.net/projects/wikindx/	Freeware

Table 5.5: List of bibliography programs

Building upon this and utilising similar logic as in unit two, I sought to move beyond the assumption that every student would be comfortable in using a word processor. Whilst not however containing a dedicated unit on using computer applications, the manual would present some simple screenshots that captured some useful elements of Microsoft Word (spelling and grammar checks, thesaurus);



Figure 5.3: Screenshot of Microsoft Thesaurus

Some supports for International students

As a final element, unit three would introduce a learning technology for international students studying in Ireland. Specifically targeting international students, the segment would rely on the usage of Wordlingos translation service, which I obtained permission to link to from Wordlingo (2009). This tool, as promoted by the University of Queensland, (The University of Queensland, 2009) would allow each international student to translate any short passage of English text into their native language, subsequently deterring each student from the practices of out-sourcing essay writing;

“Overseas students are employing professional translators to help them write essays and dissertations because their English is so poor, *The Times Higher* has learnt.

The problem came to light this week as it emerged that an external examiner at Bolton University had raised the alarm about the practice on a masters course at the university last year.

The examiner said the practice was a cause for concern as students were being awarded a British higher education qualification "yet they may not have the standard of English language that this would normally imply".

(Baty and Caulcutt, 2005)

Whilst such efforts to pay for an essay are quite infrequent within the literature, it is important to note how the pressures of academic assessment can influence a student's decision to cheat (Newstead, 2003). From a support perspective then, the inclusion of any tool to aid the writing process would perhaps alleviate some of the stress involved in producing an academic assignment. Related to this concern of pressure and stress, the last unit in Effective Learning, would describe strategies to prepare for exams and to reduce stress.

What is new here?

In light of the many existing support manuals available for academic writing (Northedge, 2005, Dawson, 2006, Kruse, 2003, Simon, 2002, Marshall and Rowland (1993), unit three represents an amalgamation of best practices. Building on this, however, I would argue that this unit also builds on the concerns raised by Belcher and Braine's (1995) insight into writing in a second language by presenting students with a free translation tool. I believe that this translation service from Wordlingo (2009) can

help students studying through a foreign language to think about terminology in their first language, thus making the composition of an essay somewhat less stressful.

(5.6) Unit 4: Exam revision and anxiety reduction

As the largest and final unit within the manual, the topic of exam revision was approached with two considerations in mind. The first of these considerations focussed on the belief that a systematic revision strategy can increase each learner's exam performance. This belief was reinforced through consultation with NCI's Educational Psychologist, who offered her own advice to learners within the unit;

“For knowledge to become embedded, we encourage our students to deliberately engage through an active process of integrating and organising information. The student's method may be as individual as their thumbprint and make use of their preferred learning styles, be it audio, visual or kinaesthetic. At NCI we endeavour to create a learning environment that engages our students through effective teaching pedagogy and appropriate support services. We believe that this support enables our students to become active in their learning.”

(Grainne McKenna, in Goldrick, 2008, p5)

In keeping with this tone, the goal of this unit would be to provide the means to become a confident and efficient exam taker. In order to achieve this goal, I sought to collaborate with other learning support experts in Trinity College Dublin who, in turn, would later co-author elements of the unit itself.

Beyond the practical elements of revision however, I also wanted the unit to present a more eclectic source of support for Higher Education, within an area not commonly found in study guidebooks. In particular, I wished to explore the possible applications of mind training (Wagner et al, 2008, Smith et al, 2009) as well as the benefits of progressive relaxation and positive reinforcement as a mechanism to reduce exam anxiety. Having trained in Hypnotherapy, I, like The University of Limerick (2009) and the Medical School Hypnosis Association (2009) was interested in using elements of progressive relaxation to reduce the physical symptoms of exam anxiety. Confident then that this unit would offer students the most up-to-date and innovative support strategies possible, I decided to create a final unit which contained the following: *Reading strategies, note-taking advice, memory strategies, exam taking advice and anxiety reduction techniques.*

Reading strategies

As the student population becomes increasingly diverse, the need for universally designed reading strategies is becoming predominantly important within Higher Education. In light of this, I firstly reviewed traditional reading strategies that allow the learner to scan, question and summarise any block of text (Van Blerkom, 2006, Simon, 2002, Robinson, 1970). The most common of these methods is perhaps the SQ3R method (Survey, Question, Read, Review Recite) developed by Robinson (1970). The method itself suggests skimming the text, using headings to establish questions about the chapter, read the chapter, recite and write your answers to the questions and finally review your answers. Playing primarily to the strengths of traditional reading and writing strategies, the SQ3R method did not envision the use of mind-maps or aural notes which would later become popular in Higher Education.

Adding to this established method, I devised the SQRNR method (Survey, Question, Read, Note-make and Revise). I believed that this method could allow each student, regardless of difficulty or disability, to create their own revision notes. Similar to POWER (Preview, Organise, Wonder, Evaluate, Review) (Learning through listening, 2009), the SQRNR method is an adaptable method for analysing print, electronic or audio versions of academic books. Essentially giving each learner a purpose to read or listen to the academic book, the method is built upon the premise that the human brain will remember information more easily once it has been internalised and has become meaningful (Jensen, 1998).

Whilst the Full SQRNR template is located within the National Learning Support Manual the stages are outlined below.

SQRNR

1 Survey the text

This act of surveying is an initial intake of all the information provided; title, headings, diagrams, conclusions (It is best to utilise this method chapter-by-chapter).

2. Question

To help you give purpose to your reading, try to formulate questions about the text; *who, what, where, how* and *why*, to construct an investigative nature to your studies. It may be helpful for you to turn sub-headings into questions.

3. Read

Having outlined your questions, read the chapter with intent to answer your questions, using whichever Note-making method suits your learning preference.

4. Note-make

Having picked the combination of note-making styles that suits you best, begin writing up your summary of the chapter.

5. Revise

Having located your answers and generated notes for revision, the last process of this model is a revision-based strategy. When revising, or planning an assignment, make sure to follow a self-created study table which is both realistic and specific.

~

It can be argued that the SQNR method itself is more suited to traditional learners with no visual difficulties. Despite this, the first step of scanning or skimming is possible for learners with visual disabilities through screen reading technologies (Redish and Theofanos, 2003), which allow non-sighted students to perform similar scanning activities. Observing students utilising this method, Redish and Theofanos (2003) comment;

“These users are just as impatient as sighted users. They want to get the information they need as quickly as possible. That means that they do not listen to every word on the page - just as sighted users don't read every word. They "scan with their ears" just as sighted users scan with their eyes.”

Having then an understanding of the needs of both sighted and non-sighted learners, the inclusive goals of the manual (to be a source of support for all learners), required the sourcing of strategies that could improve speed and scanning ability in all students.

Increasing skimming/scanning speed for non-sighted and visually impaired students

With this cohort of students in mind, I firstly identified a specific training website for students who would be using a screen reader. This multi-language website from WebAIM (2009), a Utah state University initiative, outlines a list of essential shortcuts for the JAWS user (the most common reader used). These shortcuts typically provided the non-sighted student with the same skills of scanning that a sighted reader would need, essentially allowing the screen-reader to sift through the material at greater speed.

Beyond this article however, non-sighted or visually impaired students would also be advised to contact their own institutions' assistive technology officer, who would be able to manually train them on specific techniques. In relation to the use of this resource, I did not need to obtain permission as the Effective Learner manual would be offered as a free resource;

“All content on this Web site may be reproduced and distributed in print or electronic format only if offered at no cost to recipients and as long as full credit is given to WebAIM, including a link to the WebAIM Web site or www.webaim.org clearly printed, and as long as this Terms of Use notice remains intact.”

(WebAIM, 2009)

Increasing skimming/scanning speed for sighted and visually impaired students

Having established a format for increasing speed in non-sighted and visually impaired students, I next focused on locating strategies for sighted students. To some degree, this process proved more difficult for me, as the field of scanning and skimming is more often than not perceived as a subsidiary of speed reading which, as an activity, has been criticised often (Carver, 1992). Despite such critiques however, the usage of such activities were found to exist within Higher Education, both internationally and nationally. Interestingly enough, two of the institutions who comment on the usage of such practices were Harvard University (Harvard University, 2009) (who charge \$150 for the course) and Trinity College Dublin, who suggest the usage as a format for online researching and reviewing (Trinity College, 2009). Following from such weighty support and in light of recent research that supports the benefits of scanning practices (Duggan and Payne, 2009), the following skills were identified as being beneficial to the Higher Education student:

- Increasing speed (word per minutes)
- Increasing peripheral vision

Increasing speed

For the purpose of self advocating, this section would provide each sighted-learner with an exercise to increase speed of reading. The particular method adopted, is known as by-passing sub-vocalization, which is the silent use of tongue and larynx when reading

(Buzan, 2006). In relation to this process Shepard and Unsworth-Mitchell (1997) note that whilst this process of sub-vocalizing can be enjoyable when reading poetry or prose, it can limit the maximum reading speed to about 300 w.p.m. (words per minute). Having contacted Mr. Shepard in relation to his method I was able to obtain permission to use the below exercise as part of the manual (Adapted from Shepard and Unsworth-Mitchell, 1997);

Step 1: Source a book that you can read easily.

Step 2: Read three pages of text (remember to time yourself).

Step 3: Calculate your existing w.p.m:

w.p.m. (speed) = (number of pages read) multiplied by (number of words per average page), divided by (the number of minutes spent reading)
(e.g. $3 \times 400 \div 4.5 = 285$ w.p.m.)

Step 4: bypass the physical replication of speech:

Count out loud from 1-10 repeatedly, whilst reading the page. This will occupy the motor-vocal system.

Step 5: When you can complete step 4 comfortably, try reading silently whilst counting from 1-10 silently.

Step 6: After completing this exercise for 10 minutes a day, each day for one week, retest your w.p.m. and log your speed improvement.

Original W.P.M Score _____

New W.P.M Score _____

Box 5.2: Speed Reading Exercise

In similar fashion, the authors of the Speed Reading Course permitted the inclusion of a pacing exercise, which they claim can help develop a vertical approach to reading. The

perceived advantage of this technique is that a reader, when proficient, can identify key words in a page of text without having to fixate on every word individually:

Increasing peripheral vision

Step 1: Section off the centre of the page you wish to scan (using a clear plastic ruler or similar device).

Step 2: Work your way down the page, using your finger to read the sections inside the boxed lines.

Step 3: Test yourself and see how many words you can remember from the strip.

Chapter 1: *Aggressive R&D policies* (Goldrick, 2008)

The financial marketing strategy for Tempest Industries Ltd reflects an abnormal internal network of accounts known as the Voltaire Rift (a dynamic strategy using an overlapping accounting method).

Pioneered by Ronald Stark in 1979, the Voltaire Rift has gained little use in the wider western markets but remains a near mythic model due to its' success rate, which although is very high requires high training levels and auditing rotation every set week. Most highly revered has been its' profit margin safe-fall, which is noted to reach a 97% flat rate.

Criticized most notably by C.J Stone, CEO of Bio-Stone, competitor of Tempest Industries, the Voltaire Rift and consequently Anne Walker-Anderson, Managing Director of Tempest has come under heavy fire recently due to the company's closed policy on research findings and development outlines, which Dunne believes to exist within the public domain and infringes upon the CITD's fair-trade policy, affectionately known as the "Play nice rule".

Step 4: Repeat the exercise with similar pages and see how many key words of each line you can remember.

Step 5: Practice the method without the use of a ruler or similar device and aim to remember as many key words per line as possible.

(Adapted from Shepard and Unsworth-Mitchell, 1997, p19)

Box 5.3: exercise to increase peripheral vision

Through this technique, Shepard and Unsworth-Mitchell (1997) claim that the reader will begin remembering more than one word per sentence, developing a process known as 'chunking'. Chunking itself can be traced back to Miller (1956) when he first labelled the process through which individual units of information could be remembered as part of a set or chunk (i.e. 1,2,4,7,4,0,7,9,1 = 1247 40 791). Modern applications of this theory have been linked to novice/expert studies in chess (Gobet, de Voogt and Retschitzki, 2004). This would imply that the mind can be trained in order to move beyond what Miller (1956) called *the span of absolute judgement*. Having then adopted a way to increase reading speed, the next task I faced was sourcing a way to help students increase their memory systems and processing speeds. I felt this was an important and innovative way to help students to become more efficient and effective learners. Yet in planning how to help students increase their memory capabilities, I firstly needed to better understand how memories are constructed, held and retrieved. To do this, I reviewed the works of Miller (1956), Baddeley (2000), Baddeley and Della Sala (1996), Nicolson (1981) and Pickering (2004), who theorize how memories are constructed and recalled.

The Working Memory

To understand working memory (sometimes known as short-term memory) it is perhaps best to view the brain as a computer, with a processor (called a central executive), a phonological loop, which allows us to recall recent verbal conversations and data and a visual sketchpad, which helps us to remember visual data (Pickering, 2004). Through these components, aural, spatial and visual information are regulated into a person's central executive, which governs the production of memories.

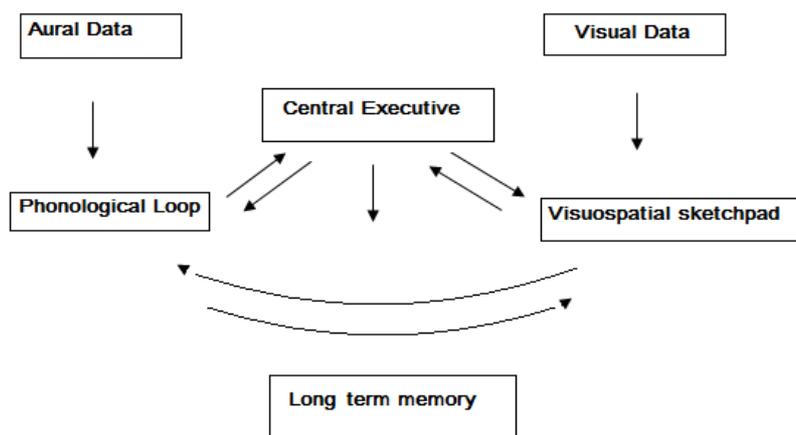


Figure 5.3: The Working memory (adapted from Baddeley, 2000)

As can be seen above, the organisation and storage of new data is reliant upon communication between several memory systems. The proficiency and accuracy of this process is governed by the processing speed of the central executive (Nicolson, 1981). Taking this into consideration, I believed that in order to help student’s increase their retrieval of memories for exam purposes, I would need to source strategies that increased processing speeds and trained the mind to become more efficient. As a method to do this, I decided that unit 3 would introduce students to *Mnemonics* and *Mind training*.

Mnemonics

Also known as the ‘first letter strategy’, mnemonics is a similar process to numerical chunking (Miller, 1956), where the goal is to take the first letter of each word and to create one memorable word:

List of critical words to revise	First letter Mnemonic
Coordinate offers and attach critical history	Coach
Perform refunding operations for international transport	Profit

Table 5.6: Examples of Mnemonics

As a strategy, the benefits of mnemonics have been demonstrated many times (Carney and Levin, 2003, Manalo, 2002), indicating that the mind will remember material more easily when it has been processed and made meaningful (Coon and O’ Mitterer, 2008). For more visual and kinaesthetic learners (Fleming, 1995), I also intended to suggest

that students should also try to use images or stories to help aid the construction of meaningful memories (Logie and Baddeley, 1990).

Mind Training

Despite becoming popular in recent times due to gaming culture, the history of mental workouts has a deep lineage that can be traced back to ancient Greece and China (Barnard, 1997). Today, this spirit of logic and puzzling, having experienced a reinvigorated sense of importance is considered crucial to developing cognitive skills within *all* learners and it is perhaps this potential to increase academic performance that has created such excitement and interest amongst researchers. Having already been adapted to help dyslexic students (Edysgate, 2009), there is now an immediate move to further establish the scientific impact of such practices on individual performance (Wagner et al, 2008, Smith et al, 2009). Despite such attention however, the potential of mind training is still in early stages, with many handheld devices such as Nintendo's DS and online programs requiring visual and/or physical dexterity. Nevertheless, in an attempt to source games which could facilitate all learners, regardless of difficulty or disability, I contacted the creators of the ALERT project. The ALERT project (2009), having gathered all relevant developers, have sourced not only known commercial games for traditional learners, but numerous online games for individuals who are blind, visually impaired, profoundly deaf or hearing impaired, motion impaired, who have autistic spectrum disorders or dyslexia. Through these links, it was envisioned that all students in Higher Education could actively engage in a process that promised to increase cognitive processing speed and memory retention. Keeping with this theme of mental workouts and improvement, the last subsection in unit three would be specifically related to the development of strategic exam strategies, such as time management, study groups, mock exams, practical exam advice, and exam anxiety reduction techniques.

Exam Revision

Following on from the manual's self-advocated theme, the later end of the unit was designed to quickly present the learner with a collaborated set of tips for exam preparation as advised by National College of Ireland and Trinity College Dublin. These exam tips would be listed in clear and practical portions of advice with some emphasis placed on the usage of group study:

- **Prioritize:** Try to get assignments with upcoming deadlines processed early to free things up for exam revision.
- **Using “Lost time”:** bus and train commutes can be useful for reading or listening to notes.
- **Be kind to your body:** work regularly in bursts rather than “cramming” all night writing or studying.
- **Create a workable timetable:** Some students find it helpful to create a weekly planner to outline what they intend to study each week.
- **Analyse past exam papers:** This can help you become familiar with the exam format and purpose.
- **Create your own exam questions:** You may end up practicing your future exam.
- **Practice writing against the clock:** this will give you an idea of how much you can expect to write per question within a certain timeframe.

Table 5.7: Exam Revision Tips (Adapted from Student Learning and Development 2009)

As the final factor of advice in this section, I would include a new section on Group study, which would introduce students to the benefits of virtual and live study groups. This section would be directly related to my earlier testing of Wiziq, where I encouraged students to utilise virtual classrooms whenever physical meetings could not be arranged either between peers or tutors. It was hoped that through the provision of such technologies, the benefits of peer support and collaboration could become accessible to all students. In continuation of this practical approach, the final section of the manual would focus primarily on exam preparation and performance.

Exam anxiety

In aiming to take a holistic approach to support, this third unit and manual would end with the consideration of the impact of stress and anxiety on exam performance and more importantly on the individual. Seeking to offer an innovative service, the last section was constructed using materials from Trinity College. Again providing simple and pragmatic advice the section would focus on avoiding unnecessary stress and developing a regular preparation routine:

- Prepare yourself emotionally by visualising your personal best exam performance and use techniques such as deep breathing and positive self talk to help you to relax.
- Avoid unnecessary stress by starting your revision plan early.
- Develop a regular routine for your study, sleeping, eating and exercise to help you maintain physical, mental and emotional health.
- Manage stress by getting regular exercise, sleeping and eating properly and scheduling in breaks and relaxation time into your study time.
- Allocating a particular task for a particular day can help you to build a routine and feel more in control. This can include doing tasks such as the shopping or washing, or going to the gym on the same day every week and having a set day (e.g. every Wednesday) for studying in the library.
- Try to concentrate on the factors that are in your control rather than those which are not, for example concentrating on the revision and exam process rather than thinking ahead to what result you may get.
- Try to relax and view the exam process positively, it is a chance for you to demonstrate what you have learned.

Table 5.8: Tips to avoid exam anxiety (Adapted from Student Learning and Development, 2009)

In support of these suggestions, the manual would link to an intriguing program developed by the University of Limerick. Having gained permission to use the links, the manual would in turn become a platform for popularising a new format of student support in Higher Education, *progressive relaxation*.

The BodyMind Relaxation Programme

Whilst the idea of using progressive relaxation is by no means a new idea, the acceptance of its influence on exam performance has only been established in recent times (Stanton, 1993, Gruzelier et al, 2001, De Vos, and Louw, 2006). Yet the degree of mistrust surrounding the method has resulted in cautious applications, with only a few institutions promoting its usage openly (University of Limerick, 2009, Medical School Hypnosis Association, 2009). The source of this cautiousness surrounds the connection which hypnosis/relaxation has with the unconscious (Elkin, 1999) and the exaggerated dangers which have been popularised through the media and stage performances; “The

dangers of hypnotism have been exaggerated in some quarters. The subcommittee is convinced however that they do exist.” (The Medical Association, 1953). Yet having been trained in hypnosis, I can empathise with the positions of The British Psychological Society (2001) and Cheek (1958, p177);

“The mechanisms by which hypnosis can do harm are not different from the tools which Lady Macbeth used on her husband, which Cassius used on the honorable Brutus, which Iago used on Othello. We can do more harm with ignorance of hypnosis than we can by intelligently using the forces of suggestion.”

Advocating then the usage of positive suggestion and reinforcement the manual itself would invite learners who felt overly anxious during the exam periods to download the mp3 files from the University of Limerick, which provided sessions on muscular relaxation, visualization and letting go.

What is new here?

Building on both established study guides (Northedge, 2005, Dawson, 2006, Simon, 2002) as well as reading theories (Robinson (1970, Learning through listening, 2009) unit four presents students with an inclusive reading strategy (SQNR). Having used this strategy with both traditional and non-traditional students, I believe that the SQNR method can help all students to give purpose to their reading and offers a clear structure on how to summarise a chapter or class notes.

Besides this reading strategy, the last unit also provides all students with links to Mind Training games (ALERT project, 2009). Based on the most recent cognitive processing theories (Wagner et al, 2008, Smith et al, 2009), these inclusive games for all learners, have the potential to raise cognitive processing speed and working memory, which in turn can increase exam performance.

~

Together, these four units make up the core materials of ‘Effective Learning’, a new learning support manual for National College of Ireland. Using universal design principles (Pliner and Johnson, 2004), I created three formats for the material (Print, online PDF, Audio), which I presented to students in National college of Ireland. With this manual completed (see Appendix A) and having secured the necessary strategies

and technologies to offer an improved service, I set upon the final stage of my improvement plan, which was to redesign the Effective Learner workshop.

(5.7) Redesigning the Effective Learning Workshops 2009/2010

As previously described in chapter one, the learning support service in National College of Ireland was originally based on two delivery systems, individual support and workshop support. The goals of this service were designed to emulate the two historical paradigms of learning support; firstly, to help students develop key academic skills, independence, self-reflection, critical thinking and problem solving skills, and secondly, to ensure an effective socialisation into academic life (Ryan and Glenn, 2004). Whilst this original model was received well by surveyed students (see chapter 3), I identified some concerns which inhibited my wish to offer an effective learning support for all students. Being then conflicted (Whitehead, 1989), I chose to redesign a new service structure. This new service would be framed by existing paradigms but would also be based on three new principles:

1. All students will be able to interact with learning support materials
2. All students will be offered guidance on which strategies and materials to use
3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

Having presented evidence in this current chapter and in chapter 4, that I could ensure the implementation of these principles, the last phase of revision surrounded the construction of new workshops, which I intended to use as a basis for my workshop service. These new set of workshops would in turn, be used to create the Effective Learner workshop, which is delivered annually to off-campus students throughout Ireland. Corresponding to each unit in the Effective Learner Manual, the Effective Learner workshop draws upon material from each of the four units in the Learner Manual (The PowerPoint presentations for each unit are presented in Appendix A):

Workshop 1: How we learn

This first workshop presents the idea that each person learns differently. Covering learning styles and preferences as well as learning difficulties, the workshop introduces the benefits of self-reflection and describes how each person can create an

individualised learning experience by using learning technologies and learning strategies. Through participation in this workshop, students would be able to:

- Identify their learning style and design a catered learning strategy.

