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Abstract

Assessment within higher education is pervasive (Leathwood, 2005). The necessity for marks and grades creates a strong summative assessment environment and can dominate students’ thoughts (Crisp, 2012). However, there is a growing body of evidence suggesting that formative interventions over a learning period can ameliorate improvements in learning and achievement (Macfarlane-Dick, 2006; Gibbs, 2006; Black and Wiliam, 1998). This research project is an action-based investigation of student teachers’ learning and self-efficacy and focuses upon a second year (level 5) cohort studying for a BA (Hons) Primary Education degree with qualified teacher status (QTS).

The evidence of the impact of formative assessment upon performance (Black and Wiliam, 1998; Juwah et al., 2004) provided a theoretical base underpinning my research project. Data on students’ responses to the implementation of a range of Assessment for Learning (AfL) strategies, assessment processes and their self-efficacy were collected by means of questionnaires, semi-structured interviews and analysis of assignment results. The data indicated that interventions such as staggered submission of assignments and changes to tutor pedagogy, impacted upon students’ performance. The largest gains were demonstrated by those achieving the lowest marks, although improvements were noted across the cohort. Changes in self-efficacy were evident and interesting results occurred when investigating sophistication of students’ assessment definitions linked to their performance.

Issues on how best to implement formative assessment strategies within a dominant summative assessment model are central to the project and the thesis concludes with recommendations on how higher education institutions can help create a more ‘assessment literate landscape’.
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**Abbreviations and Acronyms**

AfL  Assessment for Learning
AoL  Assessment of Learning
ARG  Assessment Reform Group
AUTC  Australian Universities Teaching Committee
CETL AfL  The Centre of Excellence for Teaching and Learning
Assessment for Learning
DES  Department of Education and Science
DFC  Dialogic Feedback Cycle
FE  Further Education
HEA  Higher Education Academy
IL  Information Literacy
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Chapter 1

Introduction

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1. **Introduction**

This research was undertaken within a higher education institution in South East Wales. The focus of the research was upon assessment, primarily assessment within higher education, with an emphasis upon supportive, formative models. From my years as a primary school teacher, deputy and head, the assessment process has been of interest to me. Early in my career I noted the possible negative impact assessment procedures could have upon children. My aim, captured in this research, has been to make the assessment process meaningful to learners rather than merely a measure of performance.

The focus of the intervention for this project was assessment for learning (AfL). My initial research question set out to investigate what impact the adoption of introducing a range of AfL principles and practices would have upon students’ learning and self-efficacy. A range of strategies was used including staggered feedback, withholding marks, peer and self-assessment, and sharing assignment examples. The research project not only focused upon the feedback process and students’ engagement with that feedback, which Sambell (2011) believes to have been the focus in higher education, but also I attempted within this work to provide opportunities for student teachers to build their skills through changes to pedagogy, which Sambell (2011) asserts has tended to be more of a focus within compulsory education.

The strengthening body of research relating to AfL practices (Sambell, 2011; Price *et al.*, 2010; Juwah, *et al.*, 2004; Black *et al.*, 2003; Black and Wiliam, 1998) encouraged me to include these practices with initial teacher education and training (ITET) student teachers; initially in 2002-2003 and continually to the completion of this doctorate thesis. It was important to ascertain as
a practitioner whether these principles and practices were more than another set of educational initiatives with little practical use for learners. The research project set out to attempt to see ‘assessment through new lenses’ (Sambell, 2011: 7) and to incorporate more than feedback at the conclusion of a module or semester, but to offer ‘different forms of feedback from tutors and others during a module’ (11), through strategies such as informal peer support. From my early investigations emerged this doctorate research project.

It was also felt that, if the introduction of elements of AfL within an ITET programme succeeded, there may be implications, through dissemination, for other programmes within my institution. It could also add to the growing body of research focusing upon AfL and its benefits for learners.

I would suggest that the results of this research have implications for assessment within higher education and although, as in any lengthy project, aspects of the process could have been improved, I believe that it is a useful and effective piece of action research that could offer pathways towards an appropriate assessment landscape within higher education. There would need to be further investigations into the issues with a larger sample, in addition, extending the scope of the work to research the impacts upon students outside of ITET would be beneficial (see section 6.6).

1.1 Identifying the problem

As a head teacher of a primary school in the late 1980s and early 1990s (see Chapter 2, section 2.1.1) I became interested in alternative forms of formative assessment processes, ironically at a time when government policy was moving towards a more summative, standardised form of
testing pupils’ achievement. However, over the past decade, particularly since the publication of Black and Wiliam’s review in 1998, great strides have been made in compulsory education to link more closely the assessment process to the learning and teaching cycle (Daugherty, 2008).

On moving into higher education, my interest in assessment procedures grew, influenced by the belief that ‘assessment is crucial to any area of academic endeavour’ (Jenkins, 2010: 566), in fact Brown (2004) asserts that ‘assessment is the most important thing we can do to help our students learn’ (2004: 81). I soon realised that the implementation of formative assessment strategies in higher education, set within a dominant summative assessment environment, was infinitely more complex than within a primary school setting. The assertion that summative assessments dominate students’ thoughts would seem an accurate evaluation (Crisp, 2012); however, there is a growing body of evidence to suggest that timely formative interventions during a learning period can impact significantly upon performance (Nicol and Macfarlane-Dick, 2006). In fact Boud and Falchikov (2007) go as far as to suggest that we adjust assessment processes and realign them in order to make learning the main aim.

The barriers within higher education that mitigate against such developments are numerous, and include issues such as: students’ previous experiences with assessment in compulsory education (Murtagh, 2010); the need for degree classifications within higher education institutions, increasing students numbers in higher education (Gibbs, 2006) and tutor and student perceptions of the assessment process. These issues and others are explored further in chapter two (Maclellan, 2004; Greer, 2001; Maclellan, 2001; Davies, 1994). The use of innovative forms of assessment and feedback is growing within higher education (Handley & Williams,
2011; Taras, 2002) and a strong body of evidence relating to formative assessment practices is beginning to offer alternative assessment paradigms within higher education. As Sambell (2011) argues, when discussing assessment within Higher Education, there has been ‘an over-emphasis on the purpose of certification’ and she goes on to assert that ‘the formative purposes of assessment have been obscured’ (2011: 6). However, innovation within assessment, especially at university level, does come with risks and Carless (2007) warns that this risk-taking can produce relatively low rewards. He purports that there is a need for high levels of trust between those involved in the assessment process in order for more alternative forms of assessment to succeed.

It is within this climate of change that this doctorate research emerged, looking to establish how formative assessment strategies could be incorporated within a higher education programme in order to influence student learning.

1.2 Establishing working definitions

During this thesis the terms ‘formative assessment’, ‘summative assessment’, ‘assessment for learning’ (AfL) and ‘assessment of learning’ (AoL) will be used frequently and it is prudent to provide working definitions of them.

There are two main forms of assessment undertaken within schools and higher education institutions, these being summative assessment and formative assessment. The former is a measure of a learner’s achievement at the end of a learning period and, although it has the potential to provide feedback to the learner, Cook (2007) believes that this potential is limited. However, there are some who see a use for summative assessment as a formative tool (Black et
More recently the term Assessment of Learning (AoL) has been used in place of summative assessment. It is a summing up of an individual's achievement over a period of learning, which could be a recognised qualification or a tutor devised assessment.

Formative assessment or AfL, however, is recognised as a vital component to support the learning process.

This mode of assessment is an on-going process, which provides information to the teacher who can then offer suitable learning opportunities. It should also empower the pupil or student by providing a way to narrow the gap between where he is now and where he wishes to be in the future.

(Cook, 2007:123)

There are a number of other terms used to describe these two forms of assessment. High stakes assessment is used regularly in place of summative assessment and Knight (2002) discusses ‘feedout’ and ‘feedback’ functions relating to summative and formative assessments. Other authors prefer ‘peer tutoring’ to mean formative assessment and ‘peer assessment’ as summative assessment (Woolhouse, 1999). However, for the purposes of consistency within this thesis, formative assessment and AfL will be seen as interchangeable as will summative assessment and AoL.

1.3 Why do we assess?

Leathwood (2005) questions the role of assessment within higher education and relates what she sees as a ‘bureaucratic game’ that she feels bears ‘little relation to learning’ (2005: 309). She goes on to describe some assessments as being based upon ‘minutiae of pedantic and reductionist competence-based criteria’ (2005:309). This philosophical debate as to whether assessment processes should exist within a learning and teaching cycle and that they may
impair learning is less of a focus for my research as I have taken a more pragmatic approach. I begin with the premise that assessment within higher education is here to stay and therefore working to improve assessment processes for students in order to enhance learning is my aim. Yet, if successful in my aim, the idea that assessment procedures impair learning may be countered by my efforts to make the assessment process an integral part of the learning process.

There are very few occasions within our education and working lives when we are not being assessed for some reason. It may come through job interviews, gaining new qualifications, staff appraisal, acquiring new skills and a myriad of other purposes. For those being assessed, the results of those assessments can have a major influence on life choices and those experiences of being assessed can shape learners’ perceptions of the assessment process. In fact Leathwood (2005) identifies how low grades can have ‘de-motivational potential’ for students causing ‘anger and hurt’ (2005: 309). It is this acceptance that assessment is pervasive in our lives that drove me to study this phenomenon within higher education. For those delivering assessments, the design of them is crucial as it may influence how the students respond to the assessment requirements, whether they perceive them as relevant to their learning and whether the assessments are likely to encourage a positive learning orientation or a surface approach to learning by the students. Race, Brown and Smith (2005) recognise the importance of assessment design as it can ‘maximise student motivation, and prompt their efforts’ (2005: 6).
A great deal of recent work within the field of assessment has been produced by the Assessment Reform Group (ARG). It was established in 1988, and although it went through a name change and personnel changes, according to Gardner it, ‘doggedly pursued the agenda of improving assessment in all its forms’ (2007:5). Although the group no longer exists, its influence has been felt within both compulsory and higher education. The definition it provides for AfL encapsulates the on-going nature of formative assessment, being

the process of seeking and interpreting evidence for use by learners and their teachers to decide where the learners are in their learning, where they need to go, and how best to get there.

(Assessment Reform Group, 2002:2)

This definition is encapsulated within the influential publication by Black and Wiliam (1998).

Within higher education, the Centre for Excellence in Teaching and Learning in Assessment for Learning (CETL AfL), based at Northumbria University, was awarded CETL status by the Higher Education Funding Council in England in 2005 and has contributed significantly to the continuing development of research into models of AfL within universities. The creation of an assessment landscape, where students feel part of the assessment process, rather than perceiving assessment as being a necessary evil to endure, was one of the main driving forces for developing my research project. Sambell (2011) acknowledges that this ‘relational process’ takes time to establish and ‘is dialogic, and is integral to the whole process of learning and teaching’ (2011: 5).
1.4 Spotlight on Formative Assessment

In 1998 Black and Wiliam published the results of a survey of over 250 pieces of research linked to formative assessment. They set out to discover whether there was:

- Evidence that improving formative assessment raises standards;

- Evidence that there is room for improvement;

- Evidence about how to improve formative assessment.

Their findings indicated a resounding ‘yes’ to each of their initial questions. On considering whether improved formative assessment can raise standards, Black, et al. (2003) believe that ‘very significant learning gains might be achievable’ (2003: 9). The question posed in the review by Black and Wiliam (1998) on whether there was room for improvement highlighted three barriers to improvement. The first being teachers’ assessment methods that were ineffective in moving pupils’ learning forward. Methods of marking were identified as the second problem as teachers’ use of grades and marks tended to create competition between pupils rather than assist individuals to make improvements. Their third finding related to feedback and how this can demotivate pupils and have a negative effect upon their self-esteem and self-efficacy in completing a task. The third question asked by the authors was linked to evidence on how to improve formative assessment. Their belief was that although there was a range of ideas available to teachers the need for ‘living examples’ on how teachers could implement AfL successfully was paramount. This led to a programme for teachers to implement in a structured
way with support from the authors. Innovative practices became part of the teachers’ armoury and the findings confirmed the initial belief propounded in 1998 (Black, et al., 2002).

The main body of research into the impact of AfL grew mainly through compulsory education, however, the need to review and adapt present higher education practices is recognised (Price et al., 2010; Beaumont et al., 2008; Juwah, et al., 2004; Torrance, 2004,) and a considerable research base is developing linked to formative assessment practices within higher education. The results of Black and Wiliam’s survey highlighted positive benefits when using formative assessment strategies upon learning and achievement at every level of education (Juwah, et al., 2004) and these benefits have been supported by research within the higher education sector (Gibbs, 2006; Nicol and Macfarlane-Dick, 2006).

1.5 Initial indications from early Investigations

This present professional doctorate research project emerged from my early involvement in implementing AfL strategies within a higher education degree module. The module that became the focus of my early research and subsequently my doctorate research was compulsory for all students in the second year cohort (level 5) of the BA (Hons) Primary Education degree, and the aims of the module linked closely to the students' experiences during their school placement. The module content addressed many of the key professional and pedagogical skills of primary teachers, for example, planning, classroom organisation, management of pupil behaviour, learning theories, teaching methods and the assessment of pupils’ learning. The principles of AfL formed part of this module's content, and, as the module leader, being responsible for its construction and delivery, I believed that it was important to
model the best practice in the pedagogy used by the tutors. Because of this, during the academic year 2002-2003 some AfL practices were built into the assessment of the module. As the cohort of students were student teachers on an Initial Teacher and Education Training (ITET) course part of their pedagogical training involved the understanding and subsequent use of AfL principles within their primary school placements, it was felt that an approach of scaffolding the strategies through experience would aid their own professional development, an idea supported by Tillema and Smith (2009).

During that early work in the academic year 2002-2003 the assessment element of the education module was adjusted to reflect more closely the AfL philosophy of offering formative feedback before the final submission of work. Originally the assignment entailed the completion of three reflective reports, of approximately 1,000 words, which would be based upon aspects of primary pedagogy, and all three were submitted at the end of the module, a practice of assignment submission that is, I would suggest, prevalent in most higher education institutions. In order to reflect more closely the AfL practice of giving formative feedback, tutors received the first reflective report four weeks into the module. Students only received formative comments from tutors, even though a mark had been awarded; this was not shared with them. This mirrored one of the principles of AfL encapsulated by Gibbs, ‘Any feedback that focuses on an individual’s overall performance (in the form of a mark or grade), rather than on their individual learning, detracts from learning.’ (Gibbs, 2006: 27). Even as early as 1987 the Task Group on Assessment and Testing (TGAT) identified that the role of feed forward ‘is diminished if the assessment … is designed to produce only a single overall score’ (DES, 1987, para.33). What the tutors did in my early investigations was provide focused and structured
feedback on the students’ work. They identified strengths but also offered specific targets for improvement. The emphasis for the tutor feedback was upon how well the individual student had achieved against the assignment criteria, as Black and Wiliam (1998) believe that students can only make progress if they understand the criteria, can have some sort of ownership of the aims of the work and can engage in assessing their own progress. It was hoped that this initial formative feedback would assist the students in completing their next two reflective reports, reflecting the words of Race, Brown and Smith (2005: 5), ‘the more detailed the feedback we provide, the greater is the likelihood that students will have opportunities for further development’.

The first reflective report was submitted in November 2002 marked and returned to students the following session in order to support them in completing their second reflective report. When marking their second reflective reports a significant improvement was noticed by all tutors. In fact, on comparing the marks at the end of the module, a significant overall mean gain of eight marks across the cohort emerged between the first reflective report and the second report (Cook, 2007).

Although the evidence was limited, the results seemed to suggest that certain assessment principles of AfL could contribute to improved performance and learning in a higher education context, even within a dominant summative assessment need.
1.6 Research Rationale and Aims

It was from these early investigations into the impact of AfL within higher education that this present doctorate study developed. The idea that such a simple intervention as staggered feedback during a module could ameliorate students’ understanding and performance made a lasting impression on me and other colleagues.

The research base relating to the use of AfL within higher education was less well developed at the time of my initial interest compared to that of compulsory aged school-based research. Therefore, this opportunity to investigate the introduction of further AfL strategies seemed timely, especially in the light of the assertion by Torrance (2004) that more should be done to ‘explore how assessment policies which underpin rather than undermine lifelong learning ambitions can be developed’. However, there has been a growing interest and focus upon assessment in higher education, which has been led, in the main, by the CETL, the Higher Education Academy (HEA), The Assessment Reform Group (ARG), and also in Wales by a number of Welsh Government (WG) and UK government’s initiatives (Campbell & Norton, 2007). These developments within education across all sectors indicate a possible sea-change relating to assessment.

The research question therefore was how can the implementation of a number AfL principles within a higher education context impact upon the quality of learning and teaching; as well as the standards achieved by students and their self-efficacy. My desire was to investigate the potential of including AfL principles within a traditional assessment model and to aim at making a range of improvements to the assessment process in order to aid student learning.
It began with the premise that AfL principles can have a beneficial effect upon student performance (Sambell, 2011; Nicol and Macfarlane-Dick, 2006; Black and Wiliam, 1998) but the research aimed to go further in order to investigate students teachers’ understanding of assessment and their perceptions of the use of AfL principles within a higher education module. Within the overall aim of the research a number of research sub-questions were considered:

- How can the introduction of AfL strategies impact upon students’ learning beliefs?
- How can the use of formative feedback linked to the module assignment impact upon the quality of students’ work?
- Do students perceive peer and self-assessment as beneficial when undertaking a piece of academic writing?
- How can the pedagogy of tutor delivery help develop self-efficacious students?

1.7 Approaches and methodology

The interactive nature of teaching and learning and the fact that I would be the tutor to the student teachers as well as researcher, whilst undertaking the research led me to consider two possible methodologies for this project, ‘The case study Approach’ and ‘The Action Research Cycle’. It became apparent early in my reading that the nature of the action-research model would be the most appropriate approach and would provide an ideal framework for my initial interests to develop and for the inquiry to deepen.
Baumfield et al. (2008) provide a model (figure 1) that encapsulates the dynamics of the action research cycle. It is significant that they place ‘intention’ at the top of the triangle as they believe that ‘the enquiry, the burning question, the personal interest, is the key to the development of the research engaged professional’ (2008: 7).

The need for constructing a conceptual model or framework in which to develop this research was recognised early on in the project. The principles of AfL can be employed at all levels of education and the conceptual model that provided the most appropriate model with a higher education focus was found in the work of Juwah et al. (2004) (see section 2.3). A further influential model was the ‘3P Model’ (Biggs, 2003). The elements of Biggs’ model (figure 2) linked closely to the assessment debate and I adapted the model to represent the influences upon the assessment process within higher education (see chapter 2, figure 4). This provided a point of reference for subsequent discussions.
1.8 Research agenda

The research followed a model of action-research described by Cohen, Manion and Morrison (2007) whereby modifications were made, based upon analysis of feedback and the resultant model was implemented with the following year’s cohort of students. These results were also analysed in order to work towards a conceptual, transferrable assessment model.

Approximately eighty students made up the Year two BA (Ed) cohort over the period of this research project, and their opinions were central to the investigation. The research was carried out over a two year period (2008-2010) and included the use of questionnaires, semi-structured interviews and analysis of marks. Both qualitative and quantitative methods were used to collect and analyse the data and triangulation was achieved through using three forms of data collection.
1.9 Overview of the thesis

Table 1 identifies the timeline for this research project and indicates the relevant terminology used.

1.9.1 The research question: Based upon the my previous work in this field of assessment in higher education, for this doctorate research I aimed to extend the focus so that as well as adjusting the assessment process within a module, I would investigate the implementation of AfL strategies as an integral part of the tutor pedagogy, and evaluate their impact. In order to make meaningful assessment changes they need to be mirrored by pedagogical change, a point emphasised by James, who asserts that ‘The alignment of assessment with learning, teaching and content knowledge is a basis for claims for the validity of assessment,’ (2006:47). This was indentified early in this research, in fact it was seen as influential within the early investigations (described in section 1.5), as changes of delivery by tutors would have implications for gauging effective formative assessment. In fact the recognition of how important the tutor can be within the assessment debate is explored by a number of researchers, (Sambell, 2011; Tang and Harrison 2011; Bailey, Richard and Garner, 2010; Beaumont et al., 2007) and is an important element of this research project.

I undertook an extensive study of the relevant literature and research which offered a context in which to develop this project. The literature review has been updated regularly over the period of this research project and its influence has contributed to my continued analysis of my research results in the light of emerging new research/evidence.
Formulating the research question

2008

An extensive review of available literature was undertaken and the area for research was identified.

Pilot questionnaire 2008/9

Used with a selection of students and support team.

Cycle 1. Work undertaken 2008/9

Included questionnaire and feedback on process; implementation of AfL strategies within the module. (24 student teachers agreed to participate).

Cycle 2. Work undertaken 2009/10

Pre and post questionnaires; assessment definitions; semi-structured interviews and implementation of AfL strategies within the module. (45 student teachers agreed to participate).

Analysis and presentation

Of research results 2010/11

A critical analysis of the results and their significance to the original research sub-questions.

Table 1. Research project time line

1.9.2 Pilot questionnaire 2008/9: The pilot questionnaire was offered to both students and members of the doctorate support team. Some amendments were made to its content before delivering it to the student teachers.

1.9.3 Cycle 1 2008/9: This was a significant period as it marked the beginning of the data collection process. Twenty four students from a cohort of seventy eight agreed to participate in the research. The first cycle questionnaire sought to collect data relating to how useful the
students had found the AfL strategies that had been introduced over the module. The questionnaire also sought their opinions relating to how these strategies had advanced their learning, if at all. It was also intended to explore how confident the student teachers were in completing an academic piece of work.

1.9.4 Cycle 2 2009/10: Using the results from the first cycle of the action research, changes were made to the questionnaire. A pre and post questionnaire was administered to forty five students. Second cycle questionnaire 1 looked to measure self-efficacy at the start of the module along with the student teachers’ understanding of assessment. The second questionnaire again measured self-efficacy, but did so at the end of the module, and questionnaire also measured students’ responses to their experiences of AfL during the module. It was important for this research that there were two points of measuring self-efficacy in order to measure any changes relating to the research intervention.

1.9.5 Analysis and presentation: This stage of the cycle entailed a comprehensive review and analysis of the data, including quantitative and qualitative approaches. This phase of the research project attempted to answer the original research sub-questions and from this a number of recommendations emerged from the conclusion.

1.10 Ethical considerations

As I would be inviting student teachers to take part in this project, I had to consider important ethical considerations. The BERA (2004) guidelines were used for this research project and although new guidelines in 2011 have been published, at the design stage of this project the only available guidelines were those from 2004. The chosen form of methodology, ‘Action
Research’ entails making changes through tutor intervention, it was important to ensure that the professional development and personal well-being of the student teachers were not affected in any way through their participation. The elements of the research requiring students’ input were the questionnaire and the semi-structured interviews. The marks gained by the cohort over the module would be subject to tutor analysis. Therefore agreement to participate was based upon undertaking the questionnaires, for a self-selecting group to undertake semi-structured interviews and for the analysis of the marks. Students agreeing to participate were invited to complete questionnaires at the beginning of the module and at the end once all marks had been returned to them. It was important to respect that students may feel vulnerable completing questionnaires before receiving their final marks, even so, students were given the right to withdraw at any time during the research project.

The student teachers’ experiences were paramount to the study and in order to deal with any potential risks, all students in the cohort were assured that their participation was purely voluntary and that non-participants would not be disadvantaged.

The next chapter reviews the extensive body of literature and research surrounding the issues linked to the focus of this doctorate research.
Chapter 2: Review of Literature

2.1.1 Contextualising the assessment debate
2.1.2 Assessment and compulsory education
2.1.3 Changes in the Welsh assessment landscape
2.2 Assessment – ‘The Gatekeeper’ of standards?
2.2.1 Deep or surface learning orientation
2.2.2 Marks, grades and formative feedback
2.2.3 Learning beliefs
2.2.4 Student numbers
2.2.5 Student motivation
2.2.6 The ‘how’ and ‘why’ of assessment
2.3 A formative assessment model
2.3.1 Facilitating the development of self-assessment (reflection) and peer dialogue
2.3.2 Help clarify good performance
2.3.3 Provides opportunities to close the gap
2.3.4 Delivering high quality information to students
2.3.5 Encourages positive motivational beliefs and self-esteem.
2.3.6 Provides information to teachers/tutors
2.4 AfL and theoretical influences
2.5 Pedagogic Change
2.6 Self-concept, self-esteem and self-efficacy
2.7 Implications for this research
2.0 Review of Literature

2.1.1 Contextualising the Assessment Debate

The overall aim of the doctorate research was to analyse the implementation of a range of AfL principles within a higher education context and gauge the impact upon the quality of learning and teaching; the standards achieved by students and the impact of AfL upon students' self-efficacy. This review will investigate the issues surrounding the assessment debate and its relevance to this research.

As bastions of learning, should universities aim to educate in order to offer personal and intellectual growth where fundamental changes occur within a person’s learning or are they designed to enhance a student’s measurable skill performance or knowledge performance? Within this debate lies the impact of the assessment procedures and how significant an influence they can impart upon students’ models of learning.

The relationship between assessment and learning and the power of assessment to impact upon the quality of learning has been discussed extensively within higher education (Sambell, 2011; Beaumont et al., 2008; Nicol and Macfarlane-Dck, 2006; Gibbs, 2006; Maclellan, 2001; Ramsden, 1997). In fact Race, Brown and Smith assert that for students, assessment has become ‘more than ever the driving force for their learning’ (2005: x). I have always been interested in this relationship, although the development of a greater understanding of the tensions between assessment and learning became more relevant towards the end of the 1980s when I was appointed as a primary head teacher. That period saw the introduction of the National Curriculum and also the implementation of the Statutory Assessment Tasks (SATs). Experiencing first-hand the pressures and stress that the administration of these SATs had on
myself, members of staff and the pupils instilled in me a desire to explore ways in which learners could evidence understanding and learning without the pressure of summative testing. As my career moved into higher education, it was interesting to note that, although the age of the learners had changed, the issues linked to assessment had not.

The debate relating to assessment in higher education is a complex one and has multifarious elements, one of these being the relationship between the student and tutor and the feedback and feedforward that occurs between them, which is crucial to the success or otherwise of the assessment practices. This research project grew from my early attempts to implement a more formative learning environment within a dominant summative assessment culture (see section 1.5).

It would seem likely that at some stage in our lives we will undertake formal assessments. The probability is that these assessments will predominantly manifest themselves as tests and examinations and may have a negative impact upon the learning experience (ARG, 2002). Connor (1991) however, believes that by returning to the Latin influence upon the term educational assessment; assidere (to sit beside) and educere (to lead out), it can offer a much improved interpretation of the assessment process. The dynamics of the interaction leads to a two way process which brings out learners’ potential by allowing them ample and varied opportunities to demonstrate understanding. Higher education faces the problem of how assessment is viewed by both students and other interested parties and how to make clear the importance of involving the learner within the teaching, learning and assessing cycle, which is central to AfL and thus to my research.
Authors have sought to define assessment for many years. Knight (1995) views assessment as a moral activity and that what we value in our society or culture is reflected in what we choose to assess and how we undertake the process. Arends (1998) provides a more pragmatic definition as a form of gathering information through formal testing or informally through observation or interaction. However, since the publication of Black and Wiliam’s survey (1998) the emphasis upon formative assessment processes seems to have gathered pace.

Black and Wiliam’s (1998) review analysed 250 pieces of research linked to formative assessment which ‘generated momentum for work in this field’ (Black and Wiliam, 2006: 12). The review, supported by quantitative data from other research projects, linked learning gains to innovative assessment approaches. The common denominator within all of these studies was the enhanced formative assessment features.

Within the higher education context, the development of a formative approach within a dominant summative tradition is, to say the least, challenging. In fact Maclellan asserts that,

...however much we might want to be primarily concerned with the diagnosis and support of student learning, the reality is that assessment in higher education is not confined to instructional improvement.

(Maclellan, 2004 :313)

2.1.2 Assessment and compulsory education

Although this doctorate research focuses upon assessment within higher education, it should be acknowledged that had the debate relating to assessment and learning within compulsory education has been influential and that debate may not have gained the higher profile it enjoys at present in higher education. I do not intend to dwell overly upon its development in
compulsory education, however, an acknowledgement to its growth would help place the higher education debate in context.

The Education Reform Act of 1988 began the process of a statutory national curriculum for England and Wales. It was recognised that an assessment strategy for this new curriculum would be required and in 1987 the responsibility for this was given to Professor Paul Black and The National Curriculum Task Group for Assessment and Testing (TGAT). The report appeared in 1987 and caused a great deal of concern amongst teachers due to the intention of testing children at various stages of their education and within all disciplines that made up the new national curriculum. Interestingly, although there was initial criticism of the report, aspects of it did encourage a more formative approach to the assessment procedure.

Promoting children’s learning is the principal aim of school. Assessment lies at the heart of this process. It can provide a framework in which educational objectives may be set and pupils’ progress charted and expressed. It can yield a basis for planning the next educational step in response to children’s needs.

(DES,1987: paragraph 3).

It is significant that Black went on to co-author the publication, Inside the Black Box (1998), an influential paper in the upsurge of interest in formative assessment approaches over the last decade.

2.1.3 Changes in the Welsh Assessment Landscape

Since devolution in Wales in 1999, The Welsh Assembly Government (WAG) has been slowly implementing its own philosophy of education with significant changes being made that have not been mirrored within England. The Education Act of 2002 allowed the then Minister for
Education, Lifelong Learning and Skills, Jane Davidson, the scope to determine the curriculum and assessment procedures for state schools. In 2001 Davidson had already announced plans to abolish National Curriculum standardised tests at key stage 1 within Wales and by 2002 she had come under pressure, especially from teaching organisations, to discontinue testing for 7 and 14 year olds and to rely upon teacher assessments. At the time there was a feeling that this would end formal testing in Wales; however, Davidson was adamant that this would not be the case. She clarified this by insisting that the use of teacher assessment would be an integral form of assessment rather than peripheral to the children’s learning. This was a more enlightened approach, some may feel, to assessment procedures than those witnessed in England, where at the time of writing, are still undertaking statutory Standardised Assessment Tests (SATs) at key stage 2, even though there seems to be a strong professional opinion against such testing.

Daugherty was given the task of reviewing arrangements for assessment in Wales and interestingly he commented later that he felt that the review was not driven by any party politics but ‘by the Minister’s need to signal that she would give serious consideration to radical changes to a statutory assessment system that had been designed in England’ (Daugherty, 2008: 77). One of the main recommendations that came from this review related to AfL. The Final Report (Daugherty, 2004) believed that AfL should form a central feature within assessment development in Wales with Daugherty accepting that AfL ‘had increasingly permeated policy and practice in the UK’ (2008: 81). Interestingly, the Wales Government Education Minister, Leighton Andrews, seems to be steering policy towards a more summative assessment model, with testing for each year group being suggested. This would seem to indicate a return to SATs by another name, although this has been denied by the minister.
2.2 Assessment – ‘The Gatekeeper’ of Standards?

The review thus far has outlined some of the issues surrounding the development of formative assessment and although this research project is embedded firmly within the formative assessment approach, it is important to explore the literature surrounding the formative/summative debate and the possible barriers to effective formative assessment within higher education.

Wilbrink (1997) highlights the longevity of some of the higher education assessment traditions and the entrenched views that seem to pervade higher education thinking linked to assessment.

Indeed, the university as an institution is one of the oldest of the western world, and university examinations are as old as the universities of Bologna and Paris.

(Wilbrink, 1997:2)

Harlen (2006) believes that we have had summative forms of assessment for centuries, which does not necessarily make it right, yet formative assessment, that has a distinct purpose of assessment, is far more recent. However, she goes on to contend that when we use the terms formative assessment and summative assessment the assumption is that they are different. She claims that, ‘This is not the case; what matters is how the information is used’ (2006:104), the difference being that assessment with a formative purpose informs future teaching and learning, whereas assessment with a summative purpose provides a record of achievement that can be reported to parents, governing bodies, local authorities, prospective employers and inspecting bodies such as Estyn and Ofsted. This would seem to suggest a blurring of the
boundaries between formative and summative assessment (Harlen, 2006; Maxwell, 2004). Harlen goes on to assert that, ‘the formative/summative distinction itself is not helpful and that we should simply strive for “good assessment”’ (2006: 115).

Therefore assessment within higher education faces the major issue of relating learning to appropriate and effective assessment practices, confounded by what Dreissen and Van der Vleuten see as students’ reluctance to engage always in the educational goals but only ‘define educational success as success in the assessment programme’ (Dreissen and Van der Vleuten 2000:239). The challenge seems to be how the assessment can enable learning to take place, rather than merely measuring it.

Joughin (2010) in his paper relating to three influential and much quoted pieces of research from the 1960s and 1970s linked to assessment accepts that ‘the belief that summative assessment drives students’ learning is widespread, long-standing and deeply held in higher education circles’ (2010: 335). Implementing effective assessments would seem to be less to do with the format of the chosen assessment but more to do with the ‘cognitive demands of the assessment task’ (341). Joughin also sees that the attempts to create appropriate assessment tasks, aimed at inducing deep learning orientation, can sometimes have the opposite result. He emphasises that the right choice of assessment is crucial for enhancing student learning and that the view that ‘assessment, on its own, can be used to improve the quality of student learning is not supported by the evidence currently available’ (2010: 342). My doctorate research project did not rely solely upon changes to the assessment format but it also saw changes being made to the pedagogy of the tutors involved. As all tutors were qualified and
experienced teachers the pedagogic and assessment changes were readily accepted and did not mirror the feelings of some new lecturers, as reported by Norton, et al. (2010) who saw the assessment processes as ‘set in stone’ (352).

Knight (2002) asserts that summative assessment within higher education is in disarray. He puts forward several reasons for this judgement.

- Institutions are expected to have learning goals that are far more extensive and complex than mastery of subject matter alone and are now accountable for employability.
- A fuller range of assessment techniques are used, bringing with it substantial practical and theoretical problems, with the comparability and aggregation of performances judged by different assessment methods.
- Public sector services are nowadays marked by low-trust management systems and the assessment is meant to provide evidence to bridge the trust gap.

(Adapted from Knight, 2002:278)

This final point is an interesting one and implies a possible change in social views believing that unless the educational model has an assessment-intensive system then the measurement of ‘value for money’ is impossible. Those able to show efficiency receive further funding those who fail are penalised. However, Knight argues that,

All of these rationalist, low-trust, risk-averse approaches feed on assessment data, and, when it becomes evident that summative assessment systems cannot provide robust performance indicators upon which they depend, then control, accountability and legitimacy are all compromised.

(Knight, 2002: 278)
Black et al. (2003) are far more positive about summative assessment as a way of moving learning forward. Their research identified four practices that teachers found useful in supporting formative assessment, these being questioning, feedback by marking, student peer and self-assessment and, interestingly, the formative use of summative assessments. This last point was achieved by adopting three approaches to utilising teacher devised tests. The learners were given help in preparing for tests by identifying previous weaknesses and insecure understanding. Secondly students were invited to set their own tests along with criteria. Black et al. (2003) assert that this helped the students improve their understanding but also offered insight into the actual assessment process. The third approach was to engage the students in the marking process, developing criteria and marking their peers’ work against those criteria. The problem with these approaches, according to Harlen (2006), is that whereas teachers have full autonomy when dealing with classroom based summative assessments, the national curricula are prescriptive and ‘will not have the detail that enables them to be diagnostic in the degree needed to help specific learning’ (2006:108). Black (1993) mirrored those concerns over external testing where ‘teaching to the test’ can become the norm.

The argument for summative assessment is that any measuring system, in this case assessment, has to be both valid and reliable in order to be credible. The debate surrounding reliability within assessment is a complex yet important one with Carless (2007) propounding that ‘the maintenance of standards is a key role of assessment’ (85).

The use of examinations as a summative assessment tool is strong within higher education. Even though there is an acceptance that cramming information into short-term memory
alongside time constraints during the examination process can offer an advantage to some students (Knight and Yorke, 2003), plus the fact that it does not necessarily promote ‘deep learning’; the examinations as measuring tools still ‘maintain their position as a major form of assessment in higher education’ (Carless, 2007: 82). Pryor and Crossouard (2008) support this view and believe that the cultural and historical context within the UK will constrain ‘the likelihood of any ‘paradigm shift’ in assessment practice’ (2008: 2).

The ever growing diversity of possible degree choices brings with it the questions over reliability within classification of degree. Universities are expected to develop what Knight describes as ‘four dimensions of employability’ (2002:281). These are seen as subject knowledge and understanding, related skills, the creation of self-theories and finally engaging in metacognition. Knight develops his misgivings when trying to assess these complex accomplishments reliably and Stenberg (1997) worries that the predictive validity of such assessments would be suspect and lead to students learning how to succeed in the test rather than gain the above mentioned accomplishments that the tests set out to measure in the first place (Knight, 2002). The problem of grade interpretation also intensifies the difficulties as some courses depend heavily on examinations whilst others use coursework and some use both. Yorke et al. (2000) discovered that better grades were gained by students producing coursework than those sitting examinations. One then faces the problem of differing amounts of work set for varying courses. This is significant for the learning process as Yorke (1999) states that students who feel overworked may use ‘surface’ learning approaches.
Therefore, in order for formative assessment to be successful within the context of higher education it is important that students firstly understand the assessment process (an aspect that was investigated in this doctorate research) and also what it could mean for them and their learning and secondly they need to fully engage with the process. Students are required to be honest and open with their tutors and peers and share ‘the errors in their thinking, but if the results are to be used for grading, they will be highly motivated to conceal those same errors’ (Biggs, 2003:192).

Carless (2007) raises this same issue and suggests that it may be a barrier to effective formative assessment. In his paper on trust and distrust linked to assessment reform, he argues strongly for trust and the development of trust by all stakeholders within the assessment process and that this is a key element for innovative assessment to occur. He suggests a link between high levels of trust between all stakeholders (students, tutors and management) and alternative forms of assessments. The longevity of the use of summative assessment in higher education seems to be based upon the belief that it provides ‘continuity and stability, whilst other more innovative forms of assessment may be seen as risk-taking’ (2007: 82). Such summative approaches can provide the data for those who wish to hold the higher education institutions accountable for their performances, although this does come with certain risks, as suggested by Carless when he states that ‘accountability also risks distorting outcomes-based approaches in that a bureaucratic quest to demonstrate achieved outcomes risks drowning a focus on what really matters: student learning’ (2007: 82).
The following sections investigate the literature relating to the impact of assessment practices upon student learning and the influence of both formative and summative assessments upon their learning orientation and assessment literacy.

2.2.1 Deep or surface learning orientation?

Interestingly, the ‘deep learning’ that Higgins et al. describe as ‘valued so highly in higher education’ has to involve students in ‘active construction of meaning’ (2002:54), which is achieved through formative practices; however, these are not always evident within a predominately summative assessment model. Race, Brown and Smith (2005) ask the question whether the assessment process encourages ‘deep, surface or strategic learning?’ (2005: 9) and how this may impact upon programme design which links closely to the first two of my research sub-questions.

