Differential Outcomes: causes and pedagogical responses

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Abstract

This study aimed to investigate and, to find pedagogical solutions, to support students who appeared to be vulnerable to 'differential outcomes' in summative assessments. The students were studying on undergraduate degree courses in the Education department at a college of Further Education in south London. The research was informed by my professional role as director of higher education and I planned the research with my colleagues as a collaborative project.

The twin aims of investigating the causes of differential outcomes, and thereafter, seeking pedagogical responses to these findings meant that I carried out the research in two phases. In both phases I used an interpretivist approach, within a participatory action research methodology. I used mixed, quantitative and qualitative methods, in phase one; a student survey (n=372), in-depth student interviews (n=3), analysis of student support records (n=60), analysis of students' summatively assessed essays (n= 9). In phase two; student feedback including end of research feedback (n=30), observations of students' in-class reading behaviours (n=158), observations of students during a coaching tutorial (n= 26) and analysis of students' assessed work, (n=132).

I also used an interpretivist approach to interpret the data and in-keeping with my intention to centralise the student voice I prioritised student' feedback as the primary data source. The findings of the first phase revealed a variety of unmet learning needs, the nucleus of which was the students' challenges in developing deep academic thinking skills. A sub-theme related to students' academic confidence and their identity as a student, much of which could be traced back to negative early education experiences.

The findings of the second phase showed that students tended to value learning experiences that promoted academic self-confidence and allowed them to develop a more positive self-image as a student. The benefit of enhanced self-confidence was higher levels of autonomy and more independent thinking skills. Additionally, real learning benefits were brought

about by opportunities for students to use innovative and practical strategies within a coaching tutorial. This allowed them to develop their academic skills within a very personalised and nuanced learning environment. Students placed significant value on the personalised nature of the coaching tutorial and the opportunity to reflect on their own learning processes and patterns.

A number of practical proposals for staff and the senior management of the college to consider are recommended when reviewing the matter of differential outcomes within the higher education provision. These include; an Institutional Reflective Framework that seeks to capture the matter from institutional level through to individual practice. Opportunities to improve and develop the delivery of tutorials were identified and I have created coaching tutorial guidelines to be considered by those staff who are supporting academically vulnerable students.

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Abbreviations

ALS	Additional Learning Support
BA	Batchelor of Arts
BSc	Bachelor of Science
CPD	Continuing Professional Development
DO	Differential Outcomes
DTT	Design Thinking Theory
FE	Further Education
FEC	Further Education College
FHEQ	Framework for Higher Education Qualifications
GCE	General Certificate in Education
GPA	Grade Point Average
HE	Higher Education
HEFCE	Higher Education Funding Council for England
HER	Higher Education Review
IQER	Integrated Quality Enhancement Review
ITT	Initial Teacher Training
NCT	Noticing Collecting Thinking
NSS	National Student Survey
PAR	Participatory Action Research

POLAR	Participation of Local Areas
PVI	Private Voluntary and Independent
QAA	Quality Assurance Agency
QTS	Qualified Teacher Status
SENCo	Special Educational Needs Co-ordinator
UCAS	University and College Admissions Service
WTL	Writing to Learn
WP	Widening Participation

Acknowledgements

Author's Declaration

I declare that all the material contained in this thesis is my own work.

Research Summary

Chapter 1: Positioning myself, my professional life and motivation

This opening chapter describes my research context in general terms, I go on to outline the matter of differential outcomes within the wider higher education sector I then contextualise this within my research context. This introduction seeks to lead to a definition of the concept of DO as it was understood within the context of this research. I discuss the significant influences in my personal and professional life that best explains my interest and motivation for the research. By doing this I am seeking to make clear the values and beliefs that I take into the research and how these might influence its trajectory. I am also presenting my credentials both in terms of experience and position as a well-informed and credible expert teacher in the field of FE in HE. I then describe the departmental motivation to understand this matter more fully and describe the community of practice within which this research has taken place. I finish by setting out the research questions.

Chapter 2: Review of knowledge and information

The literature review creates the background to and a context for the research, there are two parts. First, I have outlined the relevant literature, relating to differential outcomes giving a broad outline of the national picture. I have identified some of the key emerging themes and I have sought to position my research within this. I have identified gaps in the literature particularly relating to the knowledge of the pedagogy of higher education and the sub-theme of differential outcomes. I then turned my attention to explore some of the key emerging themes that arose from the findings research. This includes consideration of conceptual thinking, and academic confidence. I also discuss the coalescence of these two aspects in relation to students' engagement with HE.

Chapter 3: Methodology and Data Interpretation

There are two parts to this chapter, in the first part I discuss my rational for using a collaborative approach and the practical elements of carrying out the research. In the second I go on to discuss the ways in which the data was collated and interpreted.

3.1 Planning and carrying out my research

This part outlines the methodological approach and the methods used. I have discussed my rational for using an interpretivist and collaborative approach and the practical elements of carrying out the research. I discuss ethical matters including power differentials and I have contextualised this within the parameters of my research situation.

3.2 Collecting, collation and Interpretation of data

In this part I discuss the ways in which the data was collected, collated and interpreted. I discuss some of the challenges to the research and the ways in which I sought to overcome these. I describe the coding methods that were used, and the challenges that I faced in managing the data particularly following my move to another position in with another employer.

Chapter 4: Findings - Phase One

In this chapter I present the findings that describe the causes and impact of differential outcomes. There are four data sets;
1. Student survey – describing the extent of differential outcomes within the researched cohorts together with the students' perceptions as to why they were experiencing disappointing marks.
2. In-depth student interviews.
3. The analysis of student work.
4. The analysis of student additional learning support records.

Chapter 5: Discussion

In this chapter I discuss the findings of phase one, with the aim of deciding the trajectory of the remainder of the research. I then set out the rationale for the

research with its intended outcomes. This created the framework for the remainder of the research and was focussed on understanding those learning experiences that sought to ameliorate students' vulnerability to differential outcomes.

Chapter 6: Findings - Phase Two

In this chapter I set out the findings of phase two, I give a brief summary of the findings I present the data using a combination of methods. There are five data sets;

1. Observations of students' reading behaviours.
2. Observation of tutorials.
3. Student feedback on a coaching tutorial strategy.
4. Student' assessment outcomes contextualised within the analysis of their written assessed work.
5. Student satisfaction with outcomes contextualised within the increase, or not, in students' GPA.

Chapter 7: Discussion

In this chapter I discuss the findings within the context of the aims of the second phase, that is, firstly to develop the students' academic competence in thinking and engaging with the conceptual frameworks of their course. Secondly, I consider the importance of students' academic confidence and argue how this has multi-dimensional influences on the student and their identity together with their concomitant attainment. I then discuss the interrelatedness of students' academic confidence together with their capacity to think and engage at conceptual levels with their studies.

Chapter 8: Conclusion and recommendations

In this chapter I consider the discussion and findings located in chapters four, five, six and seven within the context of the stated research questions. I consider particularly the value of enabling students to represent their meaning in a meaningful way and how this might influence wider pedagogical practices. I make recommendations for practice and outline the dissemination of my findings. I consider the appropriateness of the research methodology and finally I reflect on my personal learning, within this I consider how I have recontextualised my findings and I finish with the ways that students have contributed to my knowledge.

Chapter 1   Introduction and Background

This research project set out to more fully understand the lived educational experiences of a small group of students studying for Higher Education (HE) courses at a Further Education College (FEC) in South London. These students were a sub-set of two larger student groups studying BA in Early Childhood Studies and a BA in Education and Learning. I, and the department where these (sub-set) students were studying, believed that they were vulnerable to Differential Outcomes (DO), in that they seemed to consistently receive disappointing marks for all assignments and across all years of study, despite working very hard, seeking much additional support and demonstrating appropriate levels of knowledge within teaching and supervisory sessions. Taking an interpretivist research approach, I sought to explore and explain the possible contributory factors that made them vulnerable to DO, as well as to develop practical pedagogical strategies to enhance their learning experience.

The initial interest in the research crystallised in May 2013, with the advent of a student' forum. Thereafter, the first data collection phase took place between June 2013 and October 2013. The second data collection phase took place between October 2013 and January 2015. The research timeframe is described in detail, in Appendix B. My position (fully discussed in section 1.6 to 1.8) was to lead collaborative research on behalf of the department that involved all members of teaching staff.

1.1   My research context

The college is situated in a South London borough, which has one of the highest levels of educational attainment in the UK as measured through GCSE and A Level average point score. There are, however, seven of the 26 wards that make up the borough where family income is categorised within the lowest percentile in the UK; the educational attainment of these wards is, similarly, among the lowest in the UK. The students who participate in the college's HE courses and who make up the research cohort are generally from these wards. They are located in quintile one or two on the Participation of Local Areas

(POLAR) three classifications. As such, the significant majority of students largely reflect the description of non-traditional students as posited by Laing, Chaob and Robinson (2005). These authors draw on the results of the House of Commons Select Committee to state that, '[n]on-traditional students (within the context of UK higher education) are those individuals of the national student cohort "who are disproportionately underrepresented"; this under-representation is "social-class based" and/or "ethnically based"' (Laing, Chaob and Robinson, 2005, p 169). The students recruited to the HE courses would fall within one or more of these categories, and, for the purposes of this research, non-traditional students are understood to mean students who do not have GCE A Levels, are mature learners and do not have a family history of engagement with HE.

When I began this research, I was employed as Director of Higher Education at the college and this position provided the context and the stimulus for my research. I was then leading a team of nine teachers in a growing department of 800 HE students. There were three Bachelor of Arts honours degrees, Education and Learning, Early Years Education and the Bachelor of Science in Business Accounting and one foundation degree in Engineering. My role carried a considerable amount of responsibility; I had overall accountability for the quality assurance and enhancement for all HE and was Quality Assurance Agency (QAA) facilitator for regulatory reviews. The department has been subject to several internal and external QAA quality assurance measures. These include a very successful Subject Review in 2006, Integrated Quality Enhancement Review (IQER) in 2010 and Higher Education Review (HER) in 2014.

The BA in Early Years Childhood Studies draws the majority of its students from Private, Voluntary and Independent (PVI) day-care settings, and the BA in Education and Learning draws its students from teaching assistants in primary and secondary schools. Approximately 68% of students are sponsored by their employers. The majority of students who enrol in the courses do so with the intention of progressing to post-graduate courses in

either an Initial Teacher Training for Primary Education or an Early Years Teacher programme. The majority (86%) of completing students are successful in securing places in their post-graduate programme of first choice. The vocational nature of the programmes meant that students were normally required to be in employment for at least 16 hours per week or, where they were not employed, they were required to participate in a 'meaningful placement' for a similar amount of time. The programmes deliver 120 credits in each of three years of the degree. Teaching is delivered one evening per week and ten Saturdays each year.

1.2 The higher education context - DO

The subject of students' outcomes and DO in HE has received increasing attention over recent years. For example, the matter of student outcomes was referenced in a commentary by David et al. (2009) in the effectiveness of learning and teaching in UK Higher Education which explained that, 'Although the overall quality [of teaching] has improved changing policy contexts and competitive institutional practices have not been conducive to equitable environments for the present broad range of students' (2009, p 6). They also reflect the view of this research project in pointing out that 'there are also opportunities for developing new and critical pedagogies. More inclusive and connected approaches' (2009, p 6). More recently a report on the causes of differential outcomes in HE by Mountford-Zimdars et al. on behalf of HEFCE, was published in 2015 and they found that, '[s]tatistical analysis shows that the least-advantaged students achieve lower rates of attainment and progression even after controlling for other influencing factors' (2015, p 1). Several other publications had begun to elucidate the issue in the years preceding this research project, see Haggis (2009), Hockings (2010), Jacklin, et al. (2007), Smit (2012), Morley (2012), Batchelor (2006), Laing and Robinson (2003), Rodway Dyer and Stone (2008). However, according to Haggis (2009) much of the discourse has been focussed on deficit thinking models in relation to specific student groups and is insufficiently focussed on solutions. She also argues that it is located within the Widening Participation (WP) discourse, and indeed this view was echoed by Mountford-Zimdars et al's. 2015 report relating

to the causes of difference in students' outcomes. Thus, while the matter of DO is receiving fuller attention it is frequently located within the discourse surrounding WP and remains an area of emerging research.

1.3 My research context - DO

There had been an apparent and persistent issue of DO, and as a department (as described in the opening paragraphs above), we believed that unmet learning needs were a significant contributory factor. We believed this because those students about whom we were concerned were committed to their course, they had similar UCAS points to the full student cohort, and they worked hard. Students scored disappointing marks, throughout all forms of assessment, through all years of study and all teachers, although they did remain committed to the programme of study.

These students were not demographically different to other students therefore we did not want to locate the research in wider data sets or national initiatives or those practices that become reliant on curative intervention. Moreover, longitudinal student feedback had unequivocally indicated that the pedagogical practice of the department and teaching skills of the staff were the single most important factor in determining student engagement and retention on the programmes of study. Believing the matter to be related to pedagogical practice we wanted to focus on our own universal pedagogical practice described by Hockings (2010). As a very experienced teacher, my role as Director of Higher Education ideally positioned me to lead positive change in mitigating students' vulnerability to DO.

1.4 What are Differential Outcomes?
1.4.1 Definitions and scope

Differential outcomes in higher education is a nebulous and difficult issue to accurately describe or to define. Much of the published literature relating to DO locates the discourse with macro and statistically well-represented aspects of educational vulnerability, with little to examine the fine granularity of students' response to pedagogy. Interestingly, Mountford-Zimdars et al. (2015) have

made no attempt to define DO in their publication although they do acknowledge that there is a need to investigate the issue of pedagogical practice as a contributory factor to DO. As an organisation, the concept of DO had not been an easy or clear issue for us to define or delineate either. The concept may presuppose a clear mechanism by which inherent academic ability, endeavour and consequent outcome can be measured. It may assume that an individual teacher, institution or organisation can '*know'* a student's capabilities and motivation, and thus forms the judgement that they are experiencing DO. It may also assume that every student seeks to achieve their full academic potential – which, of course, they may not (Drake and Heath, 2011). Nonetheless, as discussed above, the department had observed a persistent issue where some students did not appear to fulfil their apparent academic potential. Frequently, students cited long hours of study and effort being put into their work with few tangible improvements, and deep frustration at their apparent lack of capability.

Thus, the exploration of unmet learning need became the focus of the research, and for the purposes of this research, we understood the concept of DO to mean that the students' summative marks were lower than either their endeavour, apparent cognitive capacity or on-entry UCAS points would seem to indicate were probable. Of primary importance, the student themselves feel that they should be achieving better outcomes. The staff team identified five descriptors of students who were felt to have not attained their full potential. These were students who;

1.   Attended in excess of 85%;

2.   Participated effectively in class;

3.   Did not evidence significant lack of understanding in class or tutorial;

4.   Were committed to their course but consistently they were disappointed in the marks that they were awarded in summative assessments;

5.   Staff equally felt that the students could have achieved higher marks in their summative assessments.

We fully recognise that this is an inexact set of descriptors or parameters however a full and accurate definition is unlikely given the nebulous and mutable nature of educational attainment.

In order to more fully understand the extent of the issue we mapped the students' self-referrals to our criteria going back 3 years, the data is described on Appendix C. Columns 2 to 5 illustrate the number of students who consistently self-referred to the department seeking additional academic support[i]. The table shows that between 10% and 12% of current students are considered to have met all five descriptors of DO. This means that in a given year there are approximately 40 students who are likely to be within the group. Going forward it was intended that those students, who meet all five descriptors of DO would form the focus of the research.

1.5 Positioning myself and my work

1.5.1 Formative influences on my position, values and beliefs

Notwithstanding the departmental and professional imperatives to understand students' learning needs more fully, when I decided to research the matter of DO, I reflected on my career and the choices that I had made that led me to my research topic. I did not plan my career or the research topic deliberately, but in retrospect I can see the formative influences that led me to my decision to research pedagogical practice related to the matter of DO. The nucleus of these influences was the importance that I place on inclusive practice as a fundamental student entitlement, and equally, the value that I place on working within a sound professional knowledge discourse. My understanding of professional knowledge reflects Fox, Martin and Green's (2011) composite of Caper (1978), Eraut (1994) and Jarvis' (1999) work; that professional knowledge is based on the intersection between, propositional, process, personal and value-based knowledge. In that, professional judgements and knowledge is not just reliant on a single knowledge base but recognises the

complexity of using theoretical knowledge and skills within a multi-disciplinary and context, while recognising own values and ethics.

The most influential experience on my thinking and beliefs in relation to inclusion was a very early, and very short, career as a social worker in Dublin in the period between 1979 and 1981. I had been seconded from my trainee junior executive scheme into the Social Services department on a fast-track social worker training scheme. This move was to enable that department to meet its targets in providing trained social workers. My learning in the social services has remained with me throughout my working life not just in terms on *what* I learned, but *how* I learned it.