Workshop 2: Reading and study techniques

The second workshop of the day provides an insight into analytical and critical reading, emphasising the importance of evaluating academic theories and models. Offering advice on how to develop practical reading strategies and effective notes, the workshop also illustrates the benefits of speed reading and strategic reading. Through participation in this workshop, students would be able to:

- Critically read books, website content, papers and journal articles.
- Create effective study notes.
- Use learning technologies effectively (Mind maps, audio notes)

Workshop 3: Academic writing and referencing

Workshop three, Academic writing and referencing, introduces students to Higher Education writing, covering the stages of writing a project, how to research online and how to reference in the Harvard style. The workshop also includes how to format an essay and how to check for errors in Microsoft Word. Through participation in this workshop, students would be able to:

- Write an academic essay.
- Research and reference appropriately.
- Use Microsoft Word to format an essay.

Workshop 4: Exam Strategies and Anxiety Management

This fourth and last workshop focuses on the mechanics of preparing for semester exams. Covering time management, group revision, past paper testing, exam anxiety and practical exam strategies, the workshop aims to support all students through the examination period. Through participation in this workshop, students would be able to:

- Construct a realistic study timetable.
- Identify ways to improve their working memory.
- Identify and reduce the symptoms of exam anxiety.

Using Blooms (1956) Taxonomy, the learning outcomes for the Effective learner workshop can be categorised as having features of lower-to-middle order learning skills, such as knowledge, application and evaluation. Collectively, these outcomes are designed in order to facilitate the growth of key academic competences, which are needed for successful socialization into Higher Education.

(5.8) Conclusion

Questioning how people learn and how my service can aid this process, chapter five has outlined how some of the key academic competences that are necessary for successful learning have been identified. Using these competences for guidance, the chapter has outlined how I proposed to collaborate with national and international experts in order to create a standardised set of workshops and materials for my service. As a reaction to identified problems, the materials and workshops described in this chapter were created to ensure that:

1. All students will be able to interact with learning support materials.
2. All students will be offered guidance on which strategies and materials to use.
3. All students will be able to create effective notes and be able to construct meaning through peer support and tutor support.

Following this journey of production, the chapter presented how some traditional study techniques have needed to evolve in order to be inclusive to the needs of a more diverse student body. Using my own experiences and the literature, I have outlined the development of an inclusive learning support manual, with accompanying workshops. I felt that presenting this process of development was necessary in order to illustrate how my own knowledge, pedagogy and materials have grown and improved through self-reflection and collaboration. With regard to the evaluation of such changes, the next chapter will document how the improved Effective Learning Workshops were received by students and will explore how quantitatively effective such supports were. Following this student evaluation, chapter six intends to illustrate how the Effective Learning manual was also peer reviewed by an expert in learning to learn. From these evaluation and reviews, chapter seven will summarise the journey of my living education theory and present some new challenges which I intend to address.

Chapter 6: How effective is Effective Learning? Evaluating the impact of my actions through student feedback and peer review

When examining both his life's work and ultimate impact on the world, Friedrich Nietzsche concluded his professional life with one question, 'Have I been understood?' The impact of this last reflection in *Ecce Homo* (Nietzsche, 1979) marks the particular difficulty with understanding the philosopher, whose wish to change the world through his own writings left him somewhat detached and ultimately isolated from his peers. In thinking about the complexity and ultimate tragedy of this intellectual isolation, I find myself asking a question. Is it enough for us to believe in our own work, or must each researcher aim to set his or her thoughts within a cultural zeitgeist? For me, this is the crux of describing self-improvement within an academic setting. As a researcher and a practitioner, how can I measure a feeling of self-accomplishment, how can I ground an ontological belief into measurable sources of evidence? In thinking about this, I agree with Whitehead and McNiff (2006) that a researcher must find a way to transform their ontological values into epistemological standards that are visible, *valid* and *legitimate* forms of knowledge.

I return then to my original intention to improve upon my service and improve student-centred learning support. As an ontological concept, I know what I mean when I describe my desire to be more-student centred. For me, being student-centred is helping students to become effective and confident learners, no matter what their age, disability, or geographical location. It is a mechanism through which I can be content that I have done everything in my power to help facilitate a student's academic development. Yet, rather than rely on this abstract feeling, I have needed to ground my sense of improvement in socially acceptable and visible margins. In order to do this, I set upon improving my pedagogy, my support materials and use of technology, so that all students could have an equal and effective learning support experience. Having carried out these tasks, the question remains, *have I improved my service, and if so, how can I provide evidence for this improvement?*

Concerning itself with this need to provide epistemological evidence of my improvement, chapter six will present four forms of data, which are used to demonstrate that my efforts to improve upon my services and my conclusions are both reasonably fair and accurate (Mc Niff and Whitehead, 2005, 2006) . To begin, I will describe my

experiences of presenting the Effective Learner day workshop to the 2009/2010 students of Certificate in First-line Management (CFLM). Building from this live experience, the chapter will then document how I offered a more flexible service to CFLM students by delivering a virtual workshop in November 2009. In gauging reactions to these live and virtual workshops, the chapter will present survey results, which I gathered from CFLM students studying on the 2009/2010 course in National College of Ireland. These results will be used to explore whether students felt that the workshops helped them become more confident and effective learners. Supporting this data, two follow-up interviews will also be presented. These interviews were carried out in order to gain a more in-depth understanding of the needs of some of my students as well as to gauge their reactions to the Effective learner workshops.

Keeping with this theme of effectiveness, the chapter will also examine semester one results for the CFLM students, which I analysed in order to determine how statistically effective the workshops and materials were in helping students to perform well in semester one. Taking a similar approach to the analysis of success as *The Academic Skills Program (2007)*, in the University of Canberra, I felt that this quantitative approach was necessary in order to communicate my observable impact on academic development. Finally, moving outside of National College of Ireland, the last section of chapter six will describe how I gathered views of critical friends (McNiff, Lomax and Whitehead, 2003) in order to peer review my improved materials and obtain feedback about my future research plans.

Together, these forms of data are presented as tangible and reasonable sources of evidence that I have improved my service within National College of Ireland (Mc Niff and Whitehead, 2006, 2006, Whitehead, 1989).

To summarise, this chapter will be organised under the following headings:

- A Diary reflection on the Effective Learner Workshop 2009
- Survey results from Certificate in First-line Management students
- Follow-up interviews with two Certificate in First-line Management students
- Semester one performance analysis
- Feedback from two critical friends

(6.1) A Diary reflection on the Effective Learner Workshop 2009

Whilst the term ‘Effective Learner Workshop’, is not new in National College of Ireland, the materials and practices have traditionally been created in an isolated fashion as no best practices existed. This is a general consequence of the area of learning support itself, which has been criticised as being a “lottery” (Sanderson and Pillai, 2001). Having an aim to decrease such negative beliefs and constructions, the 2009/2010 Effective Learner workshop was based primarily on materials from the Effective Learner manual, which I constructed using national and international best practices. In the following diary, I make reference to how I have attempted to improve upon my in-class pedagogy by taking a constructivist (Vygotsky, 1978), cognitive (Gagné et al 1992) and behaviourist approach (Skinner, 1954) to academic support, in the hope of implementing what Illeris (2001) would describe as a ‘unified theory of learning’. Using these learning theories, I introduced students to four topics which I hoped would allow them to become more effective learners in college.

Delivering the Effective Learner Workshop 31/10/2009

Presenting to large audiences is second nature to me at this stage. That’s quite an achievement for me personally as I’ve always leaned towards a more introverted nature. Yet working in Higher Education, especially in my present role, I have had to present to quite large numbers of students, which although never easy, becomes enjoyable.

Unit One: How we learn – Duration: 25 minutes

Starting at 11.00am, the first unit aims to provide an overview of learning preferences and styles to students. As a change to my pedagogy, I open this first unit with a question, how do we learn? Using this question as a starting point, I hoped to induce interest in the subject of learning preferences, adopting what Gagné et al (1992) believed to be the first event of instruction. Blending this cognitive processing pedagogy with constructivism (Illeris, 2001), I facilitated a dialogue on the nature of learning, using Gardner’s multiple intelligences to question the nature of learning, whilst simultaneously critiquing the emphasis education places on literacy and numeracy.

From this initial construct, I outline the objectives for the day identifying how, through an understanding of learning, I hoped to help students to become more effective learners

by presenting four workshops; how we learn, how to create a tailored study strategy, how to write academic essays and finally, how to prepare for exams. Following Gagne's events of instruction, I presented the first set of PowerPoint slides which corresponded to the manual's first unit. Referring to both stimuli, I began 'How we learn' by emphasising Aristotle's belief that each of us learns differently (Reiff, 1992). As a short unit, covering how education can be individualised, I instruct students on how they can identify how they can learn best through two learning style tests. Presenting both the VARK tests (Fleming, 2001) and Kolb test (Kolb, 1984), I demonstrate how to use both tests online. I feel that this is an important stage as some individual students may be returning to education and may be slightly afraid of technology. As a conclusion to this unit, I present a learner journal template to students, which I suggest that they use as a means of recording their own reflections, which can be carried out at home or in many of the computer labs. As an example of a finished journal, I read my own learner journal account and suggest how learning reflection has helped me become a more effective learner.

Action Point: Overall, I am now more pleased with the content, class involvement and structure of this workshop. Going forward, I intend to create an online questionnaire which students can use from home or on-campus, to receive individual feedback about their learning style results.

Unit two: Study skills and time management – Duration: 35 minutes

The second unit of the day focused on how each of the students could use the information from their learning reflections to build an individual learning strategy. Turning theory into practice, I present a host of learning technologies and classical study methodologies to the group of students. Again presenting the workshop from a multi-modal or 'well-rounded' perspective I describe firstly the importance of time-management, provide a visual time-table and giving a real world breakdown of how much physical time each student may have to allocate to study. It is perhaps this informal method of presenting a very over used concept that indicates to the group that the very purpose of the workshop is to help them create an individualised learning strategy, to help each of them personally to become a more confident and efficient learner.

Moving then from the concept of time management, I direct students to the various learning technologies at their disposal, from mind-mapping software to audio note

making tools. These tools inspire somewhat increased attention from the group as they represent a move away from classical methods of learning. In particular, the Robobraille tool induces many questions; ‘is it free?’, ‘how do you use it?’ I find it best that in these cases a demonstration works best, so I talk the group through a process of building an audio version of their notes. The finished product itself provides some amusement as the group believed that they were likely to hear an Americanised synthesis, made popular by Stephen Hawking. Explaining that if they wished to, they could choose different synthetic voices within the Robobraille system and pick whichever one they felt was easiest to listen to.

Finishing the unit with an overview on effective lecture note-taking, I presented the Cornell method of note-taking, where I emphasised the importance of creating notes that have meaning. I always seem to revert to the belief that you will remember your own writing more than the writings of anybody else.

Action Point: This year’s Unit two is infinitely better than my earlier sessions. I feel in no way insecure about the quality of materials I have provided for students and now believe that I have adopted resources which will benefit all students. Going forward, I would like to present new students with some testimonials from students who have used the resources. I would also consider showing some quantitative trends which suggest that students who become reflective and effective learners do better than those students who do not.

Unit 3: Academic writing and referencing – Duration: 45 minutes

By far my most requested unit in National College of Ireland, Academic writing and referencing is a solid platform for introducing the basics of Higher Education writing. From the basics of how to analyse a question to how to write to your audience, the unit builds itself from example questions, to example introductions, to paragraph building, offering all the key stages and processes involved in producing an academic essay. As an added feature, the unit also focuses on the Harvard style of referencing system. Demonstrating short, and long quotations, summaries of text and bibliographies, the unit always induces quite a lot of questions, which are mostly connected to the avoidance of plagiarism. Being such an important topic within academic writing, it is important to double and sometimes triple check whether the group has understood the concepts and individual components.

In this particular case, students were asked would they like to see a demonstration of how to reference from the internet, which of course they did. This exercise is a good way to get the issue of using Wikipedia out into the open. Using a Google search, this simple demonstration indicates that many of the first non-journal searches carried out online will be directed to a Wiki, which itself is not a problem, unless a student actually places *Wikipedia* as a reference in their work or bases their essays on information gathered from this untrustworthy source. Incidentally, a friend of mine, who works for Cavan Institute as a dyslexic support tutor, once suggested going online to Wikipedia and showing students how the encyclopaedia could be updated by anybody. As a Behaviourist deterrent, this visual message is usually better remembered, he claimed. Whichever method of identification utilised however, the simple identification of the danger is sometimes enough.

Action Point: I was very happy with unit three as it allows me to blend constructivist, behaviourist and teacher-centred learning in a relaxed setting. I may extend this session next year in order to become even more participatory. As a way to identify an honour and pass paper, I may give students two essays to review in class and ask them to critique and mark the efforts. This I feel will help them to visualise each important component and reinforce the need to base their arguments within the literature.

Unit 4: Exam revision and anxiety reduction – Duration: 45 Minutes

After giving the students a thirty minute break I opened up the last workshop of the day, ‘Exam revision and anxiety reduction’. The philosophy behind this last unit was to encourage students to become organised and prepared learners, aiming at all costs to avoid cramming. Focusing on maximising their time, I ask the group who commutes to college. With a raise of hands I continue this opening by asking those students with raised hands how they spend their time on the train, bus, or car. Finally, I ask students if they could, would they revise for their exams during this trip using the newly introduced learning technologies. In doing so I emphasise to the group that studying and exam revision does not only take place in a library or a computer desk, but can take place on the couch, on the train, or in bed.

Moving from this constructivist style, I later present students with some key exam strategies, from reviewing essays to carrying out mock exams under time constraints.

For those students who wanted help in setting up a mock exam, I suggested that I could run live and virtual mock exams for students. Ending the workshop on this note, I advised students to make contact with me if they needed any support in preparing for either their first assignment, presentation, or their end of semester exams. I also informed students that an online workshop based on unit two and unit four would later be held using Wiziq and I welcomed all students to either log into the class or download the recording.

Action Point: Going forward, I would like to run a live and virtual session on exam skills simultaneously. This would allow all CFLM students across the country to interact with me on the same day. Similarly, I intend to run virtual mock exams next year coming up to the exam period. I believe that this extra level of support with help to motivate students to actively prepare for their exams and offer them a chance to test their knowledge in a structured live or virtual environment.

Since the workshop, I have had some calls and e-mails from students, thanking me for the day. Below is one example of this, where a student tried out the Robobrainle audio note service, and was very pleased with the results:

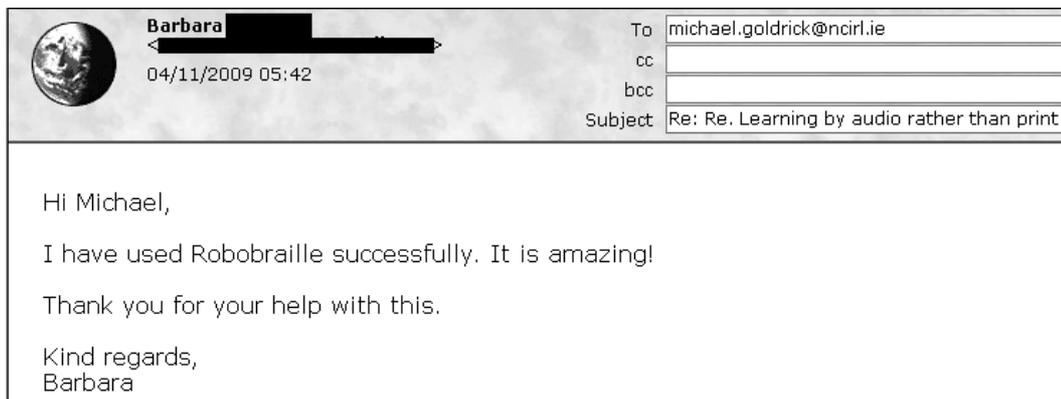


Figure 6.1: E-mail feedback from student

I take these calls and e-mails as evidence that I have helped students to diversify their learning opportunities by offering them an opportunity to reflect on their learning styles and apply practical learning technologies, such as Robobrainle.

Introducing Virtual support to CFLM students 22/11/2009

For those CFLM students who wanted a refresher of the Effective Learner workshop or who could not attend the live workshops, I later scheduled a public workshop on the 22/11/2009 using the virtual class, Wiziq. For this online session, I focussed on unit 2 and unit 4, which I believed would help students prepare for their end of semester exams:

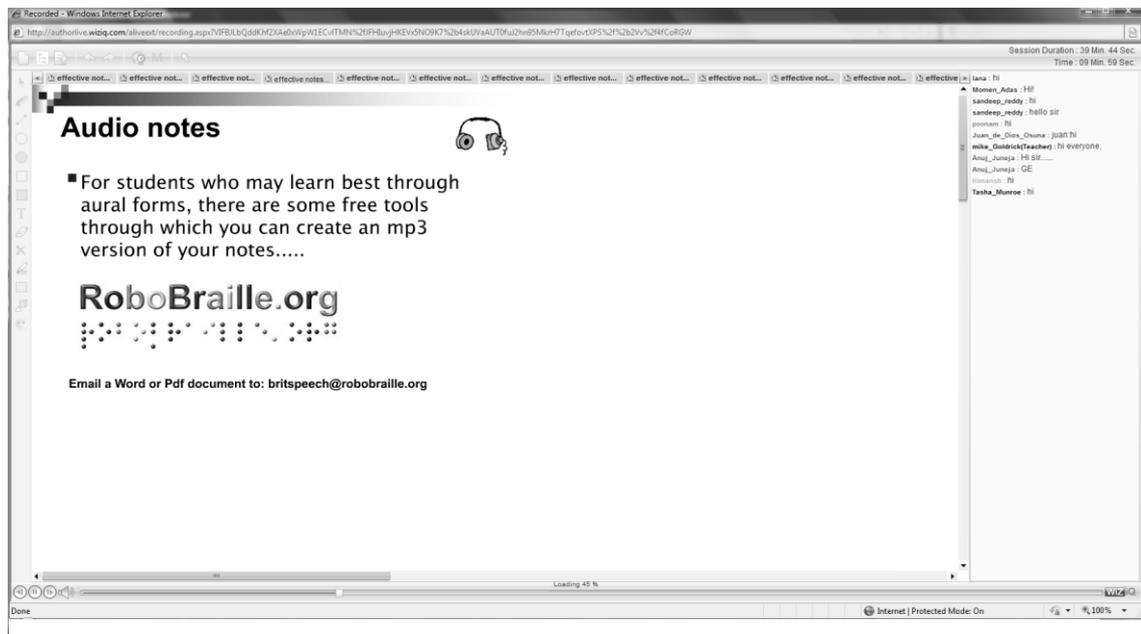


Figure 6.2: virtual class screen shot

Having successfully tested Wiziq with full-time students and having reviewed Engle and Parent-Stevens's (1999) use of video conferencing, I was confident that CFLM students who had missed the live workshops, could log on to the Wiziq platform and participate in a live virtual workshop. I was however concerned that some students would not have access to a computer on the day, or would become daunted by the technology. Learning from the experiences of Engle and Parent-Steven (1999), I decided that it would be important to send links to the recorded classes to all students on the CFLM course, thus eliminating any potential isolation or confusion.

On the day of the virtual workshop, fifty five students signed up for the class. Three of these directly downloaded the complete recording from Wiziq, whilst twenty three students took active part during the online presentation. The remaining students on the CFLM were sent a link to the final recording (<http://www.wiziq.com/online-class/210147-how-to-create-effective-study-notes-for-exam-revision>). As a review of my earlier class in National College of Ireland on the 31/10/2009, I presented students

with an overview of Unit's 2 and 4, describing the different learning technologies and strategies that could be used to create effective notes and an effective exam-taking strategy. Taking a more teacher-centred or information-centred perspective, the online workshop focussed primarily on presenting a review of the earlier live workshop. Interestingly enough however, one student commented on this approach, asking:

“Is this class only a listening class?” (Online Participant)

In reply to this, I later opened up the class for questions, asking students whether they had any queries about the material, or would like some specific advice on studying for exams. Taking this opportunity, one student asked for advice on how to study the history of a topic. She claimed that there was a ‘lot of times and things’ to remember and was finding it hard to organise the material into manageable chunks. As a way to visualise one method (Mind-mapping), I later used the virtual whiteboard to indicate how the student could group relevant dates and figures for any theory or events. Moving back then to the slides, I later reinforced Fleming's (1995) belief that students should try to create multiple formats of notes, combining traditional Cornell notes with Mind-maps, or Mind-maps with audio notes. Closing the workshop on this point, I suggested that students could e-mail me any further queries and could request either individual sessions or another group workshop before semester exams began.

Action Point: Looking back on the inclusion of a virtual service for off-campus support, I believe that my service has considerably grown. Unlike any previous years, where I had used only live workshops, my words and collaboration with students have not simply faded into memory, but have been downloaded numerous times by students as a form of multimodal (Fleming, 1995) revision. For me, this is perhaps the greatest success of the virtual class. No longer are students limited by the capacity of their short-term memory (Baddeley, 2000), but can return to the original source of visual and audio interaction, thus supporting the production of more intricate long-term memories.

As a reaction to this new support, the majority of students who offered feedback through Wiziq rated the session as being 4 out of 5. Some of these offered some reasons behind this rating:



Figure 6.3: student feedback

I felt that this feedback feature designed by Wiziq was a great way to obtain unsolicited and anonymous feedback about the content and delivery of my workshops. When compared with my own reflection of the experience however, I felt that I could further improve upon my usage of Wiziq and more importantly, improve upon my skills as an online tutor. Motivated then to unearth any further areas which I needed to improve upon, I used online surveys to extract feedback from students who attended the live Effective workshop in October.

(0.1) Survey results from Certificate in First-line Management students

As a means to collect as many individual views as possible, students were asked to carry out an anonymous online survey. This survey was e-mailed to each student using a class list and provided the means for each person to offer their own views on the effectiveness of the workshop itself. In terms of response rates, the survey was responded to quite well, having 56 completed replies out of a possible 133 students. Rather than use a Likert scale (Likert, 1932), the questions themselves were chosen to represent frankness as well as subjectivity, allowing each participant to use their own voice. With this exact purpose in mind the first question asked each participant whether they had been in Higher Education before. This question would help determine whether the person had existing strategies put in place and would help to identify the impact of the particular workshop in relation to previous supports.

Q1: Have you ever been in Higher Education before?

With the recent surge in students returning to education (a 4.2% rise in University enrolments and a 16% rise in IT enrolments) (HEA, 2010), I can expect that the diversity of students entering National College of Ireland will continue to increase. With this expectancy, I felt it important to gain an understanding of the support needs of students who had already been in Higher Education. Would they already be confident

and effective learners? Would the content of Effective Learner manual meet their needs? These questions would help me to consider constructing more advanced workshops for students with Higher Education experience, including those applying for postgraduate courses in National College of Ireland.

Interestingly, from the 56 respondents, a total of 23 students (41%) claimed to have been in Higher Education before. In light of this data, one would expect over 40% of respondents to have some levels of confidence in their academic skills. Accordingly, data from the second survey question supported this assumption.

Q2: How confident were you about your academic skills before today?

Whilst over 60% of respondents indicate that they are quite confident about their academic skills, only 1.8% of respondents claim to be very confident. This would indicate that the vast majority of students would benefit from academic and learning support initiatives. More importantly however, for those students who had never experienced Higher Education before, the need for academic and learning supports was clearly evident.