It is not only the assessment practices that need to be considered but also the students’ perception of assessment and the learning process. Greer (2001) believes that rote learning is the norm for those coming into higher education and that they are used to receiving and repeating ideas. The skills necessary to develop into autonomous learners are not in place. Greer outlines research where the result of encouraging students to adopt a more effective learning strategy ‘only increased the tendency towards surface learning’ (2001: 128). Gijbels and Dochy (2006) assert that the assessment methods encourage students to shift between ‘surface memorizing or deep understanding approaches’ (2006: 400) and Davies (1994) sees efforts to create a curriculum that promotes deep approaches to learning pointless, if the assessment procedures that are in place merely encourage a surface approach to learning.
Murtagh (2010) also expresses concern for the students when undertaking transition from school to university, as this can, for some, be ‘stressful and a source of anxiety’ (2010: 406). Beaumont et al. suggest a possible solution through ensuring that ‘a prime aim of the first-year university curriculum should be explicitly to teach students how to become self-directed learners’ (2008: 13). The literature would seem to suggest a strong link between assessment processes and their influence upon students’ learning orientation.

2.2.2 Marks, grades and formative feedback

Hounsell et al. (2008) assert that ‘the provision of guidance and feedback to students has long been acknowledged as an indispensable part of an effective teaching-learning environment in higher education’ (2008: 55). However, Hounsell et al go on to highlight the conflict between a growing interest in formative feedback and a ‘shift in UK higher education towards modularization and semesterisation’ (2008: 56), leading to ‘assessment overload’ towards the end of courses and thus mitigating against any possible benefit from tutor feedback. This could impact upon students’ views of that feedback and with this in mind my research design included early, staggered submission and feedback to reduce the possible negative influences outlined above.

Maclellan (2001), whilst researching students’ and tutors’ perceptions of assessment, discovered that ‘the most frequently endorsed purpose of assessment, ... was to grade/rank student achievement’ (2001:309) by both tutors and students, supported by the research of Beaumont et al., (2008). A second purpose identified by Maclellan was the motivation of learning, although the tutors perceived this as important, students found it motivating only
sometimes. In fact 25% of the student respondents in Maclellan’s study claimed that the assessment was never motivating.

One of the aspects of AfL that can cause conflict between student and tutor is the sharing of marks or grades. By introducing marks and grades Dweck (1999) believes that students will only focus upon passing the test or will put all their efforts into what is termed, ‘performance goals’, rather than ‘learning goals’. This is similar to extrinsic and intrinsic motivations, which will be discussed later in this chapter.

A study was undertaken by Butler (1988) which concluded that when students were offered either marks and formative comments together, marks alone or only formative comments, their interest in learning increased when only formative comments were used. Butler asserted that when given marks, the students merely focused upon the marks and made no attempt to use the comments to improve their work. Nicol and Macfarlane-Dick’s (2006) comments seem to support this assertion, when they state that ‘This phenomenon is also commonly reported by academics in higher education’ (2006:211). Butler (1987) had previously argued that the use of marks and grades encourages students to look at their work in the light of the performances of their peers rather than trying to improve their own efforts against previous personal performances, and to have, what Butler viewed as ‘task involvement’ rather than ‘ego-involvement’. Butler’s findings had a significant impact upon my research as, during the project, students were given only tutor formative feedback for their first reflective report and the mark was withheld, in line with Butler’s findings.
The problem occurs in higher education when a measure is required for the purposes of classification of degree awards. This tension between the desire to provide formative approaches to assessment, whilst still retaining some form of measurement of students’ achievements, was a dominant feature throughout my research project.

2.2.3 Learning beliefs

Maclellan (2001) asserts that ‘the power of assessment to determine the quality of learning has been established for quite some time... concluding that the quality of student learning is as high (or as low) as the cognitive demand level of the assessment tasks’ (2001: 307). How students learn and what motivates them to do so, and to what level, are questions central to the success or otherwise of an educational experience, and this debate links closely to my first research question – How can the introduction of AfL strategies impact upon students’ learning beliefs?

The debate centres on whether the delivery of higher education and particularly the assessment procedures accommodate or promote deep or surface learning. Honkimki et al. state that ‘students using a deep approach try to integrate new information with the knowledge already learnt, try to form an integrated knowledge base and understand the things they are studying’ (2004: 432), whereas students who choose a surface approach to learning are influenced more by extrinsic rather than intrinsic motivations, ‘with the aim of passing examinations’ (2004:432). The surface approach is typified by students memorising details without fully engaging in attempting to construct ‘an integrated knowledge base’. The choice by students to employ a surface approach to learning may be, in part, due to the changes within higher education over the last three decades, and the ways in which larger numbers in higher
education and a more pragmatic view of education as an employment tool by subsequent governments have influenced assessment procedures. Consideration of appropriate forms of assessment may be moving away from the impact upon student learning and pursuing ‘more efficient’ forms of assessment to meet the ‘ever-increasing student numbers’ (Joughin, 2010: 343). Middleton (2000) asks whether the higher education system is being nationalised or ‘marketised’, implying that the growth of numbers in higher education is linked to economic rather than educational factors. Norton (2009) also sees a change occurring in higher education where, ‘More recently, we have been urged to prepare students for employment and to be entrepreneurial in a global market’ (2009: 1).

The literature seems to suggest that students’ perceptions of the assessment process are less than positive. Maclellan (2001: 317) offers a rather negative conclusion to her investigation of tutor and student perceptions of AfL. She writes,

> Overall the student view of assessment is a depressing one. The students do not exploit assessment to improve their learning and, furthermore, appear to have a very underdeveloped conception of what assessment is.

This may be a little unkind to the student body as higher education has undergone significant changes over the past three decades, which have had an impact upon assessment procedures. Winn (2002) sees a link between changes within higher education and wider changes within society and in the economic culture. The 1980s saw many countries looking to higher education as a means to strengthening their positions in the new technological, globalised market place. The role of universities seemed to be moving towards producing a workforce that was capable of competing in a global market; at least, this was the view of governments, including the UK. The conservative government in the 1980s considered that universities were not fulfilling this
role adequately as suggested in the 1985 Green Paper on how higher education should develop in the UK (Department of Education and Science, 1985). Interestingly, ten years on, the National Committee of Inquiry into Higher Education (NCIHE) was given seventeen contextual factors to consider, seven of these referring to the contribution higher education should make to the economy and three to competitiveness within the international context (Winn, 2002).

A major expansion in the numbers attending higher education institutions took place in 1987, driven by the belief that gaining a degree would impact upon students’ futures and their employability. This trend has continued with successive governments encouraging young and mature students into the higher education system. Alongside the growing numbers came growing student/tutor ratios and consequently less time available to tutors to engage with their students’ learning, producing what Beaumont et al., (2008) see as ‘a reduction and possible removal of formative assessment from courses’ (2008: 13). Cook and Leckey suggest that the increase in student numbers will eventually cause problems ‘unless these are acknowledged and solutions properly managed’ (1999: 157). The Dearing Report put forward a view of the aims of higher education,

The world of work is in continual change: individuals will increasingly need to develop new capabilities and to manage their own development and learning throughout life.

(Dearing, 1997: 12)

As Taras suggests, this quotation and other messages that came out of this report expect higher education to be producing autonomous students who can confidently face challenges and develop independently. However, she doubts that this is the case and worse still she propounds that, ‘these qualities are actually being undermined in learners during their time in university’
(2002: 502). Her assertion is that what we value most in higher education, as outlined by Dearing, ‘are being submerged in the procedures and processes that students encounter’ and this she puts squarely at the door of the assessment practices.

2.2.4 Student Numbers

Changes in assessment procedures in order to meet the growing student body were inevitable and this drive to link higher education to the economic growth of the country is why Winn believes that ‘the liberal idea of the pursuit of education for its own sake was increasingly undermined’ (2002: 447). Scott (2005) also notes changes in our higher education system and states that it has ‘become much messier and much fuzzier’ (2005: 68) in recent years, with far more emphasis on markets, with universities having to find their niche within these markets.

On a more institutional level, Maclellan (2008) sees the need for a better balance between tutors’ and students’ endeavours linked to learning. The danger occurs when the students place the responsibility for learning squarely at the door of the tutor. Her research indicated that the students’ overriding wish was that tutors provide ‘easily digestible, immediately obvious ‘theoretical’ views that confirmed extant understanding (however, primitive or prejudiced these might appear to be…’ (2008: 418). This reliance upon the tutor to explain the subject matter fully, provide a range of examples and expound upon arguments and counter-arguments ‘may minimise the students’ need to think’ (2008: 418). Once provided with this information, students would presumably look towards regurgitating it through the assessment processes, particularly if the tutor views that assessment process as merely measuring retention. This worry is shared by Sambell (2011), who identifies the “transmission’ model, or
feedback-as-telling’ which is based upon ‘the tutor dispensing advice, or, perhaps, instructing the student what to do’ (2011: 12). This, she believes, can undermine the development of reflective practice and a true dialogue with the student.

2.2.5 Student Motivation

One could offer the argument to suggest that higher education students may be more motivated to learn than students of compulsory age because they had made a personal choice to undertake further studies at an institution, which in these days is not without financial implications (Watson, 2011). This may well be a rather naive assumption given the complexities of motivation in the context of assessment and learning, plus the fact that there needs to be a distinction made between the motivation to gain qualifications by initially moving into higher education and the adopted work ethic or motivation for learning whilst on the course.

Stiggins (2001) believes that motivation can be described as ‘the engine’ that moves the learning forward. Harlen (2006) goes further in asserting that motivation is vital for life-long learning where circumstances vary and rapidly changing challenges are faced once students leave school or university. Hancock (2007) defines four major approaches of motivation, these being; humanistic, behavioural, cognitive and sociocultural. However, he contends that, although these approaches ‘inform our general understanding of student motivation; they do not address the complete range of variables needed to create and sustain student motivation’ (2007: 216). Because of this there is a drive to improve understanding of motivation within learners as ‘a function of situational variables’ (Hancock, 2007: 216) and one of these, in most educational establishments, is the assessment process.
The nature of motivation and how it can impact upon a student’s model of learning is complex. Extrinsic and intrinsic motivation has been touched on previously in this chapter, but here I feel that it is necessary to outline in more detail their definitions and their impact upon the learning process. In the context of assessment, a student who is extrinsically motivated will be driven by a goal, whether it be an examination or a qualification. As Harlen so eloquently puts it, for an extrinsically motivated learner, ‘learning is a means to an end, not an end in itself.’ (2006: 62). It follows therefore that to be intrinsically motivated, one gains pleasure from acquiring new skills, knowledge and understanding with no other form of reward than the enjoyment of learning. Harlen identifies a possible problem when assuming that all extrinsic motivation is bad and all intrinsic is good, because this belief, ‘ignores the reality of the variety of learning, of learning contexts and goals as learning.’ (2006: 63). Tunstall (2003) propounds that the most significant impact upon motivation is determined by how students attribute success and failure. Weiner (1979, 1994) produced a model of attributions that focuses upon four possible causes to determining levels of motivation – ability, effort, task difficulty and luck. These were the four most common causes identified by people when questioned about motivation linked to what is termed an ‘achievement-related’ task. The two most potent causes were found to be ability and effort. These attributions were discussed in terms of locus of control, which is how a learner perceives whether his or her success is in their own hands and under their control (internal locus) or whether outside influences and conditions control their successes (external locus). Weiner (1979) suggests that ability and effort are linked to an internal locus of control whereas task difficulty and luck fall within an external locus of control. Building on this work, Watkins (2001) outlines the idea of ‘learning orientation’ and ‘performance orientation’ and
one of the challenges facing educational assessment today is how best to develop a strong ‘learning orientation’ within students in higher education and this can be strongly influenced by their own perceptions of the assessment process. However, this can be confounded further by not only general perceptions of the assessment process but varying responses to different forms of assessment initiating different approaches to learning dependent upon the ‘cognitive demand’ of that assessment (Joughin, 2010).

2.2.6 The ‘How’ and ‘Why’ of Assessment

Students’ perceptions of the ‘how’ and ‘why’ of assessment processes impact strongly on the quality of learning, yet the element of assessment is poorly scored in student satisfaction surveys. In my own institution a survey of student and staff expectations in 2008-2009 encapsulated the problem. Whereas students and tutors scored highly that assessment criteria were satisfactory or better (81% and 85% respectively), when it came to opportunities for feedback, tutors scored this highly at 89%, whereas students’ satisfaction with this aspect of the assessment process was 46%. Carless (2006) reveals the dissatisfaction students have with their feedback, which he states lacks the necessary advice for the students on how to make improvements. He goes on to add that the interpretation of feedback is also a problem for students and can impact in a negative way upon student confidence and self-efficacy. A great deal of time and effort on behalf of the tutors is invested in offering feedback for students’ assignments; however, Carless offers his own experiences of students’ desire to receive a mark and ‘not bother to collect marked assignments’ (2006: 220) as, Carless feels, they had no desire to engage with the written feedback offered to them. Work by Higgins (2000) has been adapted
by Carless (2006) to identify three components that can be used to interpret feedback to students, these being discourse, power and emotion. The problem of academic discourse is that students may find difficulty in interpreting exactly what the tutor means. A comment such as ‘you need to have a more cohesive approach to developing the issues...’ may be quite clear in the mind of the tutor but this discourse may not be fully encoded by the recipient. There is also an element of power involved in the process which can be intimidating for those new to higher education. The role can be seen as one of correcting assignments rather than ‘engaging in a debate on them.’ (Carless, 2006: 221). What Carless’ research indicates is a significant difference between how tutors perceive their feedback to students and how the students perceive that same feedback.

For example, 38.4% of teachers thought students were often given detailed feedback which helped them improve their next assignment, whilst only 10.6% of students responded in the same way, and 37.8% of students felt that feedback was rarely followed by action to improve student learning, as opposed to 16.1% of tutors.

(Carless, 2006: 224)

A less pessimistic picture is painted by Greer whose research indicates positive evaluations from students receiving tutor feedback. His results show that 69% of students ‘felt that the feedback helped them with report-writing skills.’ (2001: 133). Although, when scoring the critical evaluation of their work by tutors, the students expressed their worries that the explanations had not been sufficiently clear to aid learning.

The perception that students seek the easiest route to success regarding assessment is challenged by McDowell and Sambell (1999). Their research into ‘students as stakeholders’ in the assessment process revealed a more positive student perception of effective assessment.
They state that ‘the overwhelming student response was that a good assignment should be interesting, challenging and a good vehicle for learning’. They go on to highlight how students were ‘spurred on by developing an inherent interest in the assessment task’ (1999: 110). In fact some of the students identified how examinations can be viewed as ‘poor learning, which you quickly forget’ (1999: 116).

Considering this climate of change in higher education and the complexities of the assessment procedures alongside students’ perceptions of the assessment process outlined in this review, it was important that a conceptual model was developed for this research that could provide a framework for the work to develop. This next section investigates assessment within a theoretical perspective and reviews those theories that were considered influential to this research and expands upon the model offered by Juwah et al. (2004) that influenced my thinking.

2.3 A Formative Assessment Model

Tynjälä (1999) offers a very interesting model depicting the learning process relating to higher education students. I have adapted the model to have a more assessment orientated focus.

It is interesting to note in figure 3 the importance of students’ perceptions of the assessment process and the influences upon these. A student’s previous experiences of assessment may have included the need to memorise and repeat content, what Honkimki et al. describe as ‘the knowledge transmission and reproduction paradigm’ (2004: 433). Another student, in stark contrast to this, may have experienced assessment processes that encourage the development of thinking and a deeper understanding of the area under study. On arriving in university these
perceptions may be reinforced or challenged by the influence of the tutors and their perceived status, an important factor according to Taras (2002), or by the assessment processes employed on the student’s course and the curriculum content. Joughin (2010) seems to support this second point when stating that ‘if assessment acts as a driving force of students’ study, it might be expected that different forms of assessment would affect study in different ways’ (2010: 341). It could be surmised from the model (figure 3) that these perceptions of the assessment procedure could impact significantly upon the models of learning adopted by individual students. In turn their decisions concerning the models of learning may well affect their regulation strategies. Will they be self-regulating or externally regulated and how engaged will they be with the deep processing of the content? What the model suggests is the assessment procedure used by a tutor may only be as good as the students’ perception of assessment in general, and that perception may have a strong influence upon the student’s engagement with the assessment process by impacting upon the model of learning chosen to complete the assignment. Investigating students’ perceptions of the assessment process was an element of this research alongside the implementation of more formative strategies of

Figure 3. Assessment influences upon learning in higher education. (Adapted from Tynjälä, 1999 in Honkimki et al. 2004).
assessment, as endorsed by Sambell (2011) in order to ‘focus on learning and the support of the student achievement rather than simply measurement’ (6).

Another influential conceptual model that impacted upon my thinking was that of Biggs’ (2003) 3P model, see figure 4 below. Although Biggs (2003) discusses learning, I felt that the model reflected issues relating to assessment and its impact upon student learning and tutor pedagogy.

Elements such as previous experience mirror that of Tynjälä’s (1999) adapted model, although the impact of student performance seemed clearer within Biggs’ adapted model. Tutor pedagogy is also highlighted as an influence on student performance and assessment results. It is important that tutors are clear in their own minds as to the purpose of the assessment in order to transmit these beliefs concerning the assessment purposes successfully to the students.

I recognized the importance of this during my design for this project and numerous staff meetings with other tutors allowed for this shared vision to emerge.

Although the previous models provided food for thought, the conceptual model that underpins this research project is offered by Juwha et al. (2004) (see figure 5). Juwha et al.’s (2004)
conceptual model that influenced my research project includes seven principles, these being:-

2. Encourages teacher and peer dialogue around learning.
3. Helps clarify what good performance is (goals, criteria, standards expected).
4. Provides opportunities to close the gap between current and desired performance.
5. Delivers high quality information to students about their learning.
7. Provides information to teachers that can be used to help shape the teaching.

(Juwah, et al., 2004:6)
The principles that make up the conceptual model offered by Juwah et al. (2004) will now be considered in more detail.

### 2.3.1 Facilitating the development of self-assessment (reflection) in learning and encouraging teacher and peer dialogue around learning.

I have combined these two principles as research, predominantly from Sadler, suggests that the participation within peer assessment is almost a prerequisite for effective self-assessment. Sadler also believes that self and peer assessment are crucial for the operation of formative assessment and that it is the teacher’s responsibility to nurture these skills (Sadler, 2010). It is important to distinguish here between peer-marking and peer-assessment. The chosen approach for my research was peer-assessment, encouraging fellow students to act as ‘critical friends’ offering their opinions and listening to how the criteria had been interpreted and met.

One of the main problems facing the implementation of peer-assessment is ‘creating an environment in which students feel safe in commenting on the performances of their fellow students.’ (Berg, et al. 2006:146). This certainly was an issue when undertaking my research as a
number of students were uncomfortable with other students (possibly those they believed were performing at a lower level than themselves) offering feedback on their work. The difficulty for the tutor is to create an atmosphere of mutual support where all levels of ability can gain from the process. In order for this to work students need a clear image of the characteristics of both formative and summative assessment.

Peer assessment requires commitment from both teachers and learners. The suggestion is that if students receive formative tutor comments and are helped to understand and implement these targets, it will assist them in developing the necessary self and peer assessment skills. The benefits of peer assessment for the learner are promoted by a number of researchers (Black, et al., 2003; Berg, et al., 2006), one of the main advantages claimed is that it can improve students’ motivation. The ways in which peers communicate is also cited as a major advantage in that the messages conveyed are done so in language familiar to other students. Interestingly, studies undertaken by Taras within a higher education context seem to suggest that peer-assessment alongside integrated tutor feedback is more beneficial than peer assessment by the students followed by tutor feedback (Taras, 2002, 2003). The former system of tutor feedback alongside self and peer assessment was adopted for my research project based on these findings by Taras.

Although there is a body of research investigating peer assessment within higher education, there seems to be disagreement as to its use. Woolhouse (1999) asserts that peer assessment as a process ‘has been gaining in popularity’ at every level of education (1999: 211), yet Taras believes that ‘student involvement with assessment, whether peer- or self-assessment is still
rare in higher education’ (2002: 503). Taras offers a possible reason for this reluctance to involve students in the assessment process. She believes that the assessment and feedback processes are ‘at the heart of tutor identity’ and thus tutors are unwilling to share them with students. Taras goes as far as to suggest that, ‘Even allowing students participation permits them entry into the bastions of academia’ (2002: 504). This is a rather radical argument, possibly due to the fact that my background is within ITET and all tutors delivering ITET programmes are trained teachers, and to exclude the learner, based purely on reasons of status, or possibly even of power, would seem alien.

These peer assessment skills are important to nurture in our students, emphasised by the research of Kruger and Dunning (1999) who suggest that students have over inflated opinions of their abilities. In their research they found that ‘this overestimation occurs, in part, because people who are unskilled in these domains suffer a dual burden’ (1999: 1121). These two burdens discovered by Kruger and Dunning (1999) are that students make poor judgements and come to incorrect conclusions and secondly this is compounded by the fact that ‘their incompetence robs them of the metacognitive ability to realise it’ (1999: 1121). This underlines the importance of offering peer and self assessment opportunities to students in order to hone these vital cognitive skills.
2.3.2 Helping clarify what good performance is (goals, criteria, standards expected).

This principle was seen as an important element to this research and was prominent within the teaching and learning during the project. Students need to understand what is expected of them and this can be achieved through sharing learning objectives for teaching sessions and ensuring that they fully understand the criteria for any assessment linked to the module of work. Prominent writers in this field of research (Black & Wiliam, 1998; Sadler, 1989) claim that students need clear learning goals in order to progress in their learning, to take some form of ownership of their learning and have an idea of how they are progressing. It is interesting to note that in some cases the students’ perception of those goals can be entirely different to what the tutors sees as important. Norton (1990) noted that when students were invited to put criteria in order of importance they produced different results to those of their teachers. The students focused mainly on content of the work, whereas the teachers ranked the skills of offering argument and counter-argument and engaging in critical analysis more prominently.

The most obvious way to provide students with goals for learning is to provide specific written assignment criteria; however, this system has its critics (Rust et al., 2003; Yorke, 2003) in that the meaning of these assignment criteria may not be obvious to the students and may need unpicking in order to offer a clear way forward. An approach adopted for my research was to offer students examples of previous cohorts’ work. Students were then asked to assess them against the specific criteria. Orsmond et al. (2002) and Sambell (2011) prefer the idea of using exemplars that would allow students to compare their own efforts against what tutors believe to be the required standard for the assignment. However, the case study quoted in Sambell
(2011) seems to describe a range of examples of work within various degree categories, whereas my interpretation of the definition of an exemplar piece of work is one that is ‘fit to be imitated’, which would therefore be a piece of work representing a standard of work a tutor would want the students to emanate, which seems to suggest that Sambell’s case study involved examples of work as opposed to exemplar work. Handley and Williams (2011) also propose the use of exemplar assignments that can be judged against the assignment criteria which, they believe, will encourage ‘deeper engagement with feedback’ that should ‘lead to changes in behaviour or understanding’ (2011: 95). Nicol and Macfarlane-Dick (2006) go even further and suggest a whole range of strategies that can enhance students’ understanding of assignment criteria.

- Provide improved definitions of requirements using carefully constructed criteria sheets and performance-level definitions
- Increase discussion and reflection about the criteria
- Involve students in assessment exercises using defined criteria
- Organise workshops where students in collaboration with the tutor negotiate assessment criteria. (Adapted from Nicol and Macfarlane-Dick, 2006)

2.3.3 Providing opportunities to close the gap between current and desired performance.

This aspect has to be one of the most crucial aspects of AfL and its purpose. In fact for my research project the work of Gibbs and Simpson (2004) influenced the structure of the feedback to the students, whereby a two-stage approach was taken to assignment feedback. One could argue that I took it further and offered a three-way approach where students received tutor
feedback and also peer and self assessment before completing the third reflective report. The idea that students should have opportunities to re-draft and reconsider their work before submission based upon tutor feedback is also propounded by Boud (2000).

This research project required students to respond to tutor devised targets, which were to be used for their next reflective report, whereas Nicol and Macfarlane-Dick assert that if students begin to identify their own targets for improvement, possibly through negotiation with the tutor, it would ‘integrate feedback into the teaching and learning process, and involve the students more actively in the generation and planned use of feedback.’ (2006:214). This idea was influential in redesigning the research project to include self and peer assessment elements for the second reflective report after receiving tutor feedback for the first.

2.3.4 Delivering high quality information to students about their learning.

There is a fine balance to be had between offering constructive feedback to students on their performance against specific assessment criteria that can help them move forward with their learning and a more holistic approach to feedback. Sadler (1983) sees the danger with the former approach that students will begin to view their assignment as a series of mini tasks to achieve rather that what Nicol and Macfarlane-Dick (2006) describe as a more ‘holistic process’ that involves ‘the production of a coherent argument supported by evidence.’ (2006:209). However, what all commentators on this aspect of AfL seem to agree on is the importance of early feedback to students. However, Beaumont et al., (2008) identified distinct differences between students’ experiences in relation to early feedback between their pre-university education and their first year of higher education. In schools and Further Education (FE) one
week turn around was the normal practice whereas in higher education, three to four weeks may pass before written feedback is given to students (Beaumont et al., 2008). During my research project tutors aimed to return written formative comments to the students at the next teaching session. The emphasis upon giving praise for aspects done well alongside constructive criticism is seen as good practice when offering feedback to students. This approach was adopted for my research project as I decided that students would receive recognition for elements of their reports that showed quality and no more than three targets offered as ways forward for their learning. It was important to ensure that the tutors’ comments related to the assignment criteria and that this was made explicit to the students within the feedback.

Tang and Harrison (2011) outline four levels of feedback that could be offered to students, which they developed from the earlier work of Hattie and Timperly (2007). These being:

- Feedback about the task (FT)
- Feedback about processing the task (FP)
- Feedback about self-regulation (FR)
- Feedback about the self as a person (FS)

(Tang and Harrison, 2011: 584)

The suggestion is that most of the feedback focus should be upon the task and processing the task and that only when it is judged that positive influences could impact upon self-efficacy, should tutors focus upon self-regulation (Brookhart, 2008).

Nicol and MacFarlane-Dick describe good quality feedback as,
Information that helps students troubleshoot their own performance and self-correct: that is, it helps students take action to reduce the discrepancy between their intentions and the resulting effects.’

(Nicol and MacFarlane-Dick, 2006:208)

Although literature on higher education feedback is varied in its conclusions as to what constitutes quality external feedback (Nicol and MacFarlane-Dick, 2006), one area of research that seems to be offering insight into external feedback is that undertaken by Gibbs and Simpson (2004) who look at time students spend on task based upon the external feedback received from tutors. Their findings seem to suggest that if students receive regular feedback from their tutors it enables the students to become more proficient at self-regulation of their own progress being an aspect that is highlighted in the model in figure 5 and also in Biggs’ (2004) 3P model (figure 4) which is linked to a deep learning orientation. In fact, if the students’ learning and tutors’ feedback become uncoupled then the environment within which formative feedback thrives, is lost (Tang and Harrison, 2011). Sambell (2011) also emphasises the importance of helping students ‘develop their ideas about feedback’ which is seen as a profitable use of ‘time and energy’ (2011: 5).

What seems consistent within the literature is the acceptance that feedback and learning are inseparable. Taras offers what she terms an ‘evocative metaphor for learning without feedback where it is likened to learning archery in a darkened room.’ (2002: 505).
2.3.5 Encouraging positive motivational beliefs and self-esteem.

This element of the Juwah et al. (2004) model was the most contentious relating to this piece of research. In order to undertake the research in the time-scale available, it was deemed unlikely that the AfL strategies implemented during the module would have sufficient, measurable impact upon self-esteem. Through discussions with my Director of Studies it was decided to investigate students’ self-efficacy when undertaking the module assignment. As self-efficacy is task related the measuring of students’ self-efficacy related to an academic piece of work, would be likely to provide more realistic, reliable and manageable data within the time scale of the research.

Secondly, a strong influence on the adopted conceptual model for this research surrounded whether teachers and tutors are wise to place so much emphasis upon self-esteem, which in the opinions of some, has no significant impact upon academic achievement (Maclellan, 2005; Marsh, 1990; Skaalvik and Hagtvet, 1990; Scheirer and Kraut, 1979). Maclellan argues that ‘More useful constructs would be those of self-concept and self-efficacy; both of which can be related directly to academic achievement.’ (2005:7). This debate is more fully explored in section 2.6 of this chapter.

2.3.6 Providing information to teachers/tutors that can be used to help shape the teaching.

Assessment will provide educators with a range of information concerning the progress of learners, providing cumulative information of students’ levels of understanding. This information can then be used to adapt the delivery by tutors in order to meet the needs of the learners. Nicol and Macfarlane-Dick (2006) describe the use of one minute papers, based on the
work in America by Angelo and Cross (1993). This form of feedback is initiated by questions that are posed at various points during a teaching session such as ‘What was the most important argument in this lecture? What question remains uppermost in your mind now at the end of the teaching session?’ (Nicol and Macfarlane-Dick, 2006: 214). It is claimed that this form of feedback not only provides valuable information to the tutors but can also impact upon students’ meta-cognitive skills, by aiding the students to think in a more holistic manner and to increase their ability in identifying where they feel gaps in their learning and understanding exist (Steadman, 1998). Nicol and Macfarlane-Dick (2006) go on to offer other strategies that may initiate useful feedback to tutors, one being to invite the students to suggest in what form they wish to receive tutor’ feedback on an assignment.

The goal of putting the student at the centre of the learning process in higher education can certainly be promoted through these strategies, and the literature repeatedly asserts this (Mentkowski, 2000; Biggs, 1999; Black and Wiliam, 1998; Bowden and Marton, 1998). Mentkowski seeks a ‘visibly transformed higher education that focuses on student learning and learning-centred educational programs’ (2000: 6). However, the underpinning assessment rationale adopted by tutors and in some cases institutions will inevitably impact on the success or otherwise of formative assessment and feedback upon self-regulated learning.

The importance of how students view themselves as learners and the ways in which assessment procedures may impact upon their learning beliefs is developed in section 2.4.
2.4 AfL and theoretical influences

Formative assessment or AfL has been defined earlier in this chapter but Black and Wiliam (2006) undertake an ambitious task in which they attempt to develop a theory of formative assessment. Interestingly Taras (2007, 2009) questions their success in achieving this aim,

"Despite the title, this chapter does not clarify formative assessment: it situates elements of practice which Black and Wiliam have grouped under the heading ‘formative assessment’, and tries to explain their ‘success’ in improving learning in the classroom within a framework of ‘pedagogy’ which Perrenouds noted was missing. Therefore the 2006 chapter would seem to reply to Perrenoud’s critique,"

(Taras, 2007:364).

However, she does acknowledge their ‘undoubted contribution’ to prioritising learning over assessment. Black and Wiliam, in their attempt to define formative assessment, begin from the standpoint of the classroom being a ‘community of practice’ (Wenger,1998) or a ‘figured world’, meaning ‘a socially and culturally constructed realm of interpretation in which particular characters and actors are recognised, significance is attached to certain acts, and particular outcomes are valued over others’ (Holland et al., 1998:52). However, Black and Wiliam find these frameworks inadequate for interpreting the impact that teachers and learners can have upon the ‘world of the classroom’ (2006:83). They prefer to follow Engestrom’s (1987) framework described as an ‘active system’. Whereas the frameworks of ‘community of change’ and a ‘figured world’ provide a stability, Black and Wiliam argue that the ‘active system’, where tensions and innovations are the norm, provides a more suitable conceptual framework to analyse what takes place within the classroom. This ‘active system’ is made up of two interconnected groups. The ‘sphere of production’ is seen as the first group which constitutes the action that is taken in order to achieve a particular goal. However, Black and Wiliam (2006)
suggest that this is merely ‘the tip of the iceberg’. They go on to outline that the sphere of production has underlying social, cultural and historical elements ‘and these two groups of elements and the dialectic between them together constitute an activity system’ (2006: 83).

Black and Wiliam describe four components that make up their attempt at a theory of formative assessment, these being,

1. Teachers, learners and the subject discipline
2. The teacher’s role and the regulation of learning
3. Feedback and the student-teacher interaction

Their aims seem to be to create not only the embedding of formative assessment within a broader view of pedagogy, but to offer much broader implications for models of learning. Interestingly, they do concede that ‘This may seem to be over-ambitious in attempting a complete theory of pedagogy rather than only that particular aspect of pedagogy which is labelled “formative assessment”’ (2006: 99).

Black and Wiliam’s work on developing a theory of formative assessment and their more all-encompassing theory of learning models has its critics reflected by Taras’ assertion that their theory ‘is inefficient and often contradictory’ (2007: 363). A theory that has a more obvious impact upon learning and the resultant pedagogy of teaching and that also links closely to the principles of AfL is constructivism.

The constructivist philosophy is encapsulated by Twomey Fostnot,

The traditional hierarchy of teacher as the autocratic knower and learner as the unknowing, controlled subject studying to learn what the teacher knows begins to
dissipate as teachers assume more of a facilitator’s role and learners take on more ownership of the ideas.

(Twomey Fostnot, 1999: ix)

Clarke (2003) believes that formative assessment fits well within the constructivist theory of learning where the learner has opportunities to develop and build understanding based upon prior knowledge and learning. Twomey Fostnot (1999) propounds that when teachers adopt a constructivist approach they ‘reject the notions that meaning can be passed on to learners via symbols or transmission, that learners can incorporate exact copies of teachers’ understanding for their own use,’ (1999: ix). What constructivism encourages is a desire in the learner to search for meaning and patterns, ask their own questions rather than those imposed upon them and begin to construct their own models (Twomey Fostnot, 1999).

Hendry et al. (1999) describe a number of key principles, which are fundamental when constructivist philosophy is applied to learning.

- Knowledge exists in the minds of people only; it is a pattern in space and time, like an irregularly waving sheet.
- The meanings or interpretations people give to things depends on their knowledge
- Students create new knowledge in interrelation with, for example, textbooks, lecturers.
- Although students vary in their experiences they will create shared knowledge and reasoning processes because they share common fundamental perceptual knowledge and actions.
• Knowledge is created through perceptions and actions. A person’s knowledge may become unsustainable, or combine to produce a dissipative pattern, in his/her interrelation with the world. This event is typically referred to as ‘conceptual conflict’.

• Creation or the re-attainment of sustainable knowledge is active and requires energy, or correlated ‘mental effort’, and time.

• A final principle is that the creation of knowledge is pleasurable and satisfying.

(Adapted from Hendry et al. (1999: 361)

These principles are very relevant to my research as the aim of AfL is to place the student at the centre of the learning process (Crooks, 1988). The introduction of the AfL principles within the teaching and assessment during the time of my research aimed to create an element of conceptual conflict, it was hoped that it would also reduce anxiety within the students and thus ‘increase their mental effort’ (Hendry et al. 1999: 362).

Constructivism would seem particularly important to student teachers, similar to those students who participated in my research project, as becoming effective teachers requires a clear understanding of their own learning processes (metacognition) which is necessary to avoid what Twomey Fostnot (1996) believes to be a repetition of their own experiences of how they were taught. She asserts that they will ‘tend to teach as they were taught, rather than as they were taught to teach’ (1996: 206). Therefore she advocates that within initial teacher training courses students should be ‘constructing constructivism’, or at least having their traditional views of teaching challenged through the teaching and learning programmes.
A range of strategies have been offered over recent years to enhance learners’ mental models, some of these being regular classroom dialogue, the creation of concept maps and open-ended assignments, all designed to help scaffold their knowledge and understanding (James, 2006). James is not surprised; therefore, that constructivism is closely associated with formative assessment.

2.5 Pedagogic change

Central to the development of AfL in schools and universities is the acceptance that change cannot occur by simply changing or modifying the assessment procedures, it must come through pedagogical innovation alongside assessment reform. This is a sentiment underlined by Taras when she insists that, ‘innovation in assessment is no longer an option in higher education in Britain’ (2002:501). Biggs goes as far as to say that ‘formative assessment is inseparable from teaching’ (Biggs, 2003: 142). Some, however, recommend caution (Maclellan, 2004) due mainly to the need within higher education to produce reliable summative assessment for certification and accountability. Maclellan goes on to warn that, ‘alternative assessment in higher education is not a particularly convincing form of high stakes assessment’ (2004:319). Even considering this cautious approach, the supporting evidence for implementing formative assessment practices is compelling (Sambell, 2011; Beaumont et al., 2007; Nicol & Macfarlane-Dick, 2006; Black et al., 2003; Black & Wiliam, 1998). This belief is summed up succinctly by Nicol & Macfarlane-Dick, ‘if students are to be prepared for learning throughout life, they must be provided with opportunities to develop the capacity to regulate their own learning as they progress through higher education’ (2006:215). Doing nothing should not be an
option, therefore even if the formative processes included within higher education modules may be viewed as ‘low-stakes’, the desire to engage students more fully within the assessment process is crucial to their learning (Sambell, 2011; Beaumont et al., 2007).

2.6 Self-concept, self-esteem and self-efficacy.

I feel that it is important to outline the debate surrounding self-esteem to strengthen my justification for using self-efficacy within my research project. Self-esteem and its links to learning is promoted not only by researchers and authors but also by government bodies. Early within compulsory education it is perceived as important as the Qualifications and Curriculum Development Agency (QCA) in its curriculum guidance for The Foundation Stage in England encourages the development of self-esteem (QCA, 2000:28). The Foundation Phase in Wales also promotes these values, ‘The development of children’s self-image and feelings of self-worth and self-esteem are at the core of this phase’ (WAG, 2008: 4). Maclellan (2005) suggests that self-esteem is being portrayed as you’ve either got it or you haven’t got it and ‘having self-esteem leads to ‘good things’ while not having self-esteem leads to ‘bad things’.’ (2005:7). The terms self-esteem and self-concept seem to be interchangeable (Muijs and Reynolds, 2001). Early definitions described self-concept as our attributes whereas self-esteem was portrayed as the gap between our actual self and that of our ideal self. Writers such as Byrne and Shavelson (1996) see self-concept as a more multi-dimensional construct. Burns (1982) clearly states at the beginning of his book that ‘The terms ‘self-concept’, ‘self-attitudes’ and ‘self-esteem’ will be regarded henceforth as synonymous’ (1982:8). However one defines self-esteem and self-concept, Maclellan (2005) suggests that self-esteem involves making value judgements around
the perceptions we have of ourselves and asserts that ‘it is only if the perception is an important or salient one for the individual that it matters whether the judgement is good or bad.’ (2005:8). In other words, having low self-esteem linked to an aspect of our lives does no psychological damage if that aspect of our lives means little to us (Maclellan, 2005). These attributes that make up how we see ourselves are very personal and subjective interpretations. This evaluative process is constantly evolving and what may provide high self-esteem at a stage in one’s life could be reduced in later life as circumstances change. If children have high self-esteem due to early academic success, this could be changed as they get older and see that other attributes of their peers are valued highly, such as sporting achievements. The weighting therefore, that is attached to their early academic success may be lowered in their eyes as their experiences broaden, so it is not a fixed entity and feedback from social interaction and self-observation impact constantly upon an individual’s approval or disapproval of him or herself.