Social work was a very new concept in Ireland at the time and the threshold for intervention into child and family welfare was very high. It was largely related to crisis management rather than prevention or support. Very soon I found myself having to deal with very high-stake situations that our training had left us ill-equipped to deal with, from either a professional or a personal perspective. The culture shock of dealing with such levels of deprivation, poverty and social and gendered injustice for me was seismic. Through this work, I gained first-hand experience of the reality of ontic poverty and the consequences of pandemic educational disengagement together with social-class and gender discrimination across a large sector of society.

Lave and Wenger's (1997) model of legitimate peripheral participation is a useful tool to use in discussing *how* my learning took place when working as a social worker and, thereafter, as a secondary school teacher. These were two very different learning environments, and both have impacted significantly on the ways in which I have learned together with the value that I place on both professional knowledge and inclusive practice.

The learning environment of the social services was characterised by isolation and a lack of disciplinary knowledge, contextualised within a complete lack of opportunity for error; the imperative of a child's welfare could not have created a situation of any higher importance. The overwhelming limitation of this

learning experience lay in the absence of a sound knowledge base to draw upon. We had been 'trained' in the most rudimentary way, which was largely focussed on legislation with practically nothing about communicating or supporting very vulnerable families. We were consequently, 'learning on the job'. Although our knowledge increased with each day, and sometimes practice was barely adequate, we had little or no wider frame of reference to look to and there was an ever-present and enormous level of professional anxiety.

Lave and Wenger (1997) argue that situated learning is not related to the location of the learning but to the socio-cognitive aspect of the location. In many respects, the practice of social work was reflective of the case studies by Lave and Wenger (1997), in that there was very little specific direct teaching. Unlike the case studies that they have used to illustrate their argument, our learning experience was not based on co-participation, because there were so few adequately trained social workers. There was not a community of good practice that could be drawn upon to facilitate my learning within the concept of legitimate peripheral participation. It followed that my framework of participation and locus of my learning moved from the Social Services department to very close engagement with the client group. This became the focal point of my learning. The most important knowledge that I acquired at this time was the immense value there is to be had from understanding and valuing the perspective of a service user and how this understanding can shape and improve professional practice.

On the other hand, I believe that there were notable limitations to this form of knowledge acquisition, in that while I was acquiring some excellent and useful skills, I have always felt that they lay on the horizontal axes of a knowledge discourse, in that they were 'untested, local and [of the] context' (Bernstein, 1999, p 159). The limitation of such a knowledge base within the social services is obvious. A reliance on knowledge that can be described in such a way could have catastrophic results when dealing with child welfare, and my

recognition of this reflects the value that I now place on a well-developed knowledge discourse surrounding professional practice.

In 1987 I emigrated to the UK and had decided to qualify as a teacher at Nottingham University. This learning experience was in direct contrast to the training in the Social Services department. The teacher education programme at Nottingham University was outstanding and it reaffirmed my beliefs in the value of professional knowledge. This teacher training programme successfully combined several learning and cognition paradigms. It took a cognitivist approach, in that there were bodies of knowledge that we were required to know, understand and personalise. This was, however, only one of several learning strategies employed by the university. We were immersed in a highly specialised system of co-participation within our teaching practice schools and we had access to highly skilled practitioners who enabled us to apply and extend our knowledge. In this way, the learning experience was very closely related to the Lave and Wenger (1997) model of legitimate peripheral participation. As learners, we were habituated into the working of schools of outstanding practice, we were mentored by outstanding teachers of many years' experience and, by accessing these experiences, we gained access to expert performances. This experience enabled us to work effectively and with high levels of skill in some of the most challenging schools in the UK.[1]

My enthusiasm for professional knowledge continued following my qualification as a teacher. I have pursued several ancillary roles external to my main employment that contribute to my professional knowledge. These include, for example, sitting on a national committee for early education as well as the Local Authority Mathematics Education Development Group. I became

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[1] Nottingham City has some of the lowest attaining schools in the UK.

an external examiner for four HEIs and undertook regulatory work for Ofsted. I have also sat on validation panels for education degrees and have extended and recontextualised my knowledge of mathematics education across various disciplinary areas – for example, into engineering mathematics or mathematics in economics. I have also completed a masters' degree as well as a further PGCE for HE, thus giving me qualified teacher status for three age phases.

Although these experiences may suggest that I subscribe to the 'I love learning' adage, I am unsure that this is true. All my learning has been focussed on my job role at a given point in time because I was both anxious and curious to know as much as possible about the role. My belief is that I value professional knowledge and hold that it is fundamental to enabling the individual to fulfil his/her job role to the best of his/her capacity. As an educationalist it means that my practice is as well-informed as is possible and by extension I would argue as inclusive as possible. My motivation and values that I take into this research reflect the importance that I place on both professional knowledge as well as inclusive practice.

1.6   Positioning myself within the research situation

During the research my position within the community of practice as director of higher education spanned several roles and reflected the different requirements of my post as a manager, teacher, employee and, researcher. Primarily, I saw myself as research leader, on behalf of the department. The different roles could have created conflict and/or confusion relating to my roles and responsibilities. Drake and Heath (2010) recognise the potential for conflict when discussing the mutable and overlapping nature of the researcher located within their own organisation. They argue that '[h]yphens populate the world of insider research' (2011, p 25), and that the multiple roles of the insider researcher create a complex overlap of hinterlands. They posit that the recognition of this hinterland with its possible tensions and ethical issues is critical for the smooth implementation of a research project. The complex hinterlands within my position lay in the expectations of my varied roles and responsibilities for example, my research colleagues were entitled to expect

me as a manager to recognise their needs, to listen to their perspectives, and contribute to and provide solutions. Students were entitled to expect me as a teacher to provide a coherent and well-informed pedagogical approach that recognised their learning needs. The college was entitled to expect me as an employee to work with autonomy and to, at least to some extent, define the requirements of my own post and ensure the quality of HE across the institution. As a researcher, I needed to recognise, reflect on and adhere to my own professional beliefs and values. The integration of these roles necessitated my recognition of the possible tensions together with my capacity to move between the roles and recognise their parameters and the situations in which they overlap.

The multiple and overlapping positions that I held during the research, together with the involvement of students as key participants could have been the foundation of further tensions and ethical dilemmas. Equally, these positions brought strengths to the research because I had worked for some seven years in the position and I sought to be as clear as is possible about the issue being researched, which gave a clear direction to the research. I was sufficiently skilled as a leader-manager to recognise and pre-empt situations that might require sensitive handling, and I had the backing of the College and staff within the department to work to move the research forward. Moreover, recognition of these potential tensions prior to the research, developing clarity of purpose, and ensuring clear communication were the first steps to addressing ethical issues and avoiding potential conflicts and dilemmas.

1.7 My co-enquirers - the community of practice – our motivation

There were nine members of staff who work within the HE education department; seven hold Qualified Teacher Status (QTS) for either primary or secondary school. Of these seven, four have held management posts in their previous employment, and this sub-group included two special educational needs co-ordinators, one mathematics and literacy specialist and one head of the infant age phase. Of the remaining three staff members, one has worked extensively social worker across all age phases. The other two were paediatric

nurses, one of whom has worked as an inclusion and quality improvement officer for the local authority for several years. Each member of staff had their teaching responsibilities allocated to meet his/her disciplinary skill set. I delivered much of the teaching on the programmes relating to mathematics education as well as the third year of the BA in Education and Learning. I was also the programme convenor for this course and led on all partner liaison.

Inclusive practice is the cornerstone of the ethos and practice of the department, that is to say that, fundamental to our view of quality is the extent to which our provision and pedagogical approach meets the needs of all learners. Our concern is that we were operating an integrated rather than inclusive pedagogy (Harman, 2009) and that this was inherently excluding some students from an equitable learning experience. The concept of inclusion underpins our professional practice moreover; our teaching competencies as defined by the Department for Education had been framed around this critical teaching capability. Our commitment to the idea of inclusive practice took us, in theory, beyond the notion of 'integrated pedagogy', or the idea of learning being based on a cognitive and metacognitive framework, which integrates technology and classroom-based teaching (Cornu, 1995). This professional background underpinned our motivation to understand the learning needs of all our students and to develop our practice to ensure that we are not inadvertently creating academic disadvantage to a minority.

1.8 Motivation, values, approach and rationale

As stated in the preceding paragraphs the issue to be researched was arrived at collaboratively by the department and to some extent reflected its maturation. In that for seven years the department had driven its own improvements through; collectively sharing good practice, sharing problems related to course delivery, team planning, together with peer mentoring. We had improved the quality of the programmes to a point where they had excellent Key Performance Indicators (KPI). Completion and retention strategies were robust to the point where our retention rates were 18% above benchmark, student satisfaction as measured through the NSS was in excess

of 90% over five years and DHLE data indicated that 95% of students were either in graduate employment or further study within six months of graduating. The programmes were heavily oversubscribed each year.

These achievements may have created a space, or context, where the more subtle learning needs of some students became obvious or apparent. The staff within the department had observed that some students were consistently seeking significant additional support to enable them to complete assessment tasks. This support was often sought within the week immediately preceding submission, students were frequently distressed at their apparent lack of capacity and were frequently using self-deprecating language. This was increasingly frustrating for staff who believed that students deserved a more nuanced and differentiated approach that met their learning needs more fully. Moreover, we were concerned that our universal practice was not inclusive. The predominant strategy up until this point had been to adopt a curative intervention approach, that is to give students many additional tutorials to enable them to succeed. This was concerning to us for several reasons;

1.   it was an ineffective use of staff time;

2.   it could have been contributing to a culture of dependency in some students;

3.   the underlying situation was persistent and was not being addressed;

4.   there were issues of inequity in the distribution of resources;

5.   there was some anecdotal, but unsubstantiated evidence, that students were self-selecting into attainment-based segregated groups within the teaching sessions;

6.   the department was increasingly concerned that we were falling into a pedagogy that failed to adequately interrogate its own practices.

While curative interventions may have contributed to the retention of students on their course, they seemed to do little to address underpinning unmet learning need. Additionally, we were concerned that the continuous employment of a pedagogy that became reliant on curative interventions was contributing to, or reinforcing, a deficit thinking model where the deficit was located with the student. We recognised that in some instances curative intervention is a necessary pedagogical practice in all phases of education. However, we believed that in some circumstances, it could become counter-productive, in that, the department could have been inadvertently perpetuating an elitist and exclusionary pedagogy and as such contribute to segregation and consequently to possible DO. This being the case, and in recognition of student feedback relating to the importance of effective teaching, the departmental decision was to focus on micro learning activity with students to identify the extent, nature and reasons for student DO. The primary motivation for this was to explore, devise and reflect on practical pedagogical strategies that mitigate DO and to reduce the need for curative interventions as well as to benefit all students.

1.9 The aim of this research

Thus, the overall aim of the research was to have a positive effect on the pedagogical practice of the department and to move towards more inclusive learning environment in order to minimise students' vulnerability to DO.

1.9.1 Objectives

1. to engage in a range of critical conversations with key stakeholders about effective pedagogic strategies to address the issue or experience of student DO;
2. to collect and analyse data in order to evaluate the efficacy of a coaching pedagogical strategy within a cycle of continuous improvement;
3. to improve understanding of student learning need and the students' learning experience;

4. to contribute to a range of critical discourses with key stakeholders about the impact of specific pedagogical strategies on students' outcomes.

1.9.2 Research questions and ancillary outcomes

Primary Questions

1) What is the extent of DO within the student population of the college?
2) What unmet learning needs contribute to DO?
3) What practical pedagogical strategies can be employed to meet academically vulnerable students' learning needs, thus mitigating their vulnerability to DO?

Ancillary outcomes associated with the achievement of the main aim.

a. make more efficient use of staff time through a reduction in the number and frequency of curative interventions provided by staff;
b. higher levels of autonomy in students' learning behaviours;
c. a critical knowledge base to inform a framework for staff Continuing Professional Development (CPD) and training courses for higher education teachers at the college;
d. higher levels of student satisfaction and improved results.

Simply put, the strong feeling of the department was that we did not have sufficient professional knowledge to deal with the situation and implement inclusive teaching strategies that would mitigate students' vulnerability to DO. Thus, this small-scale, single-institution study attempted to go beyond national initiatives such as WP plans or statistical analysis and sought to centralise the students' voices with a view to exploring the causes of DO, together with developing teaching strategies to mitigate students' vulnerability to DO.

Chapter 2   Review of Knowledge and Information

2.1   Introduction and rationale

In this chapter, I review the knowledge and literature that I consulted and that was used to inform the research. Given the shared commitment to furthering the understanding of practice-based professional knowledge discussed in chapter 1, I realised that this would most likely lead me as research leader, on behalf of the department, towards a more interpretivist research paradigm and away from more positivist ones (see chapter 4). One of my initial aims in the research was thus to suspend any peremptory theorising about the kinds of literature which might be of most relevance.

For this reason, I carried out the knowledge review in three stages. Firstly, at the point of my original research proposal, I conducted an over-arching review of the literature on DO, looking at some of the key themes emerging from the literature. The second stage was conducted through the field work and data collection stage of the research. As a department whose primary disciplinary interest is education, I found it very beneficial, if not essential, to consult the published works on the key educational themes emerging from the results. I also found that this was very supportive for the developing professional confidence of the department. The third part of the literature review was more systematic. It was conducted during the data analysis stage and this consolidated and built on the previous work.

The subject of DO and pedagogy in HE more widely is a relatively young one. I therefore looked into several fields to inform the review: sociology, cognitive science, psychology and educational psychology. Much of the literature comes from the UK, North America, Australia and Europe and is situated primarily in the university sector rather than FECs. This selection was not a deliberate choice but reflected the shortage of relevant research conducted in FECs. I also included literature from a broad range of disciplinary areas, covering mathematics, business, education and the humanities.

The literature review is presented in two parts, within which there are themes and sub-themes. I start by looking broadly at the current environment relating to DO and what I consider to be some of the key issues for HE professionals when considering DO together with wider pedagogical issues. Within this, I explore how external socio-political factors may influence the wider body of students and may contribute to DO in general. This discussion is extended to the possible influences on the individual student's perceptions and how this relates to their degree outcomes. This part reflects the formal and systematic review that took place at the outset of the research and which I built on after the data collection phase had been completed. In-keeping with the interpretivist methodology, the second part of the review reflects the findings of the research. This has two sub-themes. Firstly, I consider the cognitive aspects of students' learning in relation to DO, with a specific focus on conceptual and abstract thinking skills. Secondly, I consider the sociological aspects of students' learning and I focus on students' academic self-confidence and how this can manifest itself in students' identities as undergraduates and in terms of their learning.

2.2 Part one - The national landscape relating to differential outcomes

At the inception of the research in 2012, the issue of DO, although a growing area of academic interest across the HE sector had been discussed in the literature largely in the context of WP initiatives (Haggis, 2009). According to Haggis (2009) the narrative was, at that time and in the immediately preceding years, focussed largely on external contributory factors that lent themselves to statistical description. Much attention was focused on retention in HE, where either predictive or explanatory models were sought (Haggis 2009). For example, Toynton (2005) argues that mature student alienation in the HE learning environment relates to a disconnect between their tacit knowledge and the monodisciplinary nature of HE study. Burton, Golding Lloyd and Griffiths (2011) cite issues ranging from family commitments to distance of travel as the underpinning causes for poor levels of student retention. Morley (2012) posits that social class still plays a toxic role in students' outcomes. She specifically relates this to the Bourdieu's (1997) view that those with 'social

capital' are better equipped to decode the expectations of the educational environment and consequently access its educational opportunities more effectively.

While this literature does not infer a causal relationship between DO and non-traditional students in, HE or WP initiatives, the contiguous presentation of these issues in the literature may lead to a conflation of these ideas. Thomas (2002) identified the conflation of these matters several years before I started my research and pointed to an underlying assumption in the literature, academic, governmental and journalistic, that an influx of non-traditional students into HE has directly or indirectly caused problems. She concluded that while there were differing views of non-traditional students' learning needs and reasons for DO, there were few convincing explanations for presenting the two matters concurrently.

The tendency to present aspects of WP initiatives, non-traditional students and DO continued throughout the research, Lee and Mallik's (2015) investigation into DO used a predictive model to focus on external influences. They considered students' qualifications on entry, age and gender. They concluded that both prior qualifications and age are key determinants of student outcomes. Wilkins and Burke (2015), in their study of mature students' learning experiences in higher education, found that mature students were more likely to have had negative experiences during their early education at school than younger students. They claimed that students experienced higher levels of anxiety brought about by a fear of appearing foolish and not wanting to fail. Mountford-Zimdars et al. (2015) discussed the issue of learner identity as a key factor relating to DO, largely within a socio-political and socio-economic discourse. Mountford-Zimdars et al. (2015) make the point that on a macro scale (citing socio-political, economic and cultural factors as key contributory factors to DO), these identity issues play out on an individual interactional basis and contribute to students' feelings of alienation and displacement within HE learning environments.