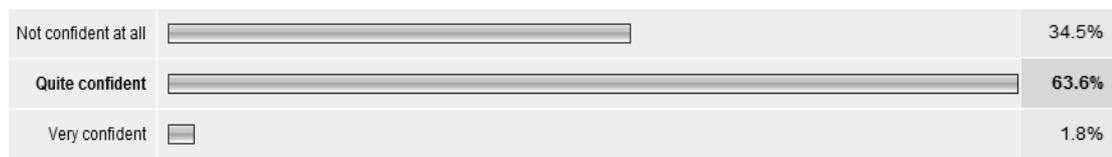


Figure 6.4: Response rate for confidence in academic skills

Building on this initial data, the next question I asked sought to extract what academic areas of Higher Education concerned the students prior to the Effective Learning workshop.

Q3: Were there any academic areas which you felt uncomfortable or anxious about?

Adopting a lifespan perspective (Mercer and Saunders, 2004), this open-ended question assumed that both traditional and non-traditional learners would be experiencing what Erikson (1980) describes as ‘psychosocial growth’. In speaking about the process of psychosocial growth, Erikson maintains that it is normal for individuals to perceive obstacles in their journey to change and adaptation. Agreeing with Datan and Ginsberg

(1975), Erikson maintains that not only is it normal to self-reflect on such barriers, but is in-fact a needed process in order to grow to one's full potential.

Taking this opportunity to self-reflect on such matters, 9% of students indicated that they had no existing concerns, whilst a further 14% of students skipped the question. For those students who did indicate areas of concern (77%), the specific comments fell within a theme which I describe as a fear of returning to education.

Returning to education

As expected, there were a number of students who expressed a fear of returning to education, in some cases identifying a twenty years gap; "*The fact that it has been so long since I was last in third level education (twenty years)*". This type of fear is quite common amongst mature learners (McClelland, 1961, Mercer and Saunders, 2004). Talking about this psychosocial fear, Dawson and Boulton (2000) indicate that individuals experience a situational and dispositional imbalance between whom they are and who they want to be and where they currently are, and where they want to be as a result of education. Beyond this generic or surface level fear however, I was interested in discovering what areas of academic life created such high levels of apprehension. Using a constructivist version of grounded theory (Charmaz, 1990), I have grouped student responses into the following categories; *academic writing, studying, exams* and *group work*.

Academic writing

As the most prominent concern, academic writing raised a number of issues relating to referencing, researching topics, as well as the basic structure of putting an essay together. Whilst many of the comments focused on individual challenges of knowing how to reference properly, the general acknowledgement that writing would be a challenge was summed up by one comment; "*Essay writing. Haven't done one since the leaving Cert.*" This particular comment is very similar to responses gathered by Mercer and Saunders (2004), who suggest that students returning to learning can feel vulnerable and scared of having to create essays after a long gap. In thinking about this, I concluded that supporting some students in the act of essay writing would require me to further utilise constructivist approaches to support, in particular, scaffolding (Vygotsky, 1978). This scaffolding process, as a collaborative form of learning, could allow

students to gain more confidence in their writing capabilities, whilst being supported by their peers and by myself. Building on what O'Neil (2008) describes as an 'ideal writing development system'; I believe that the future of academic writing support and quite possibly academic support in general, could lie in a return to a symposium-like discursive process. Building on skill-based sessions, such as 'unit 3, Academic writing', the socialisation of higher education writing may be achieved more effectively through a collaborative process, where both new students, existing students and myself discuss and share our experiences of writing, review the mechanics of writing and together, create a collaborative standard of best practices. This combination of a learning skill instruction and academic socialization approach (Ryan and Glenn, 2004), could I believe be applied to other areas of concern such as study methods and group work.

Study methods and exams

Similarly, the area of studying for exams proved to be a prominent concern for respondents, with many individual comments suggesting a desire to become more proficient in note-taking, mind-mapping and studying in general; "*Effective learning and effective study methods*". This fear of being a 'non-learner', coupled with the desire to become more socialised into academic life is recognised by Knowles (1990) as being one of the most important goals for adult learners.

Group work

As a related topic, one area of concern raised by some students concerned group work. Of these students, one student identified one of the most common reasons why group work causes stress to individuals in Higher Level; "*It's hard to meet up and get consensus on opinions from others*". Highlighting the need for a more flexible way to approach group work, this comment reinforced my belief that online collaboration can effectively reduce many of the problems associated with group assignments and study groups.

~

Illustrating then that a majority of students had established concerns about their academic skills, question four asked the student to comment on whether the workshop had helped to alleviate any of these concerns.

Q4: In your opinion, has the workshop provided you with the tools to become a more confident learner?

This question would illustrate two crucial factors. Firstly, it would indicate whether those students who identified as being unconfident (34.5%) had been positively affected by the workshop itself. Secondly the question would give those students who were already confident to convey whether the workshop had helped increase their confidence.

Yes		98.2%
No		1.8%

Figure 6.5: Response Rate for the effectiveness of the workshop to make more confident learners

As a very positive result, 98.2% of responding students indicated that the workshop had helped them become a more confident learner, giving substantial and anonymous reaffirmation that the concepts behind the workshop itself were grounded in effective strategies. In order to confirm this presumption, the next survey question offered each respondent an open ended question which could be used to give a substantial reason behind their previous response to question 4.

Q5: Could you offer some reasons behind this response?

In effect, this question sought to drill down into the reasons behind the perceived success or failure of the workshop itself. As such a qualitative element, the responses to the questions provided a dominant source of positive feedback relating to the content and presentation of materials;

“Very good workshop, lecturer knows his presentation very well and adopts to questions asked.”

“Was a very enjoyable course and very helpful. Puts your mind at ease to know that such supports exist.”

“I had an initial fear of how to start project and studying. This workshop has addressed this.”

“Class is very well presented and all questions are answered”.

In comparison, the one student who felt that the workshop did not increase his or her confidence suggested that more visual examples be included. As a direct critique relating to the Effective Learner Manual, I decided that I would later ask a critical friend to review the manual itself in order to help me make further improvements.

Continuing with this feedback, the next question aimed to establish whether students would like any further support at a later stage. This information would be useful in determining whether a continued set of workshops would be a prudent mechanism for disseminating the Learning Support Manual or whether a one-off workshop would be sufficient.

Q6: Are there any academic areas which you would like more support in?

In determining the future dissemination of material, the data from this question suggests that the majority of students (71%) found this one workshop to be a sufficient source of support. In consideration of the 29% of students who would like more support however, the following figure illustrates the breakdown of the most popular requests.

Reading		0.0%
essay writing		56.3%
research skills		18.8%
study skills		12.5%
Note-making		12.5%
exam revision		31.3%

Figure 6.6: Response Rate for areas requiring more support

What is arguably the most interesting factor from this data is the minority of students who required more substantial support in study skills and note-making. This result pattern could indicate then that the majority of students are comfortable with note-taking and study skills, it could however represent the fact that essay writing and exam revision are held as the most important skills to develop. For whatever reason however, the results from this question indicate that more support is needed for some students. The question remains however, whether a refresher course or recording of the workshop will suffice as sufficient skill provision, or should my service aim to create a more discursive environment in which to reinforce the social process of academic writing.

As a final strategy to gather the subjective views of attendees, question seven asked students to record any final comments.

Q7: Any final comments?

Primarily using the comments question to express their thanks many of the twenty two students (39%) indicated that the workshop itself was a worthwhile support;

“great help today, many thanks”

“Many thanks, I found lecture very interesting.”

As expected, many of the students who answered this question also suggested that the workshop should be presented as close to orientation as possible, so that the development of their academic skills can begin more quickly.

~

Having presented the quantitative data of the internal evaluation, the next section will present four follow-up interviews which were conducted with a selection of the Certificate in First-line Management students. For these interviews I adopted a strengths-based approach similar to Mercer and Saunders (2004), choosing to focus my questions on the positive development of each learner. It is worth noting that I conducted five follow-up interviews, two live interviews which explored the needs of students studying through a foreign language and two telephone interviews with Irish national students. The remaining live interview was carried out with an Irish student who had concerns over his reading and writing abilities. Through our discussion, this student indicated that he may have a Specific Learning Difficulty (dyslexia). Due to ethical considerations, I have chosen to exclude this interview, as the student related the questions to his early educational experiences. It is worth noting that there was only an opportunity to interview a very small number of CFLM students, due to the fact that the majority of them could not attend individual support on campus due to family or work commitments.

(6.2) Follow-up interviews with Certificate in First-line Management students

Interview 1: December 2009 with “Janice”

My first follow-up interview was with a female mature student who is studying through a foreign language. I choose to interview this student as she had experienced both the workshops and my individual support services on two occasions. This student had already viewed and agreed to the informed consent form. As an ethical feature I asked her to re-read the form and made it clear that her participation would be confidential and anonymous. For this reason I have given her the pseudo name “Janice” (All signed informed consent forms are visible in Appendix D).

The first question I asked Janice related to both my workshop and individual support services.

Question 1: Having accessed both workshop support and one-to-one support, which do you feel is the most effective type of service for you?

In reply to this, Janice confirmed my own thoughts;

“Well, I think that both types of service help students grasp the ideas needed. Perhaps the workshops are best to give an overview of content and strategies whilst one-to-one services allow each student to ask more direct questions and work at their own pace.”

From Janice’s perspective, the workshop support I provide helps students to become familiar with the core academic skills and strategies necessary to become an effective learner. There is an argument however that some students will need to further discuss these strategies with either their peers or myself. Moving forward then, I believe this remark reinforces my earlier suggestion that it will be necessary to increase collaborative relationships between myself and my students in order to further facilitate an effective learning experience.

The second question I asked Janice specifically related to her own development and would allow me to ascertain which areas of support Janice felt to be the most helpful.

Question 2: What skills do you feel you have developed in your first semester?

For Janice, becoming comfortable with academic writing has been her most prominent success to date. Indicating that she is currently receiving high marks in her assignments, Janice suggests to me that she is now a much more confident and competent writer;

“I think for one, my English has improved a lot. Both in my writing and during my discussions with students and work colleagues. I am a more confident person now, because I recognise words at work and in reports that I didn’t know before and I have learned how to use them effectively. Also in my writing, I am impressed with myself, that I can write good reports and get very good marks.”

Considering this a measure of success in itself, I lastly asked Janice whether there was any further areas which she would like support in.

Question 3: Are there any other areas which you would like more support in?

With her reply, Janice reinforced my growing belief that students need support in developing intrapersonal skills such as debating and presenting to their peers;

“I think I have the skills I need now, but I think that there could be more support for the future in relation to giving presentations as a group. It can be difficult getting all the materials together and getting everybody comfortable with their own materials. Maybe even practice sessions, its not easy getting up and presenting to a large class.”

Thinking about this need, I began to wonder how I could physically create a collaborative environment for myself and students in National College of Ireland. Exploring this further, I reflected on the success of our own lunchtime seminar discussions, where faculty share their research with each other. I wondered whether this type of monthly or bi-weekly setting could facilitate the needed practice, or social development of academic skills. Agreeing with Kuh *et al.* (2005, p215) I believed that this collaborative process could offer students a better understanding of their lecturers, deepen their learning and open up new opportunities beyond college.

Thanking Janice, for her insights I ended the interview and decided that I needed to further explore this support issue through more discussions with students.

Interview 2: January 2010 with “Brian”

My second follow-up interview was with a male mature student who is studying through a foreign language. I chose to interview this student as he had also experienced individual support and workshop support in semester one. This student had already viewed and agreed to the informed consent form from his survey. As an added ethical feature I re-read the form for him and made it clear that his participation would be confidential and anonymous. For this reason I have given him the pseudo name “Brian” (All signed informed consent forms are visible in Appendix D).

Question 1: Having accessed both workshop support and one-to-one support, which do you feel is the most effective type of service for you?

Brian considered this question for quite a while, visibly thinking about which type suited his own needs. After some time, he smiled and reported that he needed one-to-one sessions more, in order to become a better writer. Brian had come to me three times in semester one of the 2009/2010 academic year. He struggled with his written assignments at first, as he had no experience of report writing or critiquing materials. Leading from this I then asked Brian to reflect upon his own self-development;

Question 2: What skills do you feel you have developed in your first semester?

Taking no time at all to respond, Brian suggested to me that he had become a better writer and better understood how to be a modern manager;

“I better understand English slang and management concepts like quality, analysis and problem solving. I’ve been introduced to a new world”.

Brian expressed his passion for his course and made it clear that he could see immediate applications of the theories he had read about. Working in a management role, Brian has witnessed a growth in his own professional development and emphasised his eagerness to pursue a degree course in the near future.

Question 3: Are there any other areas which you would like more support in?

Taking his time with this point, Brian suggested to me that he would like more opportunities to write essays and to practice for written exams. He also suggested that he would like some more guidance on how to become a better presenter;

“You know Michael, I eh, wasn’t as confident at presenting as I wanted to be. I would really like to have another chance to become better, more powerful.”

Having gained similar feedback to Janice’s, I thanked Brian for his input and wished him the best of luck with his studies.

From both these interviews it is possible to witness the personal levels of development and growth which occurred in semester one. Like Mercer and Saunders (2004), my use of interviews allowed me to experience the enthusiasm which some mature learners convey when reflecting on their learning experiences. However, this enthusiasm is laced with further support needs, indicating that in order for lifelong learning and student-

centred learning support to further succeed, more contact is needed with their peers and with my service.

In order to support this emerging theme of *presentation skills support*, I carried out two further supplementary interviews. These interviews were carried out with two male Irish students on the CFLM course who had used my service. Due to the fact that they were off-campus students, neither could commit to a live interview so agreed to answer questions over the telephone (Robson, 2002). These two students were picked using random digit dialling methods (Robson, 1993, 2002) and two specific selection criteria:

- Students would have already signed or clicked on an Informed Consent form
- Students had attended two or more Individual Support sessions

Having identified two students who met these criteria, I interviewed ‘Chris’ and ‘Ian’. In both interviews, I believed it necessary to re-inform the student about the nature of my research and read out the informed consent form. Following this, both interviews were carried out using a similar interview plan. Through these questions, both students reaffirmed the need for more support around presentations and conveyed their desire to become ‘modern presenters’ who were comfortable using technology. For me, this concern about using technology to become a competent and confident presenter highlighted the need to diversify my support themes in National College of Ireland and inspired me to plan an expansion to my remit.

Before proposing any expansion to my levels of contact with students however, I felt it necessary to illustrate that my service was not just effective in my own eyes, or indeed in the eyes of my students, but had significant impact on student performance. To do this, I decided to examine what Kincheloe (2003) calls ‘observable phenomena’, namely the semester results from first year students in National College of Ireland.

(6.3) Semester one performance analysis

How effective is effective learning? Questioning this, a positivist researcher would automatically rely on semester performances, pass-rates, honours versus passes (Kincheloe, 2003). Yet as I have already suggested, I gauge my success on how a person feels about their learning, how confident they are about their skills and how aware they are about what elements may be problematic. These measures of success are

important to me because I believe that the development of emotional and social intelligences and self-awareness are critically important factors for a students' academic and professional career (Pascarella and Terenzini, 2005). Despite this holistic belief however, I also believe that it is worth adopting a somewhat neo-positivistic approach (Kincheloe, 2003) when claiming that I can offer students an effective learning support service. The reason why this 'cause and effect' element is becoming increasingly important for my service is related to my desire to expand the future contact I have with students in National College of Ireland. I believe in order to justify this desire at a strategic level, it is important to display evidence that is tangible and quantifiable.

Taking a similar approach to The Academic Skills Program (2007), I intended to analyse pass rates for those CFLM students who attended the Effective Learning day workshop. Using results from the Dublin-based course, I calculated a Chi-square analysis using Lambert's (2009) Chi-square test:

<u>Observed</u>			
	PASS	FAIL	
ATT	25	0	25
NATT	1	1	2
	26	1	27
<u>Expected</u>			
	PASS	FAIL	
ATT	24.07407407	0.925925926	2
NATT	1.925925926	0.074074074	43
	25	20	45
Chi-Square for Independence		Null Hypothesis	
(Obs-Exp)/Exp	0.035612536	0.925925926	
	0.445156695	11.57407407	
	Chi	12.98076923	
	DF	1	
10%	CRITICAL	2.706	

Figure 6.7: Chi-square analysis for Certificate in Front Line Management course

As can be seen above, the Chi-square result of **12.98076923** suggests that the Effective learner workshop had a significant influence on semester results for the CFLM group². In support of this positive result, I next decided to explore how my service was

² My first attempt at this analysis was skewed as I miscalculated student attendance. All raw data is included in Appendix E.

performing on a larger scale. To do this, I identified students in first and second year courses that experienced three or more units of the Effective Learner Workshop and compared them with their class peers who did not attend three or more of the Effective Learner units. This I felt was a necessary screening criterion as I could not claim to make a significant impact on semester results with only nominal contact with students. Testing then my perceived level of impact within the School of Business, I discovered the following significant Chi-square score of **7.66285259**:

School of Bus	Pass/fail rates	Pass	Fail	Class	Pass/fail rates	Pass	Fail	Significance
BAHBMD	Pass/fail rates	6	0		Pass/fail rates	95	14	0.877463893
BAHHRD1	Pass/fail rates	22	3		Pass/fail rates	44	9	0.323773585
BAHHRD2	Pass/fail rates	3	2		Pass/fail rates	64	22	0.505906514
HCBS2	Pass/fail rates	36	3		Pass/fail rates	23	11	7.12683655
CFLMNC1	Pass/fail rates	25	0		Pass/fail rates	1	1	12.98076923
	Total	92	8			227	57	7.66285259

Figure 6.8: accumulate chi-square for School of Business

As can be seen from figure 6.8, pass rates for courses within the Business School group³ were significantly affected by the Effective Learner workshops. Similarly, within the School of Computing, my wider analysis of impact produced a Chi-square result of **3.901766795**:

School of Com	Pass/fail rates	Pass	Fail	Class	Pass/fail rates	Pass	Fail	Significance
HCC1	Pass/fail rates	3	0		Pass/fail rates	39	3	0.229591837
BAMTB1	Pass/fail rates	4	0		Pass/fail rates	20	10	1.888888889
BSHC1	Pass/fail rates	5	0		Pass/fail rates	48	5	0.516197935
HCCE1	Pass/fail rates	29	3		Pass/fail rates	9	10	
	Total	41	3			116	28	3.901766795

Figure 6.9: accumulate chi-square for School of Computing

As can be seen from Figure 6.9, pass rates for courses in the Computing group⁴ were significantly affected by the Effective Learner workshops. This is not to claim however, that a statistical analysis can grasp the truth of any matter. Rather, all that can be inferred from this analysis is that it is very likely that I am making a positive difference in National College of Ireland, and that those students who experience a day workshop

³ Business School group (BAHBMD (BA (Honours) in Business, BAHHRD1 and 2 (BA (Honours) in Human Resource Management years 1 and 2, HCBS2 (Higher Certificate in Business year 2) and CFLMNC1 (Certificate in First-line Management, Dublin)

⁴ Computing group (HCC1 -Higher Certificate in Computing), BAMTB1-(BA in Management of Technology), BSCH1 –(Bsc (Honours) in Computing) and HCCE1- (Higher Certificate in Computers, Part-time)

on Effective Learning, or elements of the Effective Learning day workshop seem to do well in both continuous assessments and terminal exams. From a critical perspective however, a statistical analysis of results does not encapsulate the social and internal reasons for success or failure. From a mixed methodology perspective then, I feel it is always important to compare such quantitative analyses with surveys or interviews, so that I can get a picture of how I have helped to motivate a student to succeed (Ahl, 2006, Rhem, 1999).

As a softer quantitative analysis, I next decided to compare the class average performance of the CFLM group with other first year courses in National College of Ireland in semester one of 2008/2009. This allowed me to visually compare overall performance in all first and second year courses which I had worked with:

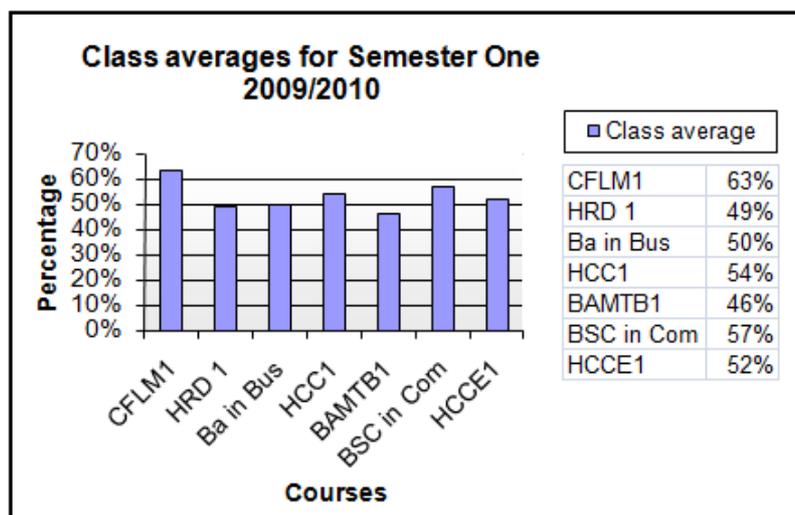


Figure 6.10: Class averages for Semester One

In calculating these class averages I included all modules that I could have impacted on, excluding Mathematic-based subjects. As can be seen from these calculations, the CFLM-Dublin class average is notably higher than other first year courses who I have worked with.