Interestingly Harlen (2006) relates how the introduction of national testing in England and Wales impacted upon learners’ self-esteem. Prior to national curriculum testing learners’ ‘views of themselves was apparently less affected by their attainments than in the case of the post-national test group’ (2006: 69). The suggestion is that forms of assessment can have a considerable influence upon a learner’s self-esteem, however, what my reading shows is a somewhat confused picture as to the link between self-esteem and learning (Maclellan, 2005).

The significance therefore of this debate between relating to self-esteem for my research is how the students view themselves linked to academic achievement. It is because of the complexity of measuring the self-esteem of the students and the time-scale of my research that
I chose to consider whether the implementation of AfL strategies impacted upon students self-efficacy.

Zimmerman (2000) distinguishes self-efficacy from self-esteem by explaining that self-efficacy ‘measures focus on performance capabilities rather than on personal qualities, such as one’s physical or psychological characteristics’ (2000:83). It is more about how they judge their ability to complete a given task rather than ‘how they feel about themselves in general’ (2000: 83).

Bandura first put forward his theory of self-efficacy in 1977 and he describes it as ‘beliefs in one’s capabilities to organise and execute the courses of action required to produce given attainments’ (1997:3). Bandura goes on to suggest that self-esteem alone is not sufficient for success, high self-efficacy is the key to achieving well (Bandura, 1997). Becoming a self-efficacious student does not necessarily mean that the student is capable of achieving a given task but that he or she believes that they are able to succeed regardless of his or her capabilities (Williams, 2009; Evers et al., 2002). Sander (2009) identifies possible problems when students’ level of confidence varies and can reduce during a university course and Kruger and Dunning (1999) worry that overestimation of perceived ability in some students does not always reflect their true ability. Any alterations made to this perceived efficacy will derive from performance accomplishments and will depend upon a number of factors, such as effort spent on the task, the perceived difficulty of the task and the amount of external support given to the learner. Cakir and Alici (2009) suggest that once self-efficacy beliefs are in place they are very difficult to dislodge.
The ramifications of weak self-efficacy are profound for students, as is highlighted succinctly by Margolis,

\[ \text{The pessimistic belief – ‘I lack the ability to succeed’ – is a major obstacle to academic success as self-efficacy influences both motivation and academic success’} \]

(Margolis, 2005: 222)

Four main areas of efficacy belief have been identified by Bandura, these being: mastery experiences, vicarious experiences, social persuasion and physiological/emotional states (Williams, 2009). Bandura believed that the mastery experiences had the greatest impact upon self-efficacy which can be explicitly linked to AfL.

Mastery experiences concern the successful completion of a task, the more the task is successfully completed the greater the impact upon the individual’s self-efficacy. What is important to the learner is the value that they place upon that success. If a learner is struggling and believes that the successful completion of a task was due to help received rather than personal effort and therefore does not take credit for that success, the self-efficacy will remain weak. If the student is unwilling to commit sufficient effort to the task, because of their belief that they are unlikely to succeed, the outcome will be unsuccessful. It is what Harlen describes as ‘learned helplessness’ (2006: 67), and goes on to illustrate the key role assessment has to play in developing self-efficacious students.

Dweck (2000) has undertaken a range of studies and suggests that an individual may have learning goals or performance goals. She believes that learning goals are set by individuals to understand a new concept or master a new skill, whereas performance goals are more to do with a person striving for positive or negative judgments about their ability. Her belief is that
when learners adopt performance goals they are driven by competition and normative standards of success. Maclellan (2005) asserts that by setting learning goals individuals can greatly enhance their learning, through collaboration and ipsative standards of success. The role of the teacher/tutor is vital according to Dweck (2000) as she feels that the emphasis in developing more self-efficacious learners should focus on effort. As effort is seen as something that we can control, the learner can attribute failure to insufficient effort and thus with more effort comes success. Whereas if the failure is seen as a lack of ability on the part of the learner the motivation to improve will not occur, as ability may be conceived as a fixed trait and is what Dweck feels is at the crux of the argument. There is a danger, as Maclellan warns, ‘that repeated references to one’s achievements being a function of effort conveys the message that one’s ability must be quite limited to require such unending hard work’ (2005:10). Those individuals who choose low risk goals because of the fear of failure may never realise their academic potential. It is Dweck’s belief that these sorts of targets, that are low risk, are set by learners seeking performance only, whereas learners who set learning goals do not believe that ability is static.

Bandura’s second source of self-efficacy is described as vicarious experiences. These are gained by watching and learning from others. Williams states that, ‘Vicarious experiences occur when people see other people’s successful achievement of tasks and feel that they would be able to master similar situations’ (2009: 602). Although learners would gain from tutor support, the most effective vicarious experiences come from observing peers (Margolis, 2005). Margolis goes on to recommend that in order to support learning, tutors should ‘model targeted skills and concepts’ (2005: 229).
Thirdly, Bandura sees social persuasion or verbal persuasion as a source of self-efficacy belief. As the term suggests self-efficacy can be enhanced by others persuading the learner that they are capable of successfully completing a task. Highlighted by Margolis (2005) when discussing the use of false performance information, ‘those who received positive information developed higher self-efficacy than those who received negative information;’ (Margolis, 2005: 231).

However, Maclellan (2005) does offer a word of caution relating to social persuasion. She believes that the use of praise needs to be focused upon individual learning goals and that there is a danger that frequent use of verbal persuasion can lead to the pursuit of performance goals, which would seem to be the case in Bouffard-Bouchard’s (1990) research findings. Maclellan describes praise as a ‘fragile motivator’ and asserts that, ‘Teachers need to ensure that praise is linked to an individual’s learning goal’ (2005: 10). Bandura believes that social persuasion has less impact upon self-efficacy than mastery or vicarious experiences. Interestingly, a survey study by Woolfolk Hoy (2005) that looked at what influenced student teachers’ efficacy concluded that social/verbal persuasion had a significant impact upon their efficacy beliefs.

A fourth influence Bandura considered was the physiological and emotional state of the learner and how this may impact upon the individual’s self-efficacy. Williams believes that the ways in which learners interpret such responses as anxiety, stress and doubt indicate how self-efficacious they are when facing a particular task. She feels that those learners with low self-efficacy will see these responses as a sign of their inadequacies, whereas those with high self-efficacy will ‘regard emotions as normal responses to a task’ (2009:603), especially in the light
of it being a new challenge for the learner. Margolis contends that ‘excessive anxiety is one of the more debilitating physiological responses that tutors need to address’ (2005: 233). Williams (2009) advances the argument that less is known about how emotions impact upon self-efficacy.

As my research is based upon developing student teachers’ skills when undertaking a piece of academic writing, it can be seen that the measuring of self-efficacy is a far more appropriate data collecting tool. It is also Maclellan’s (2005) belief that self-efficacy is a much more sophisticated construct than self-esteem when measuring academic achievement. Due to the confines of my research, I will focus upon the first two sources of self-efficacy, as these offer me the most likely measurable outcomes.

2.7. Implications for this research

The literature indicates a number of relevant issues for my research. Firstly, the chosen area of research relating to formative assessment is very relevant to students’ learning (Sambell, 2011; Beaumont et al., 2007; Black et al., 2002; Black and Wiliam, 1998). The acceptance that assessment practices within higher education need to be changed and more innovative approaches considered (Taras, 2002) supports the undertaking of this particular piece of research. Secondly the importance of students’ understanding and perceptions of the assessment processes, whether that be formative or summative, impact upon their learning and these aspects make up important elements of my research. The work of Honkimki et al. (2004) and Tynjälä (1999) and the model of learning, which I adapted to have a greater assessment focus (see section 2.3), had a significant influence upon my thinking and the design of the research project. The perceptions held by some students of assessment need to be
challenged, which could also apply to tutors’ perceptions of the purpose of assessment. Thus my fourth research question – ‘Can the pedagogy of tutor delivery help develop self-efficacious students?’ is significant as the literature suggests that the tutor’s dialogue with the students relating to the chosen assessment procedures is an important factor in the students’ learning orientation.

Thirdly, the literature has revealed a conceptual model (Juwah et al., 2004) that was discussed in section 2.3 and underpins the methodology developed for the research. The work of Biggs (2003) and his 3P model also helped illustrate the interchangeability of elements within the assessment process and their impact upon those involved.

The next chapter will detail the theoretical framework underpinning the methodology and the methods chosen to investigate the aims of the research.
## Chapter 3: Methodology

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Methodology

3.1 Developing a research design

The purpose of this research project, as outlined in Chapter 1, was to elicit whether the implementation of AfL strategies within higher education would impact upon students’ learning and self-efficacy. The reasons for my interest in this topic were also developed in Chapter 1 and the initial findings (2003-2006) from my early work in this area prompted further, in-depth inquiry. In order to develop the research and extend it, a greater understanding of the possible research paradigms was necessary; especially those within the field of educational research.

Scott and Usher (1996) offer a common definition of research, being ‘systematically attempting to address and investigate certain pre-defined issue or problems’ (1996: 10). Burns (2000:3) also emphasises the importance of a ‘systematic investigation to find answers to a problem’. This is supported by Blaxter et al. (2006:5) who propound that, ‘All types of research should be planned, cautious, systematic and reliable ways of finding out or deepening understanding.’ Burton and Bartlett (2009: 3) offer a succinct appraisal, ‘Research, however complex or formally presented, is simply a part of the process of finding out and understanding phenomena.’

Therefore, one could argue that practitioners are undertaking research within educational establishments on a daily basis. They reflect upon educational issues and problems and adjust their practices to suit particular needs. Scott and Usher ask this same question, ‘Does this mean therefore that practitioners are also always researchers?’ (1996: 10) and go on to suggest that in some ways they are. However, they also emphasise the distinguishing factor, by reiterating the belief that research is seen to be of a ‘systematic’ nature.
Clough and Nutbrown (2007) assign a number of purposes to social research. They believe that research sets out to persuade, whether it be to encourage the purchase of a particular product or the adoption of a new teaching and learning strategy. Secondly, research can be purposive, seeking to answer a particular problem. Thirdly, it is difficult to disassociate the researcher’s viewpoint from the circumstances surrounding the problem and therefore it becomes positional, and lastly, research can be described as political as it can set out to impact upon policy. It would be prudent to accept that my research project, to a greater or lesser extent, incorporated all four purposes described by Clough and Nutbrown (2007).

Cohen et al. (2007) see research as a means to discovering truth. They refer to Kerlinger’s (1970) definition

\[\text{as the systematic, controlled, empirical and critical investigation of hypothetical propositions about the presumed relations among natural phenomena.}\]

\[(\text{Cohen et al. 2007: 6)}\]

Therefore, it was important for the development of my research to establish an ontological standpoint that would influence the research design, as this starting point would affect all other decisions. Blaikie (2000:8) suggests that ‘ontological assumptions are concerned with what we believe constitutes social reality’. Grix (2002: 177) offers a definition closer to what may be found in a dictionary, describing ontology ‘as the image of social reality upon which a theory is based’ and he goes on to expound on possible ontological perspectives, these being ‘objectivism’ and ‘constructivism’. Objectivism is ‘an ontological position that asserts that social phenomena and their meanings have an existence that is independent of social actors’(2002: 177). However, the constructivism perspective alludes to an ontological position that social
interaction impacts upon social phenomena and that these are continually changed by the very process of interaction.

Grix (2002) provides a framework of the interrelationship of the building blocks of research, which he adapted from Hay (2002).

![Diagram of the interrelationship between the building blocks of research.](image)

Figure 6. The interrelationship between the building blocks of research. Grix (2002) adapted from Hay (2002)

Although it could be seen by some as rather old fashioned and prescriptive, Grix defends his position by emphasising the importance of a directional and logical approach to undertaking research and argues strongly against those who believe that researchers may start their research at any stage of the framework above. He goes on to assert that ‘it is our ontological and epistemological positions that shape the very questions we may ask in the first place, how we pose them and how we set about answering them’ (2002: 179). Scott and Usher contend
that ontology and epistemology are related ‘since claims about what exists in the world imply claims about how what exists may be known’ (1996: 11). However, Grix warns against seeing them as one and the same,

Ontology is often wrongly collapsed together with epistemology, with the former seen as simply a part of the latter. Whilst the two are closely related, they need to be kept separate, for all research necessarily starts from a person’s view of the world, which itself is shaped by the experience one brings to the research process.

(Grix, 2002: 179)

The starting point for my research was firmly in the constructivism camp as the interactive nature of the teaching and learning process and the fact that I was tutor and researcher at the same time, demanded that it was so. Certainly, aspects such as the relationship between student and tutor (Carless, 2006; Taras, 2002) would, by their very nature, dictate this ontological position. This interaction can fashion our understanding of the social world and as Burton and Bartlett suggest,

ontology is about how we see the world and our place within it. We may see it as fixed and clear, with social structures to which we all belong in our society, or we may see it as very fluid and something that is different for each of us, existing as separate individuals.

(Burton and Bartlett, 2009: 17)

Inevitably, this ontological positioning will impact on the ways in which one sets out to discover new models, theories and understanding, in other words the epistemological approach. The word itself derives from the Greek words episteme (knowledge) and logos (reason) and Cohen et al. assert that ‘How one aligns oneself in this particular debate profoundly affects how one will go about uncovering knowledge of social behaviour’ (2007: 7). A range of these research paradigms will be more fully explored in the following section.
3.2 Research Paradigms

Educational settings can be wide ranging and infinitely different and the way in which a researcher goes about collecting data, analysing that data and then presenting it are important aspects of the research process. They portray a particular educational setting at a specific point in time. It is therefore important for the reader to appreciate the researcher’s standpoint and to be aware of the chosen research paradigms employed for a chosen project. In so doing, it throws light on that particular research process and gives insight into the ways the researcher understands the world and what constitutes social reality. Bassey (1990: 41) describes a paradigm as ‘...a network of coherent ideas about the nature of the world and of the functions of researchers which... underpins their research actions’.

Within social science research Burton and Bartlett (2009) identify two main paradigms, ‘the positivist or quantitative and the interpretive or qualitative’ (2009: 18).

3.2.1 The Positivist or Quantitative Approach

The term ‘positivism’ was first used in a philosophical context by the French Philosopher Auguste Comte (1798-1857). The emphasis is upon observation and contends that we learn about behaviour from these experiences. Therefore in order for any knowledge to be valid it needs to be embedded in scientific method, where reasoned judgements can be made after rigorous testing and measuring has taken place (Cohen et al., 2007; Scott & Usher, 1996). Scott and Usher propounds that epistemological issues ‘came to be seen in purely empiricist terms’ (1996: 11) and the acceptance seemed to be that only through following this form of investigation could ‘resulting knowledge claims be considered valid’ (1996: 11). If one sees
research as uncovering new knowledge, then an exploration of what ‘knowing’ means, may throw light upon how that new knowledge is received. Kerlinger (1986) advances four general methods of ‘knowing’. These are described as:-

1. **Method of tenacity.** This method of ‘knowing’ is characterised by constant repetition of what is believed to be the ‘truth’. The more it is repeated, the more believable it becomes. A possible result of this approach is that one’s beliefs can become generalisations, as Burns exemplifies, ‘For example, even in the face of contrary evidence some people believe that all communists are spies’ (2000: 5).

2. **Method of authority.** This method of ‘knowing’ relies on the source of its ‘truth’. Certain people or bodies in authority carry a perceived influence or even control which makes what they say more believable. Government ministers or educationalists have a presumed competence of authority; unfortunately it is difficult to prove whether what they say is true, highlighted recently by the parliamentary expenses’ scandal.

3. **Method of intuition.** The cornerstone of this particular method of ‘knowing’ is reason. The phrase ‘it stands to reason’ usually precedes a statement such as, ‘assessment procedures inevitably impact upon learning orientation’. However, the method collapses when two or more eminent authorities in a particular field of research have differing conclusions.

4. **Method of science.** This method, Kerlinger (1986) believes, has something the others do not, that is self-correction. This scientific approach to verifying hypotheses means that ‘knowledge is attained through a controlled systematic process’ (Burns, 2000: 5). Something that cannot be said for the other methods described above. Burns goes on to
state that ‘Science is not just a body of knowledge but a logic of inquiry, for generating, replenishing and correcting knowledge’ (Burns, 2000: 5).

This fourth method epitomises the positivist or quantitative approach to research. It stems mainly from the belief that science had improved people’s lives through major scientific advances. These successes were accredited to the natural or physical sciences.

The natural science approach involves the testing of a hypothesis through creating appropriate experiments. This would involve the creation of a control group where variables are kept constant. Another group, the experimental group, would undergo controlled changes, ‘Altering a particular variable has a particular, measurable effect’ (Burton and Bartlett, 2009: 19). Due to the perceived success of this natural science approach, the positivist belief was that it could equally be applied to the social sciences. Within this assumption lie a number of problems for the researcher in education.

Firstly, and possibly most importantly, is the fact that humans are extremely complex beings, far more complex than inert matter. Cohen et al. outline the anti-positivist argument that science has a ‘mechanistic and reductionist view of nature’ and that the positivist philosophy ‘excludes notions of choice, freedom, individuality, and moral responsibility’ (2007: 17). The fact that a whole range of environmental forces can impact upon humans means that their interpretation and response to them may be entirely different, due to previous experiences, even when, in some cases, these may be the same forces influencing two different human beings. This argument is supported by Burns, who asserts that ‘We cannot predict how a
particular child will respond as the varying perceptions and interpretations of the environment subtly alter his or her responses’ (2000: 9).

Researchers also identify the problem that quantification can become the sole purpose of the exercise, ignoring the need to explore the vital human element (Burton and Bartlett, 2009; Cohen et al., 2007; Burns, 2000).

Scott and Usher (1996) cites the work of Kuhn and how his work has influenced the debate since the 1970s. He argued that the scientific approach was essentially an ‘individualistic enterprise’ where the researchers were able to stand outside of their field of research and be unaffected by social influences such as culture and social values. The problem with this positivist/empiricist researcher is that they are ‘unlike anyone recognisable in the real world’ (Scott&Usher, 1996: 15). In other words, the idea that a researcher can disassociate him or herself from the social context is unrealistic. Another criticism of the positivist philosophy is that scientific research is presented as rationalistic.

Kuhn on the other hand presents rationality as mediated and shaped by factors such as socialisation, conformity, faith and processes very much akin to religious conversion.

(Scott&Usher, 1996: 15)

The danger, therefore when using a positivist/quantitative approach to research, is that its assumed objectivity produces facts that must be true and therefore apply to all. Burns encapsulates this approach when he claims that it produces ‘a synthetic puppet show rather than a rich dynamic mélange of human behaviours’ (2000: 10).
My research project did employ quantitative data collection methods. Statistical data from pre and post questionnaires, plus the marks gained by the students for their reflective reports and the analysis of this quantitative data, did play a significant role in determining the impact of AfL upon students’ self-efficacy.

3.2.2 Interpretive or Qualitative Approach

An interpretive or qualitative epistemology encompasses a range of social perspectives (Burton and Bartlett, 2009; Rawle, 2009). These are described as being anti-postivist and include interpretivism, phenomenology, ethnomethodology and symbolic interactionism. The key element of interpretive epistemology is interaction which is undertaken in social situations. This more ‘naturalistic’ form of collecting data does not follow the positivist approach which tests, hypothesises through experimentation and believes that by following this structured format we come closer ‘to a single determinate truth’ (Scott&Usher, 1996: 18). In contrast to this, the interpretist researcher views the participants as ‘actors’ within specific social situations and uses biographies, personal accounts, descriptions, which include how the ‘actors’ within this social drama feel. Informal interviews and observations of social interaction taking place in as normal an environment as is possible, all provide the interpretivist researcher with evidence that may help clarify, understand or explain certain specific social contexts (Burton and Bartlett, 2009). It is what Cohen et al. describe as rejecting the belief that ‘human behaviour is governed by general, universal laws’ (2007:19). They go on to encapsulate the anti-positivist argument that individuals’ behaviour can only be understood by the researcher sharing their frame of reference: understanding of individuals’ interpretations of the world around them has to come from inside, not the outside. Social Science is thus seen as a
subjective rather than objective undertaking, as a means of dealing with the direct experience of people in specific contexts

(2007: 19)

This interpretist or qualitative approach does have its critics who cite a number of problems linked to this epistemology. The main issue is regarding the application of reliability and validity, ‘Basically, the richness, individuality and subjective nature of a participant’s perspective and understanding are not amenable to the usual scientific criteria’ (Burns, 2000: 12). Furthermore, the fact that the researcher would be interacting with the subjects within the study could create reactive effects so ‘Possible bias, from the viewpoints of both researcher and participants, must also be indentified and elucidated’ (Burns, 2000: 13).

However, Cohen et al. (2007) outline a number of positive elements to interpretive research methods. A positivist researcher would be seeking general theories or universal laws that could be applied to human behaviour, yet the interpretive approach sees theory as ‘emergent’ and grows from particular social situations. Therefore ‘theory should not precede research but follow it’ (2007:22). Interpretivism is characterised by what Burns (2000) terms a ‘methodological eclecticism’ and a ‘hypothesis-free orientation’. It provides possibilities for recognising qualities within a research project that may be missed by a more scientific, positivist inquiry.
3.3 Finding an appropriate methodology

The previous sections have discussed quantitative and qualitative forms of research and how they differ. Researchers in each camp rigorously defend their beliefs. The idea that only quantitative data will produce legitimate research, according to Burns, is misleading. In fact ‘many researchers will use both approaches as appropriate within one investigation’ (2000: 14).

This philosophy was adopted for my research project as the work leant itself to a multi method approach. Lankshear and Knobel (2004) support the idea that research can include elements of both quantitative and qualitative methods in its design. They offer the example that

A case study based on qualitative research may employ pre- and post-testing procedures from quasi-experimental research in order to be able to make claims about learning that took place during the course of an intervention study.

(2004: 75)

Grix’s (2002) building blocks of research (fig. 6), asserts that the methodology should ask the question ‘How we can go about acquiring the knowledge?’(2002: 180). The methods chosen within that methodology are seen as the precise procedures used to acquiring that knowledge.

The interactive nature of teaching and learning and the fact that I would be tutor as well as researcher whilst undertaking the research, led me to consider a possible methodology for this project, ‘The Action Research Cycle’.

Elliot characterises the main aim of this form of research as improving ‘practice rather than to produce knowledge’ (1991:49). It became clear early in my reading that the nature of the action-research model would be the most appropriate approach for my research project and
would provide an ideal framework for my initial interests to develop and for the inquiry to deepen.

Action research is viewed as on-going, as even when the project is complete ‘the participants continue to review, evaluate and improve practice’ (Bell 1993: 7). Action-research deals with practical problems highlighted during a tutor/researcher’s day to day work. My intention was to discover the impact of AfL strategies with student teachers and ‘it is by focusing on the intention of the action research that the impetus of the enquiry and the agency of the teacher are made explicit, and strategic and reflective thinking can be most readily accessed’ (Baumfield et al., 2008: 7). Norton (2009) discusses pedagogical action research and how the varied elements within our working environments impact differently on our practices. She offers two broad traditions linked to action research;

- A British tradition that links research to improvement of practice and is education oriented
- An American tradition which links research to bringing about social change. (Norton, 2009: 51).

The stance that I can relate to most readily for my research project is the British tradition as improving practice within an educational setting has always been my aim and it is this belief and also my work situation that has affected my action research design. Norton (2009) goes on to outline the types of action research and my research project sits firmly within the technical approach, which ‘tends to be research that is carried out to test a particular intervention’ (2009:53).
My research was based upon the model of action-research described by Cohen et al. (2007) whereby interventions were made, based upon analysis of feedback and the resultant model was implemented with the following year’s cohort of students. From this first cycle, adjustments were made based on the evaluation and a second cycle was implemented.

Mertler (2009) encapsulates the process in diagrammatic form.

Action-research can provide opportunities for improving educational practices (Parsons & Brown, 2002) and as Mertler suggests, ‘Systematic reflection in the form of action research can provide the stimulus for changing and improving practice in order to make it appropriate for these unique individuals with whom we work’ (2009:21). Sander (2004) also asserts that the use of an action-based approach helps highlight the role of the students as important stakeholders in the research process. The use of an action research approach for gathering data...
on assessment is propounded by McDowell et al. (2012), as this combination can provide ‘valuable and stimulating evidence-based changes to assessment practice’ (2012: 152).

A ‘practical’ action research is undertaken by the teacher/tutor, underpinning the notion of the teacher as researcher, where teachers reflect on their actions and those of the learners and aim to make improvements. The ‘emancipatory’ action research is as much about political change as it is about educational change. Some fear that it has ‘hijacked the action research agenda’ and taken it away from the practitioners (Cohen et al., 2007). Although my research project aimed at influencing a system, namely assessment procedures in higher education, as well as impacting upon students’ learning at a classroom level, I believe that my adopted approach has elements of the ‘practical’ action research approach and aspects of ‘emancipatory’ action research as both myself and the students were empowered by the process.

Norton (2009) outlines a number of advantages linked to pedagogical action research, and one that resonates clearly within the context of my research project is how this methodology can strengthen ‘an existing interest in teaching and learning’ (2009: 57).

3.4 Finding a conceptual model

Early on in my research project it was important to construct a conceptual model or framework in which to develop the research. Although the principles of AfL can be employed at all levels of education, the majority of the research and literature surrounding it, especially during my early investigations during the academic year 2002-2003, was within the sector dealing with the compulsory school age group. A wider range of issues within a deeper debate has evolved within the higher education sector since then and from my reading, (see Chapter 2, section 2.3)
the conceptual model that provided the most appropriate higher education focus was found in the work of Juwah et al. (2004).

Juwah et al.’s model is based upon the work of Black and Wiliam (1998) and also calls upon the work of other researchers, in particular that of Sadler (1989). Black and Wiliam’s review (1998) was the catalyst for the surge in interest linked to AfL (see section 2.1.2) One major element of AfL is the quality of the feedback offered to students and Sadler suggested that in order to gain the most from feedback students need to:

- Have an understanding of the aims/goals or standard of the work expected of them;
- Be able to compare and contrast their current position and standard of performance against those aims/goals;
- Be able to undertake the appropriate work necessary in order to close the gap between where they are and where they need to be.

Sadler (1989) argues that the majority of feedback to students falls into the second category, being how their performance rates against the set standards. However, Sadler asserts that the important aspect of helping the student close the gap between actual and desired performance is often not provided. Juwah et al.’s (2004) conceptual model (figure 5) is based on formative assessment and feedback and provides a framework within which such formative feedback may occur and the framework encapsulated the basic philosophy that related most appropriately to my research. However, I don’t believe that this model emphasises sufficiently the opportunities to improve performance based upon external feedback processes as I feel that initial external feedback is the catalyst for improvement and acts as a key to help students unlock their
understanding and deserves a greater emphasis (Cook, 2007). York (2003) propounds that the emphasis upon self-regulation should lead to a far stronger emphasis on self-assessment within higher education.

From this conceptual model Juwah et al. (2004) offer seven broad principles for effective formative assessment and feedback.

2. Encourages teacher and peer dialogue around learning.
3. Helps clarify what good performance is (goals, criteria, standards expected).
4. Provides opportunities to close the gap between current and desired performance.
5. Delivers high quality information to students about their learning.
7. Provides information to teachers that can be used to help shape the teaching.

(Juwah et al., 2004:6)

These seven principles provided a framework for my research; however, point six was adjusted to focus upon self-efficacy. Due to the limited time span when working with the students it was deemed unlikely that a measure of self-esteem would be feasible or reliable. I was also influenced by the debate concerning whether self-esteem actually has any influence over academic achievement (Maclellan, 2005), this debate is explored fully in chapter 2, section 2.6. As self-efficacy is task related it was felt that measuring students’ self-efficacy related to an academic piece of work, would provide more realistic, reliable and manageable results.
Principle seven had a strong significance for my research as the success of the research demanded a revised pedagogical approach within taught sessions. It was because of the revised teaching approaches that other elements of the research aims became possible, such as analysing the inclusion of self and peer feedback; allowing student teachers to view previous examples of work; having student teachers analyse the assessment criteria, aspects that became an integral part of the taught sessions.

Particular emphasis for this research was placed upon the seven principles described earlier and these principles have been echoed by others. James (2003) identifies the following essentials for successful formative assessment:

- Helping learners to understand what counts as quality in learning by explicit reference to clear assessment criteria and the use of exemplars of good practice.
- Providing appropriate feedback with an emphasis on ways of improving. Comments rather than marks.
- Timing the submission of assignments in such a way that students are able to re-draft their work in the light of formative feedback received in relation to previous efforts.
- Engaging learners to participate in peer and self-assessment.

(James, 2003)

Clear principles that are mirrored within Juwah et al’s (2004) model and provided the scaffolding for my project.
3.5 Data collection methods

The research used a multi-method approach to collecting data with elements of quantitative and qualitative data linked to students’ achievements in their performance and their perceptions of assessment and AfL strategies and their usefulness linked to learning. In order to attempt to answer the initial research sub-questions (section 1.6) a selection of appropriate methods of data collection was vital to the success of the project. Elements of the research required quantitative data, linked to a measure of the usefulness of the AfL interventions and quantitative data to provide a measurable outcome of self-efficacy. This led to the practical option of pre and post testing, which included the use of questionnaires and also analysing students’ marks for their reflective reports. The qualitative element of the research was achieved through semi-structured interviewing. This research project therefore relied upon three main data collecting methods.

3.5.1 Questionnaires

The choice of using questionnaires as a data collecting tool was for practical and research reasons. A number of research publications expound the advantages of using questionnaires (Rawle, 2009: 168; Cohen et al., 2007: 92-94; Oppenheim, 2001: 100-149). These being:-

- The efficient use of time and financial resources
- Confidentiality allowing honest responses
- Space and time for the respondent to answer (dependent upon circumstances).

The use of questionnaires also has negative connotations, which include the difficulty of collecting sufficient responses. Respondents may have difficulty responding due to
misinterpretation of the questions, although the design process and piloting should avoid such problems. The use of questionnaires as the sole data collecting instrument could negate any possible follow up investigations, thus my choice of multiple methods.

The target group was a whole Year 2 cohort of a BA degree students, numbering over eighty students, although the number agreeing to take part in the final cycle of the research was forty five. It was therefore deemed appropriate, when planning the research, to administer a questionnaire to this large number of participants. As Oppenheim suggests, ‘it has to be admitted, the choice will eventually be made for quite extraneous reasons such as costs or pressure of time.’ (1992:81). During the planning stage it was decided to undertake ‘self-administered’ questionnaires which Oppenheim (1992) sees as the most effective method to ensure a high response rate. Further advantages include a minimum of interviewer bias, accurate sampling and the benefit of ‘a degree of personal contact.’ (1992:103). Oppenheim discusses strategies to increase the response rate from the students. A number of these were employed within this piece of research.

**Explanation of selection of research sample:** This was provided within a lecture theatre to the entire cohort and also included in the ‘participant information sheet’ used to accompany the questionnaire (appendix 1)

**Confidentiality:** This was emphasised at the first introductory meeting where assurances were given that no identifiable persons would be published. This point was clearly stated on the ‘participant information sheet’ and reinforced verbally within the lecture theatre.
Length: Although questions were added to the questionnaire following the pilot work, I aimed to keep it succinct, whilst still retaining enough range to ensure that the aims of the research were met.

The pilot questionnaire was completed by five students and shared with my supervisors. Comments were sought as to whether they found any of the questions ambiguous, the length of the questionnaire and any specific questions that caused concern. Based upon their feedback the cycle 1 questionnaire was administered to the year group 2008-2009 (see appendix 2). Twenty four student teachers agreed to undertake the questionnaire and their responses were analysed (see section 4.2.2).

Following the analysis a number of changes were made to the cycle 2 questionnaires including the inclusion of extra questions, a change in the scale and an opportunity for the students to provide their own definition of what assessment means to them (see appendix 3).

3.5.2 Semi-structured interviews

This method was deemed crucial to the research as it allowed for a more in-depth enquiry of students’ perceptions and also allowed for the opportunity to give a more detailed explanation of the research aims. A semi-structured or non-standard interview had the potential to deviate from the interview schedule, if relevant to the research. Norton (2009) outlines the potential of semi-structured interviews as a means to ‘understand the respondent’s point of view’ and it allows for the use of ‘open-ended questions to enable the interviewee to talk more freely’ (2009: 99). Answers, according toOppenheim, have a much greater ‘richness and spontaneity.’(1992:81). It was important to plan and structure these semi-structured interview
sessions effectively and for this the model put forward by Kvale (1996:88) influenced the design. Kvale provides a number of stages when using interviews that can help design and implement interviews successfully. A selection of these was influential when considering the format of the semi-structured interview.

**Thematising:** This is the stage where the purpose of the study is formulated.

**Designing:** Here the research objectives are translated into questions. In the case of my particular research, the semi-structured interview questions followed closely the written questionnaire, but allowed scope for more open ended and supplementary questioning. Open-ended questioning was deemed vital to ascertain the students’ perceptions of AfL. Cohen *et. al.* outline the advantages of open-ended questions,

> they are flexible; they allow the interviewer to probe so that she may go into more depth if she chooses, or to clear up any misunderstandings; they enable the interviewer to test the limits of the respondent’s knowledge; they encourage cooperation and help establish rapport; and they allow the interviewer to make a true assessment of what the respondent really believes.

(Cohen, *et al.*, 2007:357)

Norton (2009) also highlights possible drawbacks to using this method, including the time needed for such interviews, the recording of the content and transcription plus the fact that analysing the content of a series of interviews is complex.

**Interviewing:** For this piece of research volunteers were invited from the cohort, therefore it was a self-selecting sample. The interviews took place once all module assignment marks had been returned to the students. The aim was to interview at least 10% of the number of respondents to the questionnaire, which would translate to five interviewees and this target
was achieved. The intention was to put the students at ease and to ensure that the interview was what Cohen et al. describe as, ‘a social, interpersonal encounter, not merely a data collection exercise’ (2007:361).

**Transcribing:** Although Cohen et al. (2007) believe that important elements, such as non-verbal communication, can be lost by relying entirely on audio recording, due to time restraints and the complicated nature of video-recording, the interviews for this piece of research relied on audio recording only. However, the cautions offered that the interview transcriptions do not tell the whole story were heeded during analysis.

**Analysing:** When analysing the data collected through interviews the challenge was to ensure that by dividing the data into various elements the ‘synergy of the whole’ (Cohen et al.:368) was not lost. It would be important to retain the ‘holism’ of the interview by avoiding the pitfall of atomising or fragmenting the data.

**3.5.3 Analysing students’ achievements**

Analysing students marks originally during the academic year 2002-2003 was the catalyst for my initial interest in the impact of AfL principles within higher education. Work that I had undertaken between 2003 and 2006 suggested that formative feedback given during a module relating to their work could make significant improvements in performance (Cook, 2007:144). It provided an element of quantitative data based on marks gained for their academic writing. The academic year 2003-2004 saw changes to the assignment for the BA year 2 education module. As I explain,
The module coursework assignment was changed from one reflective report to three shorter reports which would enable the tutors to provide formative feedback and the students to use these comments to improve their performance. The feedback given by the tutors identified areas for improvement but no specific marks were actually shared with the students.

(Cook, 2007:144)

These initial attempts to build AfL into an undergraduate module indicated definite signs of improvement in students’ achievement relating to their assignments. I discovered that over the whole cohort a mean improvement of almost one grade band emerged, a statistically significant finding. The practice of staggered submission of the assessment element of the module was included in subsequent years (2004-2005 and 2005-2006) and yielded similar results. These initial results also concurred with the ARG’s assertion that the gains for those students gaining lower marks were greater. Consistently over the initial period those students gaining a third class honours mark with their first reflective report made an average improvement of 10.3 marks by the end of the module. These results suggested a possible link between AfL principles and student performance and I felt that it was important to include this method of data collection within this doctorate research as it could help answer the second research sub-question (see section 1.6).

The first reflective report was submitted during the fourth session of the module and returned to the students during the next session, with comments on what they did well and no more than three targets for improvement. I believed that early feedback was extremely important, highlighted by Campbell and Norton,

so why in higher education do we give feedback to students usually at the end of a module and sometimes as much as more than four weeks later? By then there is no reason for the student to bother with our comments at all
One possible criticism of this approach that I would need to counter in my research design would be that as the tutors marked the reflective reports themselves, they could create the improvement in marks. As the team of tutors are respected, professional academics one would hope that this criticism would not be implied; however, in order to address any suggestion of this, as was done in my earlier work, a 10% sample of the reports was marked blind by a colleague who had previously worked on the module and during the early investigations a sample was viewed by another colleague as would an external examiner, in order to verify the marks.

3.6 The Impact of Pedagogical Change

In order to fully implement AfL changes to a module or series of learning episodes it is crucial to consider one’s pedagogy and philosophy. It is not sufficient to alter merely the assessment procedures without considering the impact upon content delivery (section 2.5). Black and Wiliam (1998) discuss communities of practice where all aspects of the teaching and learning cycle are important, in order for students to gain ‘meaning within particular contexts’ (Higgins et.al., 2002:53). Is the assignment merely a form of measurement to gain a mark or grade or is it an integral part of the learning process where the journey towards submission is as important, if not more so, than the final mark? I believe strongly in the importance of the learning process as opposed to merely the product. It was necessary, therefore, in order for the implementation of AfL principles within this module to succeed, that the tutors were in agreement as to its delivery as well as its content. This was achieved through regular discussions and communications and significantly all tutors on the module over the years have
come from a classroom teacher’s background and all have been regularly involved in the assessment of student teachers in partnership schools. Thus they are in regular contact with schools and fully appreciate the impact of AfL principles within compulsory education and have therefore been able to transfer this appreciation across to their own pedagogy within higher education.

From discussion with tutors and through research of relevant literature, six aspects of AfL were incorporated into my research. The six most regularly used AfL strategies are listed here and are influenced by the seven broad principles (Juwah, et al., 2004:6) discussed in chapter 2.

1. Reviewing the assignment criteria
2. Discussing criteria
3. Judging clean copies of reflective reports from previous years alongside the criteria
4. Using self-assessment
5. Using peer assessment
6. Receiving staggered tutor feedback over the module relating to the assignment

These interventions were understood by the tutor team and incorporated through the delivery of the module as well as the assignment design.

Results from previous years (2002-2006) suggested that the tutor feedback given after the submission of the first reflective report was the most significant (Cook, 2007). Therefore, for the purposes of this research, feedback for the second reflective report included elements of self and peer assessment. A student self-assessment form was designed (appendix 4) that allowed the students to respond to the assignment criteria and to their tutor targets from the
first reflective report. The students were asked to evidence how they had addressed the assignment criteria and personal targets by giving specific examples on their self-assessment forms. These were then discussed with peers and students could evidence their improvements by using the examples included in their self-assessment forms rather than share the actual reflective report. This approach was included as previous students’ evaluations had suggested that some student teachers were not happy sharing their reflective reports with peers. The use of these self-assessment forms to evidence the students’ efforts in meeting the targets and criteria seemed to alleviate any further worries. Once undertaking this self and peer assessment exercises, students were allowed to re-draft their second reflective report based on their discussions and reflections. This approach mirrors closely that of Gardner’s assertion that students need to be involved in creating their own effective learning processes. He goes on to outline that these strategies are most effective when students,

(i) individually or collaboratively, develop the motivation to reflect on their previous learning and identify objectives for new learning; (ii) when they analyse and evaluate problems they or their peers are experiencing and structure a way forward; (iii) when, through self-regulation, they act to bring about improvement.