2.2.1 Data usage and a discourse of deficit

Haggis (2009), argues that much research relating to the student learning experience and DO is reflexive and predicated on a deficit thinking model. Moreover, it focuses on cognitive aspects of the students' learning and has taken the paradigm of 'deep and surface learning as its base' (Marton and Säljö, 1997, cited in Haggis, 2009, p 377). She argued that this has meant that universities, and arguably FECs, have located the deficit with students and that the focus of the research has been based on the explanatory or predictive models that seek to uncover 'what is wrong with students' (Haggis, 2009 p 377). She went on to argue that the sector has avoided the need to consider its own practices and posited that 'the majority of work is less interested in discussing pedagogical practice than in addressing social and critical perspectives' (2009, p 381).

Batchelor (2006) had previously highlighted a danger of concentrating on the published, easily visible and statistically well-represented vulnerabilities within student groups as a means to understand DO. She points to a whole dimension of 'hidden, less obvious vulnerability among students' (2006, p 797) that is likely to contribute to DO. She makes the point that there is much unmet learning need that is not easily definable or addressed through the interrogation of datasets. She urged institutions to consider much subtler contributory factors that may contribute to DO.

Hockings (2010) review of literature relating to inclusive practice and teaching in HE considers the limitations of arguments relating to deficit and is critical of the tendency to situate the discourse surrounding inclusive practice in macro data sets. She argues that this approach may highlight and reinforce difference and does not wholly consider the multiple variables that may contribute to students' potential vulnerabilities. In her discussion of inclusive practice relating to disability, she draws on Jacklin et al. (2007), who describe the creation of unethical categorisations in student populations, which are based on 'administratively useful' data sets (Jacklin et al., 2007, p 46, cited in Hockings, 2010). Hockings, as did Haggis (2009), makes the further point that

this approach may create a discourse of deficit and locate DO within those factors that are external to the institution while simultaneously creating internal divisions and unethical categorisations within student populations. Hockings argues that it takes little account of the multiplicity of learning needs in diverse institutions or within student groups and that institutions' attempts to understand inclusive practice are too little focussed on the individual students' learning experiences.

The matter of deficit thinking is also considered by Smit (2012), Morley (2012), and Batchelor (2006). They are critical of curative interventions as an approach to inclusion, positing that this approach assumes a deficit, and focuses on assisting minority student to replicate the dominant culture. Batchelor posits that because achievement is predicated on self-knowledge, where the self of the student is denigrated by attempts to assimilate the minority into the majority. The student can acquire an 'imitator voice' (2006, p 792) and academic achievement becomes even more difficult for them. Morley argues that HE 'remains the hereditary domain of the socio-economically privileged' (2015, p 353). She argues that well-meaning attempts to support inclusion can be interpreted as an attempt to make the (minority) working class more like the (majority) middle class. Smit (2012) challenges the uncritical use of 'disadvantage' and 'deficit' in the discourse surrounding DO and WP and she considers it effect on pedagogical practice. Like Haggis (2006), she argues that the dominant thinking in HE pursues explanatory models that seek to understand students in terms of their deficit, with a view to 'fixing' the problem (Smit, 2012, p 369) and, damagingly, assimilating them into the dominant or majority culture of the institution. This, she argues, leads to individual disempowerment, disentitlement and the denial of the self of the student, thus alienating the student and perpetuating social divide. Smit (2012) concludes that struggling students are referred to by institutions in terms of what they are not, contributing to the development of a discourse that is predicated on an ideology of deficit and deficiency of those whose learning needs are not being met.

The limitations of continuous data interrogation were indeed identified by the Mountford-Zimdars et al.'s (2015) report into DO. It posited that while the interrogation of data is an important starting point and is essential for deciding institutional priorities, there is a danger of relying on this paradigm to understand the issue of DO fully, which may, in fact, be a distraction. The report points out: '[T]here is a tendency to constantly extend the data inquiry to look at more variables with diminishing returns in terms of understanding' (2015, p 22). The report draws on the work of Singh and Cousin (2009) to caution 'about an approach that over-emphasises the interrogation of data and diverts attention from the significance of individual experiences, and consideration of the institutional structures and pedagogical practices at play' (Mountford-Zimdars et al., 2015, p 22).

2.2.2 Pedagogy and inclusive practice

Hockings in her review of research relating to inclusive teaching and learning in higher education, defined inclusive practice as follows:

> Inclusive learning and teaching in higher education refers to the ways in which pedagogy, curricula and assessment are designed and delivered to engage students in learning that is meaningful, relevant and accessible to all. It embraces a view of the individual and individual difference as the source of diversity that can enrich the lives and learning of others.
>
> (Hockings, 2010, p 1)

She acknowledged that just two of the publications included in her review deal specifically with teaching practices.

I found a similar pattern in the research that I consulted in relation to inclusive pedagogical practice. Much research has focused on important programme delivery issues, for example, assessment feedback or the value of staging modules appropriately. However, as referred to by Hocking, this is not directly focussed on the micro level of teacher-student pedagogical interactions that

might contribute to a more contextualised understanding of DO. For example, Burton, Lloyd and Griffiths (2008), in reviewing HE programme delivery in an FEC, focus on issues of feedback mechanisms and the accessibility of staff. Their research does not focus on the specifics of optimising the learning experience that occurs through lecturer-student interactions. There is little in their analysis that precisely indicates the way in which teaching strategies impact on learning in practical terms, or exactly what students' value in terms of teaching strategies and pedagogical practice.

There are some publications that have acknowledged the importance of inclusive pedagogical practice and how this might impact students' outcomes and many of these identified the matter some years ago. Laing and Robinson (2003) acknowledged how pedagogical approaches impact students' decisions to withdraw from HE but they develop little of this issue other than to argue that poor retention in HE is likely to contribute to reputational damage to the sector: [it] is not just a matter of access ... [it is] also a matter of staying on and emerging in good standing 'failure to do so' will be spread among their peer group and as such make any further attempts at WP more difficult (2003, p 179). This being said, they go on to cite the much earlier work of Metzner and Bean (1987) and McGivney (1997) to argue that instead of focusing on explanatory issues, such as what happened with the student pre-enrolment, the sector should be focussed on what happens after enrolment. They concluded that the sector needs to 'pay attention to the underlying nature of teaching and learning environment and how this environment interacts with the expectations and perceptions of the student' (Laing and Robinson, 2003, p 179).

These arguments resonate with Lowe and Cook's (2003) investigation into student dropout rates in the first year of study. They considered the impact of unmet learning needs and stated that:

> Drop out is only one indicator of a lack of success in the first year ... [T]hus, a considerable proportion of those who complete their studies may have underperformed since like

> non-completers, they too may have been poorly prepared for university life ... it is those students who struggle quietly with the changes involved in entering higher education who present the biggest and most subtle challenge for universities.

> (Lowe and Cook, 2003, p 75)

However, little of this intention seems to have found widespread traction within the sector. Hay, Kinchin and Lygo-Baker's (2008) research into concept mapping (as a means of supporting students' learning) also found little that provides in the way of detailed evaluation of pedagogical practice as a means to improve equality. They challenged this situation and specifically cited Laurillard's (2002) assertion that the reason that there is little research surrounding pedagogical practice in general is because '[it] is perhaps attributable to learning having been deemed too complex and too intractable an issue to be amenable to empirical measurement' (Hay, Kinchin, and Lygo-Baker, 2008, p 304). They suggested that their strategies allow just such a detailed analysis and that there is a further need for closer analysis of the matter of how teaching practice impacts on learning in HE.

Laing and Robinson's ethnographic study looks at the relationship of student withdrawal and the underlying characteristics of the teaching and learning environment. They briefly discuss the concept of 'goodness-of-fit' (2003, p 179). This is generated from the description of the teaching and learning processes and the explanation of how these processes interreact. This was one of the closest references to the micro-interactional pedagogical practice that was relevant. There is, however, little in their research to progress this intention or to find ways in which a 'goodness of fit' might be achieved. They concluded that 'greater attention must be given to the underlying nature of the institution's learning and reaching environment … and the student perceptions and expectations that are generated by this environment' (Laing and Robinson, 2003, p 183).

Rodway Dyer and Stone (2008), in their analysis of lecturers' role in delivering HE courses in an FEC, found that a detailed analysis of teaching practice does not exist in FECs either. They concluded that there is no better fit between learning need and pedagogical practice in FECs than there is in universities, although FECs believe their teaching practice to be more inclusive. They made the point that despite lecturers in FE having greater opportunities to adopt student-led pedagogy, many FE lecturers did not fully use this opportunity and they questioned the extent to which it is a 'truly distinctive experience' (2008, p 329). They also questioned the extent to which the learning experience is effective or whether HE lecturers in FECs are 'playing out their beliefs about what constitutes a powerful teaching environment based on preconceived ideas, personal experiences and training' (2008, p 329). Further investigation is required to create a 'goodness of fit' within the whole class context and is critical to understand the experiences and needs of those students vulnerable to differential outcomes. I felt that the literature points to a need for a richer understanding of what students expect from lecturers' contact time and how these fits with lecturers' expectations.

Smit (2012), Wingate and Tribble (2012) and Hockings (2010) and Haggis (2006) acknowledge that there are no easy solutions to the difficulties faced by some students. They challenge the sector to develop an approach to teaching that takes account of the complexities of student learning need together with the diverse backgrounds of students. Many of these researchers call for inclusive teaching and learning practice. Smit called for an 'infused approach' (Smit, 2010, p 374), and Hockings and Mountford-Zimdars et al. a 'universal approach' (2010, p 3), while Haggis (2006) called for the sector 'to pay attention not only to issues such as gender and power, but to turn this attention back on all of the practices and assumptions of teachers and researchers themselves' (2006, p 388).

Yet, as previously discussed, there is remarkably little in the published literature that describes what this might look like. A study by Wingate and Andon (2011) considered an 'infused approach', as described by Smit (2010,

p 374). This study experimented with an embedded approach of developing students' academic skills together with content delivery. Their research was, however, largely evaluated in terms of its impact on staff and the delivery of the content of the discipline. They did not consider practical strategies to develop students' academic competencies or find ways to recognise students' strengths rather than difficulties.

Beyond these examples, there is little to elucidate the issue of DO or a possible way of mitigating this through pedagogical practice. Mountford-Zimdars et al. (2015) acknowledges this and states that most attempts to mitigate DO are focussed on the retention of students rather than their degree outcomes. It also found that most attempts at inclusion are based on interventionist programmes rather than the 'universal practice' described by Hockings (2010, p 4). It equally found that learning, teaching and assessment are a critical factor in understanding DO but that there has not been enough research into pedagogical practice, and this must be a key consideration in future attempts to mitigate DO.

This is not to suggest that the sector is uninterested in teaching and pedagogical practice. For example, the UK Professional Standards for Learning and Teaching was published by the HEA in 2012, the year that this research began. Moreover, in the years preceding this research, the sector saw a marked growth in the development of educational development centres or quality enhancement units (Gosling, 2009). Indeed, the Browne Report (2010) states that all institutions involved in student learning should undertake a review of teaching and pedagogical practices and that students are entitled to expect a high-quality teaching experience. This is evidence of an increased interest in teaching as a subject in its own right. The reasons for the apparent gap in research relating to DO and teaching practice may be because of the sector's perception of teaching more widely. McNay (2009) points out that because teaching was less valued and is less well rewarded in universities than research outputs there was less focus on that area. Where this remains the case, it is unsurprising that the field of research relating to teaching has

not extended to the sub-discipline of inclusive teaching practice and its potential relationship to DO. This may suggest that the scarcity of research reflects a legacy issue rather than a lack of interest from the sector.

2.3   Part two – Key contributory factors relation to differential outcomes

In this part of the literature review I take into consideration some of the more specific matters that contribute to students' vulnerability to DO, as found in this study. I carried out this part of the literature search primarily throughout the data collection phase, this reflects the interpretivist research paradigm which sought to avoid anticipatory theorising. I consider the cognitive aspects of students' learning in relation to DO, with a specific focus on conceptual and abstract thinking skills. Conceptual thinking skills and the student's capacity to abstract domain knowledge was found to make a significant impact on their capacity to engage successfully with the course. Secondly, I consider the sociological aspects of students' learning and I focus on students' academic self-confidence and how this can manifest itself in students' identity as an undergraduate. This was also found to be a key matter in understanding students' vulnerability to DO.

2.3.1   Conceptualised and abstract thinking

According to Maclellan, the conceptualisation and abstraction of thought is 'the construction of a general rule, principle or prototype that covers many instances' (2005, p 134), she usefully describes the cognitive process undertaken to form conceptual thought,

> By extracting what is understood to be central, essential or
> generic from the material, situation or behaviour, the individual
> excises memory for fine detail, in order to reorganise his/her
> knowledge into more coarse-grained generalisations, which
> can, therefore, include more instances or examples, and as a
> result be more powerful and economical in the thinking
> process.

(Maclellan, 2005, p 133)

Conceptualisation, she explains, requires the individual to recognise pattern, isolate and describe principals and to transfer their knowledge between and beyond contexts, including those where the knowledge was first acquired. Kolb (1987) offers a theoretical construct of conceptualisation and describes a four-stage model of the cognitive processes of; experience, observation and reflection that lead to the conceptualisation of knowledge. This model illustrates how experience is translated into conceptual knowledge and it had particular relevance for the research. The vocational nature of the courses, together with the students' competence-based qualifications on entry, combine to create an experiential vehicle from which they can construct the conceptual knowledge of their discipline. From a cognitive science perspective Dumontheil uses the notion of 'self-generated knowledge' (Dumontheil, 2014, p 58) as a description of abstract and conceptual thinking and describes the process as follows,

> abstract thoughts are those that focus on the relationships
> between representations rather simple stimulus features. …
> these include the retrieval of past thoughts and memories
> (e.g. episodic or source memory retrieval), the manipulation
> of current task-related or task-unrelated self-generated
> information…

(Dumontheil, 2014, p 58)

Critically, and as with Maclellan (2005) and Kolb (1987), Dumontheil assumes the individual's capacity to think independently and with deliberation. All recognise that conceptualisation and abstraction of knowledge is a conscious and deliberate act synthesising pre-exiting and new knowledge to extend and generate new knowledge. Thus, conceptualisation processes use a coalescence of both sociological and cognitive schools of thought and includes; observation, reflection, pattern identification, meta-cognition and critically, and the agency of the individual learner to generate new knowledge. The

coalescence of cognitive and sociological factors had real relevance for my research as my professional experience told me that those students whom I believed to be vulnerable to DO exhibited high levels of learning dependency as well as low levels of agency.

For the purpose of this study, I drew on the works cited above to form a composite and to set out 5 critical cognitive steps that take place relating to the development of abstract and conceptual thinking for use within the research;

1. the observation of phenomena;
2. the identification of similar and dissimilar aspects of the phenomenon [pattern identification];
3. meta-cognition, use of memory and reflection,
4. self-generating thoughts or 'rules' that delineate the parameters and principals of the concept;
5. linguistically encoding the pattern and principals in a meaningful way.

2.3.1.1 The Value of Conceptual Thinking in the HE Learning Environment

The value of conceptual thinking in HE is that it forms an economical and powerful thinking process that allows the individual to transfer, recontextualise and extend knowledge. This, Maclellan maintains is fundamental to learning in higher education, she reasons,

> If people are to learn to reason, plan and make good decisions
> (which is a significant aim of higher education), they must be
> able to generalise what they have learned in the past to new
> learning, and be able to apply and extend their learning to a
> range of situations,

> (Haskell, 2001 cited in Maclellan, 2005, p 135)

Maclellan (2005) explains that the student needs to not only synthesise extant and new knowledge but also needs to consciously and with deliberation assimilate the knowledge to extend and create new, individualised meaning.

She describes this as the 'epitome of high road learning' (Maclellan, 2005, p 135). In describing the linguistic and cognitive functions relating to conceptualisation and learning she draws on Salomon and Perkins, (1989) to make the point that,

> In high-road learning, there is no automatic transfer of knowledge/practices from one situation to another. Rather, transfer is through mindful abstraction (Salomon and Perkins, 1989). This means extracting the generic attributes from some material, situation or behaviour, and creating a mental representation…

> (Maclellan, 2005, p135)

It is evident that the expectation to manage knowledge and learning in this way necessitates high levels of linguistic dexterity as well as sophisticated cognitive skills, together with the agency of the student. Within my research context this process raises the question of language as a medium of transfer between new and extant knowledge, together with the capacity to extend knowledge. Transfer of knowledge in HE assumes a linguistic dexterity that accommodates confident and accurate, yet flexible recontextualisation of knowledge. This necessitates a high level of granularity, and the accommodation of inconsistencies both in thinking and in language use. More importantly, it suggests that students have the academic confidence to autonomously synthesise and extend their thinking. My professional experience had told me that many students included in this research who were vulnerable to differential outcomes experienced difficulty with both confidence and their linguistic dexterity. Consideration of these factors was fundamental to the research.