I would argue then, like Hofer and Yu (2003), that a stand-alone course on learning skills can positively affect students. Based on this, I would further argue that increased contact with my service could further increase academic standards in National College of Ireland. There is a counter argument, however, that the CFLM certificate course is not as academically demanding as a degree or honours degree course and therefore should not be grouped as an equal to other courses. To counter this critique, I decided to

explore whether increased contact with my service (in all first year full-time courses) through individual support, made any additional impact on individual semester averages. This analysis is captured in line-graphs below:

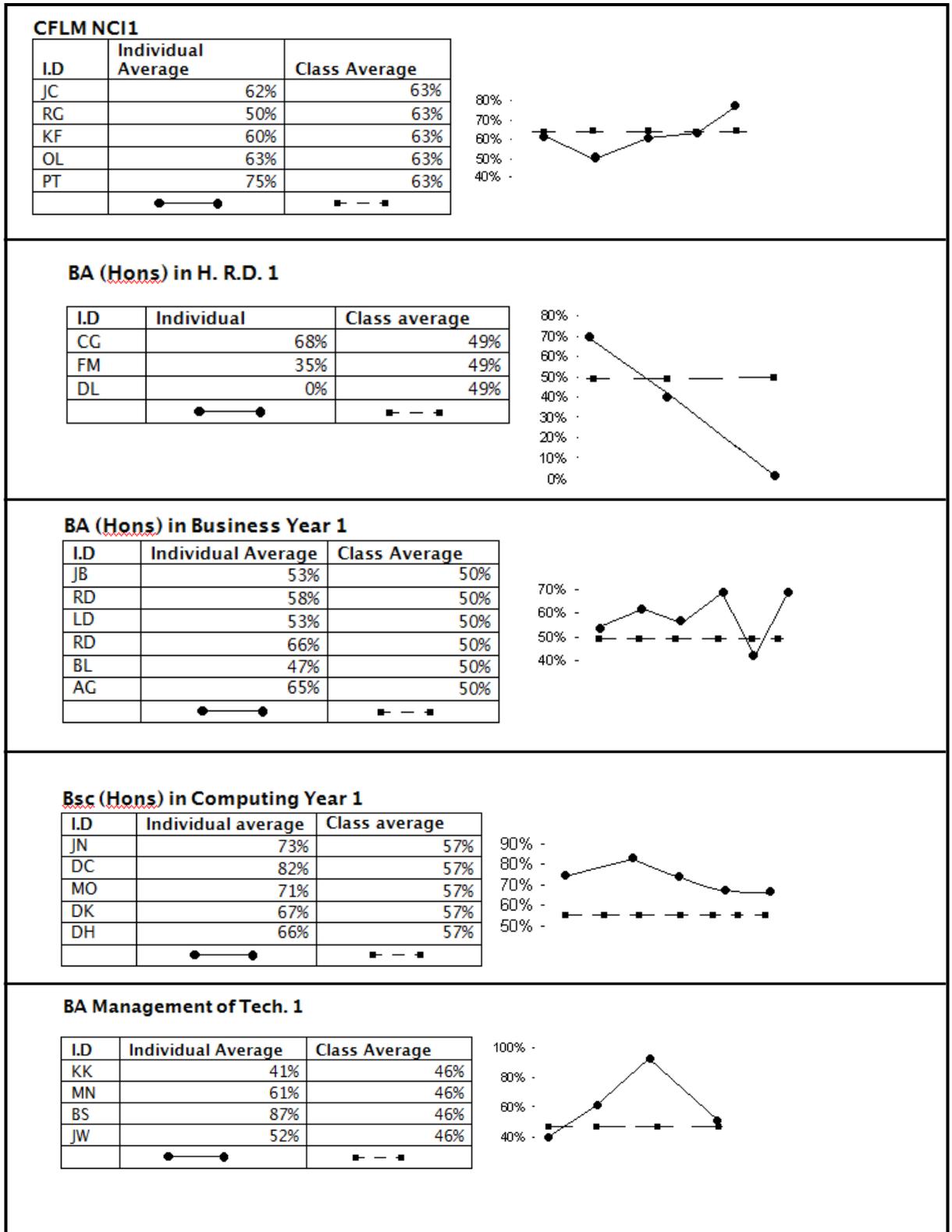


Figure 6.11: Line-graph analyses of individual versus class average

Finding similar results to the Academic Skills Program (2007) Annual Report, I calculated that 16 out of 23 students (69.5%) who attended individual support sessions done better than their peers in semester one. It is possible then to argue that individual and group support initiatives have proved to be both quantitatively and qualitatively effective.

~

Together, these analyses of semester results, interviews and student surveys indicate that students are experiencing an effective and student-centred learning support service. Yet as I aimed to further improve upon my service in National College of Ireland, I felt it was also important to look to the future. In particular, I wanted to determine whether I could use learning style results from all students, including off-campus students, to help lecturers design more student-centred teaching practices and assessments. As a means to explore this, I contacted Mr. Giles Perryer from the University of Birmingham and Ms Dawn Duffin, from the National Learning Network/IT Blanchardstown. Together, these two experts in learning offered me some feedback on my materials and offered advice on how I could support lecturers in National College of Ireland.

(6.4) Interviews with critical friends

In chapter five, I recalled my experience of “Is your preference our preference?” In this public workshop, I questioned the usage of learning styles in Higher Education and sought the views of my colleagues in National College of Ireland. In this workshop, I described how I could use styles to help students to self reflect and help lecturers to create student-centred assessments and teaching techniques. Warming to this potential future, attendees rightly pointed out that in order for this to become a reality, professional development for lectures must be initiated and supported. Aiming then to help make this transition from theory to practice, I e-mailed a Learning Profile template that I had developed to Giles Perryer (See below). In this e-mail, I outlined how I intended to use the Kolb and VARK tests to produce a learning profile for each course in National College of Ireland.

Learning Profile Template (Example)

The Kolb results for ‘Group A’ reveal that the majority of students have an *Accommodator* profile (28%), with some students receiving either a *Converger* (24%) result or an *Assimilator* (21%) result.

Accommodator Profile (28%)	This portion of the group will learn best by trial and error and may need to hear clear instructions regularly as they may lack focus and can become restless with long lectures and details. This portion of students will have strengths in innovation and leadership. They should get projects done in time but can be pushy and find it difficult to learn from mistakes.
Converger Profile (24%)	This portion of the group will learn best through practical, hands-on exercises and reviewing case studies. They will also require regular practicing of theories or formulas for maximum retention. This portion of student will have strengths in problem solving, reasoning and decision making. They will however find it difficult to learn from mistakes, experience weaknesses in time management and find it difficult to create original ideas.

This Kolb profile correlates well with the results of the groups’ VARK test, which emphasises a majority preference for Multi-modal learning (49%), aural learning (13%) and traditional reading and writing methods (13%).

Box 6.1: Learning Profile

Learning profile resources

Bearing this diverse learning profile in mind, students within this course can be introduced to the following resources, outlined in the *Effective Learner Manual*:

Preference	Outline of supports available	Pages
Visual	Students with preferences for visual learning can be directed to Mind-mapping theory and website links.	9 and 10
Aural	Those students who have a preference for aural learning can be introduced to audio note-making resources.	12 and 13
Reading/ Writing	Students with traditional learning preferences may be directed to specific note-taking methods and speed reading techniques.	11, 28 and 29
kinesthetic	Any student with a Kinesthetic or “learn by doing” preference may be led to study groups and virtual classrooms	32

Box 6.2: Learning Profile Resources

In combining the usage of both tests, I hope to increase the validity of learning style tests in Higher Education by correlating the results of the VARK with the Kolb. Beyond this issue of validity however, I mainly hope to help lecturers become aware of the diversity of students within their classes and to provide them with links to relevant sections of my Effective Learning manual. In response to this template, Giles, acting as a critical friend, offered the following feedback;

“Hi Mike

Very interesting. You have developed this a lot. It would also be interesting to see whether your students have moved towards being "well-rounded learners" by the end of their tertiary education.

Our dental school does not specifically deliver a teaching activity that may suit only one learning style: in the manner you describe we instead present the same material in many different ways, and hopefully at least one of them will "hit home" for each student”

(Perryer, 20/10/2009 17:05)

Interestingly enough, Giles had echoed my own thoughts on the potential for learning style research and I replied to him outlining our intentions in National College of Ireland to conduct a test-retest study on the evolution of learning styles throughout the student life cycle.

Building from Giles’ feedback, I later asked Dawn Duffin, Inclusive Learning Co-ordinator for IT Blanchardstown, to act as another critical friend. Having created a ‘Learning to learn’ course herself and contributed to the training of lecturers on learning styles and multiple intelligences (Duffin, 2006), I believed that Dawn’s insight into the effectiveness of such courses would allow me to further improve upon my own work in National College of Ireland.

My first question to Dawn was to gain her understanding on how self-reflection can be used in Higher Level Education.

Question 1: How can learning style tests be used to support learning in Higher education?

Making reference to how learning styles results can influence teaching practices, Dawn described the nature of their project in IT Blanchardstown (ITB), which is concluding its’ third year as a SIF funded project. Summarising the success of the initial project

itself, Dawn described the change process which has occurred within ITB. As an example of this, Dawn recalls how one Computer Scientist who teaches Mathematics has altered their teaching practices considerably through the usage of simple animations that visualise such concepts as vectors in a memorable format. The success of such simple, yet innovative practices is demonstrated by the lingering clarity of the lesson itself, which Dawn describes with affection.

As a second example, Dawn next describes how lecturers can self-regulate their pace of teaching by including blank slides in their presentations, thus encouraging them to interact with students and gain an insight into their understanding. The specific methods of gaining this understanding can be individual to each lecturer, but one simple method is suggested by Dawn;

“Firstly, the students can be told that they will require post-its for the class -this does not have to be done every class, as it takes time but it is fun.

Secondly, the lecturer asks each student whether they have understood the topic under discussion. Having done this, the lecturer can then pose a specific question and ask each student to write down their responses.

Lastly, the lecture collects these responses and gains an immediate sense of the groups’ level of comprehension.”

Moving on from this topic, I next asked Dawn about how lecturers could be supported in order to become more student centred.

Question 2: How can lecturers and tutors be encouraged to become more student-centred?

In discussing the projects goal to help lecturing staff become more inclusive and innovative with their teaching practices, Dawn considered whether there is a need for a standardised training of lecturing staff in Higher Education. Commenting on this topic, Dawn suggested that a level 6 FETAC or Certificate level award could be used to nationally standardise teaching practices. Together we agreed that some form of formal training was necessary in Higher Education, so that tutors and lecturers could be confident that their teaching practices and levels of digital literacy were sufficient in order to provide a student-centred experience.

Leading then into a discussion on self-improvement, the last area I wanted to discuss with Dawn surrounded my only efforts to improve upon my materials and service in National College of Ireland.

Question 3: Having read over the ‘Effective Learning’ manual are there any further improvements which you think I could make?

Reflecting on the layout of my manual, Dawn suggested that an inclusive manual should cater for all learners, being available in audio format and attuned to the needs of visual learners by using colour and diagrams;

“Dyslexic readers have trouble reading passages of text that are packed close together”.

Relating to the usage of technology, Dawn also commented that Robobraille and Wiziq seemed to be interesting inclusions into the manual and suggested that her own college would look into them further. Taking these comments on board, I ended the interview and thanked Dawn for her advice and insights.

In recalling my feedback from Giles Perryer and my visit to IT Blanchardstown, I find it encouraging to have discovered that my support materials, pedagogy and plans for future research are both based on best practices and innovative examples of student-centred learning support. Having then received comments from my critical friends, it is possible to argue that I have contributed to new educational practices (Sullivan, 2006) and have developed new approaches, principles and theories of how to facilitate a student-centred learning support service.

(6.5) Conclusion

As a means to demonstrate that my beliefs about my service’s improvement are both reasonably fair and accurate (Whitehead and McNiff, 2006), I have used four types of data in this chapter. Firstly, I presented a diary account of the Effective Learner day 2009, where I recalled how through new pedagogy and materials I have, in my own opinion, improved upon my practices as a learning support tutor. Leading from this diary, the next form of data I used captured the thoughts of those students who attended the workshop. Using a survey approach that attempted to emulate a lifespan perspective (Mercer and Saunders, 2004), I asked students to comment on how they had grown in

their first semester at Higher Level. To do this, I asked students to recall whether they had any preconceived worries about their academic journey and asked them to comment on whether the workshop had in some way helped them become a more confident learner. Attempting to capture what Erikson (1980) describes as a psychosocial growth, the data indicates that 65.4% of students were confident before the workshop and 98.2% of students were confident after the workshop.

Drilling into this survey data, I next described two strengths-based (Mercer and Saunders, 2004) interviews I carried out. In these follow-up interviews, I asked two CFLM students to comment about their self growth, by indicating (A) what areas in which they had become more competent during semester one and (B) what future supports do they think would be helpful. Combining these two forms of student feedback, I described my intention to further increase my contact with students in National College of Ireland. Taking the view then that I will need to justify this increased contact with students, I later analysed semester one results from first year courses in National College of Ireland and sought to question how effective is Effective Learning. Through a neo-positive approach (Kincheloe, 2003) to quantitative analysis, I presented results that indicate that increased contact with my service can positively effective the results of students.

Finally, as a way to further peer review my materials, I closed this chapter with an interview with a critical friend, Dawn Duffin, who offered me an insight into her own attempts at implementing a 'learning to learn' course. Through this discussion, I provided evidence that my materials now not only reflect best practices, but reflect innovation which can be disseminated to other Higher Education institutes. In this way, I attempted to reaffirm that I have made a contribution to new educational practices in Higher Education (Sullivan, 2006 p272).

Concluding my living education theory within this thesis, chapter seven will reflect on what concerns led me to start this journey, how I created the three principles of learning support, describe the strategies I put in place and review the effectiveness of these strategies. In moving to the future, my last chapter will also illustrate the fluid nature of a living educational theory, by presenting areas which I intend to further develop and research within National College of Ireland. In this way, I will demonstrate how I intend to modify my ideas and learning in light of my current research (Mc Niff et al. 2003).

Chapter Seven: *Reflecting on my journey: Implications of my research*

When thinking about Whitehead and McNiff's (2005, 2006) approach to action research, I find myself remembering the words of J.D Salinger (1958), who I believe captured the reciprocal nature of learning;

"Among other things, you'll find that you're not the first person who was ever confused and frightened and even sickened by human behavior. You're by no means alone on that score, you'll be excited and *stimulated* to know. Many, many men have been just as troubled morally and spiritually as you are right now. Happily, some of them kept records of their troubles. You'll learn from them - if you want to. Just as someday, if you have something to offer, someone will learn something from you. It's a beautiful reciprocal arrangement. And it isn't education. It's history. It's poetry."

(ibid, 1958, p170)

Although taking a somewhat sexist and teacher-centred view of the education process, Salinger's words seem to strip away the veneer of education as a social institution with formal roles and rules. In a fatherly overtone, he seems to reduce the process of learning to a human act of reflection, action and sharing, warning each novice researcher not to treat their ideas as the most important or profound, but to weave their own story into an already existing tapestry of learning.

Taking this under advisement, I intend to use this chapter seven as a means to review the journey that has been and is my own living educational theory. Presenting my original concerns and source of living contradiction, I firstly intend to outline why I needed to put in place the three principles of learning support which I have used to ground my ontological beliefs in logical and student-centred objectives. Having done this, I will review my attempts to improve upon my practices by discussing how I attempted to use technology to increase my services' contact with all students in National College of Ireland, especially off-campus students, who I felt were significantly disadvantaged. Joined with this use of technology, I will also outline how I gained new knowledge about pedagogy and aimed to implement Illeris' (2001) vision of a unified theory of learning. Coupled with these improvements, I intend to review the final area which I consciously tried to change, my learning support materials.

Having given an overview of these attempts to change, the chapter will examine the effectiveness of these improvements, using my own reflections, student views and critical feedback from friends, as well as quantitative evaluations of student performance. Building on this evidence of effectiveness, I will later describe how each

of my strategies and my research as a whole, has contributed to new knowledge. Capturing the reciprocal process of educational research, I will argue that my work has added to established theory and practices in learning support and contributed to the growing culture of self-focussed action research in Irish Higher Education. As a concluding factor, this chapter and thesis will end with an insight into my future research plans, thus addressing how I have modified my ideas, learning and understanding.

In review, this chapter will cover the following points:

- What were my concerns?
- What did I do about my concerns?
- How effective were these interventions?
- How have I contributed to new knowledge?
- How do I modify my ideas, learning and practices?

(7.1) What were my concerns?

The need for academic support services is well established, having been first made popular in the later nineteenth century (Barefoot and Fidler, 1996, Stahl and King, 2000). My own interest in this area arose in 2006, when I began reading a number of articles which considered the growing consumerist nature of Higher Education to be detrimental to the character and values of Higher Education (Porter, Rehder and Muller, 1997, Friga et al., 2003). What particularly concerned me was whether Higher Education institutes could adequately support international students, students with disabilities and off-campus students. In support of this initial literature search, I found the Prime Time (2006) special '*Concern over regulation of language schools in Ireland*', to be helpful in visualising and humanising the difficulties that some international students face when coming to Ireland. Arguing that some students are treated as little else than 'cash cows' (Friga et al., 2003, Ryan, Neumann and Guthrie, 2008, MacFarlane, 1995, Hazeldine and Morgan, 2007), this TV program further encouraged me to think about topics such as 'academic consumerism' (Gumport, 2000, Singh, 2002) and student centred-learning (Brandes and Ginnes, 1986), and ultimately led me to interview an ex-employee of Eurocollege about her experiences of working in a private Higher Education institute. As my first initial interview, my discussion with 'Sam' reinforced my own belief that supports for non-traditional students needed to be greatly improved upon in Higher Education and that only through self reflection and student input could this process be achieved. Having then become concerned about the qualities of support available for traditional and non-traditional students, I took up the post of Learning Support Tutor at National College of Ireland in 2008. Impassioned by my early literature reviews and interview, I began to formally explore whether my own values and concerns were reflected in my in-class pedagogy and resources.

Using a self-study approach to action research (McNiff and Whitehead, 2005, 2006, Whitehead and Lomax, 1987), this thesis has told the story of how I became critical of my own actions, resources and pedagogies. According to Carr and Kemmis (1986), this process does not come easily to educators who, they claim, are generally conformist in nature and succumb to the fashionable tendencies of teaching and learning. However, I believe that a reflective practitioner can in some way help shape his or her surrounding culture, by producing research findings which are transferable. Whilst not wishing to

overstate the connection between my own insights and learning, I do view normality itself as a fashionable process and believe, like Habermas (2002) and Rogers (1995), that a practitioner-researcher's findings can be diffused into the wider culture of their own institution and perhaps further, into their communities of learning. To induce this bottom-up process of change, I believe that an action researcher must identify areas where change is necessary within their own institutions and then choose to improve their practices in an attempt to become better. Within this thesis, I have used this method of self-critique as a way to examine my role as a learning support tutor in National College of Ireland. In chapter one and three, I recalled how this initial self-reflection began by examining my in-class delivery of the Effective Learner workshop to CFLM students. Using a reflective diary and survey methodology, I constructed socially grounded themes (Charmaz, 2000) to identify three areas I needed to improve upon:

- Theme 1: The need to connect learning styles with learning technologies
- Theme 2: The effect of isolation on distance and part-time learners
- Theme 3: How can I ensure that my materials are a reflection of best practices?

The first of these grounded themes described a need to improve upon my use of learning style tests and learning technologies. Whilst I was already using a VARK test (Fleming, 2001) to help students to self-reflect on how they learn best, I concluded that I was not showing them enough technologies or strategies to help them create a more individualised learning experience. Related to this, this theme also captured the belief that my materials were not universally accessible to students with learning disabilities or learning difficulties. In order to become more student-centred then, I believed that my materials needed to become flexible and adaptable to students needs. Similarly, I believed that I needed to learn more about learning styles and learning technologies so that I could help students to develop effective and individualised learning strategies.

The second theme, which was constructed using my own self-reflection and student feedback, surrounded the effects of isolation on distance learners. Emerging from off-campus students desires to have more contact with my service, I began to think about the effects of learning in isolation, what Becker and Watts (2006) call *academic*

isolation. In particular, I agreed with the view of Brookfield (2009) that no adult should be perceived as a ‘Robinson Crusoe’, but should be treated with the same opportunities to engage with their peers and educators as full-time students. Without this level of interaction I believed that some of my students would become less motivated to learn and less enthusiastic about being in Higher Education (Lee and Chan, 2007). Related to this damper on motivation and enthusiasm, I was also conscious of the fact that the effects of isolation could ultimately lead to increased non-completion rates among students (Middleton, 2001, Sheets, 1992).

The third and last theme which I constructed using self-reflection and student feedback surrounded a need to develop a standard of learning support that was reflective of national and international best practices. This need developed in light of the contrasting reactions to the Effective Learner workshop, where some students praised the innovative approaches to support, whilst others condemned the lack of usable learning strategies. Together, these sets of comments confirmed for me why some researchers believe learning support to be a ‘lottery’ (Sanderson and Pillai, 2001). Moreover, these concerns echoed my own belief that tutors and lecturers should be offered some form of formal training as educators. Interestingly enough, my third concern is very similar to the views of the HEA (2009, p 3), which sees the success of student-centrism being reliant upon increased quality and innovation in teaching and learning;

“Our commitment to students and to the highest standards of quality can only be progressed through a renewed emphasis on quality and innovation in teaching and learning. This will require a more concerted emphasis on the initial and continuing training of academic staff, greater investment in learning resources and the adoption of institution-wide and system-wide supports for lecturers in learning technologies and innovative pedagogical approaches for learner engagement.”

Together, these three themes are presented as evidence that I was living in contradiction (Whitehead and McNiff, 2006) and felt motivated to change and improve my services in National College of Ireland. As a means to begin this process of change (Fullan, 1991) I felt it important to establish three student-centred principles which would guide the development of each of my interventions:

1. All students will be able to interact with learning support materials.

This first principle surrounds my belief that each student, regardless of background, location or disability, should be able to interact with materials that I have created. To ensure that this principle is put in place, all materials must be universally designed so that they are accessible in hard copy, soft copy and audio formats.

2. All students will be offered guidance on which strategies and materials to use.

The second principle of student-centred learning support is connected to my belief that each student should be offered both an opportunity to reflect on their learning styles and access to guidance on how to use learning technologies that suit their individual strengths. To insure that this principle is achievable, all students must be offered an opportunity to undertake a learning style test and be given appropriate guidance on how to become a more effective learner through adopting learning strategies and technologies.

3. All students will be able to create effective notes and will be able to construct meaning through peer support and tutor support.

The third and last principle of student-centred learning support is concerned with my belief that all students must be provided with guidance on how to use learning technologies and adopt learning strategies; in short, I believe that awareness of such supports is not enough. Instructions on how to use such supports must be provided for all students. Moreover, supports for all learners must be provided, including students with sensory disabilities and learning difficulties such as dyslexia. To ensure that all students can discuss their learning strategies with other students and with the Learning Support Tutor, it is also necessary to provide communicative tools through which distance learners can create communities of learning. To ensure that this principle is realised, a comprehensive guide on how to become an effective learner is needed, containing step by step guides on how to use learning strategies and technologies. To cater for further discussion about the application and experience of using these resources, all students should have access to a virtual classroom that allows them to showcase their experiences, interact with their peers and seek advice from the Learning Support Tutor.

These principles were constructed in recognition that each student should be offered an equal opportunity to become an effective learner in National College of Ireland.

Borrowing from the literature on widening participation (Warren, 2002) and Universal Design (Scott, McGuire and Shaw, 2003), I later used these principles to implement a number of changes to my service.

(7.2) What did I do about my concerns?

Looking back on the introduction to my thesis, I agree with Beede and Burnett (1999) that each institution continually aims to become more inclusive, whilst simultaneously attempts to increase revenue streams. Conceding this point to be a major factor in organisational change, I still maintain that change can be driven by educators who want to improve upon their services or practices because they care about their students' wellbeing and educational needs (Hardy et al, 2009). Leading from this belief, chapter four of my thesis introduced how I created an intervention to elements of my second and third concerns. Beginning with a need to increase my connectedness with students and to facilitate a process of peer learning, I firstly explored how synchronous and asynchronous technologies have been used to support distance learners in Higher Education. In exploring the history of technology use in education I was particularly interested in how video conferencing had been previously used to support students (Fusco and Ketcham, 2002).

Tracing the technology's usage throughout Higher Education I concluded that, although the technology was sufficiently advanced in order to facilitate some of my needs, the technology itself was quite expensive and would not facilitate the level of peer collaboration that I wanted (Smyth, 2005). As a replacement to this technology, I began to explore the possibility of employing a virtual classroom. Using a critical friend from University College Dublin, I tested two programs through a rigorous acceptance testing procedure (Glenford et al. 2004) and eventually settled on the program Wiziq (Wiziq, 2009). Having found what I believed to be the right technology, I then began to question whether my skills as a live tutor would transfer easily into the virtual domain or whether I would need to develop further skills (McPherson and Nunes 2004, Gerrard 2002, 2005).