(Gardiner, 2006:28)

In order to help students understand what represented ‘good performance’, sessions were built into the teaching which allowed students to view reflective reports produced by previous cohorts and reflect upon them using the assignment criteria, and through peer discussion, decide how these example succeeded in meeting the assignment criteria. These pedagogical changes allowed for a number of AfL principles to be achieved and were crucial to the implementation of the conceptual model described in section 3.4 of this chapter.
3.7 Tools for Analysis

3.7.1 Grounded Theory

One element of this research project was to establish how students defined assessment. This information was requested in the phase 2 questionnaire (see appendix 3) and, although at the time of devising the research project, I did not feel that the data would make up a significant element of the project, the results proved to be very interesting with potential for further investigation.

In order to analyse the data effectively, it was important to establish a means of categorising the students’ definitions. Through discussions with my supervisory team using the ‘Grounded Theory approach’ was deemed to be the best way forward in order to analyse this element of the research.

This theory was developed by Glaser and Strauss (1967) and, although there has been disagreement between the two since (Glaser, 1992; Strauss and Corbin, 1990; Strauss, 1987), it is basically a qualitative research methodology. Instead of generating a hypothesis, as would occur in the traditional, scientific approach to research, the grounded theory approach collects data, using a range of collection methods, and from these data it looks for categories, driven by the data rather than preconceived ideas. The researchers are required to free themselves from any preconceptions whilst collecting the data, a process some critics of ‘Grounded Theory’ claim is impossible (Thomas and James, 2006).
Accepting that preconceived ideas will always play a part in any classification, I made sure that I familiarised myself with the students’ definitions by reading them a number of times in order for appropriate categories to emerge. I placed definitions in broad categories initially but after time I reduced these to three categories.

The three categories that emerged from my lengthy deliberations were:

- **Category 1** A measurement of ability/knowledge/understanding done by a third party.
- **Category 2** A measurement of ability/knowledge/understanding done by a third party, but related to moving the learning forward (mention of learning and teaching)
- **Category 3** Sophisticated definitions using formative and summative terminology with a stronger focus upon learning.

However, prior to finalising these categories, discussions took place between myself and my professional support adviser. After reviewing the definitions together he agreed that the three categories did represent a fair categorisation of the definitions.

These categories were then allocated to the students’ results to elicit any possible links between perceptions of assessment and achievement, the results of which are fully explored in Chapter 4.
3.7.2 Statistical Package for the Social Sciences (SPSS)

Although this research project used a mixed-methodology approach, it did rely upon the analysis of quantitative data, primarily for the measurement of self-efficacy but also to analyse the students’ marks. As Cohen et al. insist, ‘qualitative data analysis is a powerful research form’ (2007:501) and to dismiss it arbitrarily would be prejudiced. My approach was to look at what offered me the best methods for answering my initial research questions, in other words ‘fitness for purpose’. Through lengthy discussions with colleagues and my supervisory team, SPSS was chosen as the most appropriate statistical package for social sciences.

The questionnaires included questions that would elicit nominal as well as ordinal data and based on the results, further personal in-service training and feedback from administering the phase 1 questionnaire, the 5 point scale used in a number of questions was changed for the phase 2 questionnaires to a 10 point scale. The use of a wider scale would offer students a better choice when completing the questionnaires. Ordinal data is best suited to asking for opinions and attitudes and ideally fitted the needs of my research project.

3.8 Validity and Reliability

This chapter has chronicled the methods chosen as appropriate data gathering tools for this piece of research and throughout the selection process it was important to consider the validity and reliability of these methods.
3.8.1 Validity

Mertler (2009) when defining validity proposes that it ‘deals with the extent to which the data that have been collected accurately measure what they purport to measure’ (2009: 114). Cohen et al. believe that when using qualitative data validity can be demonstrated by ‘the honesty, depth, richness and scope of the data achieved’. When using qualitative data the researcher needs to ensure ‘careful sampling, appropriate instrumentation and appropriate statistical treatment of the data’ (Cohen et al., 2007: 133). Within my research design it was important to gain an early baseline measure during cycle 2, which Mertler (2009) asserts gives the researcher the best possible chance to measure the effects of any intervention. Cycle 2 questionnaire 1 of my research project was administered at the beginning of the module, before any AfL strategies had been used or discussed. As I was intending to measure the effects of implementing AfL strategies it was important to secure the base-line data in order to ensure the quality of the data (Mertler, 2009).

A common practice used to validate practices is through triangulation. The use of ‘multiple data sources, multiple data-collection methods’ (Mertler, 2009: 115) was an important element of my research. The use of questionnaires supported by semi-structured interviews and data on student performance offered three sources of data. The aim of the researcher is to strive to minimise invalidity and maximise validity. Williams (2009) highlights the problem of the researcher’s personal perspectives impacting upon the validity of any judgments made based upon the data. Her suggestion in response to this dilemma is to ‘lay data open to peer review’ (2009: 104).
3.8.2 Reliability

The element of reliability in research refers to whether similar results would be found were the research to be repeated using comparable subjects. Cohen et al (2007) and Geen (2007) outline how reliability can differ between quantitative and qualitative research. When discussing quantitative research Geen draws upon three important concepts, stability, equivalence and internal consistency.

Stability concerns the use of a reliable research instrument. Geen offers the analogy of a leaking tap that consistently loses a litre of water per day (2007: 192). Equivalence, according to Cohen et al. (2007) takes two forms. Firstly it can be achieved by using equivalent forms of the data collecting instrument, the example they describe is pre and post testing, an element of which was used in my research project, through the questionnaires. The second form is when other researchers conduct the same research and make the same conclusions.

Internal consistency is when marks are checked, for example a cohort of students’ work could have multiple markers and consistency is then checked through moderation. This was undertaken during this research project when marking the students’ reflective reports (see section 3.5.3. of this chapter).

Reliability in quantitative research is more difficult to achieve, however, Geen suggests three strategies,

**Stability of Observations:** The same conclusions would be drawn if observations were conducted at different times.
Parallel forms: The researcher would have interpreted observations in the same manner if attention had been paid to other phenomena during the period of observation.

Inter-related reliability: Another competent researcher observing the phenomena would reach the same conclusion.

(Geen, 2007: 192)

The decision to administer the second questionnaire to the student teachers after they had received their final marks was done on ethical grounds, so that whatever they said in the questionnaire could not be construed as impacting upon their final mark. However, in terms of reliability, it must be acknowledged that the marks gained by the students may have influenced their responses. In order to counter this any positive elements emerging from the questionnaires were verified through the semi-structured interviews, thus allowing for ‘convergent validity’ with the results.

As this research project utilised questionnaires as a major source of data, it was important to include triangulation, which was achieved through undertaking semi-structured interviews. These interviews followed the themes within the questionnaires and thus allowed for multiple methods of gathering similar data.

3.9 Ethical considerations

Ethical concerns are of paramount importance when undertaking educational research as in most cases it involves the learners, approval for this research project was received from the Cardiff School of Education’s Ethics Committee (see appendix 5). The ethical problems ‘may stem from the kinds of problems investigated by social scientists and the methods they use to obtain valid and reliable data’ (Cohen et al., 2007:51). I considered carefully both the problem
and my chosen methods to ensure that the participants were not adversely affected by their participation in this research.

It was firstly important to recognise potential risks for the students. There may have been concerns for students, such as feeling obliged to take part or time issues impinging on their study time. In order to deal with these potential risks, all students in the cohort were assured that their participation was purely voluntary and that non-participants would not be disadvantaged. The filling out of the questionnaire would take approximately forty minutes and those volunteering to take part in semi-structured interviews would be asked to give up approximately one hour of their time.

The elements of the research requiring student participation included the questionnaire and the semi-structured interviews. Students agreeing to participate were invited to complete questionnaires at the beginning of the module and at the end once all marks had been returned to them. It was important to respect that students may feel vulnerable completing questionnaires before receiving their final marks. As Geen emphasises, ‘Consideration must be given to protect their interest. The researcher, like the teacher, is in a position of authority and trust’ (2007:90). This was especially relevant as in my case I was both teacher and researcher. The interviews were also held after full completion of the module so that the student teachers would feel that their responses may influence the assignment feedback.

The other main element of the research was the impact upon tutor pedagogy and delivery of the module. Over the past ten years as module leader I have introduced a range of AfL strategies as an integral part of the teaching and learning. These have included offering explicit
reference to clear assessment criteria; the use of exemplars of good practice; providing appropriate feedback and engaging students in peer and self-assessment. These approaches are recognised as good practice (James, 2003) and would be part of the module deliver whether this research was undertaken or not. This therefore does not raise any potential ethical risks for the participating students.

Issues relating to consent were given due attention and students were offered information sheets outlining the proposed research plus what is expected of the participants. It is described as the ‘principle of accurate disclosure’ (Mertler, 2009).

Students were also informed that all consent forms and questionnaire returns would be kept under lock and key and that the research would be undertaken in compliance with the BERA (2004) guidelines on the ethical conduct of educational research.

The following chapter offers a comprehensive analysis of the data collected over the two year cycle using the methodology and data collecting instruments described in this chapter.
## Chapter 4: Results

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<td>4.4.4</td>
<td>Analysing the results</td>
<td>135</td>
</tr>
<tr>
<td>4.4.5</td>
<td>Interim discussion</td>
<td>137</td>
</tr>
</tbody>
</table>
4.0 Results

4.1 Overview

This results’ chapter will open by presenting quantitative data provided by the questionnaires administered over the research period, as well as the results from the assignment marks (three reflective reports) gained by the student teachers during the academic year 2009-2010. The data were analysed and the outcomes from that analysis are included in section 4.2.

The semi-structured interviews provided qualitative data; analysed using an approach that retained the ‘synergy of the whole’ (Cohen et al. 2007: 368) as described in section 3.5.2 and their results are included in section 4.3. Finally, section 4.4 returns to quantitative data by presenting the results of the student teachers’ understanding of assessment at the beginning of the module, which ranged from a basic understanding through to a more sophisticated insight and the link between that understanding and their performance within the assignment. This revealed interesting results that could have implications for teaching and learning within higher education.

4.2.1 Pilot questionnaire

The pilot questionnaire was designed during the academic year 2008-2009 and six student teachers volunteered to evaluate its effectiveness and it was also shared with the support team. They received participant information sheets and also the consent forms. It was also shared with the supervisory team and this feedback was incorporated into the cycle 1 questionnaire (see appendix 2).
4.2.2 Questionnaire for First Cycle of Research Project, Administered 2008-2009

Based upon the feedback from the pilot stage, minor changes were made to the questions and the first cycle of the action-based research project was initiated on completion of the education module. The modified questionnaire was administered to the cohort in the academic year 2008-2009. Twenty four volunteer students were recruited for this study out of a cohort totalling seventy eight.

The purpose of this questionnaire within the first cycle of the research was to establish,

- How helpful student teachers found using AfL strategies.
- Whether student teachers with previous experience of AfL were more self-efficacious when asked to produce an academic piece of writing.
- How self-efficacious student teachers were when asked to undertake a piece of academic writing.
- Whether changes needed to be made to the questionnaire for phase 2.
- General feedback relating to the purpose of the module and its delivery.
- Aspects raised by these first cycle students to be considered by tutors and, if deemed appropriate, implemented into the phase 2 delivery.

It is important to note here that during both the first and second cycle of the research, the tutors’ delivery during the teaching sessions included AfL strategies and some practices were amended based upon student feedback. An example of this was received at the end of the first cycle (2008-2009). One of the student teachers from the pilot study expressed dissatisfaction on receiving generic feedback from the first reflective report during a teaching session. It was common practice by tutors to spend time reviewing some of the common errors highlighted by
the marking process. He felt that if we had spent time and effort giving individual feedback and targets, then that should be sufficient as the generic feedback only caused anxiety. This anxiety was deemed unnecessary as the generic discussion was of no interest to certain students. This is supported by research undertaken by Poulos and Mahony (2008) when studying the effectiveness of feedback from the students’ perspective. One of their interviewees stated that ‘group feedback doesn’t necessarily relate to you because you could get 10 marks below your friend yet you’re both getting the same feedback’ (2008: 146). Because of this, the following year, rather than tutors giving generic feedback on errors found within the reflective reports, time was allocated for students to read and engage with their individual feedback and then have an opportunity with the tutor to discuss any issues arising from that feedback. However, this counters the Dialogic Feedback Cycle (DFC) (Beaumont et al., 2008: 43) which advocates generic feedback during the second element of the cycle relating to ‘in-task guidance’.

The first cycle questionnaire sought to collect data relating to how helpful the students had found the AfL strategies within the module. It was also intended to explore how confident the student teachers were in completing an academic piece of work. Students were also asked whether they had received written formative feedback in any previous higher education module and whether they had experienced any of the AfL strategies used during this project in another taught higher education module (See appendix 2). The sample contained those who had experienced AfL strategies within a higher education module (n=6) and those who had not (n=18). The questionnaire statements were measured using a scale of 1-5, 1 being the highest and 5 the lowest. However, for the purpose of the reporting of these results, the data has been
re-coded so that the scale now represents 5 as the highest and 1 as the lowest and the following tables will reflect this change.

Firstly the data were used to analyse how useful the student teachers found the AfL strategies when completing the academic reflective reports. The six AfL strategies, described in section 3.6, were used to ascertain whether they had an effect on students. Tables 2 shows how helpful the students found the AfL strategies. Table 3 shows that the mean values for each of the recorded six questions are significantly greater than the scale mid-point, using a single sample t-test.

### Table 2. Students’ mean score for helpfulness of AfL strategies at Cycle 1

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean (Re-coded)</th>
<th>Std. Deviation</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>4</td>
<td>0.98</td>
<td>24</td>
</tr>
<tr>
<td>Question 2</td>
<td>4.17</td>
<td>1.05</td>
<td>24</td>
</tr>
<tr>
<td>Question 3</td>
<td>3.83</td>
<td>0.92</td>
<td>24</td>
</tr>
<tr>
<td>Question 4</td>
<td>4.08</td>
<td>1.02</td>
<td>24</td>
</tr>
<tr>
<td>Question 5</td>
<td>3.75</td>
<td>0.85</td>
<td>24</td>
</tr>
<tr>
<td>Question 6</td>
<td>4.08</td>
<td>1.18</td>
<td>24</td>
</tr>
</tbody>
</table>

### Table 3. Results of a single sample t-test comparing mean scores against the scale mid point at Cycle 1

<table>
<thead>
<tr>
<th>Question</th>
<th>t</th>
<th>Mean Difference</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Question 1</td>
<td>5.01</td>
<td>1.00</td>
<td>23</td>
<td>0.001</td>
</tr>
<tr>
<td>Question 2</td>
<td>5.45</td>
<td>1.17</td>
<td>23</td>
<td>0.001</td>
</tr>
<tr>
<td>Question 3</td>
<td>4.45</td>
<td>0.83</td>
<td>23</td>
<td>0.001</td>
</tr>
<tr>
<td>Question 4</td>
<td>5.21</td>
<td>1.08</td>
<td>23</td>
<td>0.001</td>
</tr>
<tr>
<td>Question 5</td>
<td>4.34</td>
<td>0.75</td>
<td>23</td>
<td>0.001</td>
</tr>
<tr>
<td>Question 6</td>
<td>4.51</td>
<td>1.08</td>
<td>23</td>
<td>0.001</td>
</tr>
</tbody>
</table>
Secondly, the data were analysed to look at self-efficacy when completing an academic piece of work. There were five questions within the cycle 1 questionnaire linked to how confident student teachers felt when asked to complete an academic piece of writing which, in the case of this piece of research, was the production of three reflective reports. In order to undertake the analysis, the five self-efficacy questions were compared to ascertain whether they were measuring the same construct. By using Crombach’s Alpha, I was able to show that the degree of relationship between the questions was 0.852, thus a new variable was created which I called ‘self-efficacy 1 cycle 1’. It was then possible to use an independent t-test to look for an effect between previous experience of using AfL and self-efficacy. The results revealed no significant difference in self-efficacy between those who had experienced AfL previously and those who had not (t-0.23, df =22, p>0.005). However, when self-efficacy scores were measured against the mid-point of 3, the results show a mean score of 3.6 (table 4). This is significantly greater than the scale mid-point.

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std Dev.</th>
<th>t</th>
<th>Df</th>
<th>sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>3.6</td>
<td>0.69</td>
<td>4.19</td>
<td>23</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Table 4. Self efficacy, cycle 1 mean score measured against the scale mid-point of 3

4.2.3 Interim Discussions

The intention of the questionnaire in the first cycle of the research was to consider how helpful student teachers found using AfL strategies. I also wished to ascertain whether student teachers with previous experience of AfL were more self-efficacious and also how self-efficacious student teachers were when asked to produce an academic piece of writing.
Both sets of results, Afl strategies and students’ self-efficacy, showed significantly greater scores than the mid-point. However, the small number involved in the sample means that I would need to be cautious of reading too much into these results, but they do indicate that students find the use of Afl strategies helpful, which may also make them more self-efficacious when undertaking a piece of academic writing. What the results did not reveal was any significant difference between those who had experienced Afl strategies prior to the education module and those who had no previous experience.

The descriptive results (table 5) show that self-efficacy questions 1 and 4 gained the highest scores, which related to students’ confidence to link theory to practice and also to produce a cohesive, balanced reflective report. Self-efficacy question 5 scored the lowest, which related to students’ confidence with referencing an academic piece of work.

<table>
<thead>
<tr>
<th>Re-codi ed Questions</th>
<th>n</th>
<th>mean</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self efficacy 1</td>
<td>24</td>
<td>3.71</td>
<td>0.81</td>
</tr>
<tr>
<td>Self efficacy 2</td>
<td>24</td>
<td>3.54</td>
<td>0.88</td>
</tr>
<tr>
<td>Self efficacy 3</td>
<td>24</td>
<td>3.58</td>
<td>0.88</td>
</tr>
<tr>
<td>Self efficacy 4</td>
<td>24</td>
<td>3.71</td>
<td>0.69</td>
</tr>
<tr>
<td>Self efficacy 5</td>
<td>24</td>
<td>3.42</td>
<td>1.06</td>
</tr>
<tr>
<td>Afl 1</td>
<td>24</td>
<td>4.00</td>
<td>0.98</td>
</tr>
<tr>
<td>Afl 2</td>
<td>24</td>
<td>4.17</td>
<td>1.05</td>
</tr>
<tr>
<td>Afl 3</td>
<td>24</td>
<td>3.83</td>
<td>0.92</td>
</tr>
<tr>
<td>Afl 4</td>
<td>24</td>
<td>4.08</td>
<td>1.02</td>
</tr>
<tr>
<td>Afl 5</td>
<td>24</td>
<td>3.75</td>
<td>0.85</td>
</tr>
<tr>
<td>Afl 6</td>
<td>24</td>
<td>4.08</td>
<td>1.18</td>
</tr>
</tbody>
</table>

Table 5. Descriptive statistics from Cycle 1 Questionnaire 1.
The AfL strategy which the student teachers found most helpful was question 2 which related to the discussion of assignment criteria prior to completing the assignment. The strategy found least helpful was related to peer assessment.

Having established that AfL strategies may be viewed by student teachers as helpful when completing an academic piece of work, as well as indicating high self-efficacy at the end of the module (albeit based upon results from a very small sample, n=24), it was not deemed necessary to repeat this element of the research during the second cycle (year 2009-2010). In fact, by establishing these possible effects, the research moved towards investigating correlations between AfL, self-efficacy and academic achievement during the second cycle of the project.

Based upon an evaluation of student teachers’ feedback relating to the first cycle questionnaire and my own evaluations, a number of changes were made to the second cycle questionnaires. Eliciting student teachers’ understanding of assessment, through asking them for a definition, was included in phase 2 (see section 4.4.4 for analysis). Gender and age was also seen as possible factors and the results did show a higher self-efficacy in male students. However, the very small number of males in the cohort made comparisons between genders impossible and was not included in the research results.

The number of questions linked to ascertaining the student teachers’ self-efficacy was increased in questionnaire 2 to include other elements of academic writing and the scale was amended from 1-5 to 0-10 in order to offer a wider choice to the participants, as described in
section 3.7.2 (see appendix 2 for phase 2 questionnaires). The scale was also changed so that 10 represented the highest score.

4.2.4 Questionnaire for Second Cycle of Research Project, Administered 2009/10

The second cycle of the research project (2009-2010) varied from the first cycle (2008-2009) in that it had two points of data collection. A questionnaire was administered at the beginning of the module during the academic year 2009-2010 (second cycle questionnaire 1) and another questionnaire was then administered at the end of the module when all marks and feedback had been returned to the student teachers (second cycle questionnaire 2). Second cycle questionnaire 1 looked to measure self-efficacy at the start of the module along with the student teachers’ understanding of assessment. The second questionnaire again measured self-efficacy, but did so at the end of the module; the second questionnaire also measured students’ responses to their experiences of AfL during the module. It was important for this research that there were two points of measuring self-efficacy and in order to compare the results from the first questionnaire relating to self-efficacy and, the second questionnaire, the internal reliability of the questions from each questionnaire was checked using SPSS. This allowed for the opportunity to calculate the extent to which the statements within the questionnaires were measuring the same construct.

Even though this testing had been done for the self-efficacy statements in the cycle 1 questionnaire, because more statements had been added for this cycle’s questionnaires relating to self-efficacy, it was deemed necessary to undertake further testing. The second cycle questionnaire 1 statements were grouped and given a new name, (self-efficacy 1) and revealed
the following result; sef1 – 0.899. Likewise, the statements for the second cycle questionnaire 2 were also grouped under a new name (self-efficacy 2) and again SPSS was used to ascertain that the statements were measuring the same construct revealing the following results; sef2 – 0.915. It was also decided to group the AfL statement (AfL1) to ascertain whether they too were measuring the same construct. The results were - AfL1 – 0.762. which confirmed that the grouped statements from both cycle 2 questionnaires were measuring similar constructs and, therefore, three new variables were created for use in the research analysis; sef1, sef2 and AfL1.

Using these new variables alongside the reflective report marks, correlations were sought. Table 6 displays the data. It can be seen in the yellow block, which focuses on the marks gained by the participants, that those who scored high in one report repeated that high scoring in further reports and those scoring low marks similarly repeated the trend of scoring low. There is no surprise here as one would expect that when students are asked to undertake similar tasks, previous skills and abilities would influence the results.

The blue block looked for a correlation between performance and self-efficacy. The results showed no relationship between performance in any of the three reports and student teachers’ self-efficacy. The green block shows that self-efficacy is positively correlated between se1 and se2. However, when using a repeated measures t-test there is a statistically significant difference between se1 and se2 (t=7.2, df=44, p<0.001), indicating that student teachers’ self-efficacy linked to successfully completing an academic piece of writing had increased (mean at time 1 =5.4; at time 2, 7.0) over the module.
The red block indicates important results for this piece of research as the analysis provides a strong indication that those student teachers who valued the AfL strategies and found them useful over the module have an improved performance to those who placed less value upon the AfL strategies. There are significant correlations between AfL and the three marks gained for the reflective reports (AfL and report 1, p<0.001; report 2, p<0.05; report 3, p<0.05).

<table>
<thead>
<tr>
<th>Assignment</th>
<th>reflective report 1</th>
<th>reflective report 2</th>
<th>reflective report 3</th>
<th>1 se1</th>
<th>2 sef2</th>
<th>3 AfL1</th>
</tr>
</thead>
<tbody>
<tr>
<td>reflective report 1</td>
<td>0.584</td>
<td>0.727</td>
<td>0.073</td>
<td>0.266</td>
<td>0.401</td>
<td></td>
</tr>
<tr>
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<td>P&lt;.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sig (2 tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reflective report 2</td>
<td>0.897</td>
<td>0.056</td>
<td>0.127</td>
<td>0.413</td>
<td>0.300</td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>P&lt;.001</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sig (2 tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>reflective report 3</td>
<td>0.041</td>
<td>0.229</td>
<td>0.340</td>
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<td></td>
<td></td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>sig (2 tailed)</td>
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<table>
<thead>
<tr>
<th>New variable</th>
<th></th>
<th></th>
<th></th>
<th>1. se1</th>
<th>2. sef2</th>
<th>3. AfL1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. se1</td>
<td></td>
<td></td>
<td></td>
<td>0.482</td>
<td>0.216</td>
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</tr>
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<td></td>
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</tr>
<tr>
<td>sig (2 tailed)</td>
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</tr>
<tr>
<td>2. sef 2</td>
<td></td>
<td></td>
<td></td>
<td>0.489</td>
<td>0.001</td>
<td></td>
</tr>
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</tr>
<tr>
<td>sig (2 tailed)</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. AfL 1</td>
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<td>0.489</td>
<td>0.001</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Table 6 Correlations between the three assignment reflective reports, self-efficacy at two points and AfL
4.2.5 Interim Discussion

Although it was disappointing not to find a relationship between performance and self-efficacy, it is interesting to note the improvement in self-efficacy rating from the beginning of the module to the end. This would seem to contradict other research evidence that suggests that student self-efficacy falls during higher education (Sander, 2009). It is also interesting to note that Biggs (2003) 3P model identifies the link between feedback that can affect efficacy beliefs and student performance. The results above may suggest that the feedback process used during this research project had positive affects upon student efficacy beliefs.

The results showing a correlation between AfL and the reflective report marks have strong implications for this research project, which will be fully explored in the discussion chapter, however, caution needs to be exercised when considering the significance of these results due to the size of the sample (cycle 2, n= 45).

Interestingly, the descriptive data for the cycle 2 questionnaire 1 (table 7) shows that students were least confident with aspects relating to referencing, which mirrors the findings from cycle 1. Although there is an increase evident in the scores in the cycle 2 questionnaire 2 relating to academic referencing, it remains the aspect of academic writing that the student teachers are least confident in achieving. The results linked to how helpful student teachers found the AfL strategies reveal that the most helpful was ‘receiving written tutor feedback based upon the first reflective report which included targets for improvement’. This would seem to concur with the findings of Beaumont et al. (2008) who believe that ‘it is this experience of feedback as a
<table>
<thead>
<tr>
<th>Self efficacy and AFL questions from cycle 2 questionnaires 1 and 2</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self efficacy question 1 questionnaire 1</td>
<td>45</td>
<td>5.62</td>
<td>2.20</td>
</tr>
<tr>
<td>Self efficacy question 1 questionnaire 2</td>
<td>45</td>
<td>7.58</td>
<td>1.31</td>
</tr>
<tr>
<td>Self efficacy question 2 questionnaire 1</td>
<td>45</td>
<td>5.31</td>
<td>1.96</td>
</tr>
<tr>
<td>Self efficacy question 2 questionnaire 2</td>
<td>45</td>
<td>6.71</td>
<td>1.49</td>
</tr>
<tr>
<td>Self efficacy question 3 questionnaire 1</td>
<td>45</td>
<td>5.96</td>
<td>1.62</td>
</tr>
<tr>
<td>Self efficacy question 3 questionnaire 2</td>
<td>45</td>
<td>7.49</td>
<td>1.47</td>
</tr>
<tr>
<td>Self efficacy question 4 questionnaire 1</td>
<td>45</td>
<td>5.38</td>
<td>1.71</td>
</tr>
<tr>
<td>Self efficacy question 4 questionnaire 2</td>
<td>45</td>
<td>6.84</td>
<td>1.51</td>
</tr>
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<td>5.89</td>
<td>1.88</td>
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<td>1.72</td>
</tr>
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<td>4.69</td>
<td>2.39</td>
</tr>
<tr>
<td>Self efficacy question 6 questionnaire 2</td>
<td>45</td>
<td>7.02</td>
<td>1.94</td>
</tr>
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</tr>
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<td>Self efficacy question 7 questionnaire 2</td>
<td>45</td>
<td>7.20</td>
<td>2.03</td>
</tr>
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<td>2.17</td>
</tr>
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<tr>
<td>Assessment for learning question 6</td>
<td>45</td>
<td>8.96</td>
<td>1.26</td>
</tr>
</tbody>
</table>

Table 7. Descriptive Statistics for Cycle 2 Questionnaires 1 and 2.
dialogic, formative process that consistently informs perceptions of quality expressed by students’ (2008: 7).

4.2.6. Reflective report marks

In previous years the marks received for the first reflective report, which were each marked out of one hundred, had been bettered by the second reflective report by as much as a mean of eight marks across the cohort (Cook, 2007). It was this difference in marks that was the catalyst for further investigations, leading to this professional doctorate research project. These results were replicated during this research. The mean for each of the three reflective reports were used in a paired sample t-test, in order to analyse the differences in the marks. There was a statistically significant difference between reflective report 1 and 2 (p<0.05) and also between reports 1 and 3 (p<0.05). However, there was no significant difference between reports 2 and 3. Although the sample size is limited (n=45), this finding mirrors previous results over a number of years since 2002-2003, suggesting that the first formative feedback helps students unlock the assignment requirements. These results would seem to strengthen the hypothesis that AfL strategies, especially formative feedback on assignments during a module, impact upon student performance.

In order to extend this element of the research, student teachers’ results for their first reflective reports were allocated to degree classifications, these being – fail (39 and below), third class (40-49), lower second (50-59), upper second (60-69) and first class (70 and above).
Paired Samples test for reflective report marks

Having allocated each student a category for their first mark the data were analysed to ascertain whether the marks for the second reflective reports showed differences in the mean gains within the degree classification categories. From the analysis emerged a number of interesting findings, displayed in table 9. It can be noted that those students who gained either a fail or a third class mark showed marked improvements on their second reflective report.
As the fail category had only three student teachers’ marks, the categories were combined, to create two new categories. The fail and third class categories were combined as were those with a better score than the third class category, as shown in table 10.

<table>
<thead>
<tr>
<th>Category</th>
<th>Mean gain in mark</th>
<th>N</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fail &amp; Third</td>
<td>12.38</td>
<td>13</td>
<td>7.332</td>
</tr>
<tr>
<td>Better than Third</td>
<td>3.94</td>
<td>31</td>
<td>6.537</td>
</tr>
<tr>
<td>Total</td>
<td>6.43</td>
<td>44</td>
<td>7.747</td>
</tr>
</tbody>
</table>

Table 10 Improvement in marks from report 1 to report 2

The category of students gaining the lowest marks with their first reflective report made the most significant improvement by the second reflective report, showing a mean gain of 12.38 marks. Those student teachers, in their first report, achieving higher marks than the third class category only made a mean gain of 3.94 marks with their second report. An independent samples t-test revealed a statistically significant difference between those gaining a fail or third class mark and those gaining better than a third class mark (P<0.05), which supports the Assessment Reform Group’s belief that AfL is disproportionately more beneficial to those students gaining lower marks. However, more work on a larger sample would need to be done to confirm any significant difference.

4.3 The semi-structured Interviews

This second section of the results’ chapter explores the qualitative element of the research. It was important, for the integrity of the research, that the semi-structured interviews were
undertaken once all the marks and feedback had been given to students. This ensured that students could discuss relevant issues in an honest, open manner, without any perceived impact upon their assessment performance for the module. From these semi-structured interviews emerged a number of relevant issues linked to the aims of this research. Five student teachers agreed to be interviewed, being ten per cent of the sample at cycle 2. The interviews investigated similar areas to those covered in the questionnaires, but allowed for a greater depth of debate relating to the issues (interview transcripts in appendix 6). The student teachers were also invited to offer their opinions on the tutor/student relationship when linked to assessments; an area that was highlighted in the review of literature as having an impact upon student performance (Taras, 2002). The areas of discussion that will be reported upon here are:

- How useful were the AfL strategies in enhancing the learning?
- Is there a better way?
- Peer assessment
- Self-assessment.
- Motivation
- Tutor/student relationship

4.3.1. How useful were the AfL strategies in enhancing the learning?

The opening questions related to how useful the student teachers believed the AfL strategies to be in their learning. What emerged from the discussions indicated that student teachers found looking at examples of previous work very helpful,
S- The one I’d definitely say is the one looking at past students’ work. I always think that’s really helpful. I don’t like to start something, I don’t want to get it wrong, I can see the structure of it. (Q. It clarifies it) yes.

Q- So with those, we didn’t give you exemplar we gave you examples to go against the criteria, which would you prefer, exemplar material or examples?

S- Personally I have to say examples as I can see for myself then. Try to put them against the criteria to see. (transcript 3, lines 13-19)

The worth of this strategy was also outlined by student 1,

But I found it really helpful looking through other examples because I thought, Oh, that’s maybe the kind of style I go at or I didn’t think they’d really met it, (transcript 1, lines 44-46).

4.3.2 Is there a better way?

This proved to be a most enlightening discussion and provided a clear indication for change in the way feedback is delivered at present. An aspect of the interviews’ content was feedback and how it makes students feel and what might be the most effective feedback for them. The point was raised through eliciting their feelings and perceptions of the feedback process.

Comments such as,

S- I think it’s the written feedback that makes me nervous. When we’re talking about things it’s fine but when I’ve got a mark coming back I feel sick (transcript 4, lines 9-10).

On a more positive note, student 5 has moved from an emotional response to a more pragmatic, constructive one,

S5- It used to be the mark, but this year I’ve been really interested in the feedback and comments. What I’ve tried to do as well is take on board what people have said and then apply it to different assignments as well. (transcript 5, lines 5-7).

This idea of transferring feedback to other assignments is echoed by Student 1,
That has helped me because we had to do quite a lot of reading. And I thought, ok, let’s transfer that amount of reading to other assignments or more, if that makes sense. And even things like I don’t particularly like writing conclusions and one of my targets was in my conclusion to bring all the pieces together using the theory, whereas before I’d say ‘this is my point of view’ whereas now I make sure that I say someone says this, or to say the point and then in brackets put supporting literature (transcript 1, lines 109-114).

One AFL strategy that was built into the feedback process was that of withholding the mark for the first reflective report until the end of the module and only providing written feedback with targets during the module. Initially, students seemed to doubt the relevance of this strategy, and this student explains her initial reaction to the strategy.

S3-What’s the point of that I want to know straight away. If the grade is fine I’ll read the rest later, kind of thing (transcript 3, lines 49-50).

However, this same student went on to support the idea,

S3- I think it works the other way though as well, as if you look at your grade and you’ve got 65, yeah, I’m happy with that, but you think how can I improve on that? But if there’s nothing there to tell you then you’re going to be stuck in the same thing (transcript 3, lines 52-54).

A feeling reflected in student 4’s comments,

I found that a lot easier to cope with because you didn’t give me a mark, I didn’t know how I had done, so I worked on what you had said.

Q. So that was a useful thing for you.

S. Yes (transcript 4, lines 17-20).

The theme of specific feedback linked to the assignment content and generic feedback that can be used in future assignments was the most interesting element that emerged from these discussions.

This was highlighted well through discussions with student 1.
S1 - Maybe even, when you have your assignments back and they have your strengths and areas for improvement, maybe they could have another box, because obviously it’s strengths and areas for improvement for that specific assignment, maybe they could have another one with transferable skills, or generic areas for improvement and targets. Maybe as well you could have generic strengths such as ‘good academic style of writing’ rather than ‘Well done, you’ve addressed this point’. You’d be like, ‘ok these are my points, that’s fine,’ then you have areas for improvement in that specific essay but then also skills that you could transfer. That’s why I find it useful the targets you sent me. I thought, ‘am I actually addressing those in other assignments?’ That might be an idea, people may pay more attention. OK how can I actually take that other box and apply it so that I can do better (transcript 1, lines 117-126).

Student 5 made a similar point,

S5 - I think so because then the feedback you’re getting is transferable for other assignments. I noticed that the feedback you gave me, it helped me with other assignments as well. It gave me things to consider, like Harvard referencing and things you need to know for all the assignments. To an extent you need subject specific feedback to improve from year to year, I think it’s a good thing if you can apply it to other subjects as well (transcript 5, lines 40-44).

The institution in which this research was undertaken has a policy of returning students’ assignments no later than four weeks from the submission date. In some cases, especially if the module content is module specific, the feedback may be of little, if any formative use for the student. This idea of combining specific content feedback alongside generic, transferable skills would seem to be a much improved form of formative feedback within higher education. This aspect will be developed further in the discussion chapter.
4.3.3 Peer assessment

This strategy elicited a range of responses from the students and highlighted:

- a possible misconception of what peer assessment is;
- the emotional responses to peer assessment;
- possible ideas for developing peer assessment in higher education.

A number of the students discussed previous experiences within a subject area during their second year, which they described as peer assessment. On further questioning, what emerged was a form of peer marking rather than formative feedback aimed at improving performance.

S3. We’ve done that in language; we had somebody else’s and had to put that against criteria. It was somebody in the group but we didn’t know who.

Q. Was that peer marking, or did they have a chance to take that away and improve their work?

S. No, when I had mine, I thought, ‘Yes I could have done that’ but I didn’t have the chance to do it (transcript 3, lines 37-41).

The emotional response to peer assessment emerged from a number of the interviews. In previous years an issue that had occurred was students receiving feedback from those whom they deemed less able than themselves or performing to a lower standard than themselves. It was not a view held by many but during the interviews this aspect was explored. Student 2 summarised the general feeling from all interviewees,

Q. What are your feelings about another student reading your report and giving feedback, even if they are performing below your standard?

S2. That doesn’t matter, no, I’d take anyone’s views on board (transcript 2, lines 25-27).

This student’s comments highlight how the emotional response could be removed through anonymity,
S1 if there was a way to make peer assessment more anonymous because I think there is that fear of, ‘Oh I can’t tell my friend actually that maybe... ‘ I think it takes a certain person. Because people generally don’t like criticism or even constructive criticism. I know in my circle of friends I could say you need to do that and they’d be fine whereas others may respond, ‘Well I thought I did that already.’ If there was anyway of making peer assessment more anonymous, people would be a hell of a lot more honest (transcript 1, lines 134-140).

This leads neatly to the final issue linked to peer assessment, which relates to a possible way forward. What emerged was a consensus that peer assessment was beneficial, more so if blank copies were given to students of others’ work, alongside their tutor feedback targets. Students would then have to judge whether the targets had been met fully and if not, highlight the discrepancies. Most interviewees saw this as a much improved system, although Student 4’s response displayed an underlying fear of assessment.

Q. If the students had been steered to write two good things that you’d done well and two things to improve, would that have been more beneficial?

S4. Still have the anxiety (transcript 4, lines 59-62).

However, four of the students saw distinct benefits from peer assessment using clean copies and tutor targets.

Q. Do you feel that would be a better system?

S2. I think that would work better. Yes it would be better with the targets to know what you’re looking for (transcript 2, lines 19-22).

Students 5 made similar remarks, ‘I think it’s more beneficial when you don’t know whose work you’re marking’ (transcript 5, line 22).
4.3.4 Self-assessment.

Interestingly this area was not viewed as an effective strategy by a number of the students.

When discussing self-assessment Student 5 saw it as less helpful.

S5. ...I think that the feedback from you (tutor feedback) and peer assessment was better than self-assessment (transcript 5, lines 17-18).

A belief held by student 1 also,

Well to start with the ones I didn’t particularly find useful was self-assessment, only because I worry about my work anyway. Whatever I write I’m never happy with my work. So for me to self-assess my work I was , Oh my God I don’t know what to write because I’m never pleased I think I’m a bit of a perfectionist. So what ever I said wasn’t really a true reflection of what I’d written (transcript 1, lines 39-42).