Zheng (2010) offers a possible explanation of the difficulty that some students may experience with transferring and extending knowledge. He cites Holyoak and Thagard's (1989) two-step transfer process which involves the mapping of knowledge between 'base and target domains' (2010, p 470). He argues that the transfer of knowledge could be more difficult than first imagined for

some students. This is because students' mental representations of knowledge are structured and linguistically encoded differently, and they may not recognise the similarities and differences in and between their extant and newly read knowledge. Thus, their tacit knowledge remains inaccessible and inert. If this is considered within the context of Maclellan (2005), Kolb (1987) and Dumontheil's (2014) view that conceptualisation takes place by using pre-existing knowledge it means that some learners may not have access to a key part of the conceptualisation processes.

This view of transfer and language use within the conceptualisation and learning processes is very much in-keeping with Elton (2010). He draws on Polanyi's (1964) view of tacit knowledge to argue that because the meaning of language is determined by its context, 'no codified knowledge can ever be wholly transmitted by words and therefore other channels of transmission are essential' (Elton, 2010, p156). Although Elton is not fully clear what the 'other channels' might be, he argues that students need to be supported simultaneously through both language and learning activity to create the close connection between learning, conceptualisation and language.

The arguments discussed above have resonance with Billing's (2007) survey of cognitive science publications relating to knowledge transfer. Similar arguments were made by Gentner et al., (2009) who investigated the retrieval of inert knowledge through analogical abstraction with a view to enhancing learning. Billing (2007), draws on situated learning theory and notes that, 'the learning of principles and concepts facilitates transfer to dissimilar problems, as it creates more flexible mental representations. He further maintains that, 'the specificity of the context in which principles are learned reduces their transfer' (Billing, 2006, p 483). This means that where the student does not recognise the underlying and abstract principals of their situated, extant knowledge, synthesis with newly acquired knowledge is restricted, thus limiting learning. This view is particularly important for this research because the respondent students would have acquired their extant knowledge through several years of work-based and professional experience (the average age on

entry to the programme being 34 to 36 years, with 6.4 years professional experience), it is likely that they would have a highly situated mental representation of their knowledge. This could have led to an inherent challenge in their access to their extant knowledge to form connections between old and new material.

Maier and Richter (2014) point to a further issue relating to students' encoding and mental representation of knowledge, and its ostensible impact on students' access to, and use of, their tacit knowledge. Their research brings together both cognitive and non-cognitive aspects of learning. They argue that unconfident students engage with expository texts based on the extent to which students believe the content of the read material – they describe this as belief-consistent reading. They maintain that students are more likely to focus on and remember material that is in keeping with their pre-existing beliefs because pre-existing beliefs are encoded in an accessible way. Conversely, belief-inconsistent material is more difficult to integrate with their existing schema because it is linguistically encoded in an inaccessible way, moreover he argues that unconfident students are more likely to adopt this learning behaviour. They posit that where students are unable to integrate and transfer unfamiliar material and this leaves students with incomplete and possibly erroneous understanding of read material.

Somech and Bolger's (1999) investigation into unexplained variance in students' outcomes also addresses the issue of students' access to their tacit knowledge and considers this from a sociological perspective. They scrutinised the impact of tacit knowledge on academic achievement and contextualised this within social class. They found that students from SEC 4 /7 were less likely to use tacit knowledge in order to achieve academic tasks. They largely associated this with the way that students' tacit knowledge was linguistically encoded and therefore accessed. Given that the majority of students were drawn from areas of low participation, they may have been less well-equipped to access their tacit knowledge.

These findings were taken in sum; the likelihood of students' situated knowledge, their linguistic encoding of knowledge and mental representation of knowledge, social class factors and language skills, may well have contributed to difficulty in accessing and managing their knowledge to develop it further.   These considerations could combine to create an academic disadvantage that is both difficult to identify and address easily.

2.3.1.2 Thinking, Representation and Writing

The importance of students' writing and representation of thinking in HE cannot be neglected in this discussion. Sampson and Phelps Walker, (2012), Hunter and Tse, (2012), Reynolds et al. (2011), Anderson and Hounsell, (2007), Knoblaunch and Brannon, (1983), Mitchell and Evison, (2006); Wingate and Tribble, (2012), Elton (2010), Clarke (2002), Bean (1996), Bjork et al. (2003), Wingate and Tribble (2012), Zinsser (1988), Zizek (2009), and Nightingale (1988) argue that the value of writing and representation of thought is to enable deeper learning. They make the argument that the value of writing, being the manifestation of thinking, is that it contributes to students' capacity to think at a deeper, and arguably, a more conceptual level. All share the belief that effective thinking skills and effective writing are mutually reinforcing with each leading to gains in the other. For example, Bean (1996) posits that fluent writing skills provides students with the means to master intellectual tasks, and Nightingale asserts that, 'the consequences of writing are often that one discovers in the process what one thinks, probably because, writing leads one to integrate material, allows review and re-evaluation, helps form connections, and is active and dictated by one's own patterns of thinking and doing'. Emig (1977) cited in Nightingale (1988, p 270)

Itua et al. (2012) in their review of academic literacy draw on Lea and Street (1998) to make the point that academic writing, '… highlight[s] how both understanding and creating knowledge takes place through language, which includes the formulation and presentation of thoughts' (2012, p 2). Similarly, Boscolo, Arfé and Quarisa (2007) in their critique of a programme to improve students' writing identify two approaches that students might take to writing.

The first they dismiss as 'information telling' (2007, p 421) the second they relate to the learning value of writing,

> The second, [is] related to both the knowledge-transforming strategy and the transactional model of implicit beliefs about reading, emphasized a constructivist view of writing ('writing helps me understand better what I'm thinking about'), … according to this view of academic writing, text production is a process of knowledge transformation and elaboration …

They go on to describe the way in which transformation takes place,

> Transformation is an active and constructive process, in which the writer relates the contents of the sources in new ways and makes connections between the source materials and his/her knowledge. A good synthesis is, therefore, more than a summary of other texts; it is an elaboration of contents in a new representation, according to the writer's purposes.
>
> (Boscolo, Arfé and Quarisa, 2007, p 421)

These arguments emphasise the value of language and writing in relation to thinking and learning, and the centrality of the students' capacity to transfer and extend knowledge is critical. As such, students' writing and opportunities to represent their thinking, language and knowledge transfer skills becomes pressing considerations in the discourse surrounding some students' vulnerability to low-level achievement.

Zheng (2010) in his research into situated learning, explores a non-cognitive and relevant aspect of transfer of knowledge which impacts on students' learning. He examines the concept of knowledge and the role of the individual student within the transfer process,

> … the cognitive perspective on knowledge transfer carries an assumption that knowledge transfer is a static concept, in that

it can be measured in separate stages defined by a single point in time.

(Zheng, 2010, p 470)

This, he claims removes the participation of the self of the individual forming the transfer, drawing on Greeno (1997) he emphasises the importance of the social interaction of the individual within the representative system. He posits that where the student is not confident within the context, they are less likely to autonomously transfer and map knowledge and are arguably at an immediate disadvantage. This non-cognitive, sociological aspect of conceptual thinking had particular relevance for the research, in that conceptualisation of thought and consequent learning may assume a confidence that the students about whom I was concerned had not consistently demonstrated.

Additionally, if Zheng's argument is considered within the context of Billing (2007) and Maclellan's (2005) assertion (discussed earlier) that the student has not only to transfer knowledge but critically to *extend* their thinking to inform their own thinking. This implies a level of agency and autonomy that I had not observed in vulnerable students, and I could not lose sight of this in my research.

Few other publications linked academic self-confidence to conceptual thinking, yet, to return to the outline of conceptual thinking given at the beginning of this section, there is an implicit assumption of academic self-confidence. The 'self-generate[d]' knowledge (Dumontheil, 2014) discussed expects a level of confidence and self-belief, as does the construction of transferrable rules (Maclellan, 2005). Kolb's 1987 model assumes confidence and agency throughout all stages. Moreover, the assumption that students can conduct all these cognitive operations and subsequently transfer, synthesise and extend knowledge, while autonomously placing sufficient value on their own voice to construct their own knowledge assumes a noteworthy belief of their own capacity.

However, while much is written about the importance of conceptual thinking, transfer and the extension of knowledge there is less discussion about those pedagogical practices and teaching strategies that might bring about such learning experiences. Itue et al. (2012, p 2) cite Toor (2010), who explains that, 'bad writing' is often a result of 'bad habits' that are connected to 'bad thinking' but are unclear about how it might be mitigated. Boscolo, Arfé and Quarisa (2007) in their article went on to describe how students' failure to transfer and to integrate new and extant learning led to low-level thinking but did not suggest support mechanisms to enable transfer and integration of knowledge.

The studies of Hounsell (1997), Lea and Street (1997), Lillis (2006) and Bjork et al. (2003), Pletzen's (2009) and Hunter and Tse (2013) work explain the possible lack of discourse relating to practical strategies; they make the point that the difficulty is the 'invisibility of the skill' (Peltzen, 2009, p 106). In that, because thinking and writing skills are invisible (as is tacit knowledge) the difficulty, for staff, arises in trying to make the tacit overt, because the act of making the tacit overt is a reliant on linguistic skills of both student and teacher. Given that the student already has some difficulty in managing language efficiently such a strategy is unlikely to meet with success. All share the belief that teachers should make the nebulous and invisible skills associated with language and thinking visible to students. However, they discuss little of how this might come about, the difficulty being that without understanding how students acquire their writing skills it in more difficult to support them to use their writing to transfer and integrate knowledge.

In the next section I discuss the role of academic self-confidence in relation to students' wider learning behaviours. I consider this to be important because the high levels of dependence that students (believed to be vulnerable to DO) exhibited indicated a lack of confidence in their own capacity.

2.3.2 Academic confidence

According to Maclellan (2014), literature surrounding educational self-confidence is scarce, much is unclear, and there are contradictory claims and results in relation to the impact of self-confidence on student performance. Moreover, there are few shared understandings of the construct other than it can be a 'good thing' (Maclellan 2014, p 60). There is, however, a body of literature that focuses on the students' academic self-confidence and its ostensible impact on student achievement. The majority focus is on the impact of self-confidence on sociological and psychological aspects of the student experience. For example, Nicholson, et al. (2013), Batchelor (2006), Möller, et al. (2009), Sander and Sanders (2009) and indeed Abousier as far back as 1995 argue that students' academic self-confidence has a significant effect on the way that they deal learning situations. They argue that, confident, self-assured students are more motivated, and they expect positive outcomes from their endeavours. Importantly, they can regulate their own learning because they understand their own learning processes, they respond positively to feedback and are more likely to seek effective help when necessary. Conversely, unconfident students do not anticipate success, respond negatively to assessment feedback and demonstrate low levels of self-efficacy and do not effectively regulate their own learning.

A sub-theme that runs throughout the literature is the importance of early educational experiences and the ways that these can influence student identity and consequent learning behaviours. Batchelor (2006), Kröner and Biermann (2007) and Cassidy (2011) related academic confidence to earlier educational experiences.   They posit that self-concept influences self-judgements, in essence, and notwithstanding socio-political and economic factors, students are more likely to use their usual (educational) performance to form academic competence self-judgements. In essence those students who have performed well in the past expect to do so in the future, and those who did not perform well in the past do not expect to in the future. Thus outcome expectancy becomes a key driver in students' learning behaviours.

Cassidy (2011) draws on the social cognitive perspective described by Bandura (1986) he relates self-identity to a cycle of reciprocal causation between the student's past experiences, their perception of their own ability, their self-efficacy and the environment which the student is learning. He asserts that self-efficacy is closely correlated to outcome expectancies, where those students who anticipate positive outcomes demonstrate greater levels of self-efficacy in their learning, and those who anticipate difficulty delegate the locus of control for their learning externally, to peers and to teachers. In such circumstances, students remain dependent on peers and teachers but more importantly lose their ownership of their knowledge and learning processes and their opportunity for deep learning is diminished.

Batchelor (2006) argues that when students anticipate difficulty, it leads to an 'eroded capacity to work in the present', and that 'it is a paralysis carried forward from the past' (Batchelor, 2006 p 797). This means that as some students enter, HE they anticipate failure and are ill-equipped to manage their learning. She also makes the point that because such students may seek to escape a pre-existing educational identity, they may not just lose agentic learning behaviours and self-regulation, damagingly, they may take on the voice of performativity and imitation. This is of critical importance; it may mean that the student loses the sense of self within their learning. In seeking to imitate others, they may have diminished ownership over their learning processes it may follow that they may be less likely to understand their own learning paradigms and remain in a state of academic dependence. Critically, their ownership of their knowledge may become compromised; as they are less likely to value their own voice sufficiently well to synthesise and extend their own knowledge and become increasingly dependent on teachers and peers. More recently, Putwain and Sander (2014) report similar findings and argue that a student's academic confidence is likely to influence their agency as well as their competence self-judgements and self-regulation. They argue that the development of self-confidence should be seen as critical to successful student transition into higher education. Clearly, where students

draw on positive previous identities, they are more fully equipped to meet new learning challenges and adapt well to new learning situations.

The issues of self-identity relating to self-assessment are also raised by Smit (2012). Drawing on Gee (2001) and Carter (1998) she identifies a key issue. She argues that disadvantaged students are uncertain of the expectations of learning in HE or the competencies that are of value in HE and these factors place them at a disadvantage. She describes them as 'outsiders to the discourses of academia' (2010, p 373): they cannot self-assess because they do not understand what is valued in higher education. This means that students are under-equipped to either self-assess or self-regulate as such they are vulnerable to losing control over their learning and adopting dependency-based learning behaviours.

2.3.3 Conclusion

It is clear from the work already cited that there are no clear delineations between categories of students who enter HE and subsequently experience DO and those who do not. There are however some emerging themes; socio-economic advantage can make an impact on outcomes but is inconsistent and does not explain individual differences. The continuous interrogation of data can distract from the key issues. Moreover, it can contribute to administratively convenient unethical categorisations that create a deficit mind-set within the sector. It is clear that there is insufficient interrogation of institutional pedagogical practices. Students' educational legacies impact on academic confidence, agency, self-regulation and critically their identity within the environment. There is a discourse surrounding the way in which most students acquire the invisible skills of abstraction and conceptualisation. There is somewhat less, however, about those teaching strategies that might support students who experience difficulties in higher education. Much of the discourse identified explains the 'problem' but there is little to move the sector forward in terms of pedagogical knowledge.

I believe that there is an opportunity to explore pedagogical practice more fully. By concentrating primarily on external issues, the impression is formed that the matter of DO can be addressed through activities that are external to the learning-teaching dynamic. Social class, maturity, external responsibilities and vocational qualifications may create challenges for students, and aspects of disadvantage will certainly play out differently in the students' lived educational experiences. It would be unlikely that any of these would not impact on students' self-concepts and opportunities. Within the context of this research, there appeared to be a subtler and less visible vulnerability relating to individual differences that is neglected by the literature. For me this included consideration of students very individual and nuanced responses to pedagogical practices and engagement with the learning environment and it was this that I wished to focus attention on.

My professional experience told me that students, particularly vulnerable students, value effective teaching above almost every other consideration and this defines their engagement with their course. Moreover, considering the demographic make-up of the student groups (92% of all students recruited to the programmes were considered 'non-traditional'), I was cautious of focussing on the well-publicised and statistically well-represented aspects of students' vulnerabilities. For these reasons, the specific detail of the research was not situated in these wider areas. It was, nonetheless, important to include these matters in the search terms and, in so doing, acknowledge these matters as possible contributory factors to DO.

Ensuring that all students reach their full potential is not clearly a new phenomenon. However, following the dramatic rise of mass forms of higher education and notwithstanding the potential conflation of massification of HE and inclusive practice (discussed in in the opening paragraphs of chapter one), DO has become a key challenge for HE. Mountford-Zimdars et al.'s, 2015 report relating to differences in students' outcomes concur and state that as student numbers grow not just nationally but internationally there is a growing need to understand how students learn effectively. Equally, we need to

recognise when students are not learning effectively and to extend our understanding beyond the phenomenon of failure and ultimate withdrawal from study.

Based on my experience as a teacher and as a leader, my concern was that the scarcity of knowledge left me ill-equipped to either advance my own practice or support the department to develop a more inclusive practice. This call for further action on the part of practitioners and researchers encouraged me to privilege the individual experience of the student and how they interact with their learning environment and, in our case, with the pedagogical practice of the department.

Chapter 3   Methodology

3.1   Introduction

There are two parts to this chapter; in the first part I discuss my rational for using a collaborative, interpretative approach, together with aspects of validity and reliability of the research. I then go on to consider ethical matters including power differentials and I have contextualised this within the parameters of my research situation. In the second part I provide a table that describes the data collection methods used. I then discuss each method in terms of; rationale, sampling, the intention and the processes. Finally, I describe the ways in which the data was collated, coded and interpreted and within this I discuss some of the challenges to the research and the ways in which I sought to overcome these**.**

Part - One

3.2   Overall approach to the research

My research was organised within a collaborative insider-researcher paradigm. It was based in practice (or work) and as such required an approach which emerged from the worker-researcher's position, practice setting and professional and institutional context and aims (Costley, Gibbs and Elliott, 2010). I believe that the collaborative approach was appropriate for several other reasons: first, insider research created the opportunity to recognise the contribution that staff had already made to the quality enhancement of the department (see chapter 1, section 1.1). Second, the decision to investigate the matter of DO was arrived at through the on-going work of the department; as such it was important to continue in this way, this approach created a consistency from the point of deciding on the topic through to the conclusion of the research. Third, the issue under investigation, DO, is a nebulous concept that benefitted from the multiple viewpoints of the staff team.