Discussing this topic with the Director of Learning and Teaching in National College of Ireland, I decided to study content from a module on learning and teaching theories (see Appendix D). Through this supervised study with the Director, I believe I improved my knowledge of learning and gained a broader understanding of how I could become a

more effective online tutor. Confident then that I had in some way standardised my pedagogic approaches to learning support, I later began testing the classroom with full-time students, as a means to establish Wiziq's effectiveness. In gauging the effectiveness of the virtual classroom I chose to use both online recordings of the class and student feedback as a way to establish student reactions to the new technology. From a more quantitative approach, I also chose to examine whether the virtual support sessions influenced student performance (Wiezel, 1998, Kaufman et al., 2000 and Zywno, 2002). Combining both qualitative and quantitative measures of success, I hoped that this approach would allow me to capture how my students not only grew from a position of self-doubt or distress to one of confidence (Linley, 2008, Linley et al. 2007), but would illustrate their improved performance in exams. As a reflective practitioner, I believed that this combined approach was necessary in order to merge my own student-centred approach to learning, with the behaviourist expectations of a social institution that is still very much considered to be reliant on performance-based analysis (Genovese, 2005, Cole and Tufano, 2008, Weiner *et al.* 2003). Through these activities, I believe in some way that I have applied Illeris's (2001, 2003) vision of a unified theory of learning to my own teaching practices.

Having identified a way to increase contact with all students and increase the potential for peer learning, I next turned my attention to the creation of a learning support resource. This resource would offer all students an opportunity to reflect on their learning styles and help them to create an individualised approach to learning. Covering the development of this process chapter five introduced readers to existing learning support and study skills manuals (Van Blerkom, 2006, Northedge, 2005, Simon, 2002) which I critiqued using three inclusive criteria. Firstly, I argued that the best products available were commercial and therefore students would need to pay for them individually. This I felt could deter students, especially those students experiencing financial difficulty from owning their own study guidebook. Secondly, I argued that none of the existing manuals offered students an opportunity to both reflect on their learning styles and connect their learning needs to specific learning resources. Lastly, I judged all existing support manuals and books (which I reviewed) to be geared towards traditional learners, non-dyslexic, with no visual difficulties or hearing difficulties.

Having an aim to create a manual that I believed to be universally accessible, free and beneficial for all National College of Ireland students, I decided to expand and improve upon my existing support materials (Goldrick, 2009A). In an effort to ground this production in national and international best practice, I contacted other learning support tutors across Ireland through the ALSON (Academic and Learning Support Officers Network) e-mail list and asked for advice and feedback on my manual's envisioned structure, which I created in consideration of the most popular existing ICT and study resources available in Ireland (Van Blerkom, 2006, Northedge, 2005, Simon, 2002):

Unit 1: Learning Preferences and Styles

Unit 2: Creating Effective Study Notes

Unit 3: Academic writing and referencing

Unit 4: Exam revision and anxiety reduction

Through this learning community (McConnell, 2008), I received advice from Athlone IT and material from Trinity College Dublin, which I would eventually use as part of unit 4. However, the gathering of materials was just one aspect of the manual's production. Rather than viewing the exercise as a copying and paste process of existing materials, I wanted my resource to reflect new developments in the area of learning support. In particular I wanted to expand upon the use of learning styles in Higher Education (by both students and lecturers) and develop an inclusive manual for all learners. To initiate this process, I firstly held a lunchtime seminar in National College of Ireland, where I invited faculty, postgraduate students and members of management to reflect on how the college should use learning style tests. Having gained feedback from faculty and students about the two ways in which learning style tests could be used, I decided to create a support unit that allowed students to explore their learning styles through two learning style tests, the VARK (Fleming, 2001) and Kolb (Perryer, 2009). Hoping to make this unit an active learning experience for students, I used a Project-Based Learning approach (Grosling, Heagney and Thomas, 2009) to create a short exercise for students to complete at the end of unit one. This exercise would require students to think about how they learned best in the past and to critically explore how they could use the tests to become more effective learners. I hoped that this process would encourage students to proactively explore the learning strategies and technologies which I would present in unit 2.

Building from this experience, I wanted unit 2 to offer students links to various learning technologies which could help them become more effective learners. To facilitate this experience, I developed a number of new initiatives for National College of Ireland, procuring links to audio-note making software and linking to freeware Mind Maps. Through these new developments I hoped to meet the requirements of CFLM students who had previously criticised the service as being too basic.

With unit three, I aimed to continue my improvement by creating a comprehensive guide to academic writing in National College of Ireland. Covering paragraph building, the universal structure of essays and the procedures of referencing, the manual's third unit was quite similar to many existing study and writing guides available to students in Ireland. What I believe set my manual apart, however was the inclusion of a language translator for students studying through a foreign language.

Finally, for unit four, I developed a number of new materials for my students. The areas I was particularly excited about in presenting to students surrounded speed reading exercises (Shepard and Unsworth-Mitchell, 1997) (which some students had requested), virtual study groups for distance learners (Hibernia College, 2010) and mind training activities. Through these new initiatives, I believed that students could better prepare for terminal exams and actively increase their ability to remember course materials. Through these new resources, I believed that I had created an exam-focussed unit that was based on national good practices and included some new innovations for National College of Ireland. Adding to this belief was the inclusion of an exam reduction section, which I developed using input from Trinity College Dublin and the University of Limerick.

Together, the development of a virtual learning support service, my improvement of my pedagogic knowledge and the creation of a new learning support manual, are presented as evidence that I actively attempted to improve my knowledge and my service. Having implemented these changes, the next stage of my research was to evaluate their effectiveness and to identify areas where I needed to explore further.

(7.3) How effective were these interventions?

In examining how effective my attempts to change and improve my service were, I produced evidence that my ontological values could be transformed into valid and

legitimate epistemological standards of practice (Whitehead and McNiff, 2006). In judging the effectiveness of these standards of practice chapter six reviewed four forms of data, which I used to demonstrate that my efforts to improve upon my services and my conclusions were both reasonably fair and accurate (Mc Niff et al. 2003). Questioning then whether my choice to improve upon my self and my practice was indeed an effective journey, chapter six firstly presented my own insights, using extracts from a diary.

Diary

In recounting my experience of presenting the Effective Learner workshop to CFLM students in October 2009, I reflected that my pedagogic knowledge has grown and benefited my teaching techniques in National College of Ireland. Describing how I blended a constructivist approach (Vygotsky, 1978), a cognitive approach (Gagné et al 1992) and a behaviourist approach (Skinner, 1954) to academic support, I make the claim that I have attempted to put in place a unified theory of learning support based on the ideas of Illeris (2001). Talking through my experiences of the four workshops (How we learn, Study Skills and Time Management, Academic Writing and Exam Revision and Anxiety Management), my diary extracts presented my own opinion that I have improved as a live presenter. To reaffirm this belief, I provided example e-mails from students who tried out some of the learning resources I discussed and reported that they had been helpful for them.

Moving from live to virtual support, the last section of my diary reflected on the experiences of presenting to students in November 2009 using a virtual classroom. Provided as a revision session, this virtual workshop focussed on content from unit two and four and was marketed as an exam preparation session. Describing the differences between live and virtual support, this portion of my diary highlighted what I believed to be the major success of the newly created 'virtual learning support service'. In particular, my thoughts focussed on the belief that students had now access to a form of multimodal (Fleming, 1995) revision, which meant that students could replay virtual workshops and download audio versions of all virtual classes. As evidence that this new initiative had been positively accepted by students, I later presented feedback from

students who participated in the class. Keeping with this emphasis on student feedback, the next form of evidence I presented in chapter six was survey results.

Survey results

Gathering fifty six completed surveys, out of a possible one hundred and thirty three, the data I received from CFLM students surrounded their measures of confidence in relation to academic skills. Through this data, I found out that 34% of students were not confident in their academic abilities and only 9% of students had no existing academic concerns. Of those students who reported having concerns, the themes which I socially constructed using grounded theory were *Returning to Education, Academic Writing, Study Methods and Exams* and *Group Work*. Seeking to establish whether the support I provided had help alleviate some of these concerns, I next asked students to comment on whether or not the workshops had helped them to become a more confident learner. In a very positive result, 98% of students suggested that they had been provided with the tools to become a more effective learner and in some cases offered subjective reasons for this;

“Was a very enjoyable course and very helpful. Puts your mind at ease to know that such supports exist.”

“Class is very well presented and all questions are answered”.

“I had an initial fear of how to start project and studying. This workshop has addressed this.”

Following this question on effectiveness, the survey next asked students to identify whether they had any further support needs. Focussing on essay writing, research skills and exams, this question raised the issue of whether recorded workshops would be enough to alleviate any follow-up concerns, or would the service need to provide an online symposium or similar discursive element for students to learn through their peers and myself.

Concluding the survey, the last question, gave the students another opportunity to voice their subjective thoughts on the day as a whole. In light of their positive reactions, many students used this question to voice their appreciation for the day;

“great help today, many thanks”

“Many thanks, I found lecture very interesting.”

In an effort to delve further into the experiences of students, chapter six next presented my third form of data, interviews.

Follow-up interviews

Adopting a strengths-based approach (Mercer and Saunders, 2004) these follow-up interviews sought to establish how students felt about their first year in National College of Ireland and to reflect on how they had grown academically. In total, I interviewed five CFLM students, (three live interviews and two telephone interviews). Two of these students were studying through a foreign language and three were Irish national students. Of these interviews, I have chosen to use material from four. The exclusion of one participant was an ethical decision as one of these students used the interview process to convey their fear that they had a specific learning difficulty.

All five students had previously signed or ticked a declaration of informed consent form and were happy to have this read back to them before the interview. Each interview followed the same interview plan (Robson, 2003), although the telephone interviews were noticeably shorter and more direct as it was harder to establish a fluid rapport. Telephone interviews were used due to the fact that students could not commit to a live interview as they were off-campus students and had quite strict deadlines surrounding college time.

During the interviews themselves, I chose to initiate a strengths-based approach to questioning (Mercer and Saunders, 2004) by asking students their opinions on my service. Specifically, I wanted students to feel that their opinions would be valued and be used to determine the future direction of my service. In replying to this first question, all respondents spoke favourably about both Individual Supports and Workshop Support in National College of Ireland, each giving a fair and accurate review of the strengths of both services. The emerging theme which I took from this first question was that students felt that they would like more opportunities to discuss their difficulties with either their peers or with myself.

Building from this review of both services, the next question I asked my participants related to their own advancement. With this question, I wanted to gain some insight into how each student viewed their own educational journey and had become more confident as a result of their Higher Education experiences. Interestingly enough, all responses to this question surrounded the theme of academic writing, in particular, the improvement

of their essay writing ability. Similarly, most students claimed that they had developed a more comprehensive vocabulary and felt more confident in their own jobs. I did not feel this to be a leading question as I believed that students would inevitably have learned some new theories that could be directly applied to their professional roles.

As a concluding discussion point, the last question I asked students surrounded further support needs that they might have. Commenting on this, the majority of students indicated that they would like more opportunity to connect with their class and to practice intrapersonal skills such as presenting and debating. In particular, 'Brian' suggested that he would like more opportunity to practice presentations and to become a better communicator. This shared concern about presentation qualities is perhaps unsurprising given that public speaking is ranked as the number one fear among students, according to some research (Krannich, 2004). Together, these interviews offered me a deeper understanding of how students perceive themselves to grow and develop in their first year of college. Similarly, it allowed me to identify that students are concerned about not only developing purely academic skills such as writing and exam taking, but are aware of the need to develop interpersonal skills that can be transferred to a working environment. Perhaps this awareness is evidence of the growing belief that 'learning to learn' courses are crucial in order to successfully develop a competitive knowledge economy (Manning et al 2007, Krejsler, 2006, Boote, 1998). Related to this fear of presenting, was the realisation that some students were not comfortable in using PowerPoint for class presentations. This theme of digital literacy led me to question whether non-traditional students entering National College of Ireland should be offered extra training on basic IT skills.

Moving from this qualitative domain of data, the chapter later explored statistical evidence, which I used to argue that my service had made a significant and positive influence on student success.

Semester one performance analysis

Adopting a similar technique to The Academic Skills Program (2007), I next presented a neo-positivist analysis (Kincheloe, 2003) of pass and failure rates for CFLM students. I decided to adopt this quantitative approach for two reasons. Firstly, I believed that the provision of tangible statistics would help give more credibility to my work in National

College of Ireland. Secondly, I wanted to merge a self-focussed action research methodology with more traditional approaches, in order to illustrate that the two paradigms do not need to be exclusive from one another. Taking my inspiration from Illeris (2001) unified theory of learning, I hoped in some way to illustrate that there can be a more unified approach to action research.

Following this thought process, chapter six next presented a Chi-square analysis (Lambert, 2009) of CFLM pass and failure rates, in order to establish whether pass rates were influenced by my service. This information was gathered in what Robson (2002) would call an unobtrusive manner, by gathering existing test data from the college which, as a member of faculty, I have permission to use for both self review and research. Through this analysis, I illustrated that my influence on CFLM pass rates was indeed statistically significant (**12.98076923**). Inspired by this result, I later presented an analysis of other first and second year courses. Again using unobtrusive measures, I presented data which argued that pass rates for courses in the School of Business were significantly affected by the Effective Learner workshops (**7.66285259**). Similarly, in the School of Computing I presented data which suggests that my service has positively impacted pass rates (**3.901766795**). As means to further my statistical analysis, I also produced two softer analyses of data. The first of these compared the overall class average of the CFLM group with other first year courses. As can be seen below, this analysis suggests that the CFLM performed better than other first year groups.

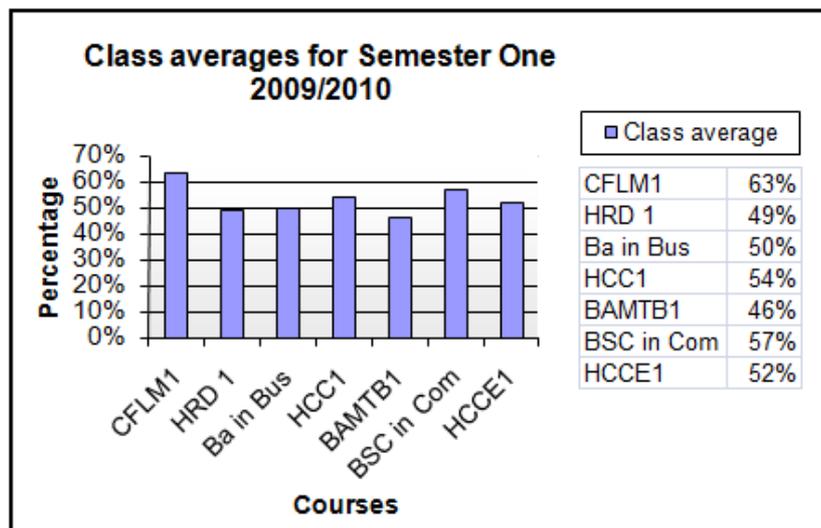


Figure 7.1: Class averages for Semester One

One could infer from this that the Effective Learner Day workshop could have attributed to this high class average, although counterarguments could also be made. Specifically, the argument could be made that the CFLM course is not as academically demanding as a degree or Honours degree program. As a way to examine then whether increased contact with my service did affect overall results, I used a similar technique to the Academic Skills Program (2007). Through the creation of individual line graphs, I calculated that 69.5% of students who attended individual support sessions done better than their peers in semester one of 2009/2010 year. Based on these 'hard' and 'soft' analyses, I concluded that individual and group support initiatives have positively affected academic performance in First year students.

Considering then whether my improvements have been effective, I believe that in light of the qualitative and quantitative data which I have presented, I can argue that my journey has been effective for both myself and my students. Building on this idea of effectiveness, however, it is important to consider whether I as a reflective practitioner have advanced educational theory or practice. In short, *how have I contributed to new knowledge?*

(7.4) How have I contributed to new knowledge?

Habermas (1987) argues that whilst postmodernism has forever altered our conceptions of truth and knowledge, objective facts or empirically tested theories can still be considered as being universal. Considering this position more closely, it is important to ask how objective or universal truths can exist in a postmodern vision of the world. Describing the nature of this seemingly contradictory statement, Habermas (1987) believes that the idea of universal truth needs to be perceived not as a transcendental ontological assumption, but seen as a stable construct which has been developed through relations with other people and validated using counter examples and scenarios. Like Habermas, I believe that this form of truth is obtainable, but that this truth is socially constructed through interpersonal relations and is bound by geographical, social and historical context. In light of this understanding of truth and knowledge, it is necessary to consider further what one means when claiming that research work has contributed to new knowledge. In other words, the question is; what processes are involved when making such claims?

Like Sullivan (2006), I claim that my self-study and journey of improvement have allowed me to enhance both my personal and professional development. In particular, I feel that my living educational theory has facilitated the improvement of my service and allowed me to instil, what I have called, the three principles of student-centred learning support. Through the implementation of these three principles, I have made a number of changes to my everyday practices and developed what I believe to be transferable practices and theories which I want to share with other reflective practitioners and interested parties. Hoping then to foster a process of diffusion (Rogers, 1995, Habermas, 2002) I present the following developments as evidence that I have undertaken research, not simply as an intellectual exercise, but as a means to improve myself and contribute to the improvement of student-centred learning support in Higher Education (O’Hanlon 2002) at National College of Ireland:

- Creating the first virtual learning support service in National College of Ireland.
- Evolving the use of learning style tests in Higher Education.
- Advancing the development of analytical reading strategies.
- Creating a universally accessible support manual based on national and international best practices.
- Further developing the use of self-study action research by merging living educational theory methods with traditional social science models of evaluation.

Creating the first virtual learning support service in National College of Ireland

As described in chapter four, I first began thinking about virtual support due to the growing problem of academic isolation (Becker and Watts, 2006) in National College of Ireland. As an intervention to this, I carried out a literature review on how synchronous technology could be used to increase contact with students (Hibernia College, 2010, Smyth, 2005, Tandberg, 2004, Newman et al. 2008, Goodwin-Jones, 2005, Pan and Sullivan, 2005, Manning, 2007, Engle and Parent-Steven, 1999). Although finding some research on the use of conferencing systems, this search offered no specific research on the use of a virtual classroom with regards the effective intervention of isolation. In light of this, I next decided to discuss the use of virtual classrooms with colleagues in Trinity College Dublin and National College of Ireland. Through this

learning community (McConnell, 2008), I established that no free existing virtual classrooms had been used for learning support in Ireland (to our knowledge) and therefore no model of good practice could easily be established. Finding it necessary then to develop a standard of good practice, I acceptance tested (Glenford et al. 2004) and piloted a virtual learning support service in National College of Ireland.

Using qualitative experiences of the class and quantitative analysis of exam results, I later established that the virtual class (Wiziq, 2009) can be an effective tool to combat academic isolation in National College of Ireland and concluded that a similar model could be adopted in other Higher Education institutes. As a means to validate this belief, I later submitted a working paper (Goldrick, 2009) to the Confederation of Student Services in Ireland as way to gather peer review.

Having presented my research to a number of my peers and having received a positive reception to my practices, I now hope that my experiences of testing and evaluating the Wiziq classroom (Wiziq, 2009) can offer guidance to other tutors who wish to develop similar virtual support services. In particular, I believe that my acceptance testing (Glenford et al. 2004) and piloting of the virtual classroom can help other institutes to decrease episodes of academic isolation and increase opportunities for online collaboration. Evidence of this potential guidance can be seen within National College of Ireland already, where the Computer Support service has begun to use the program Wiziq to offer a more flexible and student-centred service to students. Outside of National College of Ireland, I would argue that my research on virtual learning support has already helped other institutes to adopt technology. Evidence of this can be seen in Trinity College Dublin's recent 10th Anniversary symposium (Doyle, 2010), which identified my own research as an instance of innovation and good practice:

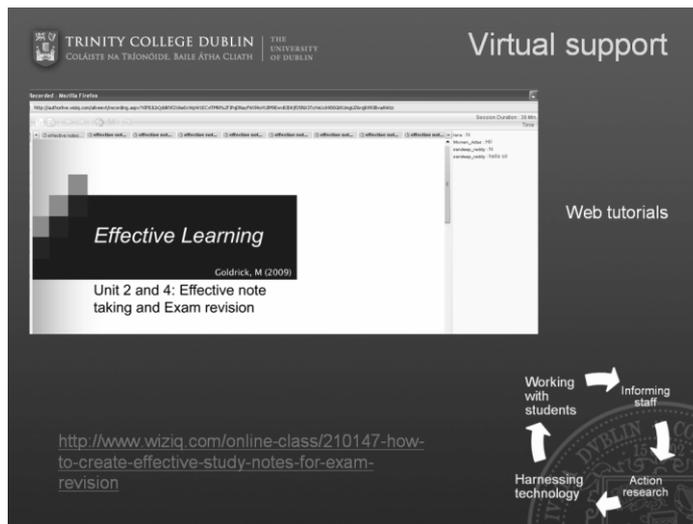


Figure 7.2: Snapshot of Effective Learning Presentation from Trinity College Dublin’s recent 10th Anniversary symposium

Interestingly enough, due to this particular exposure I have been asked by the Chair of ALSON to help train each ALSON member to use virtual classrooms in their own services.

Evolving the use of learning style tests in Higher Education

In light of the many ways in which learning styles can be used in Higher Education (Felder and Spurlin, 2005, Robotham, 1999, Bull, 2004, Sadler-Smith & Riding, 1999, Honey & Mumford, 1992, Cook, 1997) I decided to focus my own research into developing a self-reflection exercise. In thinking about how I have evolved the use of learning styles in Higher Education, I concede that a number of existing manuals have already promoted the benefits of self-reflection (Northedge, 2005, Dawson, 2006 Simon, 2002). I maintain, however, that my manual is somewhat unique as it presents students with a practical Project-Based learning exercise (Grosling, Heagney and Thomas, 2009) that does not simply refer to learning style tests being available on the internet (Dawson, 2006). This exercise takes the form of a learner journal, which students can use to reflect on their previous learning, discuss their current test results and identify what types of learning strategies and technologies they should be using.

This is perhaps the most innovative step in learning style usage for National College of Ireland. Rather than merely offering students a link to an online test, Unit one of their learning support manuals will help guide each student from a process of self-reflection to one of self-actualisation. As a measure of success, I take it as a positive sign that

students who use my service now bring their learning style results to their initial meetings in order to become more effective learners.

As a way to gain some critical feedback about my current and future uses of learning style tests, I have asked Mr. Giles Perryer from the University of Birmingham to review my methods. I valued Giles's opinion on this matter as he had previously designed a Kolb learning style test for his own university and is considered to be an expert in Learning styles;

“Hi Mike

Very interesting. You have developed this a lot. It would also be interesting to see whether your students have moved towards being "well-rounded learners" by the end of their tertiary education.”

(Perryer, 20/10/2009 17:05)

Reflecting on my current use and future research plans, Giles's feedback suggests that my work has contributed to new knowledge about how learning styles can be used in Higher Education. Indeed, through my informal dialogues with Giles I have identified a new research project which I hope will further develop ways in which learning styles can be used.

Advancing the development of analytical reading strategies

As a learning support tutor, one of my primary tasks is to help students to become more analytical and critical readers. In order to provide this service at a workshop and individual support level, I introduce students to the most commonly used and effective reading strategies available, such as the SQ3R method developed by Robinson (1970). Building on these existing techniques however, my service has introduced a new reading technique that is inclusive of students with visual disabilities and takes into consideration visual and aural learning preferences. This inclusive approach to reading strategies is achieved by incorporating a set of computer shortcuts for JAWS (the most common reader used) into existing 'scanning' techniques (Redish and Theofanos, 2003). Adding then to the SQ3R method and other similar methods such as POWER (Learning through listening, 2009) the SQRNR method (Survey, Question, Read, Note-make and Revise) can help all students to strategically analyse printed material, electronic and audio material. Although a simple adaptation, I would argue that such

inclusive activities are needed if the goals of equality and equity are to be truly realised within Higher Education.