Interestingly, both of these students valued peer assessment, yet not so self-assessment.

4.3.5 Motivation

Students’ motivation related to the assessment process was another area covered in the interviews. The students held a range of views. Student 4, although stating that her motivation was ‘I want to know’, seemed focused more upon the outcome than the actual learning. This is indicated in her response,

Q. Does the assessment process impact upon your desire to learn?

S4. Yes, I’d say so as I always want to do well. When I was little I was always in competition because I wanted to do better(transcript 4, lines 70-72).

This response suggests a desire for an external recognition of approval rather than an inner satisfaction for learning.
Student 2 offered a very honest answer,

Q. In what ways do assignments motivate you, to learn or to get it done?

S2. To get it done (student and researcher laugh)

Q. That’s very honest of you, so when you get your assessment back, is it the mark that means the most to you or is it the feedback?

S2. The first thing I look at is the mark. I do read through, obviously, the comments, you know, work towards that the next time, but the first thing I look at is the mark (transcript 2, lines 29-34).

Whereas Student 1 explains how the assignment itself dictates the student motivation.

S1. I think it depends on how much I find it interesting. Does that make sense, the motivation? If I think this is fantastic if this is something that will enhance my career or help me in the classroom then I’m more motivated to do it. I think, this is great because not only am I learning from the research but I can apply it later on. But if I think, how does this really apply to me in a couple of years then I may not be as motivated.

Q.OK, interesting. So if the assessment itself is linked closely to the relevance of what you’re doing here then you’ll put more...

S. Definitely, then I’ll put more motivation and with regards the education, the reflective reports, I found them interesting because you gave an element of independence. You could choose a topic you’re interested in rather than –‘Here’s a question, off you go’. But being more independent, you’re going to be, ‘OK this is my question, off I go.’ It’s equipping you for skills like setting my own criteria. I think it’s a way of motivating you as you come up with a title that you have to be interested in (transcript 1, lines 9-20).

This development of motivation through the assessment task is illustrated by the work of McDowell and Sambell (1999), where they quote students who gain ‘satisfaction from engaging with meaningful tasks, rather than simply learning because they were required to do so’ (1999: 115).

The element of choice within the assignment was introduced into the module some years previously, where students cover a range of pedagogical issues linked to primary education and
have to choose one in order to complete a reflective report. Student 3 saw this element of choice as a positive motivational strategy.

Q Another thing I’d like to look at is how assessment motivates you, do you find it does motivate you to learn or is it just another hurdle to be overcome?

S3 It’s a bit of both really, at the time I just really want to get it done, but then when you actually think about it, it is helpful. It does motivate you to want to do better.

Q Going back to the reflective reports, what did you feel about the choice? Would that be something you’d like to see more of?

S3 At the times it’s quite hard to think, you know, giving you a blank, do what you want type of thing, how am I going to decide? But then it’s something that you’re interested in, so that motivates you as well. You want to find out more, you want to do it (transcript 3, lines 64-72).

4.3.6 Tutor/student relationship.

A field of enquiry that emerged from the review of literature was that of the student/tutor relationship and how this can impact upon the assessment process (Maclellan, 2008; Taras, 2002). Although it is not an element that plays a significant part in this piece of research, it does have relevance for the fourth sub-question of this research project and it was deemed to be worthy of some investigation during the semi-structured interviews, due to its implicit influence upon performance.

The general consensus from all of those interviewed, as one would reasonably expect, was a description of a tutor who would be there to offer support and guidance, although one student accept that a university degree requires independent as well as guided study.

Q What is the ideal situation for you? (relating to tutor student relationship, relating to assessment and learning)

S5 It is really difficult because it getting the balance. I can see it from the tutor’s point of view, it’s a university degree and a lot of it is independent work. But I think the tutor
should be around to answer questions and support students but then I do think a lot of it is up to you as a student to do your work and get on with it and research things. (student offers an example) In Leicester tutors were unapproachable, whereas here if I’ve got a problem I will go to speak to a member of staff. (Student worries that some may be spoon fed by tutors).

Q In Leicester, was that your first experience of higher education? Do you think it was your lack of confidence in approaching a tutor or was it this tutor status thing that they protected possibly?

S5. I think there was a status, and also, I did half of my second year and decided to change course, but more so in the second year I felt that I could go and speak to them. But it would be by appointment, it was more formal. Whereas here, I think it’s more relaxed, in a way. The staff are really friendly and if you do have a problem they will try to help you as much as they can (transcript 5, lines 63-75).

This relationship would seem to have an impact upon student performance, a point made strongly by Mahony (2007) who believes that the perceptions of tutors held by their students, impact upon the confidence and credibility they have in the tutor’s feedback.

4.4 Defining Assessment

A quantitative approach to the data was employed when analysis these results as it was my aim to investigate how student teachers view assessment and the outcome of the analysis could have implications for my first sub-question of this study. For the purposes of this research project all students were asked in the second cycle, questionnaire 1 (see appendix 2) for their definitions of assessment. It was decided that for this aspect of the analysis the use of a ‘Grounded Theory Approach’ would be appropriate (see chapter 3, section 3.7.1) From that analysis three main categories of assessment definitions emerged.

- Category (i) A measurement of ability/ knowledge/ understanding done by a third party.
- Category (ii) A measurement of ability/ knowledge/ understanding done by a third party, but related to moving the learning forward (mention of learning and teaching)
- Category (iii) Sophisticated definitions using formative and summative terminology with a stronger focus upon learning.

However, prior to finalising these categories, discussions took place with my professional support advisor in order to verify the chosen categories, and he felt that the three categories did represent the majority of the definitions. Through analysing the results, a number of interesting findings emerged.

4.4.1 Category (i) A measurement of ability/knowledge/understanding done by a third party

This was by far the largest category, with 71% of respondents offering definitions focused mainly on measurement of ability, with a large number using ‘testing’ somewhere in their definitions. A number of respondents focused on a third party;

Assessment – a way of monitoring and looking at how an individual did at a certain piece of work/project.
Monitoring individuals using tests/questions/conversations etc.
Assessment means to test how well someone understands something, or to test the progress of something/someone.

Some student teachers viewed assessment as themselves being measured in some way;

Testing my knowledge finding out theories and information.
Testing my own knowledge on a specific area/topic or testing another person’s knowledge.

56% of those within category (i) included either the word ‘test’ or ‘testing’ as part of their definition. Some of these are listed here;

Being tested and compared to others.
Testing knowledge, identifying strengths and weaknesses.
Tests, exams. It is when we will be graded and for someone, it is the time when we have to study harder, in order to achieve good grades.
Monitor a pupil’s work through tests.
Others definitions within this category merely listed some strategies for assessment, which again tended to feature ‘testing’.

   Testing, observations, questions.  
   Test, exams, graded or observed.

4.4.2 Category (ii) A measurement of ability/ knowledge/ understanding done by a third party, but related to moving the learning forward (mention of learning and teaching)

Within category (ii) of the students’ definitions, there was a link made to moving the learning forward. This would indicate an improved understanding of the assessment process and was achieved by 22% of the sample. Some of the definitions discussed target-setting and continuous monitoring, displaying a greater understanding of formative assessment than was evident within the category (i) definitions.

   Giving in a piece of work, then having it marked and returned to you with feedback and comments. It helps you to see how you are doing and how you can improve.

Some also made reference to how it can be used as an evaluative tool of the teaching.

   A way of testing an individual to find out what level of ability they are at and to address problems. Also a way of seeing how effective your teaching is

Even though the definitions moved beyond the basic ‘testing’ idea seen in the category (i) definitions, there was still a focus upon performance and measuring that link their definitions to performance, using phrases such as,
Assessment is a means of checking what a person has learnt and a means of showing what a person is able to achieve...

Discovering how a person is doing...

A way of testing or finding out about an individual’s knowledge and attainment...

However, all of the above did go on to discuss closing the gap and displayed a deeper understanding of the formative assessment process than those in category (i).

4.4.3 Category (iii) Sophisticated definitions using formative and summative terminology with a stronger focus upon learning.

This was the smallest category containing only 7% of the definitions. There were similarities between category (ii) and (iii), in that ‘feed-forward’ was evident within their understanding of assessment, and choosing between these two categories proved the most difficult, whereas the difference between both category (ii) and (iii) and the first category was clear to see. However, the balance between ascertaining achievement and how this informs future leaning and teaching came through strongly within the definitions in category (iii). An example of this being,

We use assessments to find misconceptions; identify strengths and weaknesses; and to inform planning teaching and learning. Assessment is formative and summative, it can include questions, talk, observations and written recordings.

This clearly indicates a student teacher who has a sophisticated understanding of the assessment process.

In order to analyse the results, these categories were then allocated to the students’ results within SPSS to elicit any possible links between perceptions of assessment. The following section outlines the analysis of the results obtained.
4.4.4 Analysing the results

Each student teacher’s definition was allocated a category according to the sophistication of their assessment definition. These were then compared to their marks, to their self-efficacy and also to their views on AfL strategies.

When comparing student teachers’ definitions of assessment against their marks for the first reflective report, the results show that the mean mark of those in category (i) was 51, category (ii) was 55 and category (iii), having the most sophisticated definitions, was 61. These results suggest that having a more sophisticated definition of assessment is linked to performance. This pattern is reflected when comparing the marks for the second reflective report, where the more sophisticated the definition, the higher the marks.

Although these results indicate an effect, it was felt that due to the small number of students in category (iii), by combining categories (ii) and (iii) and creating a new group, it would provide more reliable results. As mentioned in the previous section, distinguishing between category (ii) and category (iii) was difficult as they both contained elements of formative practices, an area lacking within the definitions of category (i). The groups were re-named, ‘basic’ (i) and ‘better’ (ii+iii).
<table>
<thead>
<tr>
<th>Reflective report</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>One</td>
</tr>
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<td>Basic (N32)</td>
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<tr>
<td>Total (N44)</td>
</tr>
<tr>
<td>mean</td>
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<tr>
<td>std deviation</td>
</tr>
</tbody>
</table>

Table 11  Student definitions of assessment versus marks gained

Statistically significant differences emerged when comparing the student teachers’ categories of sophistication of definition to the marks gained for the reflective reports when using the new groups. Report 2 (t=2.644, df=42, p<0.05) and report 3 (t=2.410, df=42, p<0.05) highlighting a possible link between understanding assessment and performance.

When comparing the sophistication of definitions against the self-efficacy mean at the beginning and the end of the module, for those in category (i) at the beginning of the module their mean for self-efficacy was 5.0 (to the nearest decimal point) and the combined mean mark of those in category (ii) and (iii) was 6.3. Statistically, this is a significant result (t=2.874, df=43, p<0.05) and reinforces the link between a more sophisticated understanding and self-efficacy relating to the reflective report writing.
4.4.5 Interim discussion

These results, although based upon a small sample (n=45), would seem to reinforce the importance of addressing students’ understanding of the assessment process. Encouraging students to engage with the assessment process and supporting them to build a more sophisticated perception of assessment could impact significantly upon their academic performance and learning.

The next chapter will analyse these findings in the light of relevant research and the original research sub-questions for this project.
Chapter 5

5.0 Discussion

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5.0 Discussion

5.1 Introduction

This study began with the overall aim of critically analysing the implementation of a number AfL principles within a higher education context and gauging the impact upon the quality of teaching and learning and student self-efficacy. From this overall aim four research sub questions emerged:

- How can the introduction of AfL strategies impact upon students’ learning beliefs?
- How can the use of formative feedback linked to the module assignment impact upon the quality of students’ work?
- Do students perceive peer and self-assessment as beneficial when undertaking a piece of academic writing?
- How can the pedagogy of tutor delivery help develop self-efficacious students?

This chapter will address these initial research sub questions in the light of the results and relevant literature. The sub-questions will be dealt with discretely to identify emerging themes and issues as the accumulative nature of each cycle of this research project offered important evidence that relates to each sub-question. Finally the effectiveness of the methodology will be discussed.

5.2 How can the introduction of AfL strategies impact upon students’ learning beliefs?

The results from this research project show that AfL strategies can impact upon students’ learning beliefs and performance and support the evidence of other authors in this field of
research (Daugherty, 2008; Black and Wiliam, 2006; Nicol & Macfarlane-Dick, 2006; Segres, Dochy and Cascallar, 2004; Juwah et al., 2004; Black and Wiliam, 1998). The evidence for this incorporates a number of elements, outlined here.

**An assessment view:** This first research sub-question embraces a view of assessment that is not necessarily held by all in higher education. It depends greatly upon the way the assessment process is regarded. If we, in higher education institutions, value what we ask students to undertake as part of the assessment process, we must value the outcome of that assignment as an integral part of the students’ learning. If that is the case then it would seem reasonable to assume that tutors would do their best to help students achieve the goal through structured support. As Jenkins (2010) asserts, ‘the duty of the teacher must surely be to respond appropriately and ensure that everyone has the opportunity to effectively engage with the learning and assessment processes’ (2010: 567). However, if the assessment process is seen merely as a measuring tool, then formative assessment is unlikely to figure prominently in the delivery of the module. Joughin (2010) suggests that ‘the belief that summative assessment drives students’ learning is widespread’ and he goes on to discuss the role of summative assessment within higher education and believes that ‘new research is required’ (2010: 335), in order to fully understand the influence of assessment upon the students’ approaches to their study. Beaumont et al. (2008) argue that a ‘formative process’ within assessment is what ‘consistently informs perceptions of quality’ (2008: 7) for students.

This research project was firmly within the ‘supportive model’ of assessment. The obvious dilemma, when taking this stance, is that higher education is dependent upon marks and grades
for classification of degrees. However, this research project has shown that even in such a ‘results orientated’ system there is room for supportive, formative models of assessment. Jenkins (2010) would seem to agree, ‘if formative assessment is to be embraced, greater consideration needs to be given to reducing summative assessment levels to create room for a more formative assessment in the curriculum’ (2010: 566). This supportive model of assessment was, at least, a belief and philosophy that I and other tutors teaching on the module held. The problem within higher education is whether the students hold that same belief. Price et al. (2010) highlights the problem succinctly, ‘If staff define the purpose and students make the judgment but hold a different view of purpose, how useful is the measure?’ (2010:278).

**Student engagement with the assessment process:** One of the main principles behind my research was enhancing student engagement in the assessment process and therefore the importance of including AfL strategies within the delivery of the module was crucial. In fact Tillema and Smith (2009), when discussing AfL and primary student teachers, say that, ‘the practices by which such AfL is delivered, i.e., by those who provide the feedback, that is the assessors, could very well influence what students accept and subsequently follow as recommendations to improve their teaching’ (2009: 392). This quotation encapsulates my initial drive in 2002-2003 to include AfL strategies as an integral part of the education module, which is the focus for this research project. The aim was to mirror in our own practices as tutors what we expected student teachers to deliver in the primary classroom. This belief that an engagement with AfL at the student teachers’ level of learning could offer insight into their own pedagogical practices in the classroom is supported by Tillema and Smith (2009) who suggest
that this approach ‘should provide relevant and informative feedback to assessors to more effectively support student teachers in learning how to teach’ (2009: 392).

**Supporting evidence:** Both the qualitative and quantitative results from my research project offered insight into the student teachers’ beliefs. Although the student teachers’ responses were mixed, there are indications that the student teachers found the inclusion of AfL strategies helpful to their learning. The data revealed that the most helpful strategy was, ‘receiving written tutor feedback based on the first reflective report which included targets for improvement’. This underlines the importance of rethinking approaches to learning in order to promote effective learning (Sambell, 2011; Beaumont et al. 2008).

**Offering Examples alongside assignment criteria:** Recent research suggests that students sometimes have trouble understanding and interpreting the assignment criteria (Hendry, Bromberger & Armstrong, 2011; Carless, 2006). Because of this, the student teachers for this research project were offered examples of previous reflective reports alongside the assignment criteria during teaching sessions, what Carless sees as ‘pre-emptive formative feedback’ (2007). This is a strategy encouraged by Sadler (1987), when he argues that examples of high quality and low quality work help the students understand the expectations of the assignment. My qualitative data reinforced the usefulness of such a strategy for student teachers (see section 4.3.1). This strategy would seem to counter the beliefs of Orsmond et al. (2002) and Handley and Williams (2011) who promote the use of exemplar materials rather than examples, as there is clear evidence from this research project that examples are preferred by the student teachers. However, my understanding of exemplar and examples has been challenged during
this research as Sambell’s (2011) reference to a case study on the use of exemplars to aid students’ learning seems to indicate a range of work of varying standards being offered to the students, ‘(staff) had carefully chosen the four exemplars to represent what they saw as ‘clear’ examples of work which occupied the middle-band of work in upper-second, lower-second and third class categories, plus a borderline fail’ (2011: 39). My understanding of an exemplar piece of work is one that is ‘fit to be imitated’, which would therefore be a piece of work representing a high standard of work, which would suggest that Sambell’s case study involved examples of work as opposed to exemplar work. Thus my research may well be supporting the previous research relating to the usefulness of this strategy (Sambell, 2011; Handley and Williams 2011; Orsmond et al. 2002), but possibly challenging the definition of the term exemplar.

The qualitative data from the semi-structured interviews also seems to indicate student teachers’ support for the use of AfL strategies within the module. The usefulness of AfL for students does mirror the findings of Segres, Dochy and Cascallar (2003) who, when discussing assessment, found that AfL had the potential to be more informative to the students and could, in turn, enhance their understanding and competences.

The most significant findings linked to this research question emerged from the second cycle of the research project, although it must be remembered that this was based upon a small sample of student teachers. There is statistically significant evidence suggesting a correlation between AfL and the reflective report marks. Those students who valued the AfL strategies included within the module and saw them as useful had significantly higher performance levels when writing their reflective reports (see section 4.2.4).
However, the semi-structured interviews did indicate that even if the student teachers recognised AfL strategies as being useful, there still existed a tendency to perceive assessments as hurdles. As one student explained, when asked whether she saw the assessment as a learning opportunity or another hurdle, ‘It’s a bit of both really, at the time I just really want to get it done, but then when you actually think about it, it is helpful’.

Perception of assessment: Students’ perceptions of the assessment process would seem to be a factor in the successful completion of an assignment. Tynjälä’s (1999) conceptual model, which I adapted to link more closely to assessment (see chapter 2, section 2.3), indicates the assessment procedure used by a tutor may only be as good as the students’ perception of assessment in general. That perception may have a strong influence upon the student’s engagement with the assessment, thus strengthening the belief that time spent including AfL strategies within the module delivery can influence student performance. It may even go towards producing what Price et al. (2010) describe as ‘pedagogic literacy’, something they feel is ‘key to evaluation of feedback and feedback processes’ (2010: 277). However, the over-riding worry is that the ‘prevalent assessment culture’, already established through a diet of traditional assessment practices, could negate any innovative assessment orientation (Tillema & Smith, 2009).

Student motivation: An element linked to the student teachers’ learning beliefs is that of motivation. The semi-structured interviews indicate that the more students understand the purpose of the assignment and, possibly more importantly, the relevance of it to their learning, the more motivated they are to complete it successfully, ‘if this is something that will enhance
my career or help me in the classroom then I’m more motivated to do it’. Interestingly, from those discussions emerged the importance to some students of an element of choice within the assignment, reflected in this student’s response, ‘I found them interesting because you gave an element of independence. You could choose a topic you’re interested in rather than –‘Here’s a question, off you go’. It’s equipping you for skills like setting my own criteria. I think it’s a way of motivating you as you come up with a title that you have to be interested in’ (student 1). This would seem to support Jenkins’ (2010) view that too much prescription within an assignment can

‘stifle student creativity, inhibiting what Bennett (1999) refers to as ‘epistemological pandemonium’. Providing students with detailed guidance of what readers and issues their assignment should draw upon does appear to undermine the idea of ‘compounding supercomplexity’, which Bennett argues that universities should be encouraging not discouraging’ (2010: 569).

Choice within assignments is also supported by AUTC (2002); when discussing the sixteen indicators of effective assessment in higher education, they believe that there should be ‘provision for student choice in assessment tasks’.

However, that element of choice can create anxiety with some students, highlighted by student 3, ‘At the times it’s quite hard to think, you know, giving you a blank, do what you want type of thing, how am I going to decide?’ but she does go on to concede that if ‘it’s something that you’re interested in … that motivates you as well. You want to find out more, you want to do it’. This would seem to counter the findings of Maclellan (2001), who when researching students’ motivation when undertaking assessments, found the tasks motivating only sometimes, and
more significantly, 25% of the students responded by asserting that the assessment was never motivating.

5.3 How can the use of formative feedback linked to the module assignment impact upon the quality of students’ work?

The results from this study seem to indicate a link between the formative feedback and student performance within the written assignment as the results indicate a mean gain over the student cohort. However, the results also show higher gains for those whose first mark was in the lower categories, thus supporting Black and Wiliam’s belief that the inclusion of AfL strategies can be more beneficial to those students gaining lower marks. In addition, the process of that feedback within this research project was less of what Price et al. (2010) describe as ‘the cognitivist, corrective view of feedback as a ‘gift’ from the teacher to the learner’ but more within the socio-constructivist view ‘as a process developing through loops of dialogue where feedback is a process taking part within the learning context’ (2010: 280). Both the qualitative and quantitative data indicate positive results linked to this sub-question, highlighted in a number of areas, which are further developed here.

The purpose of feedback: The results from this research project suggest possible links between formative feedback and student performance. Certainly the differences between the first reflective reports’ marks prior to receiving tutor feedback and the second reflective reports’ marked after receiving tutor feedback were statistically significant (See section 4.2.6). However, as Price et al. (2010) suggests, ‘Measuring ‘effectiveness’ requires clarity about the purpose of feedback. Unless it is clear what feedback is trying to achieve, its success cannot be judged’
Price et al. (2010) go on to identify various feedback categories: correction, reinforcement, forensic diagnosis, benchmarking and longitudinal development. It is this final category, ‘longitudinal development’ that occurred during my research project, within the module as opposed to across modules. Incorporating elements of tutor and peer feedback between the completion of the three reflective reports not only offered support and guidance on how to improve, but also impacted upon the summative results. It was used by the students to make improvements in their academic writing and counters the concern voiced by Nicol (2010) that, ‘even though teachers spend considerable time carefully constructing feedback comments on assignments, these are often not collected by students’ (2010: 502). By providing formative feedback during the module, thus allowing that feedback to influence the performance, would seem far more productive for the student teachers than if feedback where to be provided alongside a summative judgment, where the only improvements that the students can make are in future modules. However, that feedback may not explicitly benefit students in their next module, either because of the module content being different or through the student not being able to identify the feedback as relevant to future modules. I would contend that longitudinal development within a module is more beneficial to students’ understanding and performance than what Price et al. seem to be advocating, which is ‘feedback directed at supporting improvements in the next assignment’ (2010:279). For this to occur, where students benefit from feedback in future modules, the semi-structured interviews from this research project identified a possible way forward. Within my institution, proformas are used to give feedback at the end of a module of work. One student, during the semi-structured interviews, suggested an amendment to these forms whereby feedback could be
given linked to the module content plus a space for generic feedback/forward that could aid the student in future assignments. This would link to the beliefs of Sadler (1998) and Covic and Jones (2008) who propound that summative assessment can be utilised to improve future assignments. Price et al. (2010) expand on this point and identify that feedforward can help support students with ‘slowly learnt literacies’ and also improve understanding of ‘threshold concepts’, being vital to their learning. Sadler (2010) would seem to support this dual approach to feedback,

Clearly, if feedback is to have a reasonable prospect of achieving its formative purpose, it has to be both specific (referring, as it necessarily does, to the work just appraised) and general (identifying a broader principle that could be applied to later works) (2010: 538).

Handley and Williams (2011) see this as a key issue and contend that students’ lack of engagement with feedback is because ‘they perceive much of their feedback to be irrelevant to future assignments and modules’ (2011: 96).

**Formative comments without marks:** One element of this research project that created debate and occasional disagreement was the withholding of marks after marking the first reflective reports and only providing the students with what they had done well and no more than three targets for improvement. This was included into this research project as there is a suggestion that written formative feedback is more effective than sharing grades and marks (Black and Wiliam, 1998; Butler, 1988). A number of student teachers felt that they should know the mark in order to ascertain by how much they needed to improve. This is a point supported by a student’s comments from Poulos and Mahony (2008) who used the mark to determine the focus of his/her efforts, ‘it all comes down to prioritising’ (2008: 148). I believe that this is a
product of students having focused on a pass mark throughout their educational careers rather than a desire to improve, whatever the starting point for that improvement. The advice that we as tutors gave to our student teachers was that if they were to concentrate on the targets identified by tutors, the work would improve. Two of the participants from the semi-structured interviews supported this view.

I would claim that the approach to giving feedback adopted in my research does impact upon what Lizzo and Wilson (2008) call the ‘performance-gap information’. They state that,

‘A commonly identified characteristic of effective feedback is that it should contribute to knowledge of performance and the nature of the performance gap between actual and ideal performance (DeNisi & Kluger, 2000). From a self-regulated learning perspective information regarding such a ‘perceived discrepancy’ is fundamental to motivating change or learning. Thus the better a feedback intervention is able to provide the learner with such information the more the effective it is likely to be perceived.’

(2008: 264)

The findings relating to improved performance from my research (see section 4.2.6) and the student teachers’ responses during the interviews (see section 4.3.2) indicate that the feedback approach employed for the reflective reports in this research project was a robust model. The results relating to how helpful AfL strategies had been were supported by the qualitative data from the interviews (see section 4.3.1) where students found viewing examples of work against the assessment criteria useful. Davies (2010) makes a similar judgement, ‘Good results may also be obtained when learners apply assessment criteria to examples of completed work before producing their own assignments’ (2010: 13).
Understanding feedback: The reason I believe this to be important when discussing feedback is the claim that unless students understand what is expected of them, they will not be able to use the feedback effectively. As Lizzo and Wilson (2008) underline, ‘This reinforces the need for assessment criteria and standards of evaluation to be clearly explained before assessment is commenced’ (2008: 265). This is a belief supported by Rust, Price and O’Donavan (2003) who propound that unless the assessment criteria are understood by students the productive dialogue needed will not occur. Jenkins (2010) sees it as increasingly important as widening access to higher education continues, ‘Acknowledging the need for information that clarifies the aims and objectives of the assessment is of increasing importance, particularly as participation rates in higher education grow’ (1010: 567). My research project acknowledged this research by including changes within the tutor delivery of the module to include opportunities to engage with and further their understanding of assessment criteria and thus enhance their interpretation of the feedback.

Speed of feedback: It is recognised that the effectiveness of feedback is enhanced when offered quickly to the student (Ferguson, 2011). During this research project, students received their tutor written feedback the following teaching session, a very quick turn around which, although putting added pressure upon tutors, was done in order to benefit the students’ learning. Ellery (2008) and Jenkins (2010) concur with the belief of rapid feedback and even though their focus was upon electronic feedback, the importance of tutor/student dialogue is encapsulated by Nicol (2010) who states that formative assessment should be seen as a dialogue between tutor and student which sadly is being squeezed due to ever growing numbers in higher education ‘with the result that written feedback, which is essentially a one-
way communication, often has to carry almost all the burden of teacher-student interaction’ (2010: 501). This worry is shared by a number of academics (Davies, 2010; Jenkins, 2010; Ellery, 2008).

5.4 Do students perceive peer and self-assessment as beneficial when undertaking a piece of academic writing?

There are mixed messages within my research relating to peer assessment, with the quantitative data from cycle 1 showing the peer assessment strategy as the least helpful according to the students, yet the qualitative evidence produced a stronger case for peer assessment over self assessment. However, what did emerge clearly was a desire for the format of future peer assessment to be anonymous and have a stronger structure, possibly similar to that offered by Pryor and Crossouard (2010) outlined in table 12.

However, I would argue, based on my findings, that the first feedback should be given by the tutor. The results from this research project indicate that the first tutor feedback unlocks the understanding for the student teachers, it is also supported by the fact that this AfL strategy gained the highest score from the second cycle questionnaire. I would agree with Pryor and Crossouard (2010) that their more structured and multi-layer model would ‘show a willingness to work (in the) gap in their engagement with students in ways that are receptive to their agency and their vulnerabilities’ (2010: 274).
Collective tutor-student $\rightarrow$ Peer assessment on $\rightarrow$ Teacher assessment $\rightarrow$ Student-tutor workshop

Task review $\rightarrow$ first stage $\rightarrow$ on first stage $\rightarrow$ on progress

↓

Submission $\leftarrow$ Teacher assessment $\leftarrow$ Teacher assessment $\leftarrow$ Peer assessment on

 Of final draft $\leftarrow$ on second draft $\leftarrow$ second stage

Table 12  Task structuring: each stage of assignment task proposed by tutor across three-month module  (Pryor & Crossouard, 2010)

Certainly my findings saw student teachers valuing the feedback given during the module and acting upon it. An aim that Nicol (2010) endorses, ‘Getting students to request feedback, to respond to feedback, and to actively connect feedback to their assignments, might result in students paying more attention to, and being more able to use, teacher feedback’ (2010: 515).

Although both self and peer assessment were two of a range of AFL strategies included in this research project, they were deemed worthy of particular attention as a sub question, due mainly to the volume of research now taking place into their effectiveness within compulsory education and, more relevant to this project, within higher education (Cartney, 2010; Yorke, 2004; Brew, 2003; Topping et al., 2000; Boud, 1995). What came across strongly when analyzing this sub-question was the student teachers’ preference for peer rather than self-assessment procedures. The indicators that led me to this answer are outlined here.
Self and peer assessment within the research cycle: During the initial investigations, prior to undertaking this professional doctorate (see chapter 1, section 1.5), the tutors gave written feedback after both the first and second reflective report. The marks from these reports showed a mean gain of eight marks over the whole cohort between the first and second reports (Cook, 2007). However, this was not replicated between the second and the third reports, where no mean gain occurred. These results were also confirmed by this research project (see chapter 4, section 4.2.6). Through discussion with the tutor team it was decided to include elements of self and peer assessment between the second and third reflective reports. By including peer assessment it was hoped that it would achieve the shift that Cartney (2010) sees as important, ‘by moving the loci of power at further distance from the tutors and towards the students’ (2010: 554). It was interesting to note that peer assessment was favoured over self-assessment in my research, however, the small numbers involved in the second cycle means that this may not be replicated across a larger sample or from students outside of teacher education and further research would be needed to ascertain a stronger case for this preference.

Self assessment: The semi-structured interviews had little support for the self-assessment element with two interviewees admitting that ‘to start with the ones I didn’t particularly find useful was self-assessment’ and another stating that ‘the feedback from you (tutor feedback) and peer assessment was better than self-assessment’. This could align with Sadler’s assertion that peer assessment is a pre-requisite of effective self-assessment (1989), reiterated by Black and Wiliam (2002) ‘in practice, peer assessment turns out to be an important complement and may even be a prior requirement for self-assessment’ (2002: 50) or it could be a reflection on
the design of the self-assessment element within this research project. Student participants in this research project were asked to consider their targets and state how they had met those targets within the second reflective report, with examples from the report to support their claims of having met those targets. They also were asked to do the same for the specific assignment criteria (See appendix 4). This system may not have been effective for the students due to their unfamiliarity with this specific process or possibly their unfamiliarity with self-assessment in general. Race et al. (2005) expound the value of self assessment and how it can ‘help students become lifelong learners’ (2005: 144). However, the indications from my research would suggest that, even within higher education, student teachers have yet to fully reach this point of self-reflection, which Sambell (2011) sees as so important. The qualitative data showed the inclusion of peer assessment receiving more positive responses from the student teachers than self assessment. Interestingly, Race et al. (2005) do go on to say that ‘it is often easier for students to make judgements about their own work when they have participated in looking critically at what others have done’ (2005:145). My findings certainly concur with this belief.

Peer assessment: Black et al. (2003) offer justification why peer assessment is important in improving self assessment abilities. The assertion is that students are more likely to work carefully and to a higher standard than they would ordinarily as they know that peers will be offering feedback. Furthermore, the language used by peers can be more readily understood and acted upon. I would suggest that this element is less relevant within higher education than in compulsory education, although a number or researchers focus upon language of feedback as important (Rae and Cochrane, 2008; Carless, 2006). One possible barrier that emerged from
my early work in this field was that of students being reluctant to receive feedback from those who were performing at a lower academic level than themselves. This was not evident in this doctorate research project in fact one student summed up the mood succinctly, ‘That doesn’t matter, no, I’d take anyone’s views on board’. However, what did emerge was the idea of anonymous peer feedback, an element discussed in the semi-structured interviews and a practice promoted by Nicol (2010) who sees peer assessment as a means of ‘having different readers respond to and comment on an assignment’ which he believes provides ‘multiple perspectives and it invokes multiple opportunities for scaffolding’ (2010: 510). Evidence from the semi-structured interviews offered another reason why anonymity is preferred by students; ‘if there was a way to make peer assessment more anonymous because I think there is that fear of, ‘Oh I can’t tell my friend actually that, maybe... ‘ I think it takes a certain person, because people generally don’t like criticism or even constructive criticism.’ I believe that the peer assessment strategies in my research project could have been more robust, with an element of anonymity plus multiple peer feedback. What my research did avoid, though, was allowing the student teachers to mark each others’ work, an element of peer assessment that Nicol (2010) sees as ‘more threatening and can undermine the benefits of peer critiquing’ (2010: 510). Interestingly, what also emerged from the interviews was students’ understanding of peer assessment based upon previous experiences in other modules. Their descriptions of peer assessment were really peer marking, which further supports Nicol’s (2010) worry of creating an undermining rather than a supportive model of peer assessment.
5.5 How can the pedagogy of tutor delivery help develop self-efficacious students?

Although data from this research project do support the importance of the tutor/student relationship, my research data for this particular sub question present the least convincing evidence. However, there are several strategies that tutors can employ in order to enhance student self-efficacy (discussed later in this section) and these will be reiterated within the recommendations in chapter 6, which are a direct result of this research project.

Having accepted that the evidence is less convincing when addressing this sub-question, there are still a number of issues that arose during this research that warrant further investigation. One element of the enquiry that was added after discussion with my director of studies during the evaluation of the first action research cycle was linked to student teachers’ definitions of assessment. It was an area that I deemed interesting and it was felt that there would be no harm in adding this to the second cycle questionnaire by asking the student teachers to offer their definitions of assessment, as once the questionnaire had been administered it would not be possible to do so at a later date. The analysis of that data linked to student performance and self-efficacy ratings produced some of the most interesting results from the whole project. Throughout my extensive reading during this doctorate I have not found research that links the students’ sophistication of the definition of assessment to their actual achievement. The data analysis from my research indicated differences in self-efficacy between those students who had a basic definition of assessment and those who had a more sophisticated definition (see section 4.4.4). These results suggest a link between a deeper understanding of the assessment process and how self-efficacious the student is about completing the assignment. The second
statistically significant result occurred when comparing the student teachers’ categories of sophistication of definition to the marks gained for the reflective reports. Differences emerged when comparing the student teachers’ reflective reports, highlighting a possible link between understanding assessment and performance. The deeper understanding of the assessment process by students and the encouraging of students to engage fully with that process by tutors could nurture a deeper approach to learning. These findings, based upon a small scale sample of student teachers, certainly deserve further investigation as they could have implications for tutor pedagogy. Time spent on developing a more sophisticated understanding of the assessment process by university tutors could result in higher student achievement, a belief that is supported by Biggs (2003) 3P model. Similarities between these results and the work of Price et al. (2010) can be drawn as their paper argues that ‘the learner is in the best position to judge the effectiveness of feedback, but may not always recognize the benefits it provides’ (2010: 277). They go on to assert that ‘the pedagogic literacy of students is key to evaluation of feedback and feedback processes’ (2010: 277) which concurs with my research results, indicating that spending more tutor time on developing a deeper understanding of the assessment processes impacts upon student performance.

Developing self-efficacy: Whether tutors can help students become more self-efficacious when undertaking a written piece of academic work was answered in part by the results from this study. Interestingly Jenkins (2010), when analysing a multi-faceted formative assessment approach, accepted that his study had ‘neglected to measure if students felt more or equally confident in their ability to tackle the assignment as a result of these initiatives’ (2010: 574). Whereas my study revealed that students were more self-efficacious in undertaking an
academic piece of writing after experiencing the AfL strategies at the end of the module than they were at the start (see section 4.2.4). Strengthening the importance, outlined in the review of literature (section 2.6), of self-efficacy measures in helping us understand the potency of our interventions as tutors upon student learning and achievement. Interestingly these results counter previous research into student efficacy beliefs in higher education (Sander, 2009).

**Tutor/student relationship:** An aspect that would seem to be crucial to the development of more self-efficacious student teachers would be the relationship between the tutor and student. Taras (2002) painted a bleak picture of this relationship, feeling that there was a reluctance by tutors to involve the students in the assessment process, ‘Even allowing students participation permits them entry into the bastions of academia’ (2002: 504). This could be described as a rather potent and negative belief, although Bailey and Garner (2010) highlight that there are problems relating to the tutor student relationship. Their worry stems more from the pressures on the present higher education system rather than at the tutor level, ‘the trend towards greater proceduralisation in higher education administrative and pedagogical practices has led to the ‘decoupling’ of teacher and student by minimising their points of contact and depersonalising the experience for both parties’ (2010: 189). Coens *et al* (2012) raise questions relating to the role of tutors as providers of formative feedback but also as summative examiners and whether ‘disentangling teaching and summative assessment in higher education’ would help the students ‘perceive the learning environment as more secure’ (2012: 2). This research project was unable to include this element of disentanglement, however, the university moderation procedures of the summative results did provide quality assurance elements linked to the accuracy of the results. Through the implementation of formative
feedback and opportunities to discuss progress with students, it was believed that the pitfalls described above could be avoided and its success in doing so seems to have been supported by the qualitative data (see section 4.3.6).

5.6. Analysing the methodology tools.

The main method of collecting data for this research project was through questionnaires, although the results were triangulated by the semi-structured interviews. I believe that this approach plus the analysis of the students’ marks met the needs of the research sub-questions. The inclusion of AfL strategies within the delivery of the module was an important part of the action research cycle but, there are two possible areas that could have been improved upon.

One has already been discussed, which would be a more structured, multi-layered approach to peer assessment intervention, the second one would be linked to student teachers’ definitions of assessment. The request for the students to give a definition of assessment was included in the cycle 2 questionnaire 1 at the beginning of the module; however, the students were not asked to offer a definition again at the end of the module. This could have provided an interesting investigation to see whether an improved definition relates to improved performance.
The next chapter draws on the results, discussions and relevant literature to endeavour to offer an ‘Assessment Literacy Landscape’.
### Chapter 6

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6 Conclusion

6.1 Creating an ‘Assessment Literacy Landscape’.

Over the period of this research project I have attended a number of significant and thought-provoking seminars and workshops. One in particular was delivered by Moira Bent from Newcastle University. Although her area was linked to information literacy, I noted a number of relevant issues for my research field. She mentioned how Information Literacy (IL) has been too focused upon skills transfer, rather than a balance between skills, approaches and behaviours. This seems to echo similar problems linked to assessment. Her discussions surrounded the difference between training and education and the meaning therefore of education, which should go beyond the performance of certain skills and help students think differently. The links here to assessment in higher education are clear, as low level assessment procedures, looking for recall only, do little to move the students forward in their thinking. She went on to discuss an ‘Information Literacy Landscape’ and the importance of creating the conditions for this to occur. This discussion marked a significant milestone in my own thinking. It prompted the question, how can we, in higher education, produce an ‘Assessment Literacy Landscape’, in other words, how can we truly make the assessment process an integral and valuable part of the students’ learning experience?