I also believe that it was important to have close access to the situation where the phenomenon was observed. Given that I had access to data systems and to the key people and practices within the college, the close engagement that

was necessary was best achieved through insider-practitioner research (Costley, Gibbs and Elliott, 2010). Critically, an insider perspective was likely to contribute to the more effective implementation of quality enhancement strategies on completion of the research rather than attempting to do so based on research generated outside the department's working practices.

The aims of the research, (described in chapter 1, section 1.9) together with the position and values of the community of practice meant that an interpretivist approach based on the Participatory Action Research (PAR) spiral described by Atweh, Kemmis and Weeks (1998) was most suitable. This approach was germane because the cycle of planning, reflection, acting and observing described by Atweh, Kemmis and Weeks (1998) created a systematic vehicle for review that enabled the department to take an evidence-based course of action. This was important to facilitate collaborative reflection and interpretation of the effects and impact of our coaching and teaching strategies. Most importantly, this lent itself well to the consideration of students' learning experiences from several sources and the collaborative nature of the research paradigm allowed the emergent data to be considered from multiple perspectives. This approach facilitated the construction of a more complete picture of the students' learning experience. The democratic nature of collaborative research (Costley, Gibbs and Elliott, 2011) was critical for the operation of the research. It had the further advantage of ensuring the regular exchange of relevant and timely knowledge and, as such, contributed to the continuous professional confidence of all staff members within the community of practice (Costley, Gibbs and Elliott, 2011).

The interpretivist paradigm was in-keeping with the values that I took to the study, and that are embedded into the ethos of the department; that is that the that the students' views are paramount to understanding the value of teaching practice. The department regarded these as the reality through which the course is experienced, as such this made the interpretivist approach appropriate. Blaxter, Hughes and Tight (2010) point out that because meaning

is culturally shaped the meaning of experience is located within the individual's perception. Similarly, Kivunja and Kuyini, describe interpretivist research as

> This approach [interpretivist] makes an effort to 'get into the head of the subjects being studied' so to speak, and to understand and interpret what the subject is thinking or the meaning s/he is making of the context. Every effort is made to try to understand the viewpoint of the subject being observed, rather than the viewpoint of the observer. Emphasis is placed on understanding the individual and their interpretation of the world around them. Hence, the key tenet of the interpretivist paradigm is that reality is socially constructed…

(Kivunja and Kuyini, 2017, p 33)

Cohen, Manion and Morrison (2017) also locate the essence of interpretative research with 'to retain the integrity of the phenomenon being investigated, [where] efforts are made to get inside the person and to understand from within' (2017, p 19), this point was critical for the validity of the research. A positivist approach would have been less suited to the purpose of the research, and research based on hypothesis testing was unlikely to give the detailed nuances that I believed are necessary for this nebulous and mutable subject and group of students. Moreover, I did not have sufficient knowledge of DO or our students' learning needs to undertake such an approach. The innumerable variables and the individual's 'truths' could have been so varied that these issues would make other research paradigms unmanageable and were likely to impact adversely on the reliability of data.

3.3 Validity and reliability

Qualitative research is frequently criticised, in terms of validity and reliability, for failing to recognise the importance of researcher bias, a lack of rigour and poor transparency (Rolfe, 2006). I carefully considered these matters prior to beginning my research and I remained cognisant of these, and their likely impact, on the reliability and validity throughout. Unlike quantitative research

where statistical methods can be applied to establish the veracity, validity and reliability of findings, qualitative research requires consideration of the design and methodology to ensure the authenticity of the findings.

Drake and Heath (2011) argue that the key to ensuring the validity and reliability of insider research is to recognise the positionality of the researcher as participant within the research and, unlike the natural sciences, that the research is unlikely to be replicable. Costley, Gibbs and Elliott (2011) argue that validity is closely related to the fitness of purpose of the overarching methodological approach to the study, together with ensuring fair and representative data sets. Yilmaz argues more widely, regarding the validity and reliability of qualitative research, stating that,

> The basic criterion to judge the credibility of data is the extent to which they allow the reader to enter the situation or setting under study. In other words, rich and detailed or thick description of the setting and participants is a must. The researcher must provide an accurate picture of the empirical social world as it exists to those under investigation, rather than as he or she imagines it to be.

> (Yilmaz, 2013, p 321)

I considered these perspectives to be important to ensure a valid and reliable knowledge base, and the factors described above were embedded into the research paradigm. I recognised my position within the research (described below) and the research paradigm placed the students' lived experiences at its centre. Reflecting the perspective of Yilmaz, the research methods sought to create just such data; the students' perspectives were collected in detail throughout the research and the collaborative approach was an important safeguard against the potential of my partisanship.

Costley, Gibbs and Elliott. (2011) also highlight the issue of representative data sets as a factor in ensuring validity, and this was a complex issue for the research. DO was a difficult and uncertain topic to define or to describe, it

follows that the students who were vulnerable to DO were an equally difficult group to identify. Therefore, confidence in the five descriptors of students (described in chapter 1, section 1.4.1) who were vulnerable to DO was a most important consideration in identifying a research population, and as such, was critical to the success of the research.

DO could not be based on summative outcomes alone because a student may well achieve relatively well but be actually capable of achieving higher marks. The research population would be best described as a non-probability sample; Robson and McCartan remind us that the accuracy of non-probability sampling 'relies greatly on the skill and experience of those involved', (2016, p 279). Given that we, as a community of practice, were a group of well-qualified and equally well-experienced teachers working within a very successful department, we believed ourselves to be adequately equipped to reliably identify students who were vulnerable to DO within the parameters of this research. There were four factors that enabled me to create secure parameters within which I could manage the research, while never losing sight of the fact that I was working with a nebulous and under-researched phenomenon:

1. The fact that we had each independently, as professional and experienced teachers, identified this as an issue over a period of several years;
2. The close and detailed consideration that we have given to the phenomenon prior to beginning the research;
3. Sub-group students' outcomes were similar over all modules, all teachers, all forms of assessment and across all years of study;
4. The students' own views were that they felt that they could be performing at a higher level, given that they frequently citied long hours of study, sought ALS, worked hard in class and the work-based aspects of their assessments were often at a significantly higher standard.

The combination of these four factors allowed me to be as secure as possible in the belief that the department had identified those students who were vulnerable to differential outcomes within the existing cohorts.

My position as both researcher and participant was a key consideration that I needed to take stock of before the research. It was complicated by the fact that I was then the director of HE and my co-enquirers within the community of practice were line-managed by me, therefore the extent to which my responses and viewpoints could have led and influenced the responses of others needed critical consideration and management. My belief was that these potential problems were mitigated by the extensive use of the pre-existing college quality systems as core data collection mechanisms. These stood outside my immediate authority and thus this created an ostensible element of external control. All staff were familiar with implementing these systems and interpreting the resultant data; while it would be incorrect to assume that my position was without impact, it is not unreasonable to expect that these data could be as reliable as they normally were. I also considered the extent to which my responses, as a researcher and respondent, were informed by my own perceptions and values needed careful management. I believe that this was achieved through engagement with a truly collaborative approach which involved significant levels of discussion and refocusing within the department, that was managed as democratically as possible.

3.4 Ethical considerations – overall approach

The research needed to give due consideration to several ethical questions. These included the nature of the issue being researched, the impact of my position as an insider researcher, the cost-benefit analysis, informed consent and confidentiality, together with the management of power differentials. All these issues could have impacted on the dignity of participants and consequently the ethical validity of the research. The ethical principal inherent within most research situations is predicated on the principle of nonmaleficence – 'do no harm' (Costley, Gibbs and Elliott, 2011), and the cost-benefit ethical dilemma needed to centralise this principle. Inaction on behalf

of the department, born of ethical scruples (Barton, 2006), would actually have 'done harm' to students; essentially, to ignore potential unmet learning needs would have been unethical. I could have remained working from day to day, building up the repertoire and reservoirs of knowledge structures (Bernstein, 1999) within the institution in the hope that students would eventually find a way to optimise their learning through our pedagogical practice. Or, I could use the seniority inherent within my position, together with my skills and knowledge, to address DO through research that sought more inclusive practice as a fundamental element of student entitlement. It followed that the research raised several issues of consent, informed consent, coercion and the use of data and power differentials. It was vital to ensure that these issues were centralised in the cost-benefit analysis within the ethic of care as described by Costley Gibbs and Elliott (2011).

The issue, in itself, being researched needed careful consideration and care needed to be taken to avoid framing unethical categorisations or divisions as described by Hockings (2010) within the student population. The concept of DO was likely to have negative connotations and if students were labelled as such it would have offended and demotivated them. It was necessary for me to manage the research in order to avoid segregating students into attainment groups, yet the research sought to elicit information specifically from students who identified as being vulnerable to DO. Student self-identification was critical to overcoming this issue, moreover, we believed that the matter had been instigated by students themselves as they had approached us citing frustration at their results. This led us to our area of research and consequently only those students who had self-identified and who matched all five descriptors of DO (chapter 1, section 1.4.1) were included; students would be able to decline or withdraw their participation or re-engage at any point at any time.

The potential benefits to the students and staff, present and future could not have been fully described prior to the research, given that research could not prejudge its own outcomes. However, the principle underpinning the research

was maximising the benefit to the participants at minimum cost. Ultimately, the benefit to the students would be a more fully informed teaching pedagogy, upon which their learning experiences would be formed. More importantly, it gave students an opportunity to have their voice heard and acted upon concerning an issue that has a long-term impact on their life opportunities. The costs to both students and staff could have included issues of distress or embarrassment, whether or not this would have been immediately apparent (Drake and Heath, 2011). The most significant benefits to staff was the opportunity to understand and meet their students' needs more fully, to develop their professional confidence and to steer their own quality improvements and gain greater levels of ownership over their own working lives. Because the research was designed to be built into the working practices of the department, it did not incur significant additional work to staff.

It was of considerable importance to me as a researcher to ensure that all students vulnerable to DO were given the opportunity to participate, equally the option to withdraw was important. Students were given the opportunity to not participate, or to re-engage, as and when they felt inclined to throughout the research. Indeed, they took these opportunities; it seemed that student feedback was largely based on the time available to them, whereby at 'pinch points' in the assessment calendar there was less feedback but noticeably at other times student feedback increased. However, the issue of staff participation was different; because the research had been decided on as a staff group and had institutional backing, staff did not have the opportunity to withdraw from a college quality enhancement initiative. This matter necessitated clear parameters being established before the research began and a clear delineation of the situations in which staff could withdraw their participation. In the event, this did not become an issue as the staff engaged with significant levels of enthusiasm throughout the research, including two staff using a specific aspect of the research to advance their own studies.

3.5   Possible tensions related to positionality

The management of a power differentials, real or perceived, needed very careful consideration prior to embarking on the research.   Robson and McCartan (2016) and Costley, Gibbs and Elliott, (2011) identify several issues relating to power differentials that were pertinent to my research situation. These include coercion, implied criticism, management of feedback and employees' rights.   Costley, Gibbs and Elliott, (2011) argue that power may not be apparent to the researcher but the perception of power by others is enough to induce coercion.   This matter was particularly important given that I, then, held the position of Director of Higher Education at the college.   The power was not only perceived but, in some but not all circumstances, it was actual, and it would be disingenuous for me to present my position as otherwise.   Some senior managers may have seen an implied criticism by the very fact that enquiry was undertaken (Costley, Gibbs and Elliott, 2011) particularly since the programme's KPIs were strong.   I considered this issue at the outset of the research, but I was confident that because the issue had been arrived at through both student feedback and by the collaborative work of the department as a whole, my concerns regarding implied criticism and coercion were mitigated.

As a department we had led our own improvements over several years and there was a history of collaborative working, feedback and reflection, it followed that I located the research in these working practices.   I planned to use the existing data and collaboratively developed quality assurance systems to create the data sets for the research.   I intended this to one of the real benefits of my being an insider researcher, in fostering a high level of engagement from staff which they would find both supportive and valuable in developing their own practice.   Given the close working relationships of the department, to have dislocated the research from the working practices of the department would be more likely to make staff feel uncomfortable.   Moreover, it would have been disrespectful to the contribution that they had already made to the success of the department.   Although the collaborative approach did

mean that I gave up some of my overall control of the research, I would argue that it had greater value to the development and support of individual teachers as well as having the benefit of mitigating perceived criticism or coercion.

3.6   A collegiate knowledge

Fox, Martin and Green (2011) point to the importance of a shared understanding of a phenomenon as a key requirement of PAR, indicating that not every member may have a shared understanding of the problem. They are unequivocal in stating the need to do so, 'In other words, the group who are involved in the research need to create a shared meaning as a precursor to researching it' Fox, Martin and Green (2011, p 53). I had very much wanted to meet the professional challenge of DO collegiately. There was a pragmatic as well as value-based purpose behind this; our students could be taught by everyone in the team at some point in their degree, consequently, team collaboration would ensure the best possible student experience. It was important that all staff were as well-equipped as possible for the task of teaching inclusively and a shared understanding of the matter was critical.

The issue of shared understanding also made me very mindful of positional power differentials. If the research had been unduly influenced by me as Director of HE, its real value would have been diminished and would be less likely to bring about any long-term improvements to the students' experience. The Foucauldian view is that power lies not with the individual but with the position that they hold, (Välikangas and Hannele, 2011) as director of the department the power differential is not difficult to identify and has been described in chapter 1, section1.6. On the other hand, Costley, Gibbs and Elliott argue that power not only exists within positions but equally in knowledge, they state that, 'the full benefits of collaborative research can only be realised where there is full participation and involvement of all parties in the whole research process, and there is a different understanding and distribution of knowledge and power from the traditional research processes.' (2011, p 55). By adopting this collaborative approach and, as far as possible, placing the acquisition of knowledge within the activities of the research group, the

knowledge base would be owned by all my co-enquirers. The process of sharing information and co-creating the knowledge base displaced the power base from myself and located it within the department. This was also important not just from an ethical perspective but because one of the ancillary aims of the research was to develop the professional confidence of the department. This aim created the need for all staff participants having parity of esteem in contributing to the research findings. It therefore followed that the problem of power differentials and their solution became intertwined and embedded into the research paradigm.

Part-two

3.7 Data collection methods and interpretation

In the next section I describe the approach that I took to managing the research in terms of data collection and its coding and interpretation. I have included a brief table of the research activities and I go on to describe each data collection method. I give a rationale for the use of each method together with the intention of the activity, the sampling used, the processes that were undertaken during the data collection and how the data was analysed. The research was carried out in two phases, as such I have set out the following section in two parts. Where a given method was used in both phases I have referred the reader to the first instance where the method is discussed.

3.8 Introduction and overview of processes

The research was carried out in two phases; the intention of phase one was two-fold; firstly, to ascertain the extent to which the matter of DO existed within the researched groups of students. Second, to identify and understand more fully the contributory factors that created vulnerability to DO. These data created a starting point and gave broad priorities from which I began work with the department to develop differentiated teaching strategies for implementation in phase two.

The over-arching aim was to research was to identify students' unmet learning needs that contribute to DO and to explore those pedagogical practices that ameliorate vulnerability to DO, these priorities were the key drivers for the second phase. Phase two was sub-divided into four cycles to reflect the points where the department reviewed and evaluated our strategies, these cycles coincided with the end of each term, beginning October 2013 and ending January 2015.

The data collection methods, together with the samples and the purpose of the research are summarised out in table 3–1 on the succeeding page. In the succeeding paragraphs these activities are discussed in relation to the; intention of the research activity, the sampling method used, together with, the process of data collection and its collation.