In my own service, I have used the SQNR method to help traditional students as well as students with Dyslexia and students with visual impairments, to become more active and critical readers. I would invite other tutors to try this method with their students and perhaps build upon the model in order to further develop inclusive reading strategies for all students.

Creating a universally accessible support manual based on national and international best practices

Throughout my research, I have been conscious of the fact that learning support is sometimes considered to be a 'lottery' (Sanderson and Pillai, 2001). Similarly, I have been concerned that recent efforts to create an inclusive and equal opportunity to participate in Higher Education has been somewhat less effective due to the implementation difficulties of universal design theory (Field, Sarver and Shaw (2003). Despite this, I believe that through an advancement in learning support pedagogy and resources, equality and equity will not continue to be what O'Sullivan (2006, p294) describes as 'assimilation, masquerading as inclusion'.

In the hope of fostering a more standardised and inclusive service within my own college, chapter five of this thesis described how I developed a new resource for students in National College of Ireland. Unlike my previous materials, this new manual, 'Effective Learning in Higher Education', was developed using national and international best practices and by developing relations between other institutes within Ireland. Following this collaborative production, the manual was designed using universal design principles, which governed the production of a printed version, a digital version and an audio version. Through carrying out these tasks, I believe that I have created a learning support manual like no other in Ireland. Furthermore, I believe that my own story and experiences of creating a manual can inspire other tutors to increase relations with their peers. Through this increased contact, I, like Cahill (2007) and Sligo IT (2009), hope that we can create a more collaborative approach to support and reduce the need to work in isolation;

“While funding programmes in recent years have brought some welcome focus to collaboration between HEIs, little progress has been made in establishing and

transparently sharing strategic targets aligned to national policy objectives. If we are to maximise our capacity, reduce duplication of resources and optimise the scholarship and skills that are available from the national pool in higher education, rationalisation of core activities and higher levels of collaboration are essential.”

(Sligo IT, 2009, p3)

In an effort to initiate this type of collaborative relationship with other institutions, I recalled in chapter six how I asked Dawn Duffin from IT Blanchardstown to review my learning support manual. Through this meeting, I received some critical feedback on the printed version of the manual which I later used to make the online version more accessible to Dyslexic readers. Perhaps more interesting, however, was Dawn’s suggestion that her own college would explore the use of Wiziq (a virtual classroom) and Robobraille (Text-to-speech converter). I take these comments as evidence that my own support manual could help other institutions to develop new support resources. In support of this localised diffusion, I believe that the invitation extended to me to present my experiences of using Robobraille at the *12th International Conference on Computers Helping People with Special Needs* suggests that my work is considered by my peers to be an example of innovation and good practice. This conference is to be held in July of 2010 and my presentation will focus on how I have used Robobraille as a tool to help all students become more effective learners in National College of Ireland (ICCHP, 2010).

Applying mixed methods to self-study action research: Combining self-study methodology with neo-positivism

As a reflective practitioner who enjoys philosophy and the writings of early psychologists, I have always wanted to write using the first person and to describe how my research made me think and feel. Yet as a psychologist who uses standardised attainment tests, such as the Wiatt-II-T to ‘screen for dyslexia’ (Harcourt Assessment, 2005), I have been trained to rely on percentiles and standard scores to determine whether there is an underlying literacy difficulty present within a student. Having this training, I cannot completely deny the logic of positivist/empiricist paradigms, which unfortunately consider self-study to be narcissistic and unsystematic (Johnston, 2006). Caught then in the middle of a paradigm war which has raged for over three decades (Gage, 1989, House 1994), I chose to take elements from both qualitative and

quantitative paradigms in order to create a more universally acceptable and reflective research thesis:

“At this time, the paradigm debates have primary relevance within the history of social science philosophy because many active theorists and researchers have adopted the tenets of paradigm relativism, or the use of whatever philosophical/methodological approach works for the particular research problem under study”

(Tashakkori and Teddlie, 1998, p5)

Through the use of this paradigm relativism, I have developed a living educational theory of what I know about my role as a learning support tutor. I have created three principles of student-centred learning support, which I have used to frame improvements to my pedagogy and resources. As a reflective practitioner, I have learned from others who have used the self-study approach (Cahill, 2007, Farren, 2006 and Hartog, 2004) and hope that I can now offer other tutors and researchers an insight into how mixed methodologies can be applied within their own research. Lastly, I hope that I can add my own thesis to those listed on Jean McNiffs’ website (www.jeanmcniff.com) as well as contribute to the Educational Journal of Living Theories (Ejolts, 2010).

(7.5) How will I modify my ideas, learning and practices?

Perhaps the most important feature of action research is the awareness that improvement is a fluid process, requiring a cyclical reflection. In this work, I have attempted to use action research as a way to pragmatically solve problems, to improve upon areas which I felt needed to become more student-centred. As an exercise in self-improvement, my core goal was to create a service which I believed was student-centred by using technology to increase connectivity, by gaining new knowledge about relevant pedagogies and by creating resources that are based on national and international best practices. As a way to evaluate this improvement, I gathered student opinion, critical feedback from friends and self-reflected on my efforts. Through these mechanisms, I concluded that my service is greatly improved upon and is well received by both my peers and my students. However, as the nature of action research is cyclical and fluid, my living education theory will continue to evolve as I modify my ideas, learning and practices. In terms of my future research plans then, I intend to carry out the following activities:

- Carry out a four year study of learning styles in National College of Ireland
- Develop a national learning support manual with other Higher Education institutes
- Create a Student Symposium in National College of Ireland
- Develop an accredited learning module in National College of Ireland

Carry out a four year study of learning styles in National College of Ireland

Building on my present knowledge about how people learn, I hope to further develop the use of learning styles in National College of Ireland. Drawing on the suggestions of my critical friends and on the literature (Coffield et al., 2004, Papanikolaou et al. 2006, Cook, 1997, Stice, 1987, Kolb, 1981), I aim to explore two related areas. Firstly, I wish to explore whether learning style results can be used as an initial predictor of academic success in first year. In order to carry out this investigation I will need to identify each student's learning profile and compare that profile against the expected skills of the course they are currently registered on. This area of research will follow the assumption that some personality and learning types are suited to certain roles. For example a caring and reflective person may be more suited to nursing than to marketing (Kolb, 1981). Secondly, I am interested in discovering whether students do become more 'well rounded' learners as a result of their time spent in tertiary education. This second parameter has emerged through internal discussions in my college and through discussions with critical friends. I hope that this research will in some way help to address the validity concerns of learning style tests (Coffield et al., 2004) and illustrate that students can succeed in courses which did not match their original learning style results.

Develop a national learning support manual with other Higher Education institutes

In the hope of building new relations with other Higher Education institutes I have submitted an open-course (free) version of my support manual 'Effective Learning in Higher Education' to the National Digital Learning Repository (<http://www.ndlr.ie>). In order to obtain feedback and inspire further collaboration, I have also invited other learning support tutors (who I have met) to review the manual and/or contribute to future editions, which I hope to edit. I believe that this activity can further standardise

learning support resources in Ireland and reduce the need to develop individual learning support manuals. In support of this standardisation process, I also believe that my manual could help support tutors within Further Education. In an effort to explore this theory, I asked one FETAC college director to review the manual and identify whether his college would like to adopt any of the initiatives or resources for their own students:

Fra: michael.goldrick@ncirl.ie [mailto:michael.goldrick@ncirl.ie]

Hi Jonathan,

Here is a draft PDF of the learning support manual, it has not been designed as of yet but all the links in the PDF to the tools should work if clicked on. In the final draft the academic writing section could be aimed at all students in further and higher education, not just NCI.

Let me know what ye think.

Kind regards,
Mike

In reply to this e-mail, the director of this college highlighted that they would be most interested in adopting my learning support manual for their own students:

Hi Michael.

Read the document. This is an excellent piece of work. I think it could be expanded over time. Let me know when the final version is ready. We certainly will be interested in adopting it for our learners.

Thanks

Jonathan

I believe that through the development of further links within Higher and Further Education, as well as in industry, a standardised and collaborative manual could be developed and made freely available to all lifelong learners.

Create a student symposium in National College of Ireland

Having identified that some students require help with presentation skills and group work, I have decided to explore ways in which to foster the development of interpersonal skills. As these are very much 'hands-on' skills, I will need to develop

practical support sessions, where all students can learn to become more confident and assertive team members and learn how to become more confident presenters. As a means to develop these interpersonal skills, I aim to create a Student Symposium (Davis, 2005), which I believe will offer all students a chance to develop their debating and presenting skills in a relaxed and stimulating environment. I envision that these symposiums could be documented in an annual staff/student publications journal, similar to that of IT Blanchardstown (ITB, 2009). This particular project is exciting for me as I want to re-introduce the role of philosophy into education. More specifically, I would like to develop the role of logic, critical thinking and dyadic argument in National College of Ireland. I believe, like Kreeft, (2004, p ix), that this venture could help develop more effective learners in Higher Education:

“Once upon a time in Middle-Earth, two things were different: (1) most students learned “the old logic,” and (2) they could think, read, write, organize, and argue much better, at a younger age, and more naturally, than they can today. If you believe these two things are not connected, you probably believe storks bring babies.”

Develop an accredited learning module in National College of Ireland

Perhaps the most ambitious of my future activities surrounds my aspiration to extend my remit in National College of Ireland. Following other universities who have put in place ‘learning to learn’ modules (Manning et al., 2007), I believe that the creation of an ‘*Effective Learning Module*’ could help to motivate students to participate in learning support workshops in National College of Ireland. Directed towards first year students, I imagine this module to be divided into twelve workshops, six per semester.

In semester one, my core focus would be on introducing all first year students (including part-time and off-campus students) to the key survival skills of college life. In particular, I hope to create six lectures that will introduce all students to how people learn, how to study strategically, academic writing, working collaboratively in groups, basic IT skills and how to prepare for exams. Building on these survival skills, I envisage that semester two would introduce students to more advanced writing techniques, show them how to use learning technologies, introduce Mind Training games, offer an insight into learning difficulties and multiple intelligences and offer workshops on reducing exam anxiety.

As an insight into the pedagogy, learning outcomes, delivery and assessment of this envisioned module, I have created a module descriptor which is located in Appendix C of this thesis.

(7.6) Conclusion

Like McDonagh (2007), I am not claiming that this thesis is a ‘what to do book’. Instead, I offer this work as a description of my own journey and invite other tutors to think about their own practices and to consider using similar methods when improving upon their own knowledge and services. As a reflection on my journey, this final chapter has provided the reader with a review of what my concerns were, what I did about these concerns and whether my efforts were successful. Accompanying this review, chapter seven has also presented my belief that I have contributed to new theory and practices in my field. Introducing five areas where I believe I have created new knowledge, chapter seven has highlighted the levels of innovation and collaboration which can arise through self-study research. In discussing the implications of these claims, my final section has attempted to emulate the fluid nature of action research, by looking forward to future research opportunities and collaborative ventures. Introducing four future changes to my own practice, this section reinforces my intention to broaden my remit within National College of Ireland and to become more intrinsically connected with the learning development of students. Yet perhaps what I have not offered up to now has been the impact of my research on myself. As a reflective practitioner, I believe that this is perhaps the last stage of my research and the last stage of my present journey.

It has been five years since I set out to explore the concept of ‘student support’. When I began my research, I approached the need for change with a Foucault or Nietzsche-like critique on educational values, norms, roles and practices. I sought to act as a mirror, reflecting back the lack of support that some Higher Education students experience. Yet as I have journeyed through my research, my approach has changed. Whilst I was originally content with the identification of problems in student support, I quickly came to realise, like Nietzsche (1979), that fault-finding can leave you somewhat isolated from your peers. Learning from his mistakes, I now believe that in order to be content in your own self and to feel like you have truly contributed to new knowledge, it is

important not to stand alone, but to develop links with peers, to collaborate, invent and explore.

Looking back over this five year period, I believe that I have become more reflective, less impulsive and less angry about the policies which underlie our educational processes. In replace of this anger and impulsiveness has come hope. Hope, that I can help shape educational policy, help develop new developments in learning support and add my tale to the growing genre of researchers who embrace the “I”.

Word Count: 72, 230

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Appendices

Appendix A: *Becoming an Effective Learner in Higher Education*

Appendix B: *Conference Paper*

Appendix C: *Effective Learner Module Descriptor*

Appendix D: *Informed consent forms, Permission from College and module results*

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Appendix G: *Raw data for Chi-square analysis*

Appendix H: *Survey Data*

Appendix A: Becoming an Effective Learner

	Recommend this item
Title:	Becoming an Effective Learner
Author/Creator:	Goldrick, Mike
Date:	16-Aug-2010
Description:	Learning support manual with a collection of resources to enhance third level students' academic achievement.
Subject keyword :	Education Training Teachers Study Skills - Third Level Education Learning Support - Third Level Education
Subject keyword (controlled):	Education science Academic teaching and learning support
Intended Level:	9 - Masters degree / Post grad. diploma 8 - Honours bachelors degree / Higher Diploma 7 - Ordinary bachelor degree 6 - Advanced certificate / Higher certificate
URI:	http://hdl.handle.net/10633/5542
Rights:	Some Rights Reserved; Restricted Access NDLR Licence Applies
Appears in Collections:	Education science

To locate resource please click on this link: <http://hdl.handle.net/10633/5542>

Becoming an Effective Learner is currently being used by the following colleges and Universities:

- National College of Ireland
- The College of Progressive Education
- University of Greenwich
- NUI Galway

Appendix B: *Virtually there*: An exploration into virtual learning support

By Mike Goldrick

Introduction

Through the adoption of ever-expanding technology, the scope of education has changed, evolved, to a degree that has seen the distinct dyadic relations between educator and student defusing into a framework which transcends the principles of classical tuition (Becker and Watts, 2006, Marshall, 2002, McSporrán, 2004).

Simply stated, the platform for imparting knowledge and facilitating self-reflection has shot forward, into a realm which has seen the concepts of E-learning, blended learning and virtual learning becoming embedded into the visions for education provision in the 21st century (The Economist Intelligence Unit, 2008, Looney, 2005).

Yet as the technology for educational facilitation becomes more readily available and moves within the shareware and freeware domain (Wiziq, 2009, Dimdim, 2009), the concerns of the modern or perhaps more aptly, the post-modern educator seems to centre upon not the *how*'s of technology, but the *why*.

For instance, one may ask; are virtual learning innovations becoming popular due to the wider needs of students or are they being invested upon simply for the sake of using technology? Perhaps even more importantly, this paper aims to establish whether virtual learning tools can be an effective alternative to face-to-face educational interaction. As then an explorative study into the effectiveness of virtual tuition compared with classical or traditional face-to-face tuition, the goals of the present research are twofold;

1. To increase the student centred experience by incorporating increased flexibility to Learning Support Services.
2. To develop innovative support strategies that are based upon student feedback and national best practices.

The rationale

The rationale behind these questions and goals reflects a contemporary view that innovations to improve student experiences should be education driven, not product driven (Hardy et al, 2009). Building on this, there is ample evidence that suggests that the incorporation of new technology within education must be collectively evaluated, from both an educator and student perspective (Brooks, 2003, McSporrán, 2004)

In attempting to address these issues, the focus of the research documented here surrounds a pilot study into the proposed benefits of a virtual learning support service, established in the National College of Ireland in the academic year 2008-2009. The study itself centres upon student feedback from both part-time and full-time study within NCI at an undergraduate level. As well as this, the study highlights the fluid principles of the change process (Fullan 1993) and the need for collaboration (**Peterson and Brietzke**, 1994), outlining the wider usage of the program throughout NCI's support staff, collaboration with lecturers and future collaboration with the Director of Learning, Teaching, Research and Innovation.

Background

In November 2008, the Learning Support Service designed and implemented a national 'Effective learner workshop' for a part-time course within National College of Ireland (Certificate in First-line Management). This workshop focussed on addressing some of the most common academic difficulties that students tend to experience (academic writing, referencing and exam revision) (Northedge, 2005). As well as this, the workshop aimed to instil within each attending student (a potential of 284) an awareness of their own learning preferences using the VARK learning style system (Fleming, 2001). This one day workshop was later evaluated through the usage of SurveyMonkey software, where 44 student responses were utilised in determining the effectiveness and overall experience of the course itself. Using both qualitative and quantitative elements, the survey design allowed the students to both rate the workshop as well as offer some subjective reasons for this rating. In order to avoid bias or influence on participants, the students were offered the opportunity to avoid identifying themselves, therefore increasing the possibility for impartial feedback.

The feedback data itself, provided a strong insight into the communal feel of the service itself, which was reflected in the quantitative and qualitative sources, where 86.5% of students found the workshop helpful and reported satisfaction of both content and delivery. There were however, some individuals who felt that extra attendance at their college site interfered with their work commitments and in turn negatively affected their experience;

‘Attendance was small and expensive in relation to having to find cover at work to attend workshop’

(NCI Student, 2009)

In an attempt to engage student thoughts on improvement, the survey later asked each respondent whether they felt any further support would be helpful;

‘Maybe specific workshops course related? Part time courses (day released in my case) can feel quite fast paced and extra support would be appreciated’

(NCI Student, 2009)

‘Not at this time, but one to one support next term does seem appealing’

(NCI Student, 2009)

‘We are out in Tallaght and at times feel at bit out of the college but I don’t have any suggestions as how this could be overcome’

(NCI Student, 2009)

From these comments, the Learning Support Service identified an established theme of academic isolation (Becker and Watts, 2006) and a need for increased support and flexibility, which present service schedules could not attend to. Having then a purpose to utilise technology in order to meet the wider needs of students, the Learning Support Tutor began researching possible avenues for virtual support.

The search for a virtual classroom

As a concept, the virtual classroom has been around for quite some time (Forster, 1909), advancing in both scope and sophistication as technology has evolved from early computer systems (Bitzer, Lyman and Easley, 1965), to television ‘teletext/videotext (Muter, Treurniet and Phillips, 1980) to the birth of the internet (Abbate, 2000). As a linked, but independent

concept to the virtual learning environments, or Learning management systems, which have become popular over the last ten years (Leclerc and Normand, 1980, Moodle 2009, Blackboard, 2009), the virtual classroom (VC) itself has a primary function of live interaction between peers and or tutors who can collaborate as they would in a live classroom.

This collaborative interaction is achieved through text, speech and visual communication, which can, depending on the provider, be recorded for wider distribution or revision. Most commonly utilising a virtual whiteboard and hosting the ability to upload a selection of word files, PDF's and PowerPoint files, the basic functions of the virtual classroom is to replicate the passive, reactive and proactive features of a classroom, where a teacher can potentially have an interactive tutorial with a single student or several students simultaneously. Through such innovations, contemporary VC's (Wiziq, 2009, DimDim, 2009, Elluminate, 2009), both freeware and commercial, have successfully realised a concept that was once limited to the realm of science fiction (Aldiss, 1963).

Beyond these basic functions however, many VC's are in the process of developing the potential for desktop sharing, audio and video upload and in-class internet searches, which until now have exclusively been restricted to commercial products.

With these points in mind, the decision to trial a Virtual Learning Support Service in NCI, was grounded by many factors; compatibility with Moodle, price, IT integration issues and digital literacy levels needed. In light of these concerns, the Learning Support Service opted for the product *Wiziq*, as several colleges had debated its merits positively in an online Moodle tread (Gates, 2008) and as a freeware source, the testing regime would not draw upon any of the departments' budget.

Having then no downloads to acquire and of no cost to the student, the Virtual Learning Support Service was initialised as a trial service on the 12/02/2009.

Case study: Evaluating the benefits of a virtual support service in one-to-one sessions and group tutorials

As an evaluation exercise, the Learning support tutor identified two first year courses within NCI from which to begin testing. As a first step, the targeted groups in question (Higher certificate in Business and Higher Certificate in Computing) were introduced to the concept and asked to sign up to the service if they so wished. From these sign-up sheets, twenty four students identified as wanting to take part in the pilot and were given instructions on how to set up an account. As a preliminary pilot to a campus wide service, the decision to exclude Moodle

synchronization was thought to be best practice. This precautionary isolation, offered the benefits of a later dissemination and further championing if proved successful, or if unsuccessful, would avoid mass technology contamination within both faculty and students. This measure was deemed vital, as a negative experience of Wiziq, as a medium, could potentially have a negative impact on future technology initiatives (Newton, 2003, O'Quinn and Corry, 2002).

Having then taken the precaution to test the program both outside NCI using a UCD colleague and gained feedback from a final year computing student in NCI, the service offered its first one-to-one virtual session on 12/02/2009.

One-to-one virtual support in Business Communications

Having established links with the Business Communications lecturer, the Learning Support Tutor was given permission to use lecture slides (Hurley, 2009) and sample questions for the purpose of both live and virtual support coming up to the exam period of semester two. This exam period was inclusive of both in-class tests and end of semester exams.

The first instance of virtual support was scheduled on the 12/02/2009, with a first year student who had expressed a growing concern about an impending Communications exam. Having missed his lecture on the topic itself (Assertiveness and influence), the student in question, had made an attempt to study from home but had encountered difficulties in understanding the topics themselves.

Encountering then a situation where a face-to-face meeting with the student would not be possible (as he remained absent from college), it was suggested (over the phone) that an online collaborative session could be of benefit to his revision strategy.

Using then the virtual classroom, the student was talked through the steps that were needed in order to register for the revision class. Having then completed the registration process and checked his internet connection, an e-mail invitation was sent to his account, which loaded him onto the classroom platform and marked the beginning of the 45 minute session.

The session itself was broken up into two sections;

3. A review of the in-class lecture slides
4. A set of sample exam questions

A Review of the in-class lecture slides

The first stage of this process worked very well; where after some initial voice delay, the experience of the virtual environment proved to be both novel and plainly advantageous for the student. Adapting well to the interaction process, the student felt comfortable in asking questions throughout the presentation phase and was receptive to both encouragement and self-evaluation.

As a visual descriptor, the layout of the program itself can be seen in the following screenshot. At the time of capture, the tutor was presenting the PowerPoint lecture slides to the student and answering any questions that he had in real time. It is worth noting that had the student wished, he could have also typed any query during the presentation, which would indicate some possible extra benefit for students with vocal disabilities.

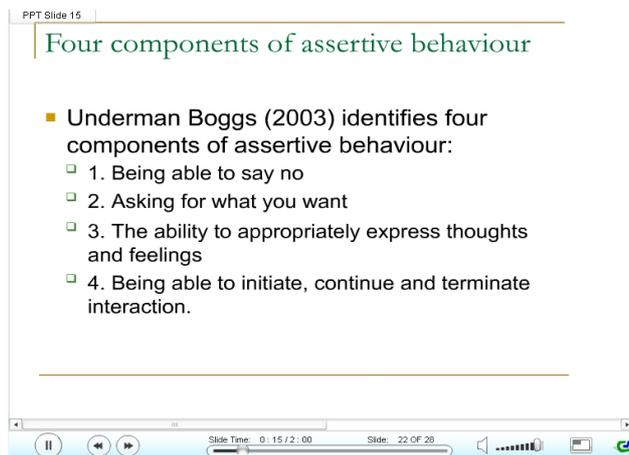


Fig 1.1

As can be seen from the above figure, the content of the lecture slides focussed around a number of contemporary communication theories that the students were expected to both understand and retain. With this task in mind, the student agreed to explore the differences between aggressive and assertive behaviour, in a mock exam scenario which would determine his own understanding of the presented material.