The results and analysis from my research project offer possible pathways for improvement for assessment within higher education, certainly within ITET modules, but I would venture that there are a number of findings that could be transferable to other discipline areas. These main
themes will now be considered as important elements in creating this ‘assessment literacy landscape’.

6.2 Key Issues

Placing the student at the centre: A landscape, seen through the eyes of a painter, should have strong compositional elements and these elements go towards creating harmony for the viewer and they follow certain rules. A landscape painter needs a focus, an area to which the eye is drawn. In assessment terms, this surely has to be the student and his or her learning journey. Although, as numbers in higher education increase, there is a danger that this focus can become more and more blurred (Winn, 2002; Middleton, 2000; Cook and Leckey, 1999). Elements of this research project reinforced the importance of engaging the students in the assessment process and helping them fully understand the purpose of assessment in terms of their learning. Davies (2010) encapsulates this aim,

…why are we spending so much time trying to improve the quality of teacher feedback? We should certainly spend equal time designing environments that help improve learners’ ability to make judgments about the quality and impact of their work’

(2010: 13).

This research project indicated a link between students’ understanding of the assessment process and performance, thus reinforcing the importance of placing the student firmly at the centre of the landscape. I discussed in chapter 2 that the level of engagement with the assessment process can influence the level of learning adopted by the student. A deep learning approach can only occur when the student sees the assessment process as more than merely a sorting procedure. When they understand and value the assignment and see its relevance to
their learning, then deep learning follows (Handley and Williams, 2011). Higgins et al. (2002) state that ‘deep learning’ is valued highly in higher education but in order to achieve this level of learning the process has to involve students in ‘active construction of meaning’ (2002:54), which is achieved through formative practices; a principle supported by this research project. The use of formative comments without marks (Butler, 1988; Black and Wiliam, 1998) employed in this project aimed at encouraging the students to make improvements in their work, no matter what the starting point may have been. Even though there were some early misgivings, the students came to see the value of this strategy (section 4.3.2).

To encourage deep learning within students’ learning orientation is complex and this research project could not claim to have uncovered a panacea. However, there are indications within the quantitative and qualitative results that are encouraging and may offer ways to ameliorate improvements (sections 4.2. & 4.3.5) and the monitoring of change in relation to deep or surface learning alongside the implementation of AfL strategies over the module would have made an interesting addition to the research project and deserves further research.

**Assessment criteria:** It is not sufficient to merely share assessment criteria with students; it needs to be understood by those students in order to complete the assignment successfully (Black & Wiliam, 1998; Sadler, 1989). The introduction of examples of previous reflective reports along with the assessment criteria in this project proved to be beneficial to students and created the circumstances for ‘deeper engagement with feedback’ to occur, thus leading to ‘changes in behaviour or understanding’ (Handley and Williams, 2011: 95). Orsmond et al. (2002) and Handley and Williams (2011) promote the use of exemplar materials; however, the
semi-structured interviews from this research project supported examples rather than exemplar work. However, how authors define exemplar work and examples could suggest that my findings concur with research on this issue (Sambell, 2011). I would also surmise that exemplar materials could, for some students, impact upon their confidence in being able to achieve the recommended standard, whereas examples of varying standards of work would offer a better framework to help them understand what is required to meet the assessment criteria. However, whether it be exemplar material or examples of varying standards of work, Price et al. (2010) identify that this is an element that students appreciate ‘but is rarely available’ (2010: 282).

Returning to the analogy of a landscape, these assessment criteria need to be in the foreground as these elements set the tonal values for the overall landscape.

**Interpretation of feedback:** This research project chose to offer staggered feedback relating to the student teachers’ reflective reports at various points over the module, but it also incorporated recommendations that written feedback is more effective than sharing marks and grades (Black & Wiliam, 1998; Butler, 1988; Crook, 1988). Although some evidence of dissatisfaction with this strategy was noted in early research in 2002-2003, the cohorts of student teachers for this research project accepted the purpose of the strategy, reflected in the qualitative evidence. By offering students three targets for improvement, what this strategy achieved was support on how to improve their work rather than merely identifying the problems. However, Price et al. (2010) believe that the nature of the gap is crucial to the effectiveness of the feedback.
Where the gap relates to the curriculum content, the feedback may be able to specify the knowledge that needs to be understood. However, where the gap identifies the need for development of, for example, academic or cognitive skills, feedback may not be able to be specific in its remedy for filling the gap (Price et al., 2010: 278).

This would seem to give credence to the idea of a two layered feedback system whereby students receive one proforma which includes module specific feedback and secondly feed-forward that helps improve ‘slowly learnt literacies’ (Knight & York, 2004). This longitudinal developmental approach to feedback has to be a goal of higher education institutions, although evidence from Price et al. (2010) suggests that students are unclear of the role of feedback, ‘Consequently many had reluctantly changed their view from that of developmental to justification of the grade’, which was seen as ‘a lost opportunity for effectiveness’ (2010: 283). However, it does seem to underline the importance of engaging the students in bettering their understanding of the assessment process, which, as this research project has shown, can impact upon performance (section 4.4.4). In fact Price et al. (2010) emphasise that the key to aid students evaluate ‘feedback and feedback processes’ is ‘the assessment literacy of students’ (2010: 277).

What also emerged from the research was the importance of the first tutor feedback (section 4.2.6). The results showed a difference between the first reflective report and the second, although no mean gain across the cohort was noted between the second and third reflective report. This could suggest that the first tutor feedback can act as a key to helping unlock students’ understanding.
Interestingly, there was evidence within my research to suggest that students do not value generic feedback, but prefer individual feedback as generic feedback may not match their needs and could cause unnecessary stress and may be wholly irrelevant to certain students (Poulos & Mahony, 2008). In fact during a workshop at Glamorgan University in 2011 a panel of year 2, level 5 students all agreed that individual rather than generic was preferable. This would seem to counter the DFC that endorses generic feedback as an element of part two of the cycle referring to in-task guidance (Beaumont et al., 2008). This area of student preference relating to feedback certainly warrants further investigation.

**Pedagogical change:** This aspect of the research represents the most significant change as it requires, not only a change in assessment approach but also demands a commitment within teaching time to support the understanding and successful completion of the set assignment. It requires the tutor to view the assessment process as an integral part of the learning as opposed to ‘simply measurement’ (Sambell, 2011: 4). It also requires tutors to engage with the individual.

The inclusion of opportunities to analyse the assessment criteria alongside examples of previous work, the inclusion of elements of self and peer assessment and feedback prior to the final submission are pedagogical changes supported by the qualitative evidence from this research project. In fact, from this research emerged students’ attitudes towards self and peer assessments alongside suggestions for improving the processes. One such improvement, reflected in the qualitative results, is the use of clean, anonymous copies of students’ work being sent to peers to be assessed against the assignment criteria. This would not result in any
allocation of marks, but would be seen as another tier of feedback from a ‘critical friend’. This strategy would help develop the students’ peer assessment skills, which could lead to improvements in their self-assessment judgements, an aspect supported by Sadler (1989). The opportunity for choice within the assessment process was also supported by the quantitative evidence (section 4.3.5).

The tutor/student relationship: This could well be one of the most difficult aspects to influence, but the importance of this relationship is being widely acknowledged (Cartney, 2010; Rust, 2007). Cartney stresses the ‘need for the active participation of students in their assessments and the value of dialogue between students and tutors in the process’ (2010: 552). Beaumont et al., (2008) also endorse the importance of creating a ‘Dialogic Feedback Cycle’ (DFC) (2008: 43) that ‘provides quality feedback within a supportive relationship offering frequent opportunities for discussion of progress’ (2008: 7).

Having been in education all of my professional career, it is alien for me to read of the reluctance of tutors to allow students to enter ‘the bastions of academia’ (Taras, 2002). Taras’ belief that the feedback processes are ‘at the heart of tutor identity’ (2002: 504) and, therefore, tutors are reluctant to help students become part of the assessment process, are serious barriers to the creation of this ‘assessment literacy landscape’. It needs to be appreciated that assessment processes and tutor feedback include emotional elements for both student and tutor (Layder, 1997; Price et al., 2010). The emotional impact of feedback, that may require the student to make an interpretation of that feedback, could be adversely affected due to that initial emotional response, it may even make the student unwilling to engage with the feedback
(Price et al., 2010). Price et al. go on to suggest that the relational dimension to feedback is vital to its effectiveness and emphasise that ‘relationships are key’ (2010: 284). The qualitative results from this research support the importance of that relationship (section 4.3.6) and the credibility and confidence that students have in their tutor can be influenced by their perception of that tutor.

**Ensuring that assessment is ‘fit for purpose’:** This is an issue that has recurred during this thesis and is one that has been advocated by researchers over the years (Brown and Smith, 1997). Race et al. (2005) outline the questions that teachers/tutors need to consider when devising assessment procedures, one of these being ‘when’ should it take place. The most appropriate time to offer feedback to students is central to its effectiveness, and they suggest to ‘start assessing early’ (2005:10). The early dialogue with student teachers featured strongly in this research project and provided statistically significant results (section 4.2.6). The timing and nature of the feedback can impact on motivation, and if students see the purpose of a particular assignment, their engagement with that assignment is enhanced (section 4.3.5). Race et al. (2005) assert that ‘assessment that occurs only at the end of a learning programme is not much use in providing feedback’ (2005: 4). This is supported by Watkins (2001) who offers the idea of students choosing between a ‘learning orientation’ and a ‘performance orientation’ when faced with assessments. The strategies implemented within this research project helped the student teachers develop a strong ‘learning orientation’ within the student teachers by helping them clarify their own perceptions of the assessment process.
A way forward: Higher education is seeing an ever-growing student population. This poses a range of challenges for higher education, reflected in the ever increasing debate over the effectiveness of assessment processes in higher education and those involved in that process (Jenkins, 2010; Cartney, 2010; Bailey and Garner, 2010; Price et al., 2010; Sadler, 2010; Tang and Harrison, 2011; Handley and Williams, 2011). The challenge is to meet the needs of the dominant summative model whilst still offering formative assessment strategies for the students. This research project offers some evidence to suggest that the inclusion of a range of AfL strategies can impact upon students’ learning experiences. The openness to changing and adapting the processes and procedures linked to the assessment debate is crucial in helping students make complex judgments relating to their learning orientation. Sadler believes that in order to find a way forward the aim in higher education should be ‘to shift the focus away from telling the students about the quality of their work (disclosure) and towards having them see and understand the reasons for quality (visibility)’ (2010: 546).

6.3 The Research Question

I set out on this research project looking to find out what impact the adoption of introducing a range of AfL principles and practices would have upon students’ learning and self-efficacy.

Although the numbers within both cycles were small (cycle 1 n=24, cycle 2 n=45), I believe that the data provide supportive evidence to suggest that the adoption of AfL strategies can impact upon student performance and in some respects upon their self-efficacy. There is less evidence within this project to claim that the impact of the interventions affected the students’ learning orientation significantly, although the qualitative evidence offered some data in relation to this.
The importance of a strong student/tutor relationship was supported by the evidence and concurs with the work of Cartney, (2010), Beaumont et al., (2008) and Rust, (2007).

I believe what this project did achieve successfully was the facilitating of pedagogic change. The tutors who have been involved in the delivery of the education module, over the period of the project and in previous years, have embraced the interventions willingly and I would purport that unless this occurs, innovative assessment practices are unlikely to develop. As Beaumont et al. (2008) assert, ‘we consider the most important feature of our approach, pioneered by Black et al. (2003), to be the owning of any intervention by the course team’ (2008: 9). It is pointless changing the assessment procedures unless you change the mind-set of those who are in a position to impact upon student learning.

Therefore, I would suggest that the results of this research do have implications for assessment within higher education and add to the growing body of research that aims to ‘reframe assessment in higher education’ (Sambell, 2011: 6).

6.4 Recommendations

These six recommendations are based upon the key issues and, although focused upon work with student teachers, I believe that they are sufficiently generic to aid other disciplines and programmes.

1. Students’ experiences of assessment vary considerably; therefore it is proposed that tutors explore possible strategies to help the students have a clearer understanding of the assessment process. If tutors value the worth of a module’s assignment, they should
invest teaching time in aiding students to unpick the complexity of the assessment process. When discussing students’ learning, the assessment process is described as a way of closing the gap between where the students are and where they need to be. I believe that we also need to close the gap between tutors’ measurement of ‘effectiveness’ and students’ understanding of what defines that ‘effectiveness’. Students need to understand the assessment process, therefore it is recommended that not only should the assessment guidelines be shared with the students but also that the development of this understanding of the process should be integral within the delivery of the module, which can lead to ‘a relational dialogic process which impacts on the development of student understanding’ (Price et al., 2010).

2. Providing summative feedback, through marks and grades at the end of a module within higher education is important, as the awarding of qualifications within our education system depends upon the accumulation of those marks and grades. However, it is recommended that formative feedback strategies, at points within a module, are introduced. This feedback would contain comments and ways to improve, but would withhold marks and grades until the final summative feedback. It is also recommended that the first tutor feedback is offered early in the module as the results from this research suggest that this strategy elicits performance improvement.

3. Feedback proformas within my institution allow for comments on successful elements of an assignment and also areas for improvement. It is recommended that the proformas are amended to offer specific module content feedback in one section and
generic feedback, that students can use in future modules, in a separate section, thus providing an element of ‘feed-forward’ as well as feedback.

4. Whilst accepting that group numbers in higher education make the inclusion of effective formative assessment problematic, the importance of the tutor/student relationship should not be undervalued. Although there is research being undertaken into innovative electronic feedback systems, the creation of a ‘relational process’ between tutor and student is key. It is therefore recommended that tutors build opportunities for face to face discussions relating to the assessment process where feedback can be debated in an environment of trust, with tutors acknowledging that any feedback can involve an emotional response. Tang and Harrison (2011) reveal that even though students are availed with a rich array of online assessment tools, they still ‘regard tutor feedback as indispensible to their learning’ (2011: 584). It is recommended that an initiative is launched within my School of Education to embark on an examination of our feedback beliefs and provision. The importance of addressing this issue is encapsulated by Tang and Harrison, (2011),

i. ‘Unless tutors address the issue of giving feedback, as opposed to feedback which is purely summative, it is likely that there will be little change in the ways that students understand and use the feedback, and indeed how they make sense of the assessment’

(Tang and Harrison, 2011: 601)

5. It tutors take the time to offer individual feedback to students that addresses individual needs, then there could be a case to avoid also offering generic feedback to the group about frequently occurring errors as my research suggests that some students perceive these to be irrelevant and could in fact cause unnecessary anxiety. It is recommended
that this practice is discussed with students and that individual feedback, tailored to the needs of individual students is offered as the vehicle of focused feedback.

6. It is recommended that peer assessment should take the form of feedback from a ‘critical friend’, focusing upon performance against the specific criteria, rather than peer marking, which changes the focus for the students. The proposal is that clean, anonymous copies are sent to students and that their feedback includes areas that meet the criteria effectively and areas for further consideration.

6.5 Limitations

- The work within this research project focused upon a specific student group, namely student teachers. ITET is a vocational degree and understanding the assessment process is important for future professional development of the students, which may have influenced their engagement with the AfL strategies.

- A traditional written assignment was at the heart of the research and although the student teachers were given choices within that assignment, the results from this research relating to AfL strategies may not be transferrable to other assessment models.

6.6 Future Research

My investigations of assessment practices within higher education have been on-going since 2002 and I believe that this research project has provided a number of interesting findings but it has also opened up a whole scope of possible further research. This research project could be just the start of a larger and interesting project encompassing students from various disciplines.
which could aim to further evaluate student confidence levels, their approach to learning and the possible impact of AfL strategies upon them. Also emerging from my research that is worthy of further investigation, is the area of students’ understanding of what assessment entails linked to their performance (section 4.4.5). At a school level, I would see an in-depth investigation into the perceptions of tutors within my own institution relating to the assessment processes and procedures a possible catalyst for change that may impact positively upon student experience.

6.7 Dissemination of results

The importance of disseminating research findings is an accepted element of any research project. It is intended that my findings will be disseminated through either journal articles or possible conference papers. This research project has indicated further possibilities for developing related issues and has instilled in me a desire to engage further in the research community. It has been an extremely rewarding process that has enhanced not only my professional development but it has brought personal gains and insight throughout the research period.

6.8 Final word

I believe that the recommendations emanating from this research project could contribute in some way to the creation of a vibrant assessment landscape. As Wilton and Lyles noted, when discussing the development of the landscape painting between 1750 and 1880 the desire for change and improvement is a constant element, whatever the field or discipline,
For artists as much as for philosophers the inherited past was to be reassessed and reformulated, old models were to be subjected to analytical scrutiny and, if necessary, ‘deconstructed’ and reassembled in forms appropriate to modern use.

(1993:36)

The desire, through research projects such as this one, is that the assessment debate will continue to evolve and, if necessary, ‘deconstruct’ itself in order to produce an ‘Assessment Literacy Landscape’ that might meet the learning needs of today’s university students.
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Appendix 1
UWIC Participant Consent Form


Name of researcher: Martin Cook

Participant to complete this section. Please initial each box.

1. I confirm that I have read and understand the information sheet dated .......... for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my relationship with UWIC, or my legal rights, being affected.

3. I understand the relevant sections of any research notes and data collected during the study may be looked at by responsible individuals from UWIC for monitoring purposes, where it is relevant to my taking part in this research. I give permission for these individuals to have access to information confirming the relevance of my participation in this research.

4. I agree to take part in the above study.

Name of Participant  Date

Signature of Participant

Name of person taking consent  Date

Signature of person taking consent
Participant Information Sheet


The work was stimulated by changes made to a BA (Hons) Primary Education degree module for second year students in 2003. It was noted by tutors that significant improvements were seen in students’ written work following the introduction of certain Assessment for Learning (AfL) strategies in the delivery of the module. The research aims to discover whether the introduction of a range of AfL strategies can impact upon student performance and also student self-efficacy. Self-efficacy is task-related and measures how confident a student feels when completing a task. The findings from the research should help produce a transferable model that would benefit other students within the Cardiff School of Education and possibly across other schools.

This is an invitation to join the research, and to inform you of what would be involved were you to agree. The work is being organised by myself, Martin Cook, Senior Lecturer in The Cardiff School of Education.

When the research is complete I will be happy to discuss the results and share any resultant model of good practice.

The study is part of a Professional Doctorate (EdD), it has no external sponsors.

If this sheet doesn’t provide you with sufficient information on which to base your decision to participate, please feel free to e-mail me at: mcook@uwic.ac.uk.

Why have you been asked?

The work is at present restricted to the Year2 Education module which you will be following, therefore all current Year2 BA (Hons) Primary Education are being asked to participate.

What happens if you change your mind?

You may withdraw from the research at any time, without your relationship with UWIC being affected. In the case of the questionnaires, students complete them anonymously. Students who agree to undertake semi-structured interviews may withdraw at any time, without giving a reason, again your relationship with UWIC, or your legal rights, will not be affected.

Are there any risks?

There may be potential time factors that could be deemed as risks. The questionnaire may take approximately 30 minutes to complete. Students agreeing to semi-structured interviews would be asked to give a maximum of 1 hour of their time. The questionnaires are completed anonymously and the
semi-structured interviews are voluntary. The analysis of a cohort’s marks would be undertaken as good practice whether the research was taking place or not.

Your rights

Joining the research does not mean that you have to give up any legal rights and withdrawal from the research will not affect your relationship with UWIC.

What happens to the questionnaire and interview results?

I will be responsible for putting the information into a computer program (no personal information will be included). The data will then be analysed to ascertain whether the inclusion of AfL startegies has had an effect upon performance and self-efficacy.

Are there any benefits for you from taking part?

There are no direct benefits to individual students; however, the information gained may impact upon future modules and may benefit future students following the BA programme as well as inform tutors teaching on this and other modules.

How can I protect your privacy?

All information will be strictly confidential and I will fully respect your privacy. Steps will be taken to ensure that your identity remains anonymous. The signed consent forms will be kept in a locked draw in my office and no personal identification will be needed on the questionnaires or for the purposes of the semi-structured interviews. All the forms and transcripts of interviews will be destroyed once the research is complete. The consent forms will be retained for 10 years, because I am required to do so by the University.

You will be given a copy of this sheet to keep, along with your consent form.

Contact details:

Martin   mcook@uwic.ac.uk   Phone: 02920417068
Appendix 2
Ed.D Research Questionnaire.

Assessment for Learning in Higher Education

As part of my Ed.D. I am investigating the impact of implementing Assessment for Learning (AfL) strategies on students’ learning experiences on a BA undergraduate module. AfL is defined by the Assessment Reform Group as,

*The process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go and how best to get there.* (ARG, 2002)

I would very much appreciate your cooperation in completing the following questionnaire.

Please note that your responses will be used solely for the purposes of my research so please be honest with your answers. I hope to conduct semi-structured interviews and would be very pleased to discuss this further with individual students. If you wish to take part in these semi-structured interviews please e-mail me on mcook@uwic.ac.uk

I am very happy to share any findings from my research with interested parties, please use the above e-mail address.
Ed.D. Research Project - Assessment for Learning in Higher Education

The following research questionnaire aims to seek your views on the impact, on your learning experiences, of introducing Assessment for Learning (AfL) strategies into a year 2 BA module.

1. Previous Experiences of AfL

   a) Please indicate whether, during any other module at UWIC, written feedback has been given before submission of the assignment. Yes / No

   b) If yes, please describe.............

2. In this section I am trying to find out how helpful were these strategies in developing your understanding and advancing your learning during the module. With this in mind please answer the question, by indicating on the 5 point scale how helpful the strategy was for your own learning and understanding.

   1. Very Helpful
   2. Helpful
   3. Neither helpful or unhelpful
   4. Of little help
   5. Of no help

   (i) Reviewing examples of work produced by previous students.

   1. 2. 3. 4. 5.
(ii) Discussing specific assignment criteria prior to completing the assignment.

1. 2. 3. 4. 5.

(iii) Using both general and specific criteria to make judgements about examples of previous students’ work

1. 2. 3. 4. 5.

(iv) Using both general and specific criteria to assess your own piece of work (self-assessment)

1. 2. 3. 4. 5.

(v) Using both general and specific criteria to assess a friend’s piece of work (peer-assessment)

1. 2. 3. 4. 5.

(vi) Receiving written tutor feedback based on the first reflective report which included targets for improvement.

1. 2. 3. 4. 5.

(vii) Please indicate whether you’ve experienced any of these AfL strategies in a taught session during another module at UWIC.
3. This section will explore how confident you are in successfully completing the reflective reports.

Please indicate on the following 5 point scale, by circling the most appropriate number, your level of agreement with regard to the following questions.

1. being very confident and 5 being not confident at all

a) How confident are you that you’re able to link the theory of your chosen pedagogical issue to your personal school experiences?
   1 2 3 4 5

b) How confident are you that you are able to analyse in depth the issues linked to your chosen topic?
   1 2 3 4 5

c) How confident are you that you can use a range of relevant and suitable references to support your work?
   1 2 3 4 5

d) How confident are you that you can produce a cohesive, balanced reflective report?
   1 2 3 4 5

e) How confident are you that you can use the Harvard System of referencing accurately?
   1 2 3 4 5

Thank you for completing the questionnaire
Appendix 3
Ed.D Research Questionnaire.

Assessment for Learning in Higher Education

As part of my Ed.D. I am investigating the impact of implementing Assessment for Learning (AfL) strategies on students’ learning experiences on a BA undergraduate module. AfL is defined by the Assessment Reform Group as,

*The process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go and how best to get there.* (ARG, 2002)

I would very much appreciate your cooperation in completing the following questionnaire.

Please note that your responses will be used solely for the purposes of my research so please be honest with your answers. I hope to conduct semi-structured interviews and would be very pleased to discuss this further with individual students. If you wish to take part in these semi-structured interviews please e-mail me on mcook@uwic.ac.uk

I am very happy to share any findings from my research with interested parties, please use the above e-mail address.

Questionnaire 1.

Name...........................................................................................................................................
Ed.D. Research Project - Assessment for Learning in Higher Education

Questionnaire 1

The following research questionnaire aims to seek your views on assessment and how confident you feel in completing an academic piece of writing.

1. Please define, in your own words, what the word ‘assessment’ means to you.
2. This section will explore how confident you feel in successfully completing the academic piece of writing linked to the assignment.

Please indicate on the following 10 point scale, by circling the most appropriate number, your level of agreement with regard to the following questions.

0 being not confident at all and 10 being very confident.

a) How confident are you that you’re able to link the theory of a chosen primary school pedagogical issue to your personal school experiences?

0   1   2   3   4   5   6   7   8   9   10

b) How confident are you that you are able to analyse in depth the issues linked to your chosen topic?

0   1   2   3   4   5   6   7   8   9   10

c) How confident are you that you can use a range of relevant and suitable references to support your work?

0   1   2   3   4   5   6   7   8   9   10

d) How confident are you that you can produce a cohesive, balanced reflective report that develops the issues logically?
e) How confident are you that you can use argument and counter-argument effectively?

0 1 2 3 4 5 6 7 8 9 10

f) How confident are you that you can reference accurately in the main body of the text using the Harvard System of referencing?

0 1 2 3 4 5 6 7 8 9 10

g) How confident are you to be able to produce an accurate reference list for your assignment.

0 1 2 3 4 5 6 7 8 9 10

h) How confident are you to be able to reference primary and secondary sources accurately?

0 1 2 3 4 5 6 7 8 9 10

i) How confident are you that you can successfully complete an academic piece of writing?

0 1 2 3 4 5 6 7 8 9 10

Thank you for completing the questionnaire
Ed.D Research Questionnaire.

Assessment for Learning in Higher Education

As part of my Ed.D. I am investigating the impact of implementing Assessment for Learning (AfL) strategies on students’ learning experiences on a BA undergraduate module. AfL is defined by the Assessment Reform Group as,

The process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go and how best to get there. (ARG, 2002)

I would very much appreciate your cooperation in completing the following questionnaire.

Please note that your responses will be used solely for the purposes of my research so please be honest with your answers. I hope to conduct semi-structured interviews and would be very pleased to discuss this further with individual students. If you wish to take part in these semi-structured interviews please e-mail me on mcook@uwic.ac.uk

I am very happy to share any findings from my research with interested parties, please use the above e-mail address.

Questionnaire 2

Name........................................................................................................................................
Ed.D. Research Project - Assessment for Learning in Higher Education

Questionnaire 2

The following research questionnaire aims to seek your views on the impact, on your learning experiences, of introducing Assessment for Learning (AFL) strategies into this year 2 BA module.

1. Previous Experiences of AFL

   a) Please indicate whether, during any other module at UWIC, (not including this education module) written feedback with targets for improvement has been given before submission of the assignment. Yes / No

   b) If yes, please describe.............
2. In this section I am trying to find out how helpful were these strategies in developing your understanding and advancing your learning during this Education module. With this in mind please answer the question, by indicating on the 10 point scale how helpful the strategy was for your own learning and understanding.

0 being no help at all and 10 being extremely helpful

How helpful was:-

a) Reviewing examples of work produced by previous students.

0 1 2 3 4 5 6 7 8 9 10

b) Discussing specific assignment criteria prior to completing the assignment.

0 1 2 3 4 5 6 7 8 9 10

c) Using both general and specific criteria to make judgements about examples of previous students’ work

0 1 2 3 4 5 6 7 8 9 10

d) Using both general and specific criteria to assess your own piece of work (self-assessment)

0 1 2 3 4 5 6 7 8 9 10
e) Using both general and specific criteria to assess a friend’s piece of work (peer-assessment)

0  1  2  3  4  5  6  7  8  9  10

f) Receiving written tutor feedback based on the first reflective report which included targets for improvement.

0  1  2  3  4  5  6  7  8  9  10

g) Please indicate whether you’ve experienced any of these AfL strategies in a taught session during another module at UWIC.
3. This section will explore how confident you are now in successfully completing an academic piece of writing following the module input.

Please indicate on the following 10 point scale, by circling the most appropriate number, your level of agreement with regard to the following questions.

0 being not confident at all and 10 being very confident.

a) How confident are you that you’re able to link the theory of a chosen primary school pedagogical issue to your personal school experiences?

0 1 2 3 4 5 6 7 8 9 10

b) How confident are you that you are able to analyse in depth the issues linked to a chosen topic?

0 1 2 3 4 5 6 7 8 9 10

c) How confident are you that you can use a range of relevant and suitable references to support your work?

0 1 2 3 4 5 6 7 8 9 10
d) How confident are you that you can produce a cohesive, balanced piece of academic writing that develops the issues logically?

0 1 2 3 4 5 6 7 8 9 10

e) How confident are you that you can use argument and counter-argument effectively?

0 1 2 3 4 5 6 7 8 9 10

f) How confident are you that you can reference accurately in the main body of the text using the Harvard System of referencing?

0 1 2 3 4 5 6 7 8 9 10

g) How confident are you to be able to produce an accurate reference list for your assignment.

0 1 2 3 4 5 6 7 8 9 10

h) How confident are you to be able to reference primary and secondary sources accurately?

0 1 2 3 4 5 6 7 8 9 10

i) How confident are you that you can successfully complete an academic piece of writing?

0 1 2 3 4 5 6 7 8 9 10
These questions will focus upon motivation relating to feedback.

Please circle yes or no and use the space below for any additional comments.

Did the tutor feedback after the 1st reflective report affect your motivation for the 2nd reflective report?

Yes  No

Please indicate whether it had a positive or negative effect by circling your choice

positive  negative

Did the self and peer assessment after the 2nd reflective report affect your motivation for the 3rd reflective report?

Yes  No

Please indicate whether it had a positive or negative effect by circling your choice

positive  negative

Further comments if required

_____________________________________________________________________________________
_____________________________________________________________________________________
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Thank you for completing the questionnaire
Appendix 4
Year 2 EDU206/207

Reflective Report – Self-assessment and feedback form

Name:………………………………………….Date:…………………………….

Please use this first box to make an honest self-assessment of your reflective report based on the assignment criteria:

As well as the UWIC marking criteria, tutors will judge:-

- The depth of reflective thought and analysis of the topics
- The extent of the research including publications as well as electronic references
- The linking of theory to personal experience
Year 2 Education. Reflective reports. Self and peer assessment sheet.

Based upon the tutor feedback from your first reflective report, please identify in the boxes below how you have addressed the criteria for the second reflective report. Please give concrete examples of how the criteria have been met.

On the back of this sheet are three boxes. Please write each tutor target in each box and again identify how you have met these targets in your second reflective report. This sheet will be shared during tutorial time as a peer assessment exercise.

The depth of reflective thought and analysis of the topic.

The extent of the research, including publications as well as electronic references.

The linking of theory to personal experience.
Appendix 5
Martin,

Please note that your Ethics approval has now been passed by the School’s Ethics Committee and you are free to continue your research now.

Regards

Dr Russell Deacon

Reader in Welsh Governance and History

Acting Director of Research

Cardiff School of Education

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Appendix 6
EdD Semi structured interviews

Transcript 1

Researcher reminds student of purpose of the research. Student reminded of AfL strategies.

Q. How do assessments make you feel?

S. With regards to assignments?

Q. Yes, assignments and assessments in HE.

S. I think it depends on how much I find it interesting. Does that make sense, the motivation? If I think this is fantastic if this is something that will enhance my career or help me in the classroom then I’m more motivated to do it. I think, this is great because not only am I learning from the research but I can apply it later on. But if I think, how does this really apply to me in a couple of years then I may not be as motivated.

Q. OK, interesting. So if the assessment itself is linked closely to the relevance of what you’re doing here then you’ll put more...

S. Definitely, then I’ll put more motivation and with regards the education, the reflective reports, I found them interesting because you gave an element of independence. You could choose a topic you’re interested in rather than –‘Here’s a question, off you go’. But being more independent, you’re going to be, ‘OK this is my question, off I go.’ It’s equipping you for skills like setting my own criteria. I think it’s a way of motivating you as you come up with a title that you have to be interested in.

Q. So the choice element in the module you feel was useful.

S. Yes definitely, because it’s the same in the classroom, if you’re giving pupils more independence and more choices they’re more likely to participate rather than like, right this is what you’re doing off you go.

Researcher asks about the tutor/student relationship.

Q. Can the relationship between student and tutor, can that impact upon the motivation or the way that you....

S. I think that’s right, if you’ve got a lecturer who you can relate to and you don’t feel that they’re on a totally different pedestal and they bring themselves down to your level then I think that’s great. Whereas if you have someone who may be a bit more intimidating you’re less likely to say ‘I haven’t got a ruddy clue how to do this!’ because you don’t want to look stupid or be patronised as a consequence of asking. I think it definitely should be a dialogue. Because the thing is, the more input they put in the
more they inspire you, then they’re going to have more fun marking your essays whereas if they don’t inspire you and you write a pile of jipe because you don’t know what to do! Well they’re going to get more frustrated anyway, so it benefits everyone if there’s that dialogue really.

Q. Lovely. (Researcher reminds student of some of the AfL strategies used during the module. Which ones did you find most useful?

S. Well to start with the ones I didn’t particularly find useful was self-assessment, only because I worry about my work anyway. Whatever I write I’m never happy with my work. So for me to self-assess my work I was, Oh my God I don’t know what to write because I’m never pleased I think I’m a bit of a perfectionist. So what ever I said wasn’t really a true reflection of what I’d written. Does that make sense, because I have this ‘It has to be amazing’ so then whenever I read through something I don’t think that it’s great. I may be harder on myself than a tutor would be. But I found it really helpful looking through other examples because I thought, Oh, that’s maybe the kind of style I go at or I didn’t think they’d really met it, so that’s good to be given examples rather than be given an assignment and off you go.

S.I think within peer assessment, I think it is very good whenever it does work, for example I’ve got a close friend on the course and we always read through each other’s essays and I know that she’ll be totally honest and vice versa but I know on that day the people I ask to read my work aren’t in my close circle of friends, so maybe I think they felt they had to say ‘Well done Sarah, that’s very good’ as opposed to giving more honest feedback.

Q. So how do you think that we can get over that, would it be better...?

S. Maybe to have anonymous essays. If you got rid of your names and said I want you in a group to look at this work and cover the strengths and the weaknesses and have another one not having the name and they don’t have that added, ‘I can’t let down Sarah because I can’t say, her referencing isn’t any good, or...’, but then is that really peer assessment or not?

Q. Well, yes as long as it’s giving formative feedback. The reason we looked at those sheets was initially, students sometimes were reluctant to have somebody else read their reflective report. Some cases, but this is an assumptions, in some cases students didn’t want others to read their reports, who were not performing at the same level as them that might have been a reason. So what we asked students to do then was show evidence of how they’ve met the targets. So what was being read over was how did you achieve what you were supposed to achieve, rather than just reading the reflective report. So which for you would have been better Sarah, having someone read your full report blind or responding to the targets that we set? So they don’t read the report they read the evidence.

S. So instead of reading through my work they read trough the evidence to show how I think that I’ve met the targets? I think that’s a good idea, but I think that they need to do both because how do they know they’ve.....

Q. We’ll assume honesty I suppose!
S. I think both would be quite effective, or another way of doing it would be for the person who is peer assessing to have your work there and the targets and for them to fill in the evidence.

Q. Yes, yes.

S. To be like, this is your success criteria did you meet it. For (the writer of the work) they’d have to be honest because the peer assessor would be able to verify if they had met the targets. So I think that would be effective because if you’re given the targets and have I met them. They have to be more honest. I think if I was marking someone else’s I would be more honest to say well actually, ‘This was one of your targets, you’ve kind of met it but if you did this you’d definitely have totally met that target.’

Q. What a good idea.

S. Thanks.

Q. For future reference, that is a good idea. As you say, it gives the peer assessor a structure to follow, doesn’t it.

S. It’s the same as when on placement, if you’re asking children to peer assess each others’ work then you should give them a check list. Two starts and a wish are great but if you give people more structure to go by in their marking they’re more likely to be honest rather than, I’m going into this blind.

Q. That’s really interesting, because one of the questions I had for my research was students’ perception of peer and self assessment, and that’s a really useful point. Sadler suggests that peer assessment needs to come first in order for us to be able to understand what self assessment is all about. Is peer assessment something you’d be comfortable with in other areas of the course?

S. Definitely, (student talks of close friend) I think that would be useful.

Q. What I also looked at was whether the implementation of these strategies helped you when completing an academic piece of writing. Do you feel those aspects did assist you, partly or not at all?

S. Definitely and I think. When you didn’t give us the mark back I think you’re right because when you get a mark back you think, yes I passed and you don’t really take note of what’s been said. Whereas getting feedback and having the targets as well gives you a bit more confidence to know I’m on the right track.

(Q. explains the research linked to this aspect)

S. When you’ve got only comments that can inform your next piece of work, so I’ve just got my comments so this is what I’ve got to go on. Whereas if you just get your mark and comments you just look at your mark and think oh, actually how can I transfer what they’ve said onto my other projects or other assignments.

Q. So do you think that some of the things we did in the module will help you in future assignments?
S. Yeah, I think so, I guess the targets I had for my reports I can include in other ones. I think the reflective reports have helped me in other assignments. Right, I’m going to do as much reading as I can and I’ve learnt things like, basically having as much theory as you can to back up your opinion. That has helped me because we had to do quite a lot of reading. And I thought, ok, let’s transfer that amount of reading to other assignments or more, if that makes sense. And even things like I don’t particularly like writing conclusions and one of my targets was in my conclusion to bring all the pieces together using the theory, whereas before I’d say ‘this is my point of view’ whereas now I make sure that I say someone says this, or to say the point and then in brackets put supporting literature.

The researcher outlines the aims for the project including the purpose and format of assessment

S.(17.22) Maybe even, when you have your assignments back and they have your strengths and areas for improvement, maybe they could have another box, because obviously it’s strengths and areas for improvement for that specific assignment, maybe they could have another one with transferable skills, or generic areas for improvement and targets. Maybe as well you could have generic strengths such as ‘good academic style of writing’ rather than ‘Well done, you’ve addressed this point’. And you’d be like, ok these are my points, that’s fine, then you have areas for improvement in that specific essay but then also skills that you could transfer. That’s why I find it useful the targets you sent me. I thought, am I actually addressing those in other assignments? That might be an idea, people may pay more attention. OK how can I actually take that other box and apply it so that I can do better.

Q. In fact that would be far more useful for future learning because...

S. It’s on going then.

Q. You’ve finished that assignment and the shortcomings, you may not be able to do anything about them.

S. Yeah, you can’t change it, whereas if you had that box, you’d be like right ok, I’m good at this but I have some areas for improvement and off I go.