Table 3-1 Research plan

Phase 1 **This phase sought to explore and identify the causes of DO in relation to students' unmet learning needs.**			
Research Activity	**Sample**	**Carried out by**	**Intention**
End of Year Student Survey 27 May 2013	All Students 90 Year 3 128 Year 2 154 Year 1 372 Students total	All co-enquirers, Head of College, FF,	To ascertain; 1. The number of students who felt that they were disappointed in their outcomes. 2. Students' perceptions of underpinning reasons for outcomes.
Analysis of Basic Literacy Scores 22nd – 30th August 2013	All Students	FF,	To elucidate any underpinning literacy issues influencing students' capacity to engage in the course
The research activities outlined below were carried out with only those students who had self-identified as being vulnerable to DO, and who met all five criteria devised by the department prior to the research. (see chapter 1, section 1.4.1)			
Analysis of Students' Assessed Work 10th July 2013	9 Scripts	All nine staff members in the team	To explore how student learning need might manifest itself in summative assessment.
Analysis of 1:1 additional support records 19th 23rd August 2013	60 records	FF,	Establish pattern of the key issues that students require support for and how we sought to meet these needs.
Open individual interviews 5th, 12th, 15th October 2013	3 students	FF,	A more detailed understanding of learning need that is specific to the subset of student vulnerable to DO together with fuller understanding of the teaching strategies that mitigate these.
Phase 2: **This phase saw the implementation of the revised pedagogical practices to reduce students' vulnerability to DO**			
Research Activity	**No in Population**	**Carried out by**	**Intention**
Observation In-class Reading Behaviours 16th Oct 2013 – 2nd Jan 2015	30	All teaching staff in the team	1. to identify those reading behaviours that may contribute to DO 2. to identify the scope and limitations of the specific teaching strategies and learning experiences designed to mitigate differential outcomes.
Observation of Coaching tutorial 16th Oct 2013 – 2nd Jan 2015	26	All teaching staff in the team	To identify students' assessment task completion behaviours with a view to understanding those that formed barriers to their learning and, those that supported students' progress
Open Interviews with participating students16th Oct 2013 – 2nd Jan 2015	30	All teaching staff in the team	To ascertain those teaching strategies and pedagogical approaches that students' placed value

Analysis of students' summatively assessed work 16th Oct 2013 – 22ndJan 2015	110 essays covering all four cycles of the research	FF,	More detailed understanding of how unmet learning need might manifest itself in students summatively assessed work.
End of Research Student Feedback X 2 12th June 2014 L6 22nd Feb 2015 L5	30	All teaching staff in the team and Head of College	To ascertain the students' views relating to the research its usefulness to them and their reflections.

3.9   Sampling

The matter of sample size in relation to generalisability can be a contentious issue in qualitative research (Malterud, Siersma and Guassora, 2016). On the one hand, my sample sizes were too large to permit a deep and detailed analysis of each individual student's trajectory throughout the research. For example, it would have been very interesting to take each individual students' feedback, lesson observation, tutorial observation and the analysis of the written work to create a detailed profile of each individual student. However, the timeframe and the fact that there were 30 participating students each with up to 18 individual pieces of assessed work and multiple observations made this impossible. The research formed a broader picture, within its own context, to give a wider profile of the students' experience and those pedagogical practices that sought to improve their opportunities.

Conversely, the sample and was too small to support claims of achieved either theoretical saturation or information redundancy that could be applied across the FE in HE sector. If my research led to lessons that could be more widely distributed this should be seen as an additional benefit. Furthermore, theoretical saturation and information redundancy are ill-defined and uncertain concepts and there are few explanations of how they should be understood or implemented to determine the number of participants (Breen, 2006). Sample size in qualitative research depends on the type of research being conducted, together with the methodology contextualised within the purpose of the research. Ultimately, the researcher needs to use their professional judgement based on their experience and knowledge of the research area (Boddy, 2016).

Since I was not seeking to generalise my findings across the sector, rather I was seeking to explain and more fully understand a specific issue within my work environment, I believe that the samples chosen below were appropriate to the needs of the research.

3.10 Role of co-enquirers

3.10.1 Identifying the matter and methodological approach

Wenger and Synder describe communities of practice as 'groups of people informally bound together by shared expertise and passion for joint enterprise' (2000, p. 139). The main ideas underpinning this understanding of a learning community are interdependence, co-operation and participation. This view very accurately describes the ways in which the department worked, both professionally and as a research team. The contribution that the community of practice (my co-enquirers) made to the research was fundamental to its successful execution. As stated in chapter 1, section 1.8, the matter to be researched was arrived at collegiately by the department; it followed that the research would continue as a collaborative project.

The staffs' strong belief was that our, then, approach of adopting curative interventions as a means to mitigate students' vulnerability was no-longer appropriate for the reasons discussed in chapter 1, section 1.8 and this belief initiated the project. As we began to work on the matter of DO, it was essential that we developed a collegiately understood definition of DO and as such were able to delineate those students who were vulnerable to DO. Importantly, our definition of DO needed to have meaning to ourselves as well as being located within the wider discourse of the HE sector. This was a key starting point and thus the staff and I worked together to develop the five descriptors outlined in chapter 1, section 1.4.1. Following this initial work, it was my role to take the critical literature relating to DO and pedagogical practice more widely to the staff meetings where we discussed the matter. This allowed us to be well-informed and to locate our discussion within the wider HE context.

3.10.1.1   Methodological approach and research methods

The staff placed primary value on the students' voice as the reality through which the students' learning experiences are received, this shared belief led to an interpretivist research paradigm. Staffs' commitment to the students' voice

also led to the decision to interview students initially at phase one and again by seeking feedback systematically throughout phase two.

Both staff and I also sought to remain, as far as was possible, within the existing quality assurance and enhancement practices of the department. This was for the twin reasons of not wishing to create additional work that might have become too burdensome as the project progressed, and additionally, to maintain within our own working practices that had brought about autonomy and much self-determination within the department.

All staff believed that it was of utmost importance that we had developed a fuller understanding of the phenomenon before attempting to make alterations to our pedagogical practice, our rationale is discussed in chapter 1, section 1.8 This led to the two-phase approach to the research. We, as a community of practice, also decided on the actual research activities to be undertaken. My co-enquirers were particularly keen that we conducted a deep analysis of students' written assessed work. They placed significant value on the opportunity to see students' work beyond assessment criteria and formal assessment strategy expectations. They strongly believed in the value of our understanding the ways in which students sought to communicate meaning, as well as the opportunity to for us to potentially identify gaps in our pedagogical practice that may have made students vulnerable to DO.

With similar conviction staff also placed great value on students' learning observations, this is likely to have reflected our primary and secondary school backgrounds, where observations form the key quality improvement tool within these sectors. Staff were very highly skilled in observing learning both within HE and through their previous professional experience, additionally, students are well-habituated into the presence of observers in all learning situations. The precise activities of staff are described in Appendix B with the research timeline.

3.10.1.2   Decisions and priorities

On completion of phase one of the research, I collated all the existing data and we discussed this at some length at our staff conference at the beginning of the academic year, 2013, when the research began. The contribution of all staff was critical to deciding our trajectory forward, and the strength of the team, many of whom have studied the disciplinary area of education for many years and who were very well-experienced, was extremely powerful. Our key decisions, together with their rationale, are discussed in chapter 5, sections 5.6 through 5.7 but overwhelmingly staff did not want to continue with existing practice broken down into ever decreasing fragments and they were very clear that they wanted to be innovative and adopt a different approach to meeting vulnerable students' learning needs (see chapter 5, section 5.6.2).

At this point I was careful to provide staff with as much relevant literature was practicable and to research areas that were of interest to them. The sharing of this knowledge and research contributed significantly to the growing confidence particularly for those members of staff who were less experienced teachers. Yet, on the other hand less-experienced staff brought fresher eyes to the matter. Thus, there was symbiosis between our consideration of research, data interpretation and the discussions and exchanges between highly experienced members of staff and those who had less teaching experience.

3.10.1.3   Phase 2- staff contribution

As the research moved into the second phase, and the research activities that are described in table 3-1 and appendix B were undertaken by the team and the sharing of information and student feedback was critical. This happened in three weekly intervals and, again, was in-keeping of our pre-existing collaborative approach to planning and reflecting that had led to our achievement of robust KPIs. The sharing of information, particularly students' feedback, was of the utmost importance, and each member of staff contributed candidly and with much energy. I began to collate these data, and this created

a valuable context for reflection as the research progressed. These fora gave us the confidence and shared knowledge that allowed us to progress and continue much more confidently with the research.

After I had left the institution, I returned to lead the project and all staff continued to execute the project plan in much the same way as previously, this was a real benefit of using the pre-existing quality assurance processes of observation, student feedback and sharing practice. As such, we continued using the same paradigm prior to my leaving. At the close of the project all staff, including myself, held the final students' feedback fora. Following this event, we considered the data as a whole and had a single final meeting in February 2015, by this time many of the staff had left the research organisation to pursue careers in universities across London and one moved to Sheffield University.

3.11 Phase One – data collection

3.11.1 Student survey

3.11.1.1 Intention

The intention of the student survey was two-fold; first to ascertain the extent of DO within the student population, second, to ascertain the students' perceptions of what they saw as the causes of their disappointing outcomes. Although surveys can have a 'positivist flavour' Robson and McCartan (2016, p 246) the strength of this method is as Robson and McCartan also point out their capacity to answers of 'how many, how much and who' (2016, p 256). This was very important for the research; I needed to be able to compare the students' perspective with the departmental criteria (see chapter 1, section 1.4.1) early on in the research in order to understand the extent of DO. Without this information I may not have had a representative data set and I did not want to create a situation where additional students' who were vulnerable to DO became apparent when the research was in progress. Moreover, had large numbers of students self-identified as disappointed with their outcomes it would have had significant implications for the second phase of the research, and I needed to know how to manage this from the beginning. The survey was carried out in the final teaching week of the academic year 2013.

3.11.1.2 Sample

All students enrolled on to the degree programmes, BA in Early Years Education and BA in Education and Learning participated, this totalled 372 students who consisted of 153 in Year 1, 128 in Year 2 and 90 in Year 3. This represented 96% of all enrolled students on these programmes.

3.11.1.3 Process

Open questions/prompts relating to teaching strategies and learning opportunities were included in the end of year student feedback survey, questions had been devised by the staff team using the regular student feedback mechanisms. The students were already familiar with the format. Specific questions were included relating to the extent to which they felt

satisfied with their outcomes, together with the reasons why they felt that they had not achieved as well as they could have. Seven members of staff facilitated the session with the Head of College present; it took place over one morning session.

3.11.1.4 Data Analysis

The data were collated using tally charts; through this I established the absolute number of students who believed that they could have achieved higher marks. The data were calculated as both absolute numbers and as a percentage of the overall number of students who participated.

The second part of the end of year survey was aimed at establishing the students' perceptions of the contributory factors that led to disappointing outcomes. The high volume of qualitative data meant that the primary data analysis method I used was a three-stage process described by Seidel (1998): Noticing, Collecting and Thinking, referred to as NCT (details of this were discussed in section 3.14 below). I and two other senior members of staff carried this out and formed the categories into which each response fell. Detailed information was not sought at this point; as such, these data were tabulated and calculated as the number of responses per category; it was then ranked in order of frequency of response.

This survey also allowed us to begin to identify participants for the research; further details are described in section 3.11.5 below.

3.11.2 Individual student interviews

3.11.2.1 Intention

I chose individual interviews in both phase one and two because they lend themselves well to being used in combination with other methods (Robson and McCartan, 2016), and more importantly, interviews allowed for close engagement with complex issues (Silverman, 2011). They created the opportunity for exploration of complex and sometimes contradictory perspectives that constitute the reality of the student experience. I needed

detailed and individualised knowledge of the students' lived learning experiences, and the distinctive feature of interviews is that they 'focused[s] on a respondent's subjective responses to a known situation in which he or she has been involved and which has been analysed by the interviewer prior to the interview' (Cohen, Mannion and Morrison 2017, p 274). This research sought to give students the opportunity to articulate their own lived experience of their degree and to discuss the reasons why they may have found their programme of study more difficult than it might have been. The privacy of individual interviews was critical to gaining this understanding.

3.11.2.2 *Sample and process*

I interviewed three students who had participated in the end-of-year student survey and had indicated that they were disappointed in their outcomes and had volunteered to participate in an individual interview. By the time the interviews took place, at the beginning of the succeeding academic year, all interviewees had graduated, two were studying post-graduate Initial Teacher Training-Primary Education, and one was studying to be an Early Years Teacher. Their mean marks aggregated over the programme were 52%, 56% and 58% with a range of 5%, 8% and 12% respectively. These students were well known to me and I had taught them in the last two years of their degree. My pre-existing relationship with the students was beneficial, as it allowed both them and I to have a very detailed discussion that may not have been possible without this relationship. The students were informed about the purpose of the interview, how the information would be used, their access to the data and their right to withdraw their information.

When the students came to the college for the interview, I tried to create as relaxed an atmosphere as possible and the students were very forthcoming about their experiences. Each interview lasted between 1 and 2 hours. Since I was seeking to understand the students' lived educational experience and had placed this perspective at the centre of the research paradigm. I used few prompts and started the interview by asking the students about their views of their performance on the course. Thereafter, the students discussed their

viewpoints as they wished. I recorded the interview verbatim as far as possible. During this time, the students remained focused on the purpose of the interview for the majority of the time, nonetheless where students digressed, I was reluctant to intervene as it contributed to the relaxed and honest nature of the interview. The notes were read back to the students and they agreed that this was an accurate record of their interview. The interviews were transcribed at a later date and the students were invited to receive a copy. As with all other qualitative data, it was analysed using the NCT paradigm (see section 3.14 of this chapter).

3.11.3 Analysis of summatively assessed work

3.11.3.1   Intention

This activity was included because one of the key descriptors of DO is students' disappointment in summatively assessed marks, therefore I believed that it was important to include a detailed consideration of the students' assessed work that went beyond normal marking. This analysis created a window on students' thinking skills and knowledge as well as the ways in which students articulated their meaning.

3.11.3.2   Process, Sample and Data Analysis

Seven teaching staff participated in phase 1, nine pieces of summatively assessed were considered across levels four to six. Six were essays that were written as a consequence of work-based activities that were carried out by the students. An example of this was students' planning for a National Curriculum subject, where they then wrote a critical essay based on this planning. Their work-based activities were required for the appendices and any work without this would receive a 'zero fail' mark. Three further essays were considered where there was no appended work. Only work that was fully marked, moderated and had been considered by the Board of Examiners was included. In order to analyse the work, we displayed it on a smart board and made collective notes which were gathered on a large sheet of A1 Flip Chart Paper.

We did not have a concrete paradigm for the analysis of student work, this was a deliberate decision that we came to prior to the beginning of the research because we wanted to avoid pre-emptive theorising entering the discussions and potentially displacing the originality of the research. However, we did feel the need to consider the work within some external reference point; we therefore decided that the Framework for Higher Education Qualifications (FHEQ) was the most objective document that we could use, given that it is one of the key documents of the QAA's Quality Code for HE. We used this document consistently and our discussions were clearly referenced to the ways in which students' work might demonstrate their engagement with this document. Using a thematic analysis, we identified key common issues relating to the scripts and categorised these. The collaborative model of enquiry was of the utmost importance during these sessions because we drew on each other's expertise to become skilled in seeking patterns of underpinning thinking skills that were not always fully clear and could not always be fully understood.

3.11.4 Additional support records

3.11.4.1 Intention

I used the analysis of additional support records in phase one to ascertain any discernible patterns in students' requests for additional support and the ways in which the department has sought to meet these needs.

Table 3-2 Sample of 1:1 Additional support records reviewed

	Status	No. of Records	Time Span	Total
Student 1	Year 3	15	2 years of study	15
Student 2	Graduated	15	3 years of study	30
Student 3	Graduated	15	3 years of study	45
Random Selection	n/a	15	3 years of study	60

3.11.4.2 Process

I only selected tutorials that had been conducted in response to students' requests for additional support that extended beyond their entitlement as

stated in the validated documents of their degrees. The departmental policy regarding additional support recording is very clear; all tutorials, whether they are phone calls, email or face to face, are recorded on NCR paper and held in the students' file. This process was very carefully implemented so I could be confident that I was considering the full set of support documents. I did not include the standard module tutorials that all students experience, as the nature of these is very different.

I was approaching the activity with an open mind and I wanted to use the opportunity to identify whether or not there was a discernible pattern or trend over the period of a student's course of study. To achieve this, I selected the complete records of three students randomly selected from within the student subset. One student's records represented Year 1 and Year 2 and was now studying for her final year, while the other two students had now left the college and as such had studied over a three-year period - both had achieved classifications at 2.2, one had a one-year break in learning between her Foundation Degree and BA. This sample constituted 45 of the 60 records considered, which was a 20% sample of all available records; as such this was a suitable sample size for ensuring that the majority of key themes were identified. The remaining records were randomly selected from students within the subset. This I believed was appropriate because there was a complete list of the population available and this is an important feature of random sampling (Robson and McCartan, 2016), this created the opportunity to ensure that as broad a range of matter as was possible could be discovered from within the sub-set of students. I deliberately did not consider any tutorial records from those students who sat outside the subset as I did not want to begin to form comparisons and possibly unethical categorisations between student groups. Using NCT analysis, we categorised and tabulated the findings. I did not continue this activity into phase two of the research because we changed the model of tutorial support considerably (see chapter 5, section 5.6), as such this activity was no longer useful to the research in this format.

3.11.5 Selection of participants for phase two

Identifying participating students - 3 stages - non-probability sampling

We used the end-of-year student survey (see section 3.11.1) which was part of a 3-stage model of non-probability sampling to identify a cohort of students who would form the subset with whom we would work. Figure 4 – 2 below describes this.