A set of sample exam questions

After going through the PowerPoint presentation, the student and tutor began to formulate example exam questions based on the information at hand. As the test itself was scheduled as a CA class test (worth 25%) the potential questions asked would require concise answers. One example of these questions was;

Mike: ‘What are the four components of assertiveness?’

In attempting to answer this question, the student had some trouble in organising the material into his own words effectively, which in turn required the tutor and student to talk around the concept of assertiveness. Through this dyadic then, the student began to internally process the concept of assertive behaviour in a professional context and ultimately began to form his own understanding of the material.

In order to test this understanding, the student was then asked to write out his answer to the question as he would in a real exam situation. In the next screenshot then, this very process can be seen, where both the student and tutor utilised the communal whiteboard;

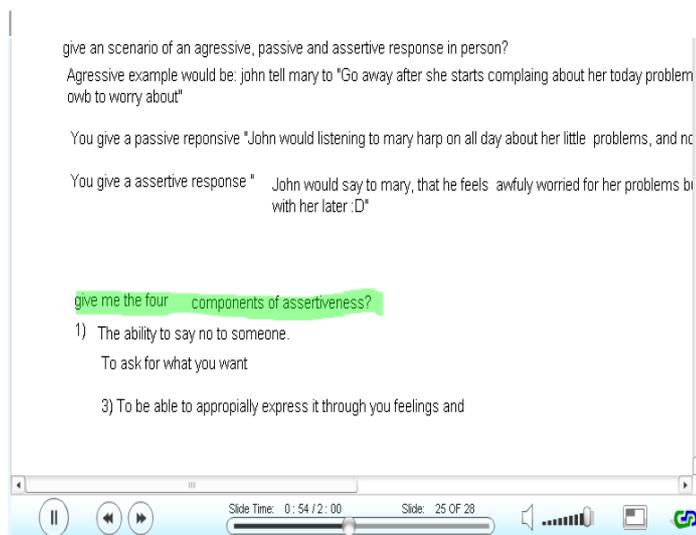


Fig 1.2

As can be seen from Fig 1.2, the whiteboard area is a vital component of the VC’s unique benefit, where the tutor and student can potentially use the same space to both pose questions and construct answers in real time.

In this particular example, the student had some difficulty in organising the question into a concise answer and felt that the required statements were hard to recall;

Student: ‘The last one is kind of hard isn’t it?’

Having explained to him that in a short-question based exam the need for short and accurate sentences was vital for high marks, the tutor instructed the student to practice this style of answering on his own and to get comfortable with composing short answers without the aid of the presentation slides.

Student Feedback

The feedback from this student about his virtual session was very positive and pacified some operational or accessibility concerns that the program might bear;

Student: “Yeah it is helpful, yeah, its’ pretty good, I enjoy it.

Quantitative effectiveness of the support throughout semester two

In order to quantitatively gauge the effectiveness of the session itself, the students’ CA scores were captured and compared with the average mark of the HCC class itself. In comparing then the students’ achieved mark of 54.00% with the overall class average of 58.50%, it can be argued that the virtual workshop, as the only form of support, provided the student with enough structure and guidance to help him reach a grade that was just short of the average band score.

This progress was further tested during the end of year exams where using both three traditional and two virtual support sessions, the student achieved a module grade of 45.5% which was an increase of 5% from his semester one result of 40.5%. In this particular case, the usage of technology increased the potential for the student to attend support sessions, having attended only two traditional sessions in semester one.

It could be argued then, that in this case, the usage of technology widened the field of support, from which there was a positive impact on the students semester performance.

Group support for Organisational behaviour and Business Communications in Semester two

As an intervention to a collective poor performance in first year Organisation Behaviour 1, the Learning Support tutor initiated a set of continuous assessment tests and exam workshops throughout semester two for twenty-two full-time students (three traditional sessions, mirrored by three virtual). For continuous assessments, two workshops were created that married lecture material and sample questions from the lecturer. Both of these workshops incorporated an in-class mock examination using a simplified voting system of hand raising or letter calling to

signal answer choice. This method sought to infuse a 'gaming culture' within the tutorial, a method becoming increasingly popular as a format to increase attention and aid recall (Dror, 2008).

Using this method, one question with three possible answers was posed to the group and each attendant in both live and virtual sessions were asked to raise their hand, call out (or type A, B, C, in a virtual setting) for whichever option they felt was the correct answer. Correct answers were then presented and followed by a virtual applause using PowerPoint sounds, which in many cases added an element of fun and a 'game show' type construction to the support session (as an added tool, Wiziq will develop multiple choice tests for you).

For the final year exam, both traditional and virtual sessions focussed on how to plan and write out answers effectively, offering example introductions, paragraph building advice and time-keeping techniques.

For any student who could not attend either live or virtual sessions, a pre-recorded version of the class was sent to their e-mail accounts. These recordings were also e-mailed to part-time students who could not attend NCI support lectures due to work commitments. It is important to note however, that the recording facility, motivated many students to directly request a link to a pre-recorded version of tutorials, which were then used in connection with traditional sessions.

Quantitative effect of support tutorials

In gauging the effect of the Learning Support Services' blended intervention, the overall semester two results were compared with semester one results. Bearing in mind then the pre-intervention group average of 42%, the results of the post-intervention scores of 56%, indicate a significant overall improvement in semester two, within both the CA's and exam results. This significance of this is reflected in the scores of the twenty-two students who utilised three exam revision workshops in semester two (either live or virtual or both versions), which shows an overall group average increase of 14% in total marks.

Whilst it can't be claimed that improvement in this area was solely due to the intervention, it can be argued that the consistency of improved scores indicates that those students who attended both the live and or virtual sessions, received the same quality of support. What is perhaps a testament to this, has been the consistent requesting of students who have asked for a link to a virtual session, when work or illness prevented their attendance.

~

Marking then a service which is of benefit to both one-to-one and group tutorials, the Virtual Learning Support initiative is one which has great potential, for not only students who need extra tutorial support, but for those who wish to get live essay or project feedback from home.

Conclusion

Since its inception, the concept of a Virtual Support service has grown within NCI, where the Computer Support Tutor has begun testing the same program with noted success and similar critiques. Similar interest has also been shown within the realm of Maths Support, which has in turn, induced a collective will, under the guidance from the Director of Learning, Teaching, Research and Innovation, to further evaluate the virtual realm and test other programs within both the freeware and commercial realms. Having then a shared aim to trial the benefits of such tools as desktop sharing for software tuition and to investigate how virtual classrooms may improve group work for part-time learners, NCI's Virtual Support Tutors envision a future set of services that are unbounded by physical absences and which foster a form of student collaboration that is recordable and observable.

In reflecting then on a time when the prospect of online collaboration was located within the confines of imagination, we can with some finality, state that technology has finally caught up with our most intrepid educational aspirations, we have in short, not only physically made it, but are virtually there.

Appendix C: Module Descriptor



Learning Support Service 2009/2010

Effective Learning Module

Mike Goldrick

Learning Support Tutors⁵

National College of Ireland

Abstract

This Module is concerned with the development of key academic skills in Higher Education. It considers the process of learning as a combination of self-reflection, critical thinking and the construction of personalised learning strategies.

Keywords: Self-reflection, critical thinking, learning strategies

⁵ Address correspondence to Mike Goldrick at michael.goldrick@ncirl.ie

Pedagogic Design

There are two specific learning theories that underline the Effective Learner Module; Constructivism and Behaviourism. Constructivism allows the tutor and students to create a shared understanding of the material and theories in order to insure that each person gains a personalised understanding. The use of Behaviourism ensures that each topic is broken up into manageable chunks of learning and that the importance of each workshop is underpinned with positive reinforcement. The core goals of the module are based on the two historical roots of learning support⁶;

- To help students develop key academic skills, independence, self-reflection, critical thinking and problem solving skills.
- To promote respectful and collaborative relations between students and their peers, tutors and lecturers and to ensure an effective socialisation into academic life.

Learning Outcomes

After completing this course successfully, students should be able to:

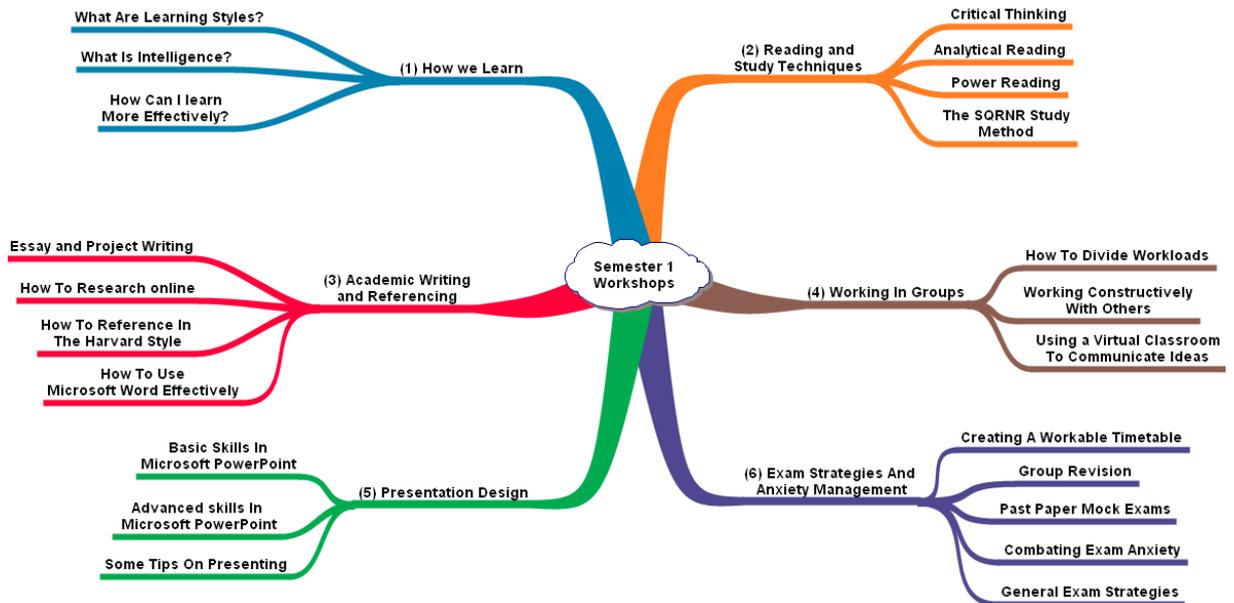
1. Identify their learning styles and preferences
2. Create a tailored learning strategy that suits their styles and preferences
3. Critically read books, website content, papers and journal articles
4. Use learning technologies effectively (Mind maps, audio notes)
5. Write an academic essay
6. Research and reference appropriately
7. Work assertively in groups
8. Construct a PowerPoint presentation
9. Prepare for examinations
10. Improve their working memory
11. Recognise the symptoms of exam anxiety

Course Structure

⁶ Ryan, M.P and Glenn, P.A (2004) What Do First-Year Students Need Most: Learning Strategies Instruction or Academic Socialization? *Journal of College Reading and Learning*, Vol.34. 4-28

Semester One

The module is divided into 12 workshops, 6 per semester. Semester one introduces the key survival skills of college life, introducing how people learn, how to study strategically, academic writing, working collaboratively in groups, basic IT skills and how to prepare for exams.



How we learn

This first workshop presents the idea that each person learns differently. Covering learning styles and preferences as well as learning difficulties, the workshop introduces the benefits of self-reflection and describes how each person can create an individualised learning experience. This workshop is originally introduced during Orientation and the first week of a course.

Reading and study techniques

The second workshop of the series provides an insight into analytical and critical reading, emphasising the importance of evaluating academic theories and models. Offering advice on how to develop practical reading strategies, the workshop also illustrates the benefits of power reading and strategic reading. This workshop is delivered in the second week of a course.

Academic writing and referencing

Workshop three, Academic writing and referencing, introduces students to Higher Education writing, covering the stages of writing a project, how to research online and how to reference in the Harvard style. The workshop also includes how to format an essay and how to check

for errors. Workshop three is originally presented during Orientation and the third week of a course. For lecturers who wish to implement the Plagiarism Committee's essay '*A really useful guide to academic writing*', or alternative first essay, this workshop will also be run in the fourth and fifth weeks of semester one, where students will be given examples of how to structure their first academic essays and avoid plagiarism.

Working in groups

Workshop four, Working in groups, is designed to help students work effectively and collaboratively with their peers. Highlighting the underlying elements of group work, the workshop is designed to increase productivity and decrease conflict and avoidance. This workshop is offered in the sixth week of a course.

Presentation Design

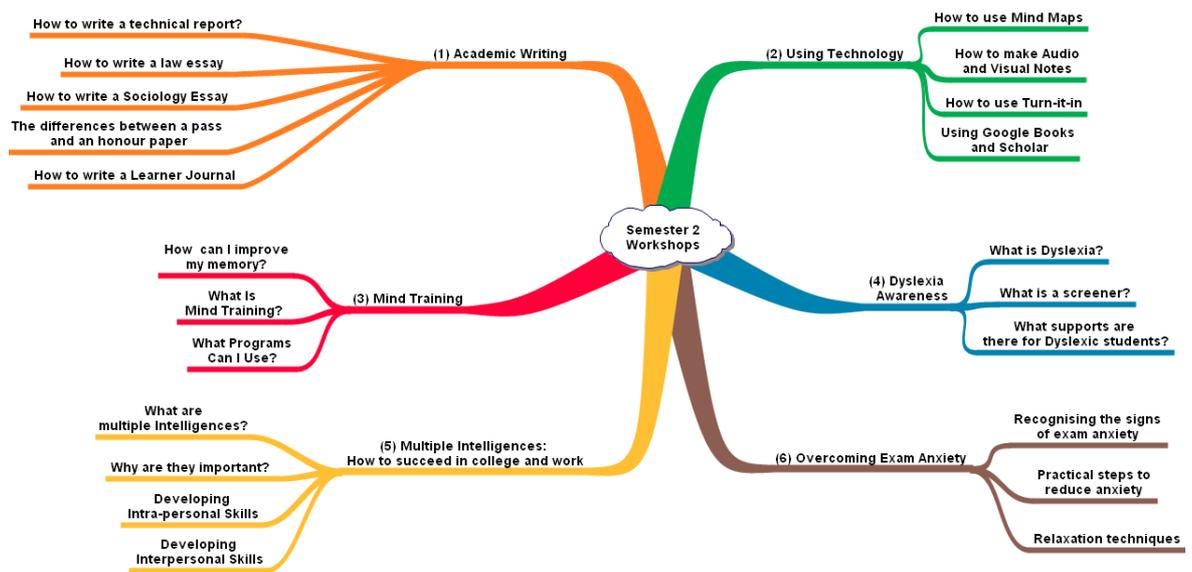
This fifth workshop, as a double workshop, introduces the basic and advanced techniques of creating and delivering a presentation. The first of these will cover the necessary skills to effectively use the Microsoft PowerPoint and Paint, whilst the second will be a practical session, where students will practice delivery styles. This double workshop will be delivered in weeks seven and eight.

Exam Strategies and Anxiety Management

This sixth and last workshop in semester one, focuses on the mechanics of preparing for semester exams. Covering time management, group revision, past paper testing, exam anxiety and practical exam strategies, the workshop aims to support all students through the examination period. This workshop is run on weeks nine of a course.

For any lecturers who wish to request a tailored exam workshop for a particular module, weeks, ten and eleven will be kept free. The remaining weeks in semester one will be reserved for requested mock exams.

Semester Two



Academic writing

This first workshop in semester two, builds upon existing knowledge of semester one by introducing some specialised examples of academic writing. In particular, the workshop will cover tips on how to write a computer technical report, a sociological or political essay, a law essay and a learner journal. The workshop also provides some generic differences between a pass paper and an honour paper. This workshop will be presented in week one and two of semester two (lecturers can also request this particular workshop throughout semester one and two if deemed appropriate).

Using technology

This second workshop is broken up into four practical sessions, where students will be shown how to use learning technologies effectively.

- The first technology workshop will cover, how to use mind maps to aid recall. Two products will be demonstrated and used by students, Freemind and Inspiration.
- The second technology workshop will introduce students to the steps needed in order to produce audio and audiovisual notes.
- The third technology workshop will illustrate to students how ‘Turn-it-in’ is used by lecturers to identify plagiarism. Students will also be shown how to use the program to test their essays for plagiarism before formally handing it in.
- The fourth and last technology workshop will demonstrate to students how to use Google books, My Athens and Google Scholar as research tools. This workshop’s sole purpose is to encourage students to use real academic sources and to avoid soft online sources such as Wikipedia.

These technology workshops are presented in weeks two, three, four and five of semester two (but can be requested at other appropriate times by lecturers or class reps).

Mind training

The third topic in semester two introduces the area of Mind Training. In this workshop, students will be introduced to the benefits of mind training and given an opportunity to set up accounts with an online training website. This workshop is scheduled for week six of semester two.

Dyslexia awareness

The fourth workshop, Dyslexia awareness, illustrates to students what dyslexia is and its impact on academic performance. The workshop will also introduce the screening service provided by the college and what supports can be put in place with a formal diagnosis of dyslexia. This workshop is offered in week seven of semester two but can be requested periodically throughout both semesters.

Multiple intelligences

Workshop five, Multiple intelligences, seeks to widen students understanding of intelligence and to empower learners to become socially and emotionally intelligent. This workshop is broken up into two sessions, interpersonal competences and intrapersonal competences⁷:

- In interpersonal competences, students will demonstrate how their knowledge of themselves has grown by producing a learner journal. This journal will document each student's motivation to be in college and identifying any difficulties to achieving their goals.
- In interpersonal competences, students will demonstrate skills in negotiation, conflict management, assertive behaviour and democratic decision making, by reacting to scripted scenarios in the classroom

These workshops are expected to be run in weeks eight and nine of semester two.

⁷ Tiana, A. (2004) *Developing key competencies in education systems: some lessons from international studies and national experiences*. In Rychen, D.S. & Tiana, A. (Eds.) *Developing key competencies in education: some lessons from international and national experiences*. Geneva:

Overcoming exam anxiety

Building on exam strategies in semester one, this last workshop will help students to strategically prepare for exams and identify the key symptoms of stress. Students will also be introduced to physical exercises and breathing techniques that can reduce the physical symptoms of stress. The workshop will also introduce downloads for positive reinforcement and progressive relaxation. This workshop will be presented in weeks ten and eleven of semester two. Lecturers can also request a module-specific exam preparation workshop in weeks twelve and thirteen. Weeks fourteen and fifteen will be reserved for mock exams.

Delivery

Live Workshops

The Effective Learner module will be delivered primarily through live workshops either in lecture halls or in labs. Each workshop will be scheduled for an hour period.

Virtual Workshops

For students who cannot attend traditional workshop, the service will also provide online sessions. These virtual workshops will be recorded and will be made available for all students.

Office Hours for Individual Support

For students who require individual help with any of the topics covered in semester one and two, the learning support service will operate office hours two days a week. To avail of this supplementary service, students must first attend the Effective Learner workshops.

Assessments

Students who participate in the Effective Learner module will be expected to produce the following;

One Learner Journal

This journal will document the student's reflection on their learning styles, their motivation to attend college and outline any difficulties which may hinder their academic success.

SQRNR summary of chapter

Students will be expected to produce one summary of a lecture or relevant book chapter using the SQRNR method.

Reading Material

Adler, M and Van Doran, C (1972) *How to read a book*. Simon and Schuster. NY.

Buckly, M (2009) *First Cite@NCI*. Dublin. National College of Ireland.

Goldrick, M (2010) *Becoming an Effective Learner*. Dublin. National College of Ireland.

Hughes, W and Lavery, J (2004) *Critical Thinking: An introduction to the basic skills*. 4th Edn. Broadview Press. Ontario.

Appendix D: Informed consent forms and permission letter from college

Declaration of Informed Consent

My name is Mike Goldrick, I am a PhD student with Dublin City University and a Learning Support Tutor with the National College of Ireland. I am carrying out research to explore how Higher Education institutes can continue to support the academic needs of present and future students through developing strategies and relations with other institutions. Particularly of interest to this study are students' evaluations of the 'Effective Learner' Workshop.

Before you agree to participate in this research I would like emphasize that:

- **your participation is entirely voluntary**
- **you are free to refuse to answer any question**
- **you are free to withdraw at any time**

The data received by you may be used to construct research findings but under no circumstances will your name or any identifying characteristics be included in the report without your prior consent.

If you would like a copy of the report you can contact myself on (01) 6599245 or e-mail michael.goldrick@ncirl.ie

You can also check the verification of this research through my supervisor, Dr. James O'Higgins-Norman james.norman@dcu.ie

Thank you for your participation

Consent form from "Sam"

Informed consent form:

My name is Michael Goldrick. I am conducting research on a project entitled "the fashion of normality", a research project aimed to investigate perceivable deficits in the Irish educational system. The drives of the research itself surround an attempt to improve student and staff experiences in the college/school environment

If you would like any further information on this project I can be contacted at
0876989402 or 0494362854.

Thank you for agreeing to take part in this project, before we start I would like to outline the following;

- Your participation is completely voluntary
- You are free to refuse to answer any question
- You are free to withdraw at any time

This interview will be kept strictly confidential and its content will be available only to me. Excerpts from the interview may be included in a report or case-study but under no circumstances will your name or any personal details be included in the report.

 participant signature

12th/1/08 date

If you have any further queries and would like to make contact with my department supervisor in Dublin City University or our governing research council you can feel free to do so at;

James.norman@dcu.ie

Further if you would like a copy of any and all transcripts made I would be happy to send you on a copy if you provide your address details;

Consent form for Dawn Duffin

Informed Consent Declaration

My name is Mike Goldrick, I am a research student with Dublin City University and a Learning Support Tutor with the National College of Ireland. I am carrying out research explore how Higher Education institutes can continue to support the academic needs of present and future students through developing relations with other institutions. Particularly of interest to this study are evaluations to the advice and resources contained within the Effective Learner Workshop and the National Learning Support Manual.

Before you agree to participate in an interview I would like emphasize that:

- your participation is entirely voluntary
- you are free to refuse to answer any question
- you are free to withdraw at any time

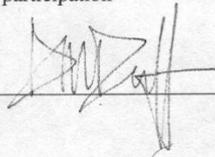
The data received by you may be used to construct research findings but under no circumstances will your name or any identifying characteristics be included in the report without your prior consent.

If you would like a copy of the interview transcript you can contact myself on (01) 6599245 or e-mail Michael.goldrick@ncirl.ie

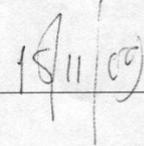
You can also check the verification of this research through my supervisor, Dr. James O'Higgins-Norman James.Norman@dcu.ie

Thank you for your participation

Participants Name



Date



Example Consent form from students

Informed Consent Declaration

My name is Mike Goldrick, I am a research student with Dublin City University and a Learning Support Tutor with the National College of Ireland. I am carrying out research explore how Higher Education institutes can continue to support the academic needs of present and future students through developing relations with other institutions. Particularly of interest to this study are evaluations to the advice and resources contained within the Effective Learner Workshop and the National Learning Support Manual.

Before you agree to participate in an interview I would like emphasize that:

- your participation is entirely voluntary
- you are free to refuse to answer any question
- you are free to withdraw at any time

The data received by you may be used to construct research findings but under no circumstances will your name or any identifying characteristics be included in the report without your prior consent.

If you would like a copy of the interview transcript you can contact myself on (01) 6599245 or e-mail Michael.goldrick@ncirl.ie

You can also check the verification of this research through my supervisor, Dr. James O'Higgins-Norman James.Norman@dcu.ie

Thank you for your participation

Participants Name

A rectangular box with a grey background, used to redact the name of the participant. There are some faint scribbles above the box.