Q. Would you prefer tutor or peer feedback if you had the choice?

S. I probably would prefer tutor just because I would know that they were being totally honest or if there was a way to make peer assessment more anonymous because I think there is that fear of, ‘Oh I can’t tell my friend actually that maybe…’ I think it takes a certain person. Because people generally don’t like criticism or even constructive criticism. I know in my circle of friends I could say you need to do that and they’d be fine whereas others may respond, ‘Well I thought I did that already.’ If there was anyway of making peer assessment more anonymous, people would be a hell of a lot more honest.

Q. So anonymous for the person who’s written it and anonymous for the assessor. So for instance if I were to number them and I e-mail you with a feedback sheet. Because I know on that day (the day peer assessment took place in the module) the person’s work that I read, without sounding harsh, I
don’t think they did address their targets and I think it wasn’t very focused but I didn’t feel that I could say that because I didn’t know them that well or I didn’t know how they’d react. Whereas if it were anonymous I would have said , right these are your strengths I think you need to address...

Q. So if we did it using IT there’d be no recognition.

EdD Interview

Transcript 2

Researcher outlines what the research is about.

Q. In general terms, how does being assessed make you feel?

S. I like to know how I’m doing and how I’m getting on. It does make me feel nervous when I’m being assessed. Regarding the feedback we had? (Q. Yes), when we didn’t have feedback on the second report, I was a bit unsure (Q. tutor feedback?) I prefer to have tutor feedback than not to have tutor feedback.

Researcher reminds student of AfL strategies used in the module.

Q. Out of those, which did you find beneficial or where there some that were of no benefit at all?

S. For the first feedback when I had the three targets that you gave me, I felt more able then to do my second report knowing what I had to work on and build on from the previous one. The second one I found with the peer assessment, they find it hard to criticise you as a friend, to say what you need to work on. So with my second one they didn’t really pinpoint anything for me to build on type of thing. I think the tutor student relationship, they can give you more constructive criticism.

Researcher offers possible way forward for peer assessment, using clean copy and targets for improvement from previous work.

Q. Do you feel that would be a better system?

S. I think that would work a lot better.

Q. It could be done on an electronic basis, we could e-mail you this as part of the module.

S. Yes, it would be better with the targets to know what you’re looking for.

Q. If that were to b done would you feel that peer assessment would be more beneficial?

S. Yes.

Q. What are your feeling about another student reading your report and giving you feedback, even if they are performing below your standard ?
S. That doesn’t matter, no, I’d take anyone’s views on board.

Researcher offers rationale for not giving tutor feedback on second report.

In what ways do assignments motivate you, to learn or to get it done?

S. To get it done (student and researcher laugh)

Q. That’s very honest of you, so when you get your assessment back, is it the mark that means the most to you or is it the feedback?

S. The first thing I look at is the mark. I do read through, obviously, the comments, you know, work towards that the next time, but the first thing I look at is the mark.

Researcher discusses subject specific feedback

Q. What are your feelings about an area that discusses generic skills, skills that are transferable to another assignment?

S. I think you should have one that goes throughout. I was quite confident writing essays, but with education you had to find counter-argument, that was new to me. Um, and I’m pleased that my grades progressed, so it did really help me writing my review of literature.

Q. So has the whole process made you more confident in undertaking a piece of academic writing?

S. Yes, I think so, definitely.

Q. Which bits have possibly been the most useful?

S. As I said, finding counter-argument and the structure of the report as it’s so different to writing a general essay.

Researcher discusses tutor/student relationship

Q. What’s the ideal tutor/student relationship do you think?

S. I think just if you need to ask anything or is there for you to ask something or e-mailing. Available for meetings, that type of thing. Just contact really.

Q. How would you define assessment?

S. To know where the children are, where they need to go to and how to develop the children really.

Q. That model that you talked about being a primary teacher, do you feel that model transfers into HE? Can it transfer?

S. I thinks so, yeah, feedback given, as my grades this year are that bit higher than last year so I feel I’ve progressed, so that’s obviously through feedback and me changing my ways.
Q. In what ways?

S. My style of writing has matured, I think, just in general.

Q. Do you feel that your confidence has grown in HE?

S. Yes definitely.

Q. That’s brilliant, thank you.

EdD Semi-structure3d interviews

Transcription 3

At the beginning of the interview I reminded the student teacher of the research project, reflecting the information on the ‘participation information sheet’.

Q. What are your perceptions of assessment?

S. To be honest I feel like going I’ve just got to get this done now, get it out of the way that type of thing rather than motivate me, I suppose.

Q. So you see it as a sort of hurdle, rather than an integral part of the, ok that’s interesting. Some of the things that we did in year 2 education, we looked at things like, giving examples of previous students’ work and then looking at the criteria against those. We looked at self-assessment we looked at peer assessment we also looked at tutor feedback where we had 3 targets, or whatever, out of those strategies, which ones do you feel to be the most beneficial?

S. The one I’d definitely say is the one looking at past students’ work I always think that’s really helpful. I don’t like to start something, I don’t want to get it wrong, I can see the structure of it it clarifies it) yeah.

Q. So with those, we didn’t give you exemplar we gave you examples to go against the criteria, which would you prefer, exemplar material of examples.

S. personally I have to say examples as I can see for myself then. Try to put them against the criteria to see.

What about the element of self and peer assessment as that can be quite contentious? What are your feelings about that being built into higher ed?

S. It’s definitely a good idea but depends on the individual, how they’re going to respond to that sort of thing, if somebody tells me something I’m going to say, ‘oh ok then’ I take it a bit personally.

Q. Yeah, that’s the problem with peer assessment isn’t it?

S. It is constructive, it does help you then to carry on or to improve for the next one. But at the time I’m a bit like ‘ oh, is that what you really think?’
Q What we tried to do was you see, some students there was a reluctance to share their reports, so that’s why we brought in this idea of, you don’t have to share the report just share the evidence that you’ve achieved it. There’s the option to show the report if required, that’s fine. How better could we do that to avoid this idea of taking it personally?

S That’s going to be difficult as there’s always going to be people who take it personally, I don’t know to be honest, I don’t know how to word it sorry.

Q OK how would you feel about if I sent you a clean copy of a student’s report along with their specific tutor targets and I ask you to tell me the bits they’re doing well, where they’re reaching the target and possibly any advice, would you find easier? You could also self-assess and have that next to the peer assessment.

S That would definitely be easier, we’ve done that in language, we had somebody else’s and to put that against the criteria. It was somebody in the group but we didn’t know who.

Q Was that peer marking, or did they have the chance to take that away and improve?

S No, when I had feedback on mine, I thought yes I could have done that, but I didn’t have the chance to do it.

Moving on to feedback, be as honest as you like, when you get an assessment back, an assignment back, do you look staright for the mark?

S Yes (laughs)

Q It’s almost inevitable isn’t it?

S Yeah

Q So thinking about marks, how did you feel when I said that I will mark the first one but I won’t be sharing the mark with you, what were your feelings about that?

S What’s the point of that I want to know straight away. If the grade is fine I’ll read the rest later, kind of thing.

(Researcher explains the research rationale for not sharing the marks)

S I think it works the other way though as well as if you look at your grade and you’ve got 65, yeah, I’m happy with that, but you think how can I improve on that. But if there’s nothing there to tell you then you’re going to be stuck in the same thing.

Q Yes that’s true. Picking up on that then, because that’s an interesting point, do the proformas give you subject specific feedback, do they also offer generic skills information that is transferable?

S It’s mainly sort of what you’ve been looking at, sort of thing.
S Yes, it’s useful to know for that topic, but when you do another you’re still in the same boat really.

Q (researcher offers alternative proforma design offering subject specific feedback and also generic skills)

S I think that would be definitely more useful, more beneficial for you overall, not just when you’re in university, but later, other skills as well.

(Researcher explains possible recommendations)

Q Another thing I’d like to look at is how assessment motivates you, do you find it does motivate you to learn or is it just another hurdle to be overcome?

S It’s a bit of both really, at the time I just really want to get it done, but then when you actually think about it it is helpful. It does motivate you to want to do better.

Q Going back to the reflective reports, what did you feel about the choice? Would that be something you’d like to see more of?

S At the times it’s quite hard to think, you know, giving you a blank, do what you want type of thing, how am I going to decide? But then it’s something that you’re interested in, so that motivates you as well. You want to find out more, you want to do it.

Q OK, what were your feelings about the tutor feedback, was that something you found useful?

S Specific to the..

Q Yes, specific to the reflective reports now, sorry.

S Yes definitely, I’ve brought it with me actually (student fetches assignment, she indicates how the marks have improved), so being able to do those little bits in between. At the time I was just thinking oh, I’ve got to fill this form in now.

Q So those targets have helped.

S Yes, definitely.

Q So staying with tutor feedback, would you have preferred tutor feedback twice or did you feel that you got something out of the self/peer assessment exercises for the second report?

S Yes, I think I definitely got something out of it because at the time I thought, Oh I’ve got to fill this in before I hand this in, I completely forgot about it, but when I went through it I could pinpoint the bits myself then. I could actually see it for myself rather than somebody else telling me. Then I did for the next one I remembered to do this.

Q Do you mind me asking, did you go back to the second report after the self/peer assessment or did you feel, it’s done?
S I did look over it, but I left it as it was. I did go back and read it again to see if I had put those points in.

Q Would you have preferred to have had a chance with the first one again or were you happy enough to get the comments on it and assume that the mark stood?

S I was quite happy to get the comments back and just leave the mark.

Q So you didn’t feel you needed to revisit that one. (S Yeah) ok, good. The last bit really I wanted to cover is the idea of the way we teach, the delivery and the sort of student/tutor relationship, and how important that is in the assessment process and even in the learning process. Sometimes students worry about this tutor status, so what for you is the best student tutor relationship to help you learn and help you with the assessments?

S Um, (couldn’t pick up what was said) a really important part because if you feel uncomfortable about going for help if you need help. (Asks for clarification)

Q Yes that’s one thing, to be able to communicate. For me an assessment has to be a dialogue not just a measure. If we feel the assignment we’re giving you is important, then we should be willing to help you along the way to get there.

Q We’ll turn it around a different way then, thinking of the sorts of assessment you’ve had during your higher education experience, had you received tutor feedback prior to submission before.

S Not that I can think of.

(Researcher tries to ascertain whether assessments for the student were measures or helpful learning processes.)

S More that they were just there for the end measure rather than to help along the way.

Q Did the feedback make you more confident to undertake a piece of academic writing?

S I’m the type of person, I never feel confident until I’ve got the grade back, and I can tick off and say that’s ok now. Rather than at the time I always worry about things like that.

Q Did these strategies, did you feel, help?

S Yes, definitely.

Researcher thanks the participant.

EdD Interviews

Transcript 4
Q. Researcher wants student’s general feeling about what assessment does to her. He invites her to be as honest as she likes.

S. Assessment, it makes me quite nervous. You’re pressured when it comes to assessment. Especially when it comes to assignments and things like that.

Q. So is that down to the written word or…? Are there certain sorts of assessments that you feel comfortable with?

S. I think it’s the written mark that makes me nervous. When we’re talking about things it’s fine but when I’ve got a mark coming back I feel sick.

Q. Has that ever been justified, have you ever had a mark that maybe made you feel…?

S. Last year I failed maths and the essay bit, and this year I’ve just been totally stressed out with every assignment that has come.

Q. So assessment then is not… you don’t view it as a positive thing.

S. No

Q. Researcher reviews AfL strategies used in the education module.

S. I found that a lot easier to cope with because you didn’t give me a mark, I didn’t know how I had done, so I worked on what you said.

Q. So was that a useful thing for you?

S. Yes.

Q. That’s interesting.

S. And I did quite well in my education, I was pleased with that.

Q. So somebody who really fears marks did better by just having targets?

S. Yes. A lot better.

Q. That’s really interesting. Did the targets worry you at all or was it just this is what I need to…?

S. Yes, it was just reading them and I’ve got to work on this (can’t make out final comment)

Q. The next thing I want to discuss is feedback and how you interpret feedback. You obviously look at the mark (S. Straight away!) because that’s the thing that worries you. In a way a lot of feedback from tutors is subject specific, whatever element you’ve been looking at. (Researcher discusses possibility of generic feedback s well as subject specific). Would feedback on transferable skills be useful to you?
S. Definitely. The style or writing reports or essays, yes definitely. That’s one thing we all worried about, when we had the reports from you, we don’t know how to write the reports!

Q. That’s interesting, because as I say a lot of what you get as feedback may be redundant as it is related to...

S. A specific thing.

Q. So do you feel that what we did in education has been transferable?

S. Definitely. Not just now with the last two assignments (reports), I don’t go back and look at the mark as such, it’s more of the criticisms and what I did well.

Q. Oh, well done.

S. It’s definitely made me reflect.

Q. So some of the things that we did then were (researcher reminds of Afl strategies) you’ve mentioned tutor feedback, were the other ones beneficial do you feel?

S. They all were. Sara read through second one (reflective report), not so much on the topic but grammar and spelling and things like that. Then it gave me a focus and idea by looking at the past reports, so it was like a mixture of all three.

Q. One of the things that I wanted to explore with you is this idea of peer assessment (researcher describes approach)

S. We did that in language.

Q. Tell me about that, you had to do a similar thing in language?

S. For our essay or assignment we did two copies and one was sent to another student,

Q. Did you know that student?

S. No, it was anonymous. We had the feedback, but I don’t know if it was just me but I found it really critical. I was really nervous then about getting my.... I don’t know.

Q. That’s interesting. Do you think you might....

S. I think it was because I didn’t know who’d written it. I can let Sara or Laura read my work no problem, but for someone else I worked myself up. I think I really need a social connection with the person.

Q. That’s interesting. If the students had been steered to write two things that you’d done well and two things to improve, would that have been more beneficial or would you still have had that anxiety of not knowing who’d done it?

S. Still have the anxiety.
Researcher establishes whether the literature was a peer marking or peer assessment.

S. It was a form of marking. We had direct targets to set for each other.

Q. Thinking of peer assessment then for you, a critical friend, knowing the person, that social connection is more important than the feedback you get?

S. Yes.

Q. What motivates you to learn, is it the assessment or you want to know anyway?

S. Because I want to know anyway.

Q. Does the assessment process impact upon your desire to learn?

S. Yes, I’d say so as I always want to do well. When I was little I was always in competition because I wanted to do better.

Q. The final thing then, (Researcher outlines tutor/student relationship) what would be your perfect tutor/student relationship in order to move your learning on?

S. The sort of thing someone like you and Angharad have got, just laid back and you chat to us as friends rather than (name’s a tutor) he terrifies, he does he really frightens me when I talk to......

Q. Are there things that the tutor could do to make it easier or is it a character thing?

S. It’s a character thing. Definitely.

Q. That would be almost impossible to change if a person was ... So that can almost be a barrier, the tutor/student relationship?

S. Yes.

Q. That it, thank you ever so much.

EdD Semi-structured interview

Transcript 5

Q. The researcher asked the student to give her perceptions of assessment. How do you feel about the assessment process?

S. It used to be the mark, but this year I’ve been really interested in the feedback and the comments. What I’ve tried to do as well is take on board what people have said and then apply it to different assignments as well. I admit, like last year, I used to just look at the marks, because I think I knew that
last year didn’t count, it sounds silly in a way, but it didn’t count, but this year I look at the marks and I think, oh ok I need to improve on this, this and this.

Q So some of the things that we did then, during the module, (researcher describes strategies used), out of those were them some you found more beneficial or some that were of no benefit at all?

S I’d say peer assessment was really good because myself and Sarah, we usually read through assignments and give our opinions, and tell each other what we think. Correct grammar and punctuation and things, so I thought that was really good. You weren’t just getting one person’s feedback, I had like several people’s feedback. Self-assessment, I don’t really know about that because I can’t really remember what we did. (researcher outlines what happened on the module relating to self-assessment tasks). I think that the feedback from you (tutor feedback) and peer assessment was better than self-assessment. (researcher relates the theory of peer assessing as a pre requisite for effective self-assessing.

Q Researcher discusses receiving a clean copy as part of peer assessment. Would you prefer it to be anonymous or do you prefer the more social approach of knowing who’s work it is?

S I think it’s more beneficial when you don’t know whose work your marking. Because I did a course in Leicester before and it was completely anonymous, and I just think they could probably find out whose work it was but here like you can just tell straight away. I think you probably, not that you’re biased but I think if t was anonymous, with our English assignment we had to do a task where we had to mark someone else’s work and I just think, if you maybe had your friends to mark then you might be more, not lenient but maybe soft. Whereas you could give fairer marks if it was completely anonymous.

Q Just to pursue what you said there, that’s interesting, in Leicester, was that your work going in anonymously or was it peer assessment anonymously?

S Oh, sorry, the tutor wouldn’t know whose work they’re marking. You’d know who’d marked your work but you’d just put your number not your name.

Q Researcher clarifies difference between peer marking and peer assessment, so what are you describing there.

S Peer marking.

(Further discussion takes place as to the English assignment which was agreed was peer marking with no opportunity to return to improve the work. Also researcher related the approach to feedback being subject specific)

Would that be of use to you?

S I think so because then the feedback you’re getting is transferable for other assignments. I noticed that the feedback you gave me, it helped me with other assignments as well. It gave me things to consider, like Harvard referencing and things you need to know for all the assignments. To an extent you
need subject specific feedback to improve from year to year, I think it’s a good thing if you can apply it to other subjects as well.

Q Interesting, because that element of feedback is so important. Do you feel then, with the sorts of things we included in the module, (researcher reminds student of strategies used) did you feel more confident in undertaking an academic piece of writing having done that or did it make no difference at all?

S It made a slight difference, I wouldn’t say it made a huge difference because I felt quite confident with essay writing anyway. I know there are areas for improvement, you’re constantly improving when you’re working but things like.. uh.. I knew I had to improve my introductions and conclusions and from this module I feel like I could do that. As really I learnt that through peer assessment, just like learning from my peers.

Q (researcher ask about motivation, whether intrinsic or extrinsic) Does an assessment impact upon your motivation for learning or is it just a matte of I’ve got to get it done?

S I think so, with me for example sometimes I can pick up a book and read about various subjects relating to teaching but I’m not inclined to do it if we have a deadline (Q OK) so that’s me being perfectly honest (Q. Yeah), Then in my spare time especially when on placement, I will go away and research things, so I think it’s a bit f both.

Q The last element in this research I’m looking at is the student tutor relationship. What is the ideal for you with tutor student relationship, relating to assessment and learning?

S Do you mean seeking help and things?

Q Yes, what is the ideal situation for you?

S It is really difficult because it getting the balance. I can see it from the tutor’s point of view, it’s a university degree and a lot of it is independent work. But I think the tutor should be around to answer questions and support students but then I do think a lot of it is up to you as a student to do your work and get on with it and research things. (student offers an example) In Leicester tutors were unapproachable, whereas here if I’ve got a problem I will go to speak to a member of staff. (Student worries that some may be spoon fed by tutors).

Q In Leicester, was that your first experience of higher education? Do you think it was your lack of confidence n approaching a tutor or was it this tutor status thing that they protected possibly?

S. I think there was a status, and also, I did half of my second year and decided to change course, but moreso in the second year I felt that I could go and speak to them. But it would be by appointment, it was more formal. Whereas here, I think it’s more relaxed, in a way. The staff are really friendly and if you do have a problem they will try to help you as much as they can.
Q. So just to round it up then, do you feel that anything that we may have done in the module (researcher reminds student of AfL strategies) changed your learning beliefs, or did you feel that you had a pretty mature way of approaching it anyway?

S. I keep going back to peer assessment, I really do think that that has helped me this year and it’s something I would encourage children to do in school as well. Before I would have been inclined to write an essay and not show anyone, it’s a good thing to get a friend to look over it and for them to give their opinions on what you’ve written.

Q. You initiated that with a friend, do you think that it needs to be more formally built into a module process?

S. Yes, I think so, I’ve done that before with Sarah, but it does need to be included in the module.

Q. So which would you prefer, share with a friend or get a clean anonymous copy, and you state whether you believe that student has met the targets?

S. The clean copy,

Q. That’s interesting, even though you get a lot from the social approach?

S. Yeah, I think it would be better. If we were in a class situation, if it were just me and friends in a relaxed environment, I think that would be fine and I’d probably do that anyway. I think it would be better for everyone if it was a clean copy. Some people might feel a bit intimidated about other people reading their work. Because I know that when we did it in class I asked someone if they wanted me to read their’s and they said no, they wouldn’t let anyone read their work.

Q. You feel a clean copy and students stating what is done well and targets is a better system?

S. I think so, because it would be good practice as well, as in school they need the praise but they need constructive criticism as well.

Q. Have you ever received feedback from a tutor prior to the final submission of an assignment?

S. No

Q. Is it something you’d like more of?

S. I think so.

Q. Lovely that’s it, marvellous!
Professional Development
Portfolio
Personal Development Profile

Contents

Section 1  Personal reflection
Section 2  Personal progress and skills analysis
Section 3  Reflection on learning and planning for future developments
Section 4  Significant training and workshops
Section 5  presenting my research
Section 1
Introduction

Klenowski, Askew and Carnell (2006) indicate that professional development portfolios (PDP) ‘are found in all phases of education’ (2006: 267). The suggestion is that they provide achievements for summative purposes, and assert that very little research has been undertaken on their use as formative tools.

As my whole thesis has been based upon formative strategies, I have found the PDP to be very formative in its nature. Brown, (2003) advocates a practice-orientated approach to their use, where small tasks can engage the learners. During my own ‘learning journey’ I have encountered many hurdles that have required new learning and regular reflection.

My understanding of this PDP was for it to be used as a map of that ‘learning journey’ and I can identify closely to Klenowski et.al.’s (2006) description of it being ‘a learning portfolio that focuses attention on the subject of learning’ and how that can impact upon ‘social and emotional elements’ (2006: 283).

I didn’t set out with any preconceived plan for this portfolio. It grew alongside the development of this research project. It helped me identify areas for development in my own skill set and gave me a reason to reflect, not only on the work, but also on my emotional response to the whole process. The following pages do not give the whole picture as some aspects will remain confidential, as ‘there is a need to respect the learner and respect his or her need to keep some learning experiences confidential, particularly in relation to feelings’ (Klenowski et. al., 2006: 283). What follows is a synopsis of the important milestones that marked my learning journey.
Personal Reflective Statement

I have kept a personal log book of the ups and downs of my EdD studies. As this is personal, it has not been included in my Professional Development Portfolio. However, some of the journey so far can be recounted in this statement.

I began on my own educational journey in Swansea until the age of eight when my father’s job took us to Tenby. I believe that my love for the outdoors and sailing developed over the next three very enjoyable years. I was a member of the Sea Scouts and spent many hours enjoying campfires on Harbour Beach, camping and rowing our boat in the bay. Being extremely interested in outdoor learning and having recently trained as a Forest School practitioner, level 4, I could easily have undertaken my research within outdoor learning in the Primary school. However, having been awarded a teaching fellowship in 2005 for my work on introducing AfL into a Higher Education context, it seemed logical to continue within that field for my EdD.

At eleven I moved from Tenby County Primary School to Llanrumney High School, quite a culture shock for one so young. Within two years I moved to Howardian, as Llanrumney wasn’t offering A level study at the time.

I worked for a year before going to Hereford College to train as a teacher in 1972. I wanted to experience life outside of education as most teachers move from school to college and back to school and never experience other workplaces. Between 1972 and 1975 I trained as a primary teacher and gained a Certificate in Education as a teaching degree had not become compulsory at the time.
Interestingly, I believe that my thirst for continuing professional development may have been stronger than my initial motivation in college, they do say that education is wasted on the young! I decided to undertake a B Ed in-service degree and graduated in 1984. I then went on to do a Diploma in IT and also a Diploma in Education through the medium of Welsh. In 1996 I gained my Master’s in Education and the period since then has been the longest gap in my professional career without undertaking some form of qualification. I have been involved in research, in 2000 I was a member of the team that evaluated the implementation of the PSE Framework in Wales and whether it should become statutory and as I’ve mentioned previously, I have been researching the effects of AfL within Higher Education since 2002.

Alongside all of this, and possibly one of the things that I’m most proud of, is that on leaving college, when I couldn’t even sing the Welsh National Anthem, I learnt Welsh and having become fluent, I was appointed a deputy head teacher of a Welsh medium school in Cardiff. In 1987 I became a head teacher of a Welsh medium school and have been able to use my Welsh throughout my time in Higher Education. I believe that this thirst for new learning and new ideas has set me in good stead during my career and it is that same drive that has supported me through some of the more difficult periods of this EdD. This, understandably, has been the most demanding CPD that I’ve undertaken, but has also provided some of the most rewarding points of my experiences with educational research.
Section 2
Research Degree Progress Plan

Progress in research occurs at different rates, and you will develop some skills faster than others depending on the nature of your research.

The statements below relate to general skills and abilities; some may not be relevant to your particular research area. Enter Yes, No, or Not applicable (N/A) for each statement. At the end of the section you can identify short and long-term goals to develop skills you may lack. As your research moves through different phases you can reassess your skills to monitor skills development.

Alternately, set your own phases

<table>
<thead>
<tr>
<th></th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<tbody>
<tr>
<td>Phase 1</td>
<td>1-12 months</td>
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<td>Phase 2</td>
<td>12-36 months</td>
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<tr>
<td>Phase 3</td>
<td>36-48 months</td>
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<table>
<thead>
<tr>
<th>Research Progress</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
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<tbody>
<tr>
<td>I have a clear understanding of the nature of my project, the objectives and a strategy for reaching targets</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I understand the relevant literature</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have my own system for regularly reviewing the literature</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have become familiar with, and use, literature search methods</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have acquired research skills necessary for my project</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have adapted proven techniques for my project</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>I have completed COSSH details for my research</td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>I have identified relevant skills needed to support my research (eg statistics, interviewing, analytical)</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have produced precise and informative summaries of my research</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have kept precise experimental records, and retained a copy outside the laboratory</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
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<tr>
<td>I have contributed to discussions in seminars</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have planned my research independently on a daily and weekly basis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have discussed with my supervisor whether my research direction needs changing</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Research Progress</td>
<td>phase 1</td>
<td>phase 2</td>
<td>phase 3</td>
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<tr>
<td>I have presented my research and incorporated constructive feedback into planning my research</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>I have discussed colleagues’ projects and given constructive feedback</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>I have reassessed my research techniques</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have planned for, and gained, new research skills</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have developed my transferable skills</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have initiated plans for the structure of my thesis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have identified information (eg experimental work, data) which establishes and confirms my results/ideas</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have developed the ability to recognise the amount of data needed to evaluate my results</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have considered whether any aspect of my research could have commercial value</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>I have identified the central message and key themes of my thesis</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have planned and managed the writing of my thesis</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have sought opportunities to present my research outside UWIC (eg conferences, meetings, exhibitions, journal articles)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>I have planned my oral examination</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>I have carried out a Skills Audit (discipline-related and transferable)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>I have considered the next step in my career</td>
<td>No</td>
<td>No</td>
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</table>
Academic and Research Skills

Discuss your responses to these questions with colleagues or your supervisor

Responses could be:

<table>
<thead>
<tr>
<th>Score</th>
<th>Level</th>
<th>Signs</th>
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<tbody>
<tr>
<td>S</td>
<td>superior</td>
<td>Very confident of ability; at doctoral level</td>
</tr>
<tr>
<td>A</td>
<td>adequate</td>
<td>Am managing task satisfactorily, but could be better</td>
</tr>
<tr>
<td>N</td>
<td>needs attention</td>
<td>able to use skill, but not too confident</td>
</tr>
<tr>
<td>P</td>
<td>experiencing problems</td>
<td>fell my skill is really not up to what is needed</td>
</tr>
<tr>
<td>N/A</td>
<td>never used</td>
<td>skill that is not likely to be relevant to programme</td>
</tr>
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Information handling

<table>
<thead>
<tr>
<th>I can use all aspects of the literature in my field</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
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<table>
<thead>
<tr>
<th>I can use and maintain a bibliographic/reference database</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
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</table>

<table>
<thead>
<tr>
<th>I can maintain my own electronic research database</th>
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<th>phase 2</th>
<th>phase 3</th>
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<tbody>
<tr>
<td>N</td>
<td>A</td>
<td>A</td>
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<table>
<thead>
<tr>
<th>I can produce careful, detailed and accurate data</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>S</td>
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<table>
<thead>
<tr>
<th>I can carry out in-depth literature surveys</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>S</td>
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</table>

Learning and Performance

<table>
<thead>
<tr>
<th>I am able to assess my current and future skills requirements (subject-specific and general)</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>S</td>
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</table>

<table>
<thead>
<tr>
<th>I can identify opportunities to develop my skills</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td>A</td>
<td>S</td>
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<table>
<thead>
<tr>
<th>I am able to maintain an interest in issues in my general discipline area</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>S</td>
<td>S</td>
<td>S</td>
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<table>
<thead>
<tr>
<th>I can review my PhD progress plan regularly and plan for skills development</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>N</td>
<td>A</td>
<td>S</td>
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<table>
<thead>
<tr>
<th>I am able to review targets in my research with my supervisor</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>A</td>
<td>S</td>
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<table>
<thead>
<tr>
<th>I can understand how my field of research could impact on other areas</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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<tbody>
<tr>
<td>A</td>
<td>A</td>
<td>A</td>
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<table>
<thead>
<tr>
<th>I am able to assess critically the skills I possess in relation to the needs of potential future employers</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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</table>

<table>
<thead>
<tr>
<th>I can comply with university policy on postgraduate research</th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>S</td>
<td>S</td>
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</table>
### Planning and organisation

<table>
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<tr>
<th></th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
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<tbody>
<tr>
<td>I can identify a series of research objectives and targets</td>
<td>A</td>
<td>S</td>
<td>S</td>
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<tr>
<td>I can develop a work plan so that I can achieve my targets</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>I can develop a planning system for day to day work</td>
<td>N</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>I can plan ahead for skills and techniques I will need to acquire</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>I am able to plan for meetings with my supervisor</td>
<td>A</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I can take account of facilities or support I need from other people when planning my research</td>
<td>N</td>
<td>A</td>
<td>S</td>
</tr>
<tr>
<td>I can take advice from my supervisor</td>
<td>S</td>
<td>S</td>
<td>S</td>
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<tr>
<td>I can analyse the benefits and drawbacks of changes in my research direction.</td>
<td>A</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I am able to plan for the next step in my career</td>
<td>N/A</td>
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</table>

### Subject skills

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<tr>
<th></th>
<th>phase 1</th>
<th>phase 2</th>
<th>phase 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can comply with good practice in my work</td>
<td>S</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I can assess my research techniques and modify them if necessary</td>
<td>A</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I can work safely with tools and materials</td>
<td>N/A</td>
<td></td>
<td></td>
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<tr>
<td>I can design and implement new research independently</td>
<td>A</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I can evaluate and interpret the results of my research</td>
<td>A</td>
<td>S</td>
<td>S</td>
</tr>
<tr>
<td>I am able to consider and take responsibility for the possible impact of my research on society or the environment</td>
<td>N/A</td>
<td></td>
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<tr>
<td>I can adapt proven procedures to meet the requirements of my research</td>
<td>A</td>
<td>S</td>
<td>S</td>
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</table>
Personal Progress and skills analysis

Sometimes a series of answered questions does not give the full picture. However, I have found that by asking myself these questions it has provided a catalyst for reflection. Some of the most significant areas of improvement that I feel have resulted from this EdD process have been my improved research skills and also the use of quantitative data and subsequent analysis. For this I am very much indebted to my director of studies. The regular meetings with Dr. Sander and his willingness to offer advice and help when using SPSS, have been invaluable to my skill development.

The skills required to complete a doctorate thesis are many and the undertaking of this work has required me to work on areas that may not have been developed or possibly even considered had I not started this research project.
Section 3
Reflections on the process.

I came to Cardiff Metropolitan University (UWIC) in 1991 after a period of teaching in primary schools. Ten years of that primary experience had been spent as a senior manager, six years as a deputy and four as a head. What I found most interesting relating to my own development, on first becoming a university tutor, was that on talking to student teachers about aspects of primary pedagogy and explaining my own views, students would ask me why I held that particular belief. It struck me, quite hard at the time, that as a busy practitioner, I had not really been challenged to give my rationale for my beliefs. This for me was the greatest gift that working in higher education has given me, the chance to formulate my philosophy on primary education and education in general. It also made me realise how important it is for practitioners to have that reflection time and certainly through our partnership with schools, this aspect of creating school mentors and senior mentors has allowed practising teachers to share their beliefs and philosophies with student teachers and act as a very effective professional development element of their role.

Another opportunity that working in higher education has presented to me is the chance to pursue interests and explore issues. It is because of this that my interest in formative practices within higher education was able to develop into this research project.

What the professional doctorate has also done is instil in me a desire to learn more and although this research project has, I believe, added to the growing body of insight into formative practices, it has also created a whole new list of other questions that I am keen to pursue. My personal log sheets regularly plot my thinking process and the various questions
raised by my findings. The log also shows how much time was spent trying to ensure a strong and appropriate research design for the project. At the beginning of the professional doctorate programme we had a number of interesting presentations by tutors from our own institute and from other universities. One small comment made by a tutor had a significant influence on my reflective process over the past years. He suggested keeping a journal and provided a simple format for recording my reflections. The analogy he used, that has remained with me, was that of a Pensieve from the Harry Potter books. It is a magical process that allows the user to draw out a thought and revisit it in order to reflect upon it. My daughter grew up reading the Harry Potter books and through this I became a fan too. That pensieve idea has provided me with many hours of reflection during this project, although the use of a wand was never part of the process, but could have been very useful!
LOG (facts/events – descriptive objective detail)  DIARY (Subjective detail-e.g. your feelings/reaction to/about events)

JOURNAL

Your in-depth reflections about the above sections, implications, interpretations, ways forward, changes, prospects, points to review in future
Learning and future developments.

Learning and how we learn has been of interest to me since early in my career. My interest in assessment procedures and their impact upon learners grew when I became a head of a primary school in the early 1990s. That period saw the introduction of the National Curriculum and also the implementation of the Statutory Assessment Tasks (SATs). Experiencing first-hand the pressures and stress that the administration of these SATs had on myself, members of staff and the pupils, instilled in me a desire to explore ways in which learners could evidence understanding and learning without the pressure of summative testing. As my career moved into higher education, it was interesting to note that although the age of the learners had changed the issues linked to assessment had not. In fact within the higher education context, the development of a formative approach within a dominant summative tradition is, to say the least, challenging.

My personal experiences also support the less than progressive thinking linked to assessment within higher education. In 2005 I delivered a presentation to an audience of learning and teaching directors from my institute. I discussed my early findings linked to implementing a range of AfL practices within a module at level 5 of a BA Primary ITET course. During the question and answer session I was encouraged by one of the directors, who shall remain anonymous, that I should be taking this to schools so that they could introduce these AfL strategies and keep up with what was happening in higher education. I had to inform the director that it was already happening in primary and secondary schools and that we, in higher education, were far behind the development in the compulsory education sector. The fact that
someone responsible for teaching and learning in higher education was firstly unaware of the developments in the academic debate surrounding assessment, and secondly was unaware of its development within compulsory education, shocked me.

I hope that this piece of research can offer more insight into the assessment processes and perceptions within higher education. To produce a model that may have implications for other modules across the school and possibly the institute would make the wok very worthwhile.

I believe that the results of this work could produce an article and possibly conference papers. For my future professional development I would like to use the various research skills that I have developed over the years doing my EdD to undertake some outdoor learning research, as this is another of my great passions.
Section 4
Information Literacy Workshop

This particular workshop was hugely significant to my research development and thinking related to assessment within higher education. Immediately after the workshop I wrote notes in my reflective journal and it made me reflect upon not only the issues that seemed to mirror some of those covered in the workshop but also a wider picture of what an ‘Assessment Landscape’ could look like.

The following pages outline the workshop content, my reflections from my journal and an e-mail correspondence resulting from the workshop.
Workshop 26/5/10

Developing 21st Century Graduates – thinking critically through information Literacy

Moira Bent Newcastle University

An excellent session that could have possible links to my piece of research.

It made us consider the possibility of creating ‘An Assessment Literacy Landscape’ and what it means to be ‘assessment literate’. I’m not sure if the phrase has been coined previously, I’ll need to research the journals, if not I think it would fit well into my attempt at producing a transferable model for assessment practices in HE.

She mentioned Sally Brown who has done a lot with assessment, I’ll need to find out more about her.

She believed that Information Literacy (IL) has been too focused upon skills transfer rather than a balance between skills, approaches and behaviours. This certainly linked to my work on perceptions.

She discussed differences between the meaning of training and the meaning of education. Education should help us think differently, not merely perform certain skills.

I intend to e-mail her to discuss her feelings relating to IL as an integral part of the assessment process and how the quality of the assessment will influence the need for sound IL.
From: Moira Bent [mailto:moira.bent@newcastle.ac.uk]
Sent: 13 September 2010 09:05
To: Cook, Martin
Subject: RE: Workshop

Dear Martin

I’m delighted that you found the workshop useful and many thanks for your feedback on the 7 pillars model. It is still evolving and I’m hoping we’ll have a final version ready to launch in January. I think the best place to start with articles etc written by Sally is here:

http://phil-race.co.uk/sally-brown-2/

I am aware of other books such as “500 tips for assessment” too. If you google her, you’ll find links to several talks, ppts etc.

There’s also an interesting page here

http://www.londonmet.ac.uk/deliberations/assessment/brown.cfm

Phil and Sally are married and both write very accessible material on assessment. I’m sure Sally wouldn’t mind you contacting her directly.

The is a new JISC report out on assessment in the digital age too, I’m sure you’ve seen it, but just in case, I’m attaching some info about it.

Best wishes with you research

Moira

Moira Bent
Robinson Library
Newcastle University
ext 0191 222 7641

Please consider the environment before printing
Dear Moira,

I was in your workshop at UWIC on 26th May this year and found it a very useful and thought provoking session. I’ve read over the Seven Pillars Expanded (draft) and liked the way you’ve distinguished between ability and understanding. I agree with your doubt over the possibility to use discrete levels and I wonder whether it is possible or desirable to do so. The students obviously need help and guidance during their time in university but I would suggest that the level of their information literacy would reveal itself through the work and assignments undertaken.

This brings me to the area in which I’m undertaking my professional doctorate – assessment within higher education and the implementation of assessment for learning strategies within a dominant summative assessment model.

The key, I believe, is the way in which assessment practices are implemented and whether these practices influence the students’ learning orientation. If the demands of the current assignments merely require the regurgitation of module content, then students will tend to adopt a surface learning approach thus impacting on any possible improvements in their information literacy.

You mentioned Sally Brown in your workshop and the fact that she has undertaken a lot of work with assessment. Could you recommend any titles that may link to my area of study please?

I hope that you don’t mind me contacting you and I appreciate that the beginning of term can be very busy for all staff.

Kind regards,

Martin Cook

Senior Lecturer in Primary Education

UWIC
Doing things better and doing better things in assessment and feedback

HEA Workshop at Glamorgan University 25th March 2011.

This was another significant workshop for my own learning journey. A number of issues being raised by my research were confirmed, especially when a panel of students related their experiences relating to assessment and feedback. An aspect that they raised linked closely to a finding from my qualitative data. They expressed their dislike of generic feedback from tutors about assignments, this was raised by my interviewees and the opinions of both my research participants and this student panel at the workshop were that tutor feedback is provided for individuals and should remain that way.