Figure 3-1 Process map of selecting participants

Students self-identified through the end-of year student survey (see Figure 4 -1)

These were matched to the pre-determined criteria outlined in Chapter 3 (section 3.3)

Sub-group students were offered the opportunity to participate during their 1:1 tutorial to ascertain their wish to participate in the research.
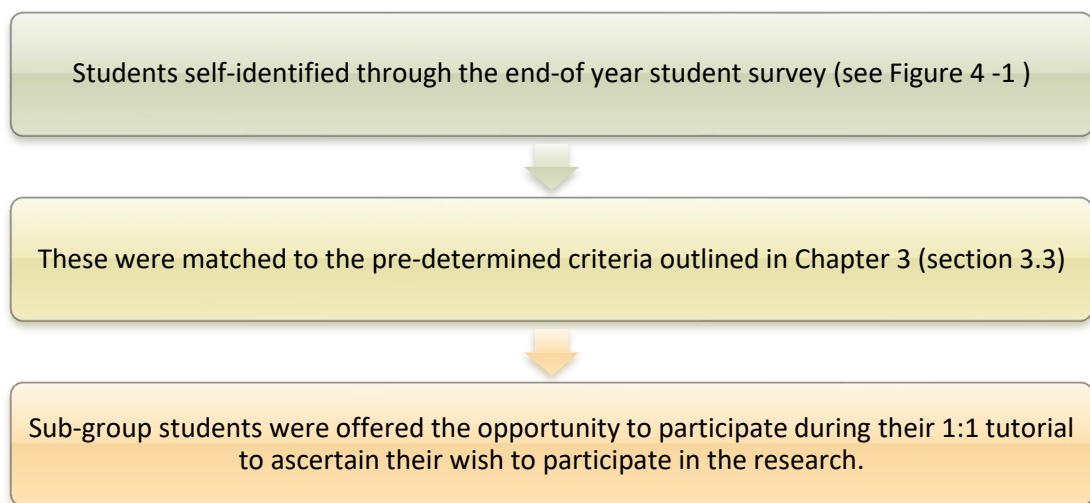
In order to select a group of students to participate in the research in the succeeding academic year I matched the students who believed that they were vulnerable to DO (from the student survey) to the criteria that we set out in chapter 1, section 1.4.1 and shared this information with the department. Contact was made with potential respondents during an individual tutorial (all students have end-of-year tutorials) where we raised the issue of DO with each student, (all students have a 1:1 tutorial at the beginning of each year to discuss their learning needs) I did this so that I could be confident that each continuing, respondent student was fully aware of their entitlement to withdraw without reason, to ensure the confidentiality of information and that students fully understood the parameters of the research. Following these events, I was satisfied that I had a reliable subset of students and I was satisfied that the sample met the specific needs of the research (Robson and McCartan, 2016).

I decided at this point that we would not include any further students in the study should they come forward.

3.12 Phase Two – data collection

3.13 Representative sampling – within the sub-group

In recognition of our belief that the student voice was critical to the understanding of DO, every participating student was given the opportunity to feedback at the completion of each taught module. For the same reason it important to include to observe each student during whole class reading activities. The observation of tutorials was more complex largely because of the availability of staff, in each of the first three cycles we observed seven separate students in all three tutorials. In the final cycle we observed 5 students as this cycle took [place in the beginning of the new academic year and as such many of the participating students had already graduated. A table is situated at the beginning of the findings section that describes the sample.

3.13.1 Student' feedback

3.13.1.1   Intention

The intention of the activity was to ascertain as closely as possible the students' perspective on their experiences during the coaching tutorial. This particularly related on any learning benefits or the ways in which the activities of the tutorial supported, or not, their learning.

3.13.1.2   Process, sampling and data analysis

In-keeping with the interpretivist nature of the research I centralised the student voice as a key data source. All participating students were asked for their feedback during a 1:1 tutorial at the end of each module, throughout all four cycles of the research and, staff sought as much detail as was possible although no prompts were used. Students fed back varying amounts of information from a couple of sentences to, on some occasions, a full hour of reflection. This was recorded as closely as possible to their exact words and the students confirmed the accuracy of this information.

I received student feedback notes from the team in a continual stream throughout the research. These data came to me in a variety of formats; for example, emails, file paper, or a dedicated notebook. To interpret these, we laid the artefacts out on a large table and we could all easily see the content. A significant challenge lay in managing a large volume of data without overlooking important matters. The collaborative nature of the research helped in this as did our regular consideration of the data. We carried out a Noticing, Collecting Thinking (NCT) Seidel (1998), analysis seeking the nuances of language and meaning and collectively decided the categories where the responses lay. To aid effective presentation of data we calculated the results in terms of the frequency of citations of a given response. For example, a single student might refer to an issue several times over the duration of the research, each citation was recorded in the data. We did this because we felt that although students frequently repeated similar feedback from one cycle to the next, this reinforced the importance and relevance that students placed on the issue.

We recorded the number of citations using a tally chart. Each category was coded, and the corresponding code and date was noted on the artefact. An individual student identifier was used so I could identify specific student responses. As we progressed through the research, we continued in the same paradigm; carefully reading and rereading the details of the student feedback, identifying new categories and sub-categories, and seeking cues and content that we may have missed. The cumulative results were calculated on tally charts at the end of each cycle. This dataset gave us useful knowledge that described the flow of student responses over the duration of the research.

I did not have the opportunity to fully digitise all the student feedback until the data collection had finished but because the artefacts were already categorised and sub-categorised into folders, and there was an accompanying tally chart, it was easily managed. Nonetheless, I felt that it was important to digitise all student feedback at the end of the data collection process. The act of reading, rereading and writing gave me a close proximity to nuances of

concepts, language and description that informed my thinking in a way that may not have been possible had I not done so. It was, however, a very long process and in total there were 17,000 transcribed words in the data set.

3.13.2 Observations

1.1.1.1 Intention

According to Fox, Martin and Green 'observations are the pre-eminently appropriate technique for getting at real-life in the real world.' (2011, p 125) and this was critical for the research as I needed to understand the students' actual learning behaviours in detail. And, I was conscious of the limitations of some of my other research methods particularly surveys and students' summative marks. Robson and McCartan (2016) identify some of these limitations, arguing that both interviews and questionnaires can carry significant differences between what people believe, and what the reality of their behaviours are. Observations provided an important additional dimension on the matter being researched. While I was placing a very high level of value on students' views, I believed that it was important that this was triangulated against other data. Consequently, I used observations in two situations; the first was in the whole class teaching situation with the intention of gathering data on students' reading behaviours. The second was to observe the coaching tutorial strategy. Observations were used widely within the department and they form a key data set for reflection on practice and professional development as such we are habituated (Robson and McCartan, 2016) to the presence of peer observers as such the observer effect described by Robson and McCartan was reduced.

The observations were focused on the learning behaviours of students and not the teaching behaviours of staff. They were not, nor could they be, focused on the performance of the individual members of staff and because we are familiar with this way of working, I was confident that it was possible that this could be carried out in an ethical and meaningful way.

1.1.1.2 Sample - Whole class students' reading behaviours

Table 3-3 In-class reading behaviours

	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Total
No of observations	6	10	9	3	27
No of students observed total	20	20	20	10	
No of students observed detail	20	6	5	4	27
Length in minutes	20 - 25	15 -20	15 - 20	15 - 20	n/a
Total time observed in mins	148	175	156	78	517

In the first cycle of phase two, observations were very detailed, and we observed 20 of the 30 students and these were randomly selected. We carried out an NCT analysis of the findings to create a semi-structured framework for use in the remainder of phase two. The use of the semi-structured framework was augmented by intermittent fully detailed observations. The period of observation covered 14 months, the entire timespan of the research; this was important to identify trends and to track the ways and extent to which students' learning behaviours had changed or altered or responded to coaching teaching strategies.

1.1.1.3 Process

The observations were carried out by five members of staff who were experienced in-class observers. Each observer had significant disciplinary knowledge of the area in which they were observing; this was important to ensure that the observer was equipped to form a judgement as to how the read material was being used by students. The detailed observations recorded included as much specific detail as was possible and aimed to capture the students' verbatim conversations and engagement with both peers and teachers. We decided that the most effective way to observe the students' engagement with specific aspects of the text was to record those parts of the text that were being annotated, highlighted or underlined or that were subject to peer-group discussion. Recording students' feedback to the whole class was important to ascertain those aspects of the text where students focused their attention, what they felt was important in the text and the ways that they communicated their meaning.

1.1.1.4 Sample - Coaching tutorial observations

Observations of students' learning behaviours within the coaching tutorial were carried out when staff were available; it followed that those students who were observed were randomly selected.

Table 3-4 Number of tutorials observed

Cycle	Number of students	Number of tutorials observed	Total number of observations
1	7	3	21
2	7	3	21
3	7	3	21
4	5	3	15
Total number of observations			78

1.1.1.5 Process

The average time of an observation was 18 minutes, these observations covered 11 hours approximately and were carried out over the timeframe of the research. For the most part, the observer did not engage in the tutorial; where this did happen, it is noted in the record. The recording sought to include the verbatim dialogue and student's learning activity as much as possible. Using the NCT interpretation paradigm, we devised a semi-structured framework for use in the succeeding cycles.

1.1.1.6 The activities of the coaching tutorial
> *How visual techniques and devices - thinking grids and writing frames were used.*

The learning intentions of the coaching tutorials were twofold, firstly, to document the student's thinking in a structured way that made salient their thinking journey and thus available for their reflection and scrutiny. The second aspect was to 'map out' and 'make 'visible' the component cognitive functions related to a given academic task and in so doing allow the students to 'see' for themselves the key aspects of thinking. For example, where students experienced difficulty in constructing an evidence based and critically considered argument. The teacher would support the student by constructing a diagram where they could outline their observations of an issue, formulate a hypothesis based on their (now visible observations) and locate this within the

critical literature relating to the subject. There is an example of this in appendix F, penultimate page, Appendix L, figure 5 and Appendix J, photographs 1 to 8 provides further examples of how students used dual-coded diagrammatic representations of their thinking. As Elton points out students need to be supported simultaneously through 'word and deed' (2010, p 157), and this is what we had sought to do in the coaching tutorials. While these cognitive operations may seem simple to many academics and teachers, the findings of phase one told us that this was not the case for the respondent students. Vulnerable students were more likely to describe their observations of an issue without taking the final step towards creating a hypothesis or reasoned argument, and this tendency also seemed to lead to disjointed and fragmented use of reference material.

The role of the teacher in the coaching tutorial was very much as facilitator and questioner. The ways in which we sought to make students' thinking visible varied from student to student and it was very much a shared and tailored experience between teacher and student. In many situations the teacher initiated the construction of the visual thinking tool but was focussed on enabling the student to develop the technique independently. This approach meant that grids or thinking diagrams were not prepared by staff in advance, to do so would have dislocated the students' thinking from its documentation. This was an important matter; the visual tools were constructed **with** the student and helped the student to create their own representations of their own thinking. To create diagrams in advance would place ownership of thinking with the staff member not the student. The contemporaneous documentation of the students' thinking became a crucial matter for the development of a shared thinking experience. It also allowed the teacher to modify their plans and adopt a much more nuanced approach to suit the students' needs at a particular point in time.

3.13.3 Students' marks and summatively assessed work

1.1.1.7 Intention

I considered students' marks as one way to consider the potential impact of the research, disappointment in marks was the primary focus of participating students and as such I believed it to be important to consider any change in outcomes. I did not intend to infer causation but to use student outcomes to observe patterns or configurations of student performance.

1.1.1.8 Process and sample

I took the mean average and range of students' marks in the academic year preceding the research. I then recorded the students' marks for each assessment for each module to the end of the research. This was the last data collation exercise that I undertook, and I did so when all other data collection had been completed.

I clustered students' outcomes in two ways; firstly, by Grade Point Average (GPA) at the end of the research into five broad bands reflecting grade boundaries of 10%. I aligned these findings of an analysis of the students' final piece of work with a view to identifying key characteristics and patterns and compared this to their final piece of work in the preceding academic year. Secondly, I clustered their average GPA *improvement* into four broad bands of 3% and contextualised the end-of -research student feedback (satisfaction) within this.

This allowed me to create a data set that holistically described the key objectives of the research; students marks, with the characteristics of their assessment writing practices, together with student satisfaction with their outcomes. I could then contextualise this within the findings of the other data sets. This allowed me to see the outputs of the research in a way which accommodated meaningful discussion.

3.14 Qualitative data interpretation and analysis

It became apparent early on in the research that the collaborative nature of the research, that is to say the involvement of the entire, multi-disciplinary education, department was a notable benefit to the interpretation of the data sets. In that, each member of the team brought a wealth of knowledge moreover, it was a valuable safeguard against my partisanship and my choosing what appeared to fit with my own conscious or unconscious ideologies. This may include unconsciously giving too much credence to a particular issue or insufficient to another. While we did need to consider 'group think' our varied professional backgrounds and professional experiences helped in this respect. For example, a social worker will consider perhaps different aspects of a student's performance than a nurse or secondary school teacher and in this way by harnessing the strengths of the department I sought to maintain critical distance from the interpretation of the data.

The high volume of qualitative data meant that the primary data analysis method that we adopted was a three-process described by Seidel (1998): NCT. The steps taken to analyse qualitative data are outlined below:

1. I transcribed (when possible) the raw data this included; notes relating to student interviews, observations, and student feedback[2] verbatim;
2. We jointly read the transcriptions, notes and student work seeking themes and patterns;
3. We made initial observations which were recorded on large sheets of flip chart paper creating loose categories and 'messy maps'

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[2] This was complete at the end of the research for this data

4. We reread the artefacts, checking those aspects that evidenced our initial observations;

5. This allowed us to form tentative but firmer categories;

6. We re-read a selection of not less than 20% of the artefacts;

7. We established key categories and subcategories;

8. We identified repetitive concepts;

These steps were applied to all qualitative data sources, including:

Phase One

1) students' interviews;

2) the analysis of student work [steps 3 to 8]

3) analysis of 1:1 support records [steps 3 to 8].

Phase Two

1) student feedback;

2) observation of tutorial;

3) observation of in-class reading behaviours.

The aim was to extrapolate meaning and understanding from the content and complexity of respondents' experiences (van Manen, 2007, Smith, Flower and Larkin, 2009). This approach meant that I developed a detailed engagement and interpretative knowledge of the artefacts. In-keeping with the interpretative approach, I paid particular attention to the language and conceptual content of the student feedback, seeking themes and patterns.

3.14.1 Ethical considerations - data analysis

There were ethical considerations to take account of when analysing and interpreting data. These related to the confidentiality of the data – this was particularly important given the collaborative nature of the research; for example, we needed to be very careful that student feedback or observations were not left on staff desks. Where we sent emails, they only included the research team. Furthermore, the secure storage and retrieval of data was

managed in accordance with college and the University of Westminster's policies and Data Protection legislation. Critically, to represent the findings of the data with integrity and give an accurate interpretation of the data was a particularly important consideration given the multi-dimensional nature of the data.

Chapter 4   Findings - Phase 1

In this chapter I set out the findings from the first phase of the research, I have considered these data in the light of the aims and objectives; in this phase this was to identify the extent of DO as a phenomenon within the department and more importantly to identify the potential issues that made student vulnerable to DO. There are four research activities represented and I have used a variety of presentation methods. Where there are relatively large data sets, they are in tabulated format, this includes the student survey, and the analysis of additional learning support records. Student interviews are presented using extracts from the interviews these are organised under the key themes that emerged from the NCT analysis. The analysis of student work is similarly organised to give a clear sense of the emerging issues that impact of students' attainment.

4.1   Phase 1 - Student survey

Table 4-1 Students' satisfaction with their summative outcomes

Level of Study	No. of students self-identifying	% of students in the year group	No who met all 5 descriptors of DO	% of the year group	Total number in group
Level 4	17	11%	16	10%	152
Level 5	17	13%	14	11%	128
Level 6	11	12%	9	10%	92
	45	12%	39	10%	372

Summary

Of the 372 students who participated in the student survey table 4 -1 shows in column 2 that 45 self-identified as disappointed with their outcomes and indicated that they might have achieved higher marks, 39 met all 5 descriptors of DO set down at the start of my research, as shown in table 4-1 column 4. Not all students who self-identified as being vulnerable to DO were included in the research; one student had less than 85% attendance and two students demonstrated fundamental misunderstandings of theory and content of the programme throughout teaching sessions.   The findings were in-keeping with the departmental original estimate of 10% of all students.   Level 5 and 6

students were slightly more likely to identify themselves as being disappointed with 12% of the entire group describing themselves thus.

Table 4-2 Students' perceptions of reasons for differential outcomes

Factor Identified	Frequency		
	Level 4	Level 5	Level 6
Preparedness of study at HE	15	12	8
Academic Literacy	15	12	7
Time availability	12	8	5
Volume of work	12	4	5
English as an additional language	5	2	2

Summary

Students did not locate the deficit with anything fundamentally associated with the programme or its delivery, the issues appeared to be outside their control were largely unable to change. Of the five issues identified four were outside the students' immediate control, their initial preparedness for study at HE level was the most frequently cited issue, followed by time, volume of study and English as an additional language. Academic Literacy, that is to say capacity to engage effectively with the literature of their subject together with their capacity to articulate their knowledge and understanding of their subject, was the only area where students could bring about change while on the course.