Consent form for “Katie”

Informed Consent Declaration

My name is Mike Goldrick, I am a research student with Dublin City University and a Learning Support Tutor with the National College of Ireland. I am carrying out research explore how Higher Education institutes can continue to support the academic needs of present and future students through developing relations with other institutions. Particularly of interest to this study are evaluations to the advice and resources contained within the Effective Learner Workshop and the National Learning Support Manual.

Before you agree to participate in an interview I would like emphasize that:

- your participation is entirely voluntary
- you are free to refuse to answer any question
- you are free to withdraw at any time

The data received by you may be used to construct research findings but under no circumstances will your name or any identifying characteristics be included in the report without your prior consent.

If you would like a copy of the interview transcript you can contact myself on (01) 6599245 or e-mail Michael.goldrick@ncirl.ie

You can also check the verification of this research through my supervisor, Dr. James O'Higgins-Norman James.Norman@dcu.ie

Thank you for your participation

Participants Name

Permission letter from the National College of Ireland



To Whom it May Concern,

I, Registrar of National College of Ireland, give permission to Michael Goldrick to publish the following articles as part of his PhD submission:

Goldrick, M (2009) Virtually there: An exploration into virtual learning support. Sligo. 12th Annual Conference of the Confederation of Student Services.

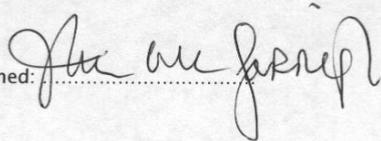
Goldrick, M (2009) Effective Learning in Higher Education. Dublin. National College of Ireland.

As I understand it, Michael's thesis is part of an action research project which aims to increase student-centred practices within his own service and the wider academic community.

I am aware that Michael's research has been presented internally at several occasions and has been peer reviewed at national and international levels. I am also aware that a copy of Michael's work will be made available to the college.

Yours sincerely,

Signed:

A handwritten signature in black ink, appearing to read "John Mc Joseph".

Date:

25 JUNE 2010

Results of learning and teaching module which I took for professional development



PROVISIONAL

Student Transcript Summer Sitting 2009/2010

**MICHAEL GOLDRICK
18 CHERRYMOUNT
CAVAN
CO CAVAN**

**Student Number : 09114254
Course : Associate Student Scheme**

Year 1 of 1

Subjects	Marks (%)
Theories of Learning and Cognition	75
Overall Grade : PASS	

A handwritten signature in cursive script, likely belonging to a member of the Registrar's Office.

For Registrar's Office

June 10 2010

RESULT TABLE

Overall Result	Overall Average (%)
PASS	39 - 100
FAIL	0 - 39

Appendix E: Records of e-mail correspondence

1. Robobraille

Hi Mike

Thanks. Feel free to add a link to RoboBraille in your material.

Kind regards

Lars

Lars Ballieu Christensen

RoboBraille Coordinator

Synscenter Refsnæs - The RoboBraille Consortium

Tel: +45 48 22 10 03 – Mobil: +45 40 32 68 23 - Skype: Ballieu

Mail: lbc@robobraille.org – Web: www.synref.dk & www.robobraille.org

Fra: michael.goldrick@ncirl.ie [mailto:michael.goldrick@ncirl.ie]

Sendt: 24. juni 2009 15:09

Til: contact@robobraille.org

Emne: adding robobraille link to student manual

Dear Sir/Madam,

I am hoping to create a learning resource document for my students with a list of websites to help them become more independent learners.

I would like to add robobraille as a link for the creation of audio-files but

will only do so with your permission?

Kind regards,

Mike

Michael Goldrick
Learning Support Tutor,
Student Services
National College of Ireland
IFSC, Dublin 1.
00353-6599245
michael.goldrick@ncirl.ie

2: Kolb Learning Test

That would be fine Mike. However, please note it only runs in internet explorer, not firefox, safari etc.

It is also worth explaining that the closer to the "centre" you are, the more of a well rounded learner you are, whereas the learning style descriptions assume you are near the edge.

Best wishes

Giles

----- Original Message -----

From: michael.goldrick@ncirl.ie

To: d.g.perryer@bham.ac.uk

Sent: Friday, June 19, 2009 12:16 PM

Subject: Learning Style link

Dear Mr. Perryer,

my name is Mike Goldrick. I am The Learning Support Tutor at National College of Ireland, in Dublin. I have recently tried your Kolb learning style online test and would like to direct my students to your link in the following format;

The Kolb Learning Style Test (Kolb, 1984)

<http://www.dentistry.bham.ac.uk/ecourse/pages/page.asp?pid=1518>

This test from Perryer (2009) will help you determine which type of learning style may suit you best for both your academic and professional career.

I totally understand if this is not possible however, and if not, would be grateful for any advice on how you developed the test?

Kind regards,

Mike

Michael Goldrick

Learning Support Tutor,

Student Services

National College of Ireland

IFSC, Dublin 1.

00353-6599245

michael.goldrick@ncirl.ie

3: BodyMind Programme, University of Limerick

Yes, Michael, by all means, regards,

Declan

From: michael.goldrick@ncirl.ie [mailto:michael.goldrick@ncirl.ie]

Sent: 02 July 2009 09:25

To: Declan.Aherne

Subject: Bodymind Programme link

Hi Declan,

I just wanted to thank you for allowing us to use the Mind-body programme link.

I have used it for some of my students who get very anxious during exam periods and the feedback has been very positive. At the moment I am putting together a support manual for students and would like to put in the following link with your permission;

The BodyMind Relaxation Programme

http://www2.ul.ie/web/WWW/Services/Student_Affairs/Student_Supports/Student_Counselling/Relaxation

These set of progressive relaxation downloads from the University of Limerick can help

reduce stress levels and anxiety during the academic year.

Is this ok by you?

Kind regards,

Mike

Michael Goldrick

Learning Support Tutor,

Student Services

National College of Ireland

IFSC, Dublin 1.

00353-6599245

michael.goldrick@ncirl.ie

4. VARK learning style test

Dear Michael

You may link to the VARK site. You may not place VARK copyright material on your website other than the link and description.

cheers

neil

Neil D Fleming

Designer of the VARK Inventory

50 Idris Road

Christchurch 8005

NEW ZEALAND

www.vark-learn.com

fax (64) 33519939

5: Speed Reading Exercise

Yes, Michael,

you may include contents from our ebook about Speed Reading.

Peter

Peter Shepherd, Founder & Webmaster

Trans4mind - <http://www.trans4mind.com>

"Minds, like parachutes, function better when open"

On 6 Jul 2009, at 9:55 am, michael.goldrick@ncirl.ie wrote:

Dear Mr Sheperd,

My name is Mike Goldrick, I am currently putting together a list of resources for a free learning

support manual for students in higher education in Ireland. Within this manual I am hoping to

create a section on speed reading and have recently found your manual 'The speed reading course'

at

http://web.archive.org/web/20030913231313/www.trans4mind.com/speed_reading/speedread.pdf

Whilst the course itself is listed as a freeware source I thought it best to gain your permission to describe your

preliminary exercises within this new manual. After such descriptions I would place a reference to your work like so

(Shepard and Unsworth-Mitchell, 1997).

Is it possible to do this?

Also I would be delighted if you would like to provide a short quote on the benefits of your exercises.

Kind regards,

Mike

Michael Goldrick

Learning Support Tutor,

Student Services

National College of Ireland

IFSC, Dublin 1.

00353-6599245

michael.goldrick@ncirl.ie

6: Collaboration with Trinity College Dublin

That would be great Michael,

Thanks for that and we would be delighted to have the piece on exam tips put in and the draft manual forwarded to us.

Well done on the manual it must have taken a lot of work and coordination.

Best wishes

Maeve

From: michael.goldrick@ncirl.ie [mailto:michael.goldrick@ncirl.ie]

Sent: 27 July 2009 14:14

To: mgallag9@tcd.ie

Subject: RE: National Resource for Learning Support

Hi Maeve,

to date here is the list of individuals, colleges and projects that have given copyright permission to the project;

Acknowledgements

I would like to formally acknowledge the permission to utilise the following projects within this manual;

ALERT information (2009) Eleanor Robinson, 712-8 Software

The BodyMind Programme (2009) Declan Aherne, University of Limerick

The Free Online Language translator (2009) Worldlingo

The Kolb Learning Style Test (2009) Giles Perryer, University of Birmingham.

The RoboBraille Consortium (2009) Lars Ballieu Christensen, Synscenter Refsnæs.

The Speed Reading Course (1997) Peter Shepard and Gregory Unsworth-Mitchell

The VARK Questionnaire: Copyright Version 7.0 (2006) held by Neil D. Fleming, Christchurch, New Zealand and Charles C. Bonwell, Green Mountain Falls, Colorado 80819 U.S.A.

~

I'd like to place your exam preparation section within Unit 4: Exam revision and anxiety reduction. I would accredit your section

in whatever format you would like; I.e. *Student Learning and Development (2009) Examination tips. Dublin, Trinity College*. Also I would list your team as collaborators to the resource manual.

Would you like me to put the piece in and forward you on a draft of the manual?

Kind regards,

Mike

Michael Goldrick

Learning Support Tutor,

Student Services

National College of Ireland

IFSC, Dublin 1.

00353-6599245

michael.goldrick@ncirl.ie

7: Interest from FETAC Level College in Manual

Hi Michael.

Read the document. This is an excellent piece of work. I think it could be expanded over time. Let me know when the final version is ready. We certainly will be interested in adopting it for our learners.

Thanks

Jonathan

Fra: michael.goldrick@ncirl.ie [mailto:michael.goldrick@ncirl.ie]

Hi Jonathan,

here is a draft PDF of the learning support manual, it has not been designed as of yet but all the links in the PDF to the tools should work if clicked on. In the final draft the academic writing section could be aimed at all students in further and higher education, not just NCI.

Let me know what ye think.

Kind regards,

Mike

8: Dialogue with Giles Perryer about learning styles

Dear Giles,

Mike Goldrick here in NCI Dublin. I hope this e-mail finds you well.

Giles I wonder could you offer me some guidance. I recently gave a results seminar on the benefits and limitations of Learning Styles and Preferences in Higher Education.

For the research I created a class profile for each first year course using your test and the VARK test. This data was then presented to course directors for their review (attached is an example).

One of the key questions raised from this seminar was how faculty could use learning style results when designing lectures and assessments.

I'm just wondering does your faculty experience similar questions when analysing learning results?

Just to let you know, my faculty were most impressed with the test that you were so kind to allow us to link to, so thank you again for helping us to develop this free resource for students.

Best wishes,

Mike

Michael Goldrick

Learning Support Tutor,

Student Services

National College of Ireland

IFSC, Dublin 1.

00353-6599245

michael.goldrick@ncirl.ie

Hi Mike

Very interesting. You have developed this a lot. It would also be interesting to see whether your students have moved towards being "well-rounded learners" by the end of their tertiary education.

For info, the public version of our Kolb Test is now at <http://www.dentaljuce.com/fruit/page.asp?pid=354> - I have modified it to run on all browsers (previously it was internet explorer only)

Our dental students tend to be Convergers and Accommodators, but we have not made the test compulsory for all, so it is a self-selecting sample who do the online test (who may be of a similar learning style that likes this kind of exercise :). Very few divergers (which in my view is a shame in a profession that relies so much on communication skills and seeing others' viewpoints).

Our dental school does not specifically deliver a teaching activity that may suit only one learning style: in the manner you describe we instead present the same material in many different ways, and hopefully at least one of them will "hit home" for each student

Lectures, tutorials, seminars, small-group practical demonstrations, simulations with actors, simulations with mannequins, a huge amount of 1-to-1 teaching, critical self-appraisals, Inquiry & Problem based learning

The ecourse (our e-learning resource) uses didactic material, learning through self assessment, discussion boards and chat rooms (students can elect to be anonymous), podcasts, videos, mind-maps, wish lists, etc. Because the ecourse replicates the conventional L&T, there is no compulsion to use it: it is a self-directed learning resource. (the reverse is not true!!)

I'm glad you found the online test helpful, do keep in touch with further results.

Best wishes

Giles

That's fine Mike, and yes I would be interested to see your resource pack.

Best wishes

Giles

----- Original Message -----

From: michael.goldrick@ncirl.ie

To: [Giles Perryer](#)

Sent: Tuesday, October 20, 2009 5:30 PM

Subject: Re: Learning style and preference advice

Hi Giles,

I will indeed, the re-test idea is fantastic! Could I quote you on that as a recommendation for future research?

The area is close to my heart, as I'm actually trying to finish off my PhD in Education at the minute. My topic focuses around how Higher Education can continue to move toward a personalised learning framework through collaboration.

It's been really exciting so far and I'm hoping to develop a free resource pack in the next few weeks to a national audience so fingers crossed.

If you want I could send it on to you, It would be great to have your input,

Best wishes,

Mike

9: Student asking for feedback on learning style results

Hi Mike

Yep any feedback would be great here are my scores not sure if you need more info.

VARK:

Your scores were:

* Visual: 9

* Aural: 6

* Read/Write: 8

* Kinesthetic: 4

Kolb

Result Assimilator

Thanks

Lisa

10: Contact with Dawn Duffin about learning styles

Dear Michael

Further to our telephone conversation of earlier this week, I have emailed Geraldine Gray re a meeting to discuss our SIF Learning Styles Strand.

I attach the 2008 End of Year Report which describes the first two years of the project as we are in the middle of writing the final report.

You might be interested in the online profiling tool we use as well as the online learning styles questionnaire we have developed.

I will be in touch when Geraldine has responded.

Kind regards

Dawn

Appendix: F: Interviews Plan

Interview plan fro “Sam’s” interview

Q1. Is there a limit to how many years you can have a student Visa?

Q2. In your opinion what changes need to be made in both the application procedure and in student selection?

Interview plan for follow-up interviews:

Question 1: Having accessed both workshop support and one-to-one support, which do you feel is the most effective type of service for you?

Question 2: What skills do you feel you have developed in your first semester?

Question 3: Are there any other areas which you would like more support in?

Interview plan for Dawn’s interview

Question 1: How can learning style tests be used to support learning in Higher education?

Question 2: How can lecturers and tutors be encouraged to become more student-centred?

Question 3: Having read over the ‘Effective Learning’ manual are there any further improvements which you think I could make?

Appendix G: Raw Data

Certificate in First-Line Management Pass rates

Certificate in First-Line Management

ID	Communication	Effective Leader	Interview skills	Role of the manager		%	Pass	Fail
Attended								
1	55	40	55	61	53	53%	1	
2	71	63	77	64	69	69%	1	
3	67	50	81	71	67	67%	1	
4	67	73	72	68	70	70%	1	
5	77	89	72	62	75	75%	1	
6	55	63	58	73	62	62%	1	
7	78	59	73	62	68	68%	1	
8	71	61	78	64	69	69%	1	
9	54	12	64	69	50	50%	1	
10	67	57	65	62	63	63%	1	
11	61	53	60	69	61	61%	1	
12	56	42	70	71	60	60%	1	
13	68	65	68	62	66	66%	1	
14	72	45	74	72	66	66%	1	
15	61	45	77	71	64	64%	1	
16	60	50	71	72	63	63%	1	
17	60	20	70	57	52	52%	1	
18	74	58	77	63	68	68%	1	
19	76	69	80	55	70	70%	1	
20	63	62	63	67	64	64%	1	
21	66	40	80	70	64	64%	1	
22	82	63	80	75	75	75%	1	
23	65	62	65	67	65	65%	1	
24	62	35	79	67	61	61%	1	
Non-Attended								
25	60	35	60	0	39	39%		1
26	61	52	57	72	61	61%	1	
							64% Average	

Certificate in First-Line Management Chi-Square

<u>Observed</u>			
	PASS	FAIL	
ATT	25	0	25
NATT	1	1	2
	26	1	27
<u>Expected</u>			
	PASS	FAIL	
ATT	24.07407407	0.925925926	2
NATT	1.925925926	0.074074074	43
	25	20	45
<u>Chi-Square for Independence</u>			
(Obs-Exp)/Exp	0.035612536	0.925925926	
	0.445156695	11.57407407	
	Chi	12.98076923	
	DF	1	
10%	CRITICAL	2.706	

Raw Data on Higher Cert Group 2008

"Higher Cert Group"

Semester one	Pass	Fail	Semester two	Pass	Fail
36.5		1	59.1	1	
24.5		1	45.6	1	
51.5	1		57.7	1	
59.5	1		53.4	1	
66.8	1		61.1	1	
57.8	1		53.9	1	
57.8	1		71.8	1	
60.5	1		62.1	1	
63	1		59.3	1	
34.5		1	56.5	1	
40	1		61.2	1	
35		1	52.2	1	
37		1	65.2	1	
43.3	1		64.2	1	
51.5	1		57.8	1	
20.5		1	43.8	1	
35.5		1	54	1	
0		1	51.4	1	
35		1	19.5		1
0		1	66.1	1	
32.5		1	45	1	
83.3	1		73.3	1	
42%	11	11	56.10%	21	1

Chi Square for Higher Cert Group 2008

		<u>Observed</u>		
		PASS	FAIL	
ATT		21	1	22
NATT		11	11	22
		32	12	44
		<u>Expected</u>		
		PASS	FAIL	
ATT		16	6	2
NATT		16	6	43
		25	20	45
		Chi-Square for Independence		Null Hypothesis
(Obs-Exp)/Exp		1.5625	4.16666667	
		1.5625	4.16666667	
	Chi	11.45833333		
	DF	1		
10%	CRITICAL	2.706		

CFLM Vrs All Data

Both Schools

Course	My Group	Pass	Fail	Class	Pass	Fail	Significance
BAHBMD	Pass/fail rates	6	0	Pass/fail rates	95	14	0.877463893
BAHHRD1	Pass/fail rates	22	3	Pass/fail rates	44	9	0.323773585
BAHHRD2	Pass/fail rates	3	2	Pass/fail rates	64	22	0.505906514
BSHC1	Pass/fail rates	5	0	Pass/fail rates	48	5	0.516197935
HCBS2	Pass/fail rates	36	3	Pass/fail rates	23	11	7.12683655
BAMTB1	Pass/fail rates	4	0	Pass/fail rates	20	10	1.888888889
HCC1	Pass/fail rates	3	0	Pass/fail rates	39	3	0.229591837
CFLMNC1	Pass/fail rates	25	0	Pass/fail rates	1	1	12.98076923
	Total	104	8		334	75	8.226975856

School of Bus	Pass	Fail	Class	Pass	Fail	Significance	
BAHBMD	Pass/fail rates	6	0	Pass/fail rates	95	14	0.877463893
BAHHRD1	Pass/fail rates	22	3	Pass/fail rates	44	9	0.323773585
BAHHRD2	Pass/fail rates	3	2	Pass/fail rates	64	22	0.505906514
HCBS2	Pass/fail rates	36	3	Pass/fail rates	23	11	7.12683655
CFLMNC1	Pass/fail rates	25	0	Pass/fail rates	1	1	12.98076923
	Total	92	8		227	57	7.66285259

School of Com	Pass	Fail	Class	Pass	Fail	Significance	
HCC1	Pass/fail rates	3	0	Pass/fail rates	39	3	0.229591837
BAMTB1	Pass/fail rates	4	0	Pass/fail rates	20	10	1.888888889
BSHC1	Pass/fail rates	5	0	Pass/fail rates	48	5	0.516197935
HCCE1	Pass/fail rates	29	3	Pass/fail rates	9	10	
	Total	41	3		116	28	3.901766795

School	Significance level (<1)	Significant/Not Significant
School of Business	8.226975856	Significant
School of Computing	3.901766795	Significant

School Chi-squares

School of Business

<u>Observed</u>			
	PASS	FAIL	
ATT	92	8	100
NATT	227	57	284
	319	65	384

<u>Expected</u>			
	PASS	FAIL	
ATT	83.07291667	16.92708333	2
NATT	235.9270833	48.07291667	43
	25	20	45

Chi-Square for Independence		Null Hypothesis
(Obs-Exp)/Exp	0.959311651	4.70800641
	0.337785793	1.657748736
	Chi	7.66285259
	DF	1
10%	CRITICAL	2.706

School of Computing

<u>Observed</u>			
	PASS	FAIL	
ATT	41	3	44
NATT	116	28	144
	157	31	188

<u>Expected</u>			
	PASS	FAIL	
ATT	36.74468085	7.255319149	2
NATT	120.2553191	23.74468085	43
	25	20	45

Chi-Square for Independence		Null Hypothesis
(Obs-Exp)/Exp	0.492798975	2.495788357
	0.150577465	0.762601998
	Chi	3.901766795
	DF	1
10%	CRITICAL	2.706

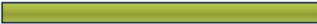
Appendix H: Survey Data

2009 Survey

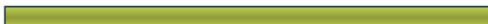
Response Summary

Total Started Survey: 56
Total Completed Survey: 56 (100%)

1. Have you ever been in Higher Education before?		Download
		Response Count
		Show replies 56
		answered question 56
		skipped question 0

2. How confident were you about your academic skills before today? (please tick one)		Create Chart	Download
		Response Percent	Response Count
Not confident at all		34.5%	19
Quite confident		63.6%	35
Very confident		1.8%	1
		answered question	55
		skipped question	1

3. Were there any academic areas which you felt unconfident or anxious about?		Download
		Response Count
		Show replies 48
		answered question 48
		skipped question 8

4. In your opinion, has the Workshop provided you with the tools to become a more confident learner?		Create Chart	Download
		Response Percent	Response Count
Yes		98.2%	54
No		1.8%	1
		answered question	55
		skipped question	1

5. Could you offer some reasons for your last response? [Download](#)

	Response Count
--	----------------

[Show replies](#) 22

answered question	22
skipped question	34

6. Are there any academic areas which you would like more support in? [Create Chart](#) [Download](#)

	Response Percent	Response Count
Reading	0.0%	0
essay writing	56.3%	9
research skills	18.8%	3
study skills	12.5%	2
Note-making	12.5%	2
exam revision	31.3%	5
answered question		16
skipped question		40

7. Have you any other comments? [Download](#)

	Response Count
--	----------------

[Show replies](#) 22

answered question	22
skipped question	34

Survey data 2008 Group

Response Summary

Total Started Survey: 44
Total Completed Survey: 43 (97.7%)

2. Did you attend the Effective Learning Day Workshop on November 1st?		Create Chart	Download
		Response Percent	Response Count
Yes		88.4%	38
No		11.6%	5
		answered question	43
		skipped question	1

3. Where did you attend the workshop? (Dublin, Sligo etc)		Download
		Response Count
		Show replies 36
		answered question 36
		skipped question 8

4. Did you find the Workshop useful?		Create Chart	Download
		Response Percent	Response Count
Yes		86.5%	32
No		13.5%	5
		answered question	37
		skipped question	7

5. Could you please rate the workshop by choosing one of the below options?		Create Chart	Download
		Response Percent	Response Count
Very Good		27.0%	10
Good		59.5%	22
Ok		8.1%	3
Poor		2.7%	1
Terrible		2.7%	1
		answered question	37
		skipped question	7

6. Could you please offer some reasons why you gave this grade?		Download
		Response Count
	Show replies	38
	answered question	36
	skipped question	8

7. Is there any further support you feel could be helpful?		Download
		Response Count
	Show replies	25
	answered question	25
	skipped question	19

8. Any other comments?		Download
		Response Count
	Show replies	17
	answered question	17
	skipped question	27