What arose from the discussions was the importance to the students of them being involved in the assessment and feedback process where they could engage in open and honest discussions. This was hugely significant to me as I reflected upon my data and realised that this issue went beyond my own cohort of students and permeated other student bodies.

The workshop also identified the importance of engaging staff who are resistant to changes in assessment practice, which again was an important element of my own project.

What it did for me more than anything was to make me realise that I have interesting results and should share them more widely within the research community.
Presentation to Cardiff School of Education

Research Seminar

16/11/2011
Slide 1

RESEARCH SEMINAR PRESENTATION
16th November 2011
Martin Cook

Slide 2

BACKGROUND:
- Module leader of BA Ed Yr 2 Education module
- Aspects of Primary pedagogy
- Academic year 2002/3
- Amendments to assignment procedure
- 2005 Teaching Fellowship
- 2007/8 EdD. Included a range of AfL strategies
How can the introduction of AfL strategies impact upon students’ learning beliefs?

How can the use of formative feedback linked to the module assignment impact upon the quality of students’ work?

Do students perceive peer and self-assessment as beneficial when undertaking a piece of academic writing?

How can the pedagogy of tutor delivery help develop self-efficacious students?

Maclellan (2005) encapsulates the problem I faced:

The problem with trying to boost self-esteem directly is that we are pursuing the wrong strategy. Increases in self-esteem do not produce increases in their academic achievement. Indeed the evidence for a link between self-esteem and any given behaviour is so weak that self-esteem cannot be claimed either to cause behaviour or behavioural change. (2005, p. 8)

Questionnaires over two cycles

Semi-structured interviews

Students’ achievements
Formulating the research question

An extensive review of available literature was undertaken and the area for research was identified.

Pilot questionnaire - Used with a selection of students and support team.

Cycle 1. Work undertaken included questionnaire and feedback on process; implementation of AfL strategies within the module.

Cycle 2. Work undertaken Pre and post questionnaires; assessment definitions; semi-structured interviews and implementation of AfL strategies within the module.

Analysis and presentation. A critical analysis of the results and their significance to the original research sub-questions.

The six most regularly used AfL strategies incorporated throughout the module delivery:
- Reviewing the assignment criteria
- Discussing criteria
- Judging clean copies of reflective reports from previous years alongside the criteria
- Using self-assessment
- Using peer assessment
- Receiving staggered tutor feedback over the module relating to the assignment

To establish whether those student teachers who had previous experience with AfL strategies found these strategies more helpful in completing the academic reflective reports than the students who had not previously experienced AfL.

Secondly, to look for an effect between prior experience with AfL strategies and self-efficacy when completing an academic piece of work.
Independent Groups t-tests were carried out to look for statistically significant differences between those with and those without previous AfL experience. Mean scores were higher for those who had previous experience of AfL and significantly higher for two particular AfL strategies. Although the sample was relatively small, two statistically significant results do suggest an effect between previous experience of AfL and how helpful students find AfL strategies when completing an academic piece of writing.

Secondly, the data was analysed to look for an effect between prior experience with AfL strategies and self-efficacy when completing an academic piece of work. By using Cronbach’s Alpha I was able to confirm that the grouped statements were measuring a similar construct, thus a new variable was created which I called ‘self-efficacy 1 cycle 1’. The results reveal that those who had experienced AfL previously were more self-efficacious when confronted with producing an academic piece of work, although the difference between the groups was not statistically significant.

Cycle 1 results suggested that AfL strategies may be viewed by student teachers as helpful when completing an academic piece of work. A difference in self-efficacy between those who had and those who had not experienced AfL previously (albeit not significantly so) meant that I didn’t deem it necessary to repeat this element of the research during the second cycle (year 2009/10).
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CHANGES TO CYCLE 2
- Based upon an evaluation of student teachers’ feedback relating to the first cycle questionnaires and my own evaluations, a number of changes were made to the second cycle questionnaires.
- Eliciting student teachers’ understanding of assessment, through asking them for a definition, was included in Cycle 2.
- Gender and age was included. The results did show a higher self-efficacy in male students. However, the very small number of males in the cohort made comparisons between gender impracticable.
- The number of questions linked to ascertaining the student teachers’ self-efficacy was increased in cycle 2 and the scale was amended from 1-5 to 0-10 in order to offer a wider choice to the participants.
- Aspects of tutor delivery were also amended – not giving generic feedback (supported by students from University of Glamorgan).

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QUANTITATIVE RESULTS CYCLE 2
- Pre and post questionnaires
- Again Cronbach’s Alpha was used to check the internal reliability of the questions from each questionnaire.
- The results using Cronbach’s Alpha confirmed that the grouped statements from both questionnaires were measuring similar construct and therefore three new variables were created for use in the research analysis; sef1, sef2 and AfL1.
- Using these new variables alongside the reflective report marks, correlations were sought.

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RESULTS
- Self-efficacy. The results showed no relationship between performance in any of the three reports and student teachers’ self-efficacy.
- However, when using a repeated measures t-test the results showed a significant difference between se1 and se2 (p<0.05), indicating that student teachers’ self-efficacy linked to successfully completing an academic piece of writing had increased over the module.
The most important results for this piece of research emerged from this analysis. It provided a strong indication that those student teachers who valued the AfL strategies and found them useful over the module had an improved performance to those who placed less value upon the AfL strategies. There were significant correlations between AfL and the three marks gained for the reflective reports (AfL and report 1, Sig=0.007; report 2, Sig=0.048; report 3, Sig=0.024).

There was a statistically significant difference between reflective report 1 and 2 (p<0.05) and also between reports 1 and 3 (p<0.05). However, there was no significant difference between reports 2 and 3. This also mirrors previous results, suggesting that the first formative feedback helps students unlock the assignment requirements. These significant results strengthen the hypothesis that AfL strategies, especially formative feedback on assignments during a module impact upon student performance.

The category of students gaining the lowest marks with their first reflective report made the most significant improvement by the second reflective report, showing a mean gain of 12.38 marks. Those student teachers, in their first report, achieving higher marks than the third class category only made a mean gain of 3.94 marks with their second report. An independent samples t-test revealed a significant difference between these two groups of student teachers (P=0.05), which supports the Assessment Reform Group’s belief that AfL is disproportionately more beneficial to the less able.
Using a Grounded Theory approach:
- Category (i): A measurement of ability/knowledge/understanding done by a third party.
- Category (ii): A measurement of ability/knowledge/understanding done by a third party, but related to moving the learning forward (mention of learning and teaching).
- Category (iii): Sophisticated definitions using formative and summative terminology with a stronger focus upon learning.

Each student teacher's definition was allocated a category according to the sophistication of their assessment definition. These were then compared to their marks, to their self-efficacy and also to their views on AfL strategies.

The results showed that the mean mark of those in category (i) was 51, category (ii) was 55 and category (iii), having the most sophisticated definitions, was 61.

Although these results indicate an effect, it was felt that due to the small number of students in category (iii), by combining categories (ii) and (iii) and creating a new group, it would provide more reliable results.

Statistically significant differences emerged when comparing the student teachers' categories of sophistication of definition to the marks gained for the reflective reports when using the new groups. Report 2 (t=2.644, df=42, p<0.05) and report 3 (t=2.410, df=42, p<0.05) highlighting a possible significant link between understanding assessment and performance.
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- When comparing the sophistication of definitions against the self-efficacy mean at the beginning and the end of the module, for those in category (i) at the beginning of the module their mean for self-efficacy was 5.0 (to the nearest decimal point) and the combined mean mark of those in category (ii) and (iii) was 6.3.
- Statistically, this is a significant result ($t = 2.874, df = 43, p < 0.05$) and reinforces the link between a more sophisticated understanding and self-efficacy relating to the reflective report writing.

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- These significant results underline the importance of addressing students' understanding of the assessment process. Encouraging students to engage with the assessment process and supporting them to build a more sophisticated perception of assessment could impact significantly upon their academic performance and learning.

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QUALITATIVE RESULTS

- Self-selecting sample
- Key issues:
  - Students' responses mirrored the quantitative results - viewing prior work linked to criteria
Slide 24

**EXAMPLES OR EXEMPLAR**

- S: The one I’d definitely say is the one looking at past students’ work. I always think that’s really helpful. I don’t like to start something, I don’t want to get it wrong. I can see the structure of it. (Q: It clarifies it) yes.
- Q: So with those, we didn’t give you exemplar we gave you examples to go against the criteria, which would you prefer, exemplar material or examples?
- S: Personally I have to say examples as I can see for myself then. Try to put them against the criteria to see.

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**FORMATIVE COMMENTS ONLY**

- S: What’s the point of that I want to know straight away. If the grade is fine I’ll read the rest later, kind of thing.
- However, this same student went on to support the idea,
- S: I think it works the other way though as well, as if you look at your grade and you’ve got 65, yeah, I’m happy with that, but you think how can I improve on that? But if there’s nothing there to tell you then you’re going to be stuck in the same thing.

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- A feeling reflected in student 4’s comments,
- I found that a lot easier to cope with because you didn’t give me a mark, I didn’t know how I had done, so I worked on what you had said.
**Slide 27**

**SPECIFIC AND GENERIC FEEDBACK**

- S1 - Maybe even, when you have your assignments back and they have your strengths and areas for improvement, maybe they could have another box, because obviously it's strengths and areas for improvement for that specific assignment, maybe they could have another one with transferable skills, or generic areas for improvement and targets.

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**PEER ASSESSMENT**

- An aspect that emerged from these discussions was the emotional response to peer assessment.
- The students' comments highlighted how the emotional response could be removed:
  - If there was anyway of making peer assessment more anonymous, people would be a hell of a lot more honest.

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**SELF-ASSESSMENT**

- Not viewed favourably by the interviewees.
- S5. …I think that the feedback from you (tutor feedback) and peer assessment was better than self-assessment.
- S1. Well to start with the one I didn’t particularly find useful was self-assessment, only because I worry about my work anyway.
- Interestingly, both of these students valued peer assessment.
Unsurprisingly, students valued tutors who were approachable and offered useful advice and support.

Taras (2002) writes of the reluctance of tutors to allow students to enter ‘the bastions of academia’. Her belief that the feedback processes are ‘at the heart of tutor identity’ (2002, p. 504) and therefore tutors are reluctant to help students become part of the assessment process, are serious barriers to the tutor/student dialogue.

Bailey and Garner (2010) highlight that there are problems relating to the tutor student relationship. Their worry stems more from the pressures on the present higher education system rather than at the tutor level, ‘the trend towards greater proceduralisation in higher education administrative and pedagogical practices has led to the “decoupling” of teacher and student by minimising their points of contact and depersonalising the experience for both parties’ (2010, p.189).

As Wilton and Lyles noted, when discussing the development of the landscape painting between 1750 and 1880 the desire for change and improvement is a constant element, whatever the field or discipline.

For artists as much as for philosophers the inherited past was to be reassessed and reformulated, old models were to be subjected to analytical scrutiny and, if necessary, “deconstructed” and reassembled in forms appropriate to modern use. (1993, p.36)

The desire, through research projects such as this one, is that the assessment debate will continue to evolve and, if necessary, “deconstruct” itself in order to produce an “Assessment Literacy Landscape” that might meet the learning needs of today’s university students.
There are two main areas that have emerged from this research project that are worthy of further investigation.

Firstly, the area of students understanding of what assessment entails linked to their performance.

Secondly, an in-depth investigation into the perceptions of tutors within my own school relating to assessment processes and procedures.

**REFERENCES**

Journal article based on research project

Seeking publication
Assessment for Learning Strategies: their effects upon student teachers’ learning and self-efficacy.
Martin Cook
Cardiff School of Education

Abstract
Assessment within higher education is pervasive (Leathwood, 2005). The necessity for marks and grades creates a strong summative assessment environment and can dominate students’ thoughts (Crisp, 2012). However, there is a growing body of evidence suggesting that formative interventions over a learning period can ameliorate improvements in learning and achievement (Black and Wiliam, 1998; Gibbs, 2006; Macfarlane-Dick, 2006). This article outlines an action-based research project investigating of student teachers’ learning and self-efficacy when introduced to Assessment for Learning (AfL) strategies.

The evidence of the impact of formative assessment upon performance (Black and Wiliam, 1998; Juwah et al., 2004) provided a theoretical base underpinning this research project. Data on students’ responses to the implementation of a range of AfL strategies, assessment processes and their self-efficacy were collected by means of questionnaires, semi-structured interviews and analysis of assignment results. Interventions, such as staggered submission of assignments and changes to tutor pedagogy, resulted in significant gains with students’ performance. The greatest gains were demonstrated by those gaining the lowest marks, although significant improvements were noted across the cohort. Changes in self-efficacy were evident and significant results occurred when investigating sophistication of students’ assessment definitions and performance.

Issues on how best to implement formative assessment strategies within a dominant summative assessment model were central to the project and the article concludes with recommendations on how higher education institutions can help create a more ‘assessment literate landscape’.

Key words: Assessment for learning; formative assessment; self-efficacy; learning orientation

Introduction
Approaches to assessment in HE are predominantly driven by the need to collate marks/grades in order to feed into degree classifications and to calculate students’ accumulation of credit points, they are, therefore, summative in nature. For those being assessed, the results of those assessments can have a major influence on life choices and those experiences of being assessed can shape the learners’ perceptions of the assessment process. The Assessment Reform Group (2002) published research which investigated the impact of summative testing on pupils’ motivation for learning. What emerged from the work was strong evidence to suggest that summative forms of assessment have a negative impact upon motivation. This
supported by Leathwood (2005) who identifies how low grades can have ‘de-motivational potential’ for students causing ‘anger and hurt’ (2005 p.309). For those designing and delivering these assessments, the goal has to be making the assessment requirements relevant to the learner and to encourage a positive learning orientation.

Torrence and Pryor (1998) believe that what is sometimes described as formative assessment is actually a repeated form of summative or continuous assessment rather than true formative assessment. This is what Black et al. (2003) describe as ‘micro-summative assessment’, being a series of short tests and assessments. AfL, on the other hand, changes the focus from assessments that are carried out on particular occasions and can be formal in nature, to an informal approach that is designed to promote the students’ learning. It is ‘embedded in all aspects of teaching and learning’ (Black et.al., 2003). An activity that incorporates AfL not only provides feedback for the teacher, but can also aid students in assessing themselves and each other. This then can impact upon the teaching and learning activities. The assessment Reform group offer this definition for AfL,

*The process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go and how best to get there.* (ARG, 2002)

AfL is another term for sound formative assessment practices and in 1998 a significant insight into these practices was offered by Black and Wiliam (1998). They undertook a review of some 250 sources linked to formative assessment, over a nine year period. The results of this extensive review were published in ‘Inside the Black Box’. The resultant analysis highlighted positive benefits from formative assessment on learning and achievement at all levels of education (Juwah et al., 2004).

**The research aims**

The overall aim of this project was to investigate the implementation of a number of AfL principles within a higher education (HE) context and from the main aim emerged four sub-questions,

- How can the introduction of AfL strategies impact upon students’ learning beliefs?
- How can the use of formative feedback linked to the module assignment impact upon the quality of students’ work?
- Do students perceive peer and self-assessment as beneficial when undertaking a piece of academic writing?
- How can the pedagogy of tutor delivery help develop self-efficacious students?
The project was undertaken within a HE School of Education in South East Wales between 2008-2010. The student teacher participants were undertaking a module delivered at level 5 of the National Qualifications Framework as part of the three-year full time BA (Hons) Primary Education course. The input was compulsory for all students in the second year cohort and linked closely with the students’ experiences during their school placement. The content addressed many of the key professional and pedagogical skills of teachers, for example, planning, classroom organisation, management of pupil behaviour, learning theories, teaching methods and the assessment of pupils’ learning. The principles of AfL formed part of this module’s content, and, as module leader, with responsibility for its construction and delivery, I believed that it was important to model the best practice in tutor pedagogy, because of this AfL practices were built into the teaching, learning and assessment of the module.

Based upon the principles of assessment for learning advocated by the Assessment Reform Group, Juwah et al. (2004) provide a conceptual model for HE in order to enhance student learning through effective formative feedback. The conceptual model includes seven principles, these being:

10. Helps clarify what good performance is (goals, criteria, standards expected).
11. Provides opportunities to close the gap between current and desired performance.
12. Delivers high quality information to students about their learning.
14. Provides information to teachers that can be used to help shape the teaching.

(Juwah et al. 2004, p. 4)

These seven principles provided a framework for my research; however, point six was adjusted to focus upon self-efficacy. Due to the limited time span when working with the students it was deemed unlikely that a measure of self-esteem would be feasible or reliable. I was also influenced by the debate concerning whether self-esteem actually has any influence over academic achievement (Maclellan, 2005). As self-efficacy is task related it was felt that measuring students’ self-efficacy related to an academic piece of work, would provide more realistic, reliable and manageable results.

Principle seven had a strong significance for my research as the success of the research demanded a revised pedagogical approach within taught sessions. Central to the development of AfL in schools and universities is the acceptance that change cannot occur by simply changing or modifying the assessment procedures, it must come through pedagogical innovation alongside assessment reform. Taras insists that, ‘innovation in assessment is no longer an option in higher education in Britain’ (2002:501). Biggs goes as far as to say that ‘formative assessment is inseparable from teaching’ (Biggs, 2003, p.142). Some however, recommend caution (Maclellan, 2004), due, mainly, to the need within higher education to produce reliable summative assessment for certification and accountability. Maclellan goes on to warn that, ‘alternative assessment in higher education is not a particularly convincing form of
high stakes assessment’ (2004, p.319). Even considering this cautious approach, the supporting evidence for implementing formative assessment practices is compelling (Black & Wiliam, 1998; Black et al., 2003; Nicol & Macfarlane-Dick, 2006). This belief is summed up succinctly by Nicol & Macfarlane-Dick, ‘if students are to be prepared for learning throughout life, they must be provided with opportunities to develop the capacity to regulate their own learning as they progress through higher education’ (2006, p.215).

It was because of the revised teaching approaches within this project that other elements of the research aims became possible, such as analysing the inclusion of self and peer feedback; allowing student teachers to view previous examples of work; having student teachers analyse the assessment criteria, aspects that became an integral part of the taught sessions.

Indications from earlier investigations

This research project emerged from my earlier work in this field. During the academic year 2002-2003 the assessment element of an education module was adjusted to more closely reflect the AfL philosophy of offering formative feedback before the final submission of work. Originally the assignment entailed the completion of three reflective reports, of approximately 1,000 words, which were based upon aspects of primary pedagogy, and all three were submitted at the end of the module. A practice of assignment submission that is, I would suggest, prevalent in most higher education institutions. In order to more closely reflect the AfL practice of giving formative feedback, tutors received the first reflective report four weeks into the module. Students only received formative comments from tutors, even though a mark had been awarded; this was not shared with them. This mirrored one of the principles of AfL encapsulated by Gibbs, ‘Any feedback that focuses on an individual’s overall performance (in the form of a mark or grade), rather than on their individual learning, detracts from learning.’ (Gibbs, 2006:, p. 27). What the tutors did provide was focused and structured feedback on the students’ work. They identified strengths but also offered specific targets for improvement. The emphasis for the tutor feedback was upon how well the individual student had achieved against the assignment criteria as Black and Wiliam (1998) believe that students can only make progress if they understand the criteria, can have some sort of ownership of the aims of the work and can engage in assessing their own progress. It was hoped that this initial formative feedback would assist the students in completing their next two reflective reports, reflecting the words of Race, Brown and Smith (2005, p. 5), ‘the more detailed the feedback we provide, the greater is the likelihood that students will have opportunities for further development’.

The first reflective report was submitted in November 2002 marked and returned to students the following session in order to support them in completing their second reflective report. When marking their second reflective reports a significant improvement was noticed by all tutors. In fact, on comparing the marks at the end of the module, a significant overall mean gain of eight marks across the cohort emerged between the first reflective report and the second (Cook, 2007). The results obtained in 2003 - 2004 were duplicated in 2005 - 2006 and again in 2006 – 2007.
Although the evidence was limited, the results seemed to suggest that certain assessment principles of AfL could contribute to improved performance and learning in a HE context, even within a dominant summative assessment need.

**Method**

It was from these early investigations into the impact of AfL within higher education that this wider piece of research developed. The idea that such a simple intervention as staggered feedback during a module could ameliorate students’ understanding and performance made a lasting impression on me and other colleagues.

The action-research model was deemed the most appropriate methodology and three methods of data collection were used, questionnaires, semi-structured interviews and students' performance. The research was carried out over two cycles between 2008 and 2010.

**Cycle 1 of the project**

The first cycle questionnaire sought to collect data relating to how useful the students had found the AfL strategies within the module and whether they believed that these strategies had advanced their learning. It was also intended to explore how confident the student teachers were in completing an academic piece of work. Students were also asked whether they had received written formative feedback in any previous higher education module and whether they had experienced any of the AfL strategies used during this project in another taught higher education module. The sample was split into two groups, those who had experienced AfL strategies within a higher education module and those who had not. The questionnaire statements were measured using a scale of 1-5. Firstly the data were used to analyse whether those student teachers who had previous experience with AfL strategies found these strategies more helpful in completing the academic reflective reports than the students who had not previously experienced AfL.

The six AfL strategies investigated during the module, were used to ascertain whether they had an effect on students who had previously experienced AfL within higher education and are listed below.

1. Reviewing the assignment criteria
2. Discussing criteria
3. Judging clean copies of reflective reports from previous years alongside the criteria
4. Using self-assessment
5. Using peer assessment
6. Receiving staggered tutor feedback over the module relating to the assignment
Independent Groups t-tests were carried out to look for statistically significant differences between the two groups of students, those with experience of AfL strategies and those who had no experience. The results displayed in Table 2 indicate differences between those student teachers who had previous experience of AfL strategies and those who had not across all six aspects of AfL. Mean scores are higher than for those who had previous experience of AfL and significant differences were noted within two aspects of AfL. AfL strategy 2, where students had opportunities to discuss the assignment criteria, the independent samples test produced the following results, (t=3.187, df=22, p<0.05). When students judged prior work using assessment criteria, described in table 2 as AfL strategy 3, similar results occurred, (t=2.227, df=22, p<0.05). Although the sample is relatively small, with one sample group consisting of six student teachers, two statistically significant results do suggest an effect between previous experience of AfL and how helpful students find AfL strategies when completing an academic piece of writing.

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<td>without previous experience N=18</td>
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Table 2: Mean rated usefulness (1 - 5) of AfL strategies for those with and without previous experience

Secondly, the data was analysed to look for an effect between prior experience with AfL strategies and self-efficacy when completing an academic piece of work. There were five questions within the cycle 1 questionnaire linked to how confident student teachers felt when asked to complete an academic piece of writing which, in the case of this piece of research, was the production of three reflective reports. In order to undertake the analysis the five self-efficacy questions were compared to ascertain whether they were measuring the same construct. I was able to show that the degree of relationship between the questions was 0.852, thus a new variable was created which I called ‘self-efficacy 1 cycle 1’. It was then possible to use an independent t-test to look for an effect between previous experience of using AfL and self-efficacy. The results reveal that those who had experienced AfL previously were more self-efficacious when confronted with producing an academic piece of writing, although the difference between the groups is not statistically significant.
### Cycle 2 of the project

The intention of the questionnaire in the first cycle of the research was to consider the previous experiences of AfL and how helpful students found these strategies and whether it made them more self-efficacious when producing an academic piece of writing. Having shown a significant effect (see table 2), and established that AfL strategies may be viewed by student teachers as helpful when completing an academic piece of work, as well as indicating a difference in self-efficacy between those who had and those who had not experienced AfL previously, albeit not significantly so, it was not deemed necessary to repeat this element of the research during the second cycle (year 2009-2010). In fact, by establishing these possible effects, the research moved towards investigating correlations between AfL, self-efficacy and academic achievement during the second cycle of the project.

Based upon an evaluation of student teachers’ feedback relating to the first cycle questionnaire and my own evaluations, a number of changes were made to the delivery of the module and to the second cycle questionnaires. This approach mirrors the action-research methodology which deals with practical problems highlighted during the research period followed by appropriate interventions. One example that arose from the first cycle changed aspects of our delivery as tutors.

A number of the student teachers from the pilot study expressed dissatisfaction on receiving generic feedback from the first reflective report during a teaching session. It was common practice by tutors to spend time reviewing some of the common errors highlighted by the marking process. They felt that if we had spent time and effort giving individual feedback and targets to the student teachers, then that should be sufficient as the generic feedback only caused anxiety. This anxiety was deemed unnecessary as the generic discussion was of no relevance to certain students' learning needs. This is supported by research undertaken by Poulos and Mahony (2008) when studying the effectiveness of feedback from the students' perspective. One of their interviewees stated that ‘group feedback doesn’t necessarily relate to you because you could get 10 marks below your friend yet you’re both getting the same feedback’ (2008, p.146). Because of this, during the following year, rather than tutors giving generic feedback on errors found within the reflective reports, time was allocated for students to...
read and engage with their individual feedback and then have an opportunity with the tutor to discuss any issues relevant to them arising from that feedback.

The second cycle of the research project (2009-2010) varied from the first cycle (2008-2009) in that it had two points of data collection. A questionnaire was administered at the beginning of the module during the academic year 2009-2010 (second cycle questionnaire 1) and another questionnaire was then administered at the end of the module when all marks and feedback had been returned to the student teachers (second cycle questionnaire 2). Second cycle questionnaire 1 looked to measure self-efficacy at the start of the module along with the student teachers’ understanding of assessment. The second questionnaire again measured self-efficacy, but did so at the end of the module, the second questionnaire also measured students’ responses to their experiences of AfL during the module. It was important for this research that there were two points of measuring self-efficacy and in order to compare the results from the first questionnaire relating to self-efficacy and the second questionnaire, the internal reliability of the questions from each questionnaire was checked. This allowed for the opportunity to calculate the extent to which the statements within the questionnaires were measuring the same construct.

The second cycle questionnaire 1 statements were grouped and given a new name, (self-efficacy 1) and revealed the following result; sef1 – 0.899. Likewise, the statements for the second cycle questionnaire 2 were also grouped under a new name (self-efficacy 2) and again SPSS was used to ascertain that the statements were measuring the same construct revealing the following results; sef2 – 0.915. It was also decided to group the AfL statement (AfL1) to ascertain whether they too were measuring the same construct. The results being; AfL1 – 0.762. These results confirmed that the grouped statements from both cycle 2 questionnaires were measuring similar construct and therefore three new variables were created for use in the research analysis; sef1, sef2 and AfL1.

Using these new variables alongside the reflective report marks, correlations were sought. I looked for any correlation between performance and self-efficacy. The results showed no relationship between performance in any of the three reflective reports that made up the assignment and student teachers’ self-efficacy. However, when using a repeated measures t-test there emerged a significant difference between se1 and se2 (p<0.05), indicating that student teachers’ self-efficacy linked to successfully completing an academic piece of writing had increased over the module. An increase in self-efficacy does not mirror other research, which suggests that student confidence reduces whilst in HE (Sander, 2009).

When analysing the results of those student teachers who valued the AfL strategies and found them useful over the module it revealed that they had an improved performance to those who placed less value upon the AfL strategies. There are significant correlations between AfL and
the three marks gained for the reflective reports (AfL and report 1, p<0.05; report 2, p<0.05; report 3, p<0.05).

**Student performance**

As mentioned earlier marks received for the first reflective report had been bettered by the second reflective report by as much as a mean of eight marks across the cohort (Cook, 2007). It was this difference in marks that was the catalyst for this research project. These results were replicated again during this research. The mean for each of the three reflective reports were used in a paired sample t-test in order to analyse the differences in the marks. There was a statistically significant difference between reflective report 1 and 2 (p<0.05) and also between reports 1 and 3 (p<0.05). However, there was no significant difference between reports 2 and 3. This also mirrors previous results, suggesting that the first formative feedback helps students unlock the assignment requirements. These significant results strengthen the hypothesis that AfL strategies, especially formative feedback on assignments during a module impact upon student performance.

In order to extend this element of the research student teachers’ marks were grouped into those receiving a fail or 3rd class honours mark in their first reflective report and a second group comprising of those who had better than a 3rd class mark. The category of students gaining the lowest marks with their first reflective report made the most significant improvement by the second reflective report, showing a mean gain of 12.38 marks. Those student teachers, in their first report, achieving higher marks than the third class category only made a mean gain of 3.94 marks with their second report. An independent samples t-test revealed a significant difference between those gaining a fail or third class mark and those gaining better than a third class mark (P<0.05), which supports the Assessment Reform Group’s belief that AfL is disproportionately more beneficial to the less able.

**The semi-structured Interviews**

The semi-structured interviews explored the qualitative element of the research. It was important, for the integrity of this research, that the semi-structured interviews be undertaken once all the marks and feedback had been given to students. This ensured that students could discuss relevant issues, in an honest, open manner, without any perceived impact upon their assessment performance for the module. From these semi-structured interviews emerged a number of relevant issues linked to the aims of this research. The interviews investigated similar areas to those covered in the questionnaires, but allowed for a greater depth of debate relating to the issues.

- Is there a better way?
- Peer assessment
- Self-assessment.
- Motivation
- Tutor/student relationship
Defining Assessment

This element of the project investigated how student teachers view assessment and was linked closely to the first research ub-question. All participants were asked in the second cycle, questionnaire 1 for their definitions of assessment. These were analysed using a ‘Grounded Theory Approach’ and from that review three main categories of assessment definitions emerged.

- Category (i) A measurement of ability/ knowledge/ understanding done by a third party.
- Category (ii) A measurement of ability/ knowledge/ understanding done by a third party, but related to moving the learning forward (mention of learning and teaching)
- Category (iii) Sophisticated definitions using formative and summative terminology with a stronger focus upon learning.

Each student teacher’s definition was allocated a category according to the sophistication of their assessment definition. These were then compared to their marks, to their self-efficacy and also to their views on AfL strategies.

When comparing student teachers’ definitions of assessment against their marks for the first reflective report, the results show that the mean mark of those in category (i) was 51, category (ii) was 55 and category (iii), having the most sophisticated definitions, was 61. These results suggest that having a more sophisticated definition of assessment is linked to performance. This pattern is reflected when comparing the marks for the second reflective report, where the more sophisticated the definition, the higher the marks. Although these results indicate an effect, it was felt that due to the small number of students in category (iii), by combining categories (ii) and (iii) and creating a new group, it would provide more reliable results. Distinguishing between category (ii) and category (iii) was difficult as they both contained elements of formative practices, an area lacking within the definitions of category (i). The groups were re-named, ‘basic’ (i) and ‘better’ (ii+iii).

Statistically significant differences emerged when comparing the student teachers’ categories of sophistication of definition to the marks gained for the reflective reports when using the new groups. Report 2 (t=2.644, df=42, p<0.05) and report 3 (t=2.410, df=42, p<0.05) highlighting a possible significant link between understanding assessment and performance.

When comparing the sophistication of definitions against the self-efficacy mean at the beginning and the end of the module, for those in category (i) at the beginning of the module their mean for self-efficacy was 5.0 (to the nearest decimal point) and the combined mean mark of those in category (ii) and (iii) was 6.3. Statistically, this is a significant result (t=2.874, df=43, p<0.05) and reinforces the link between a more sophisticated understanding and self-efficacy relating to the reflective report writing.

These significant results underline the importance of addressing students’ understanding of the assessment process. Encouraging students to engage with the assessment process and
supporting them to build a more sophisticated perception of assessment could impact significantly upon their academic performance and learning.

**Key Issues**

A number of key issues emerged from my research, the first being the importance of placing the student at the centre of the process. In assessment terms, the emphasis surely has to be on the student and his or her learning journey. Although, as numbers in higher education increase, there is a danger that this focus can become more and more blurred (Winn, 2002; Middleton, 2000; Cook and Leckley, 1999). Elements of this research project reinforced the importance of engaging the student in the assessment process and helping them fully understand the purpose of assessment in terms of their learning.

This research project indicated a link between students' understanding of the assessment process and performance, thus reinforcing the importance of placing the student firmly at the centre of the landscape. A deep learning approach can only occur when the student sees the assessment process as more than merely a sorting procedure. When they understand and value the assignment and see its relevance to their learning, then deep learning will follow (Handley and Williams, 2011). Higgins *et al.* (2002) state that ‘deep learning’ is valued highly in higher education but in order to achieve this level of learning the process has to involve students in ‘active construction of meaning’ (2002:54), which is achieved through formative practices; a principle supported by this research project. The use of formative comments without marks (Black and Wiliam, 1998; Butler, 1988) employed in this project aimed at encouraging the students to make improvements in their work, no matter what the starting point may have been. Even though there were some early misgivings, the students came to see the value of this strategy.

To encourage deep learning within students' learning orientation is complex and this research project could not claim to have uncovered a panacea. However, there are indications within the quantitative and qualitative results that are encouraging and may offer ways to ameliorate improvements in learning orientation.

The importance of assessment criteria was reinforced through this project. The introduction of examples of previous reflective reports along with the assessment criteria in this project proved to be beneficial to students and created the circumstances for ‘deeper engagement with feedback’ to occur, thus leading to ‘changes in behaviour or understanding’ (Handley and Williams, 2011: 95). Orsmond *et al.* (2002) and Handley and Williams (2011) promote the use of exemplar materials; however, the semi-structured interviews from this research project supported examples rather than exemplar work. I would also surmise that exemplar materials could, for some students, impact upon their confidence in being able to achieve the recommended standard, whereas examples of varying standards of work would offer a better framework to help them understand what is required to meet the assessment criteria. However, whether it be exemplar material or examples of varying standards of work, Price *et al.* (2010) identify that this is an element that students appreciate ‘but is rarely available’ (2010: 282).
This research project chose to offer staggered feedback relating to the student teachers’ reflective reports at various points over the module, but it also incorporated recommendations that written feedback is more effective than sharing marks and grades (Black & Wiliam, 1998; Crook, 1988; Butler, 1988). Although some evidence of dissatisfaction with this strategy was noted in early research in 2002/3, the cohorts of student teachers for this research project accepted the purpose of the strategy, reflected in the qualitative evidence. By offering students three targets for improvement, what this strategy achieved was support on how to improve their work rather than merely identifying the problems.

This would seem to give credence to the idea of a two layered feedback system whereby students receive one proforma which includes module specific feedback and secondly feedforward that helps improve ‘slowly learnt literacies’ (Knight & York, 2004). This longitudinal developmental approach to feedback has to be a goal of higher education institutions, although evidence from Price et al. (2010) suggests that students are unclear of the role of feedback, ‘Consequently many had reluctantly changed their view from that of developmental to justification of the grade’, which was seen as ‘a lost opportunity for effectiveness’ (2010, p. 283). However, it does seem to underline the importance of engaging the students in bettering their understanding of the assessment process, which, as this research project has shown, can impact upon performance.

What also emerged from the research was the importance of the first tutor feedback. The results showed a significant difference between the first reflective report and the second, although no mean gain across the cohort was noted between the second and third reflective report. This would suggest that the first tutor feedback can act as a key to helping unlock students’ understanding.

Pedagogical change represents the most significant change as it requires, not only a change in assessment approach but also demands a commitment within teaching time to support the understanding and successful completion of the set assignment. It requires the tutor to view the assessment process as an integral part of the learning as opposed to a mechanism for sorting the chaff from the wheat. It also requires tutors to engage with the individual. One element that emerged from my research was that students do not appreciate generic feedback within tutorials, as this can cause unnecessary stress and may be wholly irrelevant to certain students (Poulos & Mahony, 2008).

The inclusion of opportunities to analyse the assessment criteria alongside examples of previous work, the inclusion of elements of self and peer assessment and feedback prior to the final submission are pedagogical changes strongly supported by this research project. In fact, from this research emerged students’ attitudes towards self and peer assessments alongside suggestions for improving the processes. One such improvement, reflected in the qualitative results, is the use of clean, anonymous copies of students’ work being sent to peers to be assessed against the assignment criteria. This would not result in any allocation of marks but would be seen as another tier of feedback from a ‘critical friend’. This strategy would help develop the students’ peer assessment skills which could lead to improvements in their self-
assessment judgements, an aspect supported by Sadler (1989). The opportunity for choice within the assessment process was also supported by the quantitative evidence.

The tutor/student relationship could well be one of the most difficult aspects to influence within HE, but the importance of this relationship is being widely acknowledged (Rust, 2007; Cartney, 2010).

Having been in education all of my professional career, it is alien for me to read of the reluctance of tutors to allow students to enter ‘the bastions of academia’ (Taras, 2002). Her belief that the feedback processes are ‘at the heart of tutor identity’ (2002, p.504) and therefore tutors are reluctant to help students become part of the assessment process, are serious barriers to the creation of an ‘assessment literacy landscape’. It needs to be appreciated that assessment processes and tutor feedback includes emotional elements for both student and tutor (Price et al., 2010; Layder, 1997). The emotional impact of feedback, that may require the student to make an interpretation of that feedback, could be adversely affected due to that initial emotional response, it may even make the student unwilling to engage with the feedback (Price et al., 2010). They go on to suggest that the relational dimension to feedback is vital to its effectiveness and emphasise that ‘relationships are key’ (2010: 284).

The qualitative results from this research support the importance of that relationship (section 4.3.6) and the importance of this relationship is reinforced by Mahony (2007) who sees the credibility and confidence that students have in their tutor being influenced by their perception of that tutor.

Ensuring that assessment is ‘fit for purpose’ is an issue that recurred during this project and is one that has been advocated by researchers over the years (Brown, 2004; Brown and Smith, 1997). Brown (2004) outlines the questions that teachers/tutors need to consider when devising assessment procedures, one of these being ‘when’ should it take place. The most appropriate time to offer feedback to students is central to its effectiveness and as Brown suggests ‘not, I would suggest, all at the very end of a learning programme if we want students to have a chance to learn from early errors’ (2004, p.82). The early dialogue with student teachers featured strongly in this research project and provided significant results. The timing and nature of the feedback can impact significantly on motivation, and if students see the purpose of a particular assignment, their engagement with that assignment is enhanced. This is supported by Watkins (2001) who offers the idea of students choosing between a ‘learning orientation’ and a ‘performance orientation’ when faced with assessments. The strategies implemented within this research project helped the student teachers develop a strong ‘learning orientation’ within the student teachers by helping them clarify their own perceptions of the assessment process.

**A way forward:** Higher education is seeing an ever growing student population. This posses a range of challenges for higher education, reflected in the ever increasing debate over the effectiveness of assessment processes in higher education and those involved in that process (Handley and Williams, 2011; Tang and Harrison, 2011; Jenkins, 2010; Cartney, 2010; Bailey and Garner, 2010; Price et al., 2010; Sadler, 2010). The challenge is to meet the needs of the dominant summative model whilst still offering formative assessment strategies for the students. This research project has significant evidence to suggest that the inclusion of a range of AfL
strategies can impact upon students’ learning experiences. The openness to changing and adapting the processes and procedures linked to the assessment debate is crucial in helping students make complex judgements relating to their learning orientation. Sadler believes that in order to find a way forward the aim in higher education should be ‘to shift the focus away from telling the students about the quality of their work (disclosure) and towards having them see and understand the reasons for quality (visibility)’ (2010: 546).

References