4.2 Phase 1 - Students' interviews

Three students were interviewed, and it was surprising the extent to which the trajectory of each students' interview was similar, and the issues that they described. Each student could describe their difficulties as well as how this manifested itself. However, it was apparent that they had little capacity to reflect on their learning in significant detail and all three discussed similar matters. Appendix D contains verbatim samples of the students' interviews.

1) All three students identified difficulties in early education that led to a lack of confidence, each student began with this information and it seemed to hold significant importance for their identity as an undergraduate

I. *Student A - I always struggled in school it wasn't like I didn't know what was going on, but I wasn't great at exams, and everything in school is about exams and you try, and others get all these great marks but not me. Teachers were nice but they'd say, 'oh but you one very good verbally' and leave it there. That didn't help me with exams ... it was like, 'so there's nothing else that I [teacher] can do for you' They talk about getting extra help, but no one wants that in school and being known as ***. It was embarrassing*

II. *Student B - I was always *** in school, I was sub-standard and always felt it… that's how it was for girls like me we were all the same no one where I came from did well in school, maybe some boys but not us.*

III. *Student C - When our school shut down they placed all the clever kids really quickly but I was moved to a PRU for a while but I was assaulted there by another girl so I was moved to a school for kids with learning difficulties … so I didn't go and no one noticed ... I was 15 by then anyway*

2) Students swiftly moved on to explaining how this impacted their engagement with their degree. Largely this related to the anticipation of similar difficulties

I. *Student A - It was the same here I hoped that I could put it [academic difficulty] behind me. I never thought in a million years that I'd get a degree, but I have, and I AM proud but it [academic experience] was the same again. Oh yes, the same old same old, it was so frustrating because I'd hoped I'd be different, but you are faced with the same things (challenges) every time. Every time it is the same.*

II. *Student B - When I started, I didn't know what I'd let myself in for … I knew it'd be bad; I mean not bad bad like the teaching's bad, but I am not that sort of person who does well. I was in the same group as MM, you just could see them flying ahead.*

III. *Student C – I knew that I'd be rubbish [studying for a degree] but something made me keep coming but it's hard when it's just you and a laptop ... and so, this is you... and you can't do it.*

3) Students began to describe and explain the specifics of their difficulties and related these with their literacy and language skills.

I. *Student A – It makes a misery of the degree, every time I hear something in class, I am just thinking how I am going to write this. I always understand the classes… I'm never confused [regarding content] but I just can't seem to get it down on paper. I'd sit there in class and all I could think about is how will I write this, how will I do it, ... then I'd hear something . I'd think that's just what I wanted to say I'd scribble it down, but I'd still be stuck, still sitting in front of a computer thinking how do I say this, … how in the end its all you think about how do I say it.*

II. *Student B - I always seem to know what I want to say but cannot seem to get it down in writing and am then told that I'm being descriptive but I don't know what else to write, I then run out of words I don't have to write in my job and when you are doing the NVQ qualification it's all observation, professional discussion and witness testimony. You do have to write but not anything really important. Sometimes I'd think yes I've got the hang of it and I'd be so happy, then I could write some but then get stuck again, .. and I hadn't got the hang of it after all …*

III. *Student C - XXX used to correct my English too I never had to use real language and worry about paragraphs or real grammar, but I was always getting corrected for it. At work I get XX to do the writing for me, I never bother why would I when it's not my strength. It's not like I don't know what to say, I just didn't know how to say it. We didn't know what you wanted anyway it was always a mystery…*

4) All students indicated that they had poor value from their reading could not understand the content of the material or conversely that the content was obvious and did not represent new learning.

I. *Student A - I did not know that there would be so much reading to do and that the reading would be so complicated, when we first started we were told that there would be a lot of reading at the interview I don't like reading the journals too much and they don't often make sense, just go read is not an answer to what we are asking, if we read less better than we would find the assignments easier to do. I found it boing and didn't learn anything… at work I could see it in front of me … all I needed to do was look out the window [at children in her school]*

II.   *Student B - It [using reference material] feels like we are copying and that it is not our work, we are just using someone else's work to get credit for ours, I thought that we should be coming up with something original and I still try to but to think of something that is original is hard and we're pressed for time. We should be told about the reading because you don't do it [read] anywhere else [in life] in work you don't learn in that way you can't just read about everything; the practice is more important. Sometimes I read and I say yes... yes, I know I know this already… so why am I having to read it?*

III.   *Student C - When we started the reading, we didn't know what to do with it and it was different than what we had done before normally we only read letters but it was difficult to understand what we read and we couldn't make sense of it, all the references in the reading made it very difficult to understand. I still hate reading everyone does if you ask anyone, they will tell you the same thing – we don't see the point of it I know that we need references but that is all we need the reading for. Mostly…. It's stuff we already know so why would are read about it.*

5) Two said that they were not equipped to make a judgement regarding the quality of their academic work.

I.   *Student A - I hadn't got a clue what marks I'm going to get I look at my work and it looks fine to me I think I've covered everything but then I get a fairly medium mark and I am disappointed because I thought that I'd covered everything in the essay and I must have to get a pass but then I have so, any tutorials and I still don't know how to improve my work*

II.   *Student C – It's impossible to tell (predict her mark) I mean you can do everything you're told but it's not enough – I cannot tell the different between mine and xx, but she got brilliant marks.*

6) All students indicated that they did not clearly understand what was valued in the new learning environment.

I)   *Student A – I had no idea what was expected, I just kept guessing, if you told me to do this then I'd do it, but if you told me to do something else, I'd be like, 'okay I'd do it.' I never saw an academic essay or heard of a theorist so how would I know ... but other people did work it out.*

II) *Student B – I never could get my head around what was good or bad, no one tells you, do it like this, how are we supposed to know ... so, you just keep going and find a way to get in the fifties (this is the % mark for assessment) I couldn't change what I did because I didn't know what you [teachers] wanted'*

III) *Student C - I'm not sure what I should have said, I don't think it matters what I think, I mean either he [the pupil] met the level descriptor [of the National Curriculum] or not, if he didn't, I need to go back, ... I mean I know why he didn't and why it didn't work for him but that doesn't matter ... he didn't so I need to find another activity for him.*

7) All students indicated that they could not understand or apply feedback effectively and felt criticised by feedback.

I. *Student A - The feedback didn't help much either, and it's not always the same [i.e. contradictory] one teacher will tell you to do something and the other will tell you not to. I could read it, but it didn't make sense, it's so vague and going around the houses … not specific, if you said do this here then I would have done it but I couldn't see how I could use it in the future. Anyway, who wants to read about how 888 you are…*

II. *Student B – 'when I saw 53%, I could have cried. I had worked so hard on that essay and in the discussions in class I had done so well and had often been asked to share my ideas, ... that's how it [cycle of disappointment] started... I did better in some things, but I didn't even have the heart to read the feedback I could not bear it.... especially when Jvvv who struggled all the time in class got such a better mark for that essay'* It *didn't seem to matter, of course I could read it but I was never sure how to use it [the feedback] in future or if I did then I was told that it was wrong. I just wanted to pass by the end, I knew what to do for that [to gain a pass] but I didn't know how to change it. Nothing seemed to work... it's just me.'.*

III. *Student C - I used to read the feedback but I didn't make sense until the 3rd year, it's disheartening, I put so much work into it and then nothing improves just the same sort of feedback and I sometimes cannot even bear to read it.*

8) All students indicated that they did not have a clear understanding of expectations academic writing or HE either before or during the course.

I. *Student B – I just wish that we were told what we had to produce, I looked at essays in the library, but it didn't help … actually, one thing that did help was when we marked other students work in class, (this is old essays more than four years old) that did help.*

II. *Student A – I found it difficult to understand what was needed I think that I knew my stuff but how to put it was the problem ... some people knew instinctively or got the hang of it but not me… I'd write and think, 'will they like this or not'. Sometimes I knew that I'd done a knowledge dump. Just write everything that I know but I knew that was not what was needed but I couldn't work out what was.*

III. *Student C – I kept wondering if there was a formula, I don't know how others worked out what to do but they did some people's work was amazing and you could see it was good but how did they know what was needed. I the end you just do what you always did at least I'd get a pass.*

9) All students indicated that they did not know how to carry out the advice from tutorials - advice was frequently similar throughout their degree.

I. *Student A: 'when I go to tutorials, I'm not sure what to ask, we are supposed to go prepared… and I do, I have never missed a lecture or miss reading a book, but I go and all we seem to do is go round and round the houses. I come away more confused; I can remember some ideas but not all'. Often, it's always the same, just the same but the staff will see you anytime, how late it is you can turn up*

'I wish that I'd said its [the tutorial] not good enough, 'this is what I am trying to say so tell me how I should put it?' I'd only need to have asked a few times and I'd have got it right, but I didn't admit that the tutorials were useless... it was not the teachers' fault I just did not know what to ask and I did not understand what I was being told'.

II. *Student B - Tutorials were okay, I would not have kept going without them because when you are desperate you have nowhere to go… the tutors were great and would always see you even if it was the day before (submission deadline) so I wouldn't like to see them go (be removed from the support mechanisms)I could do so much at a time but mostly if I didn't do it straightaway, I'd forget. I mean you always get told the same thing but it's*

difficult to know what to do with it (advice) ... it makes sense in the tutorial…
mostly… but afterwards it just not there and I can't remember it.

III.   *Student C – tutorials kept me going. XX saw us anytime or would contact me*
back even late in the evening they were so kind ... just, but they didn't really
help in the long run… I'm not complaining but you'd come out and think what
was that all about or it's always just the same things. The format wasn't right.
'It just becomes a huge mush of words ...   I couldn't make sense of it ... I
couldn't see what I am saying; I just wanted to get it done' You have to go in
there with questions ... which is okay but I didn't know what to ask and I didn't
understand what I was being told. I should have said, this is what I am trying
to say help me to say it.'

10) Two students commented that they disliked ambiguity or uncertainty in teaching.

I.   *Student B - The thing that everyone hates is wishy washy teaching it goes*
around and around but never gets to the point of what they are going on about
so we just lose interest in it and we never get a straight answer for anything or
it is different and it is ok to be asked another question it you ask one but I get
the impression that sometimes they don't know the answer, and you get
another vague and wishy washy answer

II.   *Student A – I know that there are no easy answers, but I couldn't get any head*
around why something could be just said plainly and not full of ifs, but and
maybe we just needed to be given books that said, 'this is it…. get your head
around it'

11) Two students finished by discussing other strategies that they found helpful.

I.   *Student B - Being made to write in every class and don't let us go off the point*
and when we feedback, we can only read what we have written so we sound
like you [teacher] and think,

II.   *Student C - An example of a plan was really helpful I could see what to do with*
it, the stick diagram is really useful to help because there is so much to
remember, and so much research, so when I did my plan in file paper and

sellotaped it together on one big piece it was a huge roll but I knew what I had to do.

4.2.1 Summary

All three students identified unsatisfactory early educational experiences at the outset of their interviews, this seemed to be key in their identity as a learner, all three swiftly moved on to describe how this manifested itself while studying for their degree. All three students anticipated academic difficulties if not failure and seemed to have few tools with which to improve their opportunities. There a palpable sense of disappointment in at least two students' voices, where it seemed that they had hoped that their experience might be different and better but clearly, they still felt disappointed. The remainder of the discussion focussed on assessments and their performance. All three moved quickly on to identifying language as their primary difficulty, and at least one conflated this with social class. Standard pedagogical practices seemed to have little value for them, in that both saw assessment feedback as having little use for them and tutorials, while meeting the most basic needs of retention, did little to address long-term learning needs. The only criticism of teaching lay in their need for unequivocal knowledge that was not open to interpretation, two students spoke at length on this topic and made it clear that they saw the nebulous nature of theory as unhelpful and confusing. Towards the end of the interviews, students became more reflective and indicated that their difficulties may have stemmed from a poor understanding of the expectations of writing in HE and that this had remained so throughout their studies. Students spoke about those aspects of teaching that they valued most towards the end of the interview and these were focussed on co-located thinking opportunities and the opportunity to use alternative support tools for writing. In both cases they were focussed not on learning but developing the skills necessary to complete assessment tasks.

4.3 Phase 1 - Analysis of students' assessed work

The analysis of assessed work provided an opportunity for staff to consider in some detail the ways in which unmet learning need might manifest itself in the

students' essays. Although all the work had been marked previously this collegiate analysis was very useful in sharing our thinking and creating a more thorough understanding than marking would have done. It became clear that much of the student' work exhibited similar issues. These are outlined below.

Structuring of Written Work

In 7/9 pieces examined the work did not have an identifiable structure. Introductions were either absent or where they did exist, they were not referred to throughout the remainder of the text. Conclusions were not constructed in the way that might have supported the essay, 7/9 had several long citations and 4/9 introduced new material. The organisation of the students' work was exacerbated by their use of non-standard English; in 7/9 pieces paragraphing was fragmented in that some paragraphs were as short as one sentence, or very long up to 700 words. Sentence structure was not consistent with Standard English and more complex language was misused. These factors had the impact of obscuring meaning and fragmenting any arguments that the students were trying to make, as such their marks were impacted negatively.

Students' Use of reference material

In the majority of student work reference material, while reasonably relevant to the module as a whole, was not used effectively. There appeared to be 4 fundamental issues related to this;

1) 9/9 samples students only used reference material to substantiate a personal perspective rather than to deepen or explore argument;
2) 6/9 pieces of work the cited reference material was used as a very short quotation that did little to progress any discernible argument;
3) 5/9 scripts quotations were arbitrarily inserted in the text with little use being made of them;
4) 72% of quoted reference material did not directly relate to the point that the students seemed to be trying to make, more it was loosely related to the topic under discussion.

Criticality and Conceptual Thinking Skills

In 6/9 scripts examined there were long repetitive descriptions using multiple examples of either work-based practice or of theoretical frameworks. Students would reiterate and describe the essays' appendices. This precluded any meaningful critical analysis within the work and did not carry evidence based critical and reasoned analysis. In 3/9 samples students who did demonstrate a sound understanding of the conceptual frameworks seemed to experience difficulty in applying theory to practice. Their work was characterised by a long, heavily referenced descriptions of theory but this was not applied to the appended work or the essay title.

However, there are two features of their work that evidence conceptual thinking. Firstly, fragments of critically based reasoned arguments were evident randomly throughout the work. They were presented as overly short one or two sentences and there was no development or interpretation and the point did not relate to the surrounding material. The second factor that indicated that students were thinking conceptually related to an issue of consistency or a discernible pattern that emerged within the descriptive parts of their work. In that a student would cite several examples of a given phenomenon but would stop short of identifying the common feature and interpreting this to make a reasoned conceptual point. For example, in student's discussion regarding the theory of instrumentalism in mathematical education she cited five separate examples of children learning in an instrumental way without once mentioning the concept of instrumentalism. The student went on to cite a further three examples of children learning within the converse model of relationalism, again without citing this concept or drawing a reasoned interpretation from these. This pattern was found throughout 50% of the work that was identified as being descriptive and was evident in 6/9 scripts considered.

In 7/9 samples there was a lack of the students' own voices or conversely in 2/9 samples the work was written as a polemic that would not withstand

scrutiny. In all samples the level of work was only just at or below the level at which they were studying.

Comparison to Appended Work

5/6 essays had valuable and thorough work contained within the appendix, were this work to be graded it is likely that it would have been graded between 10% and 22% higher than the assessed written report. In the sixth piece considered the appended work was detailed and contained valuable work but did not have the breadth required, the work was poorly focussed on the requirements of the assessment task nonetheless, it was at an appropriate level.

Reasons for Referrals

3/9 essays did not cover each learning outcome adequately as such they were referred

3/9 essays were below the expected level for the course, of these 2 did not cover each learning outcome adequately.

4.3.1 Summary

One of the most obvious issues relating to students' work was high levels of description. They demonstrated little capacity for forming coherent reasoned argument or to engage with the conceptual frameworks of the discipline and apply these to a given situation. The consequence, of this was that student' essays read as long descriptions of theory or, more frequently, the paraphrasing of lectures or their appended work. This seemed to be exacerbated by erratic use of reference material, citations did not seem to be relevant to the matter they were attempting to discuss. Tellingly, the quality of appended work was far superior than their essay. Additionally, students use of standard English was poor and this obscured and fragmented their meaning. The combined impact of these matters was that it would be difficult for a marker to follow their line of enquire and relate a given aspect of the essay to the learning outcomes of the module. In some cases, it appeared that some

learning outcomes had not been attempted in the essay while others were given a disproportionate attention.

4.4 Phase 1 - Analysis of 1:1 support records

Table 4-3 Purpose of support session

Frequency	Focus of Support Sought by Students
60/60	Support for module specific assessment tasks; e.g. child observations
60/60	Uncertain indications that they were 'stuck', could not progress, could not complete the work
51/60	Assurance that the assignment would PASS at least
49/60	Advice as to whether that had covered the module learning outcomes or not- there was no evidence that the students could make this decision themselves
53/60	Reference material was relevant or not.
50/60	Students took assessment text to the support session – many wanted the teacher to read the work in the session – the teacher in most cases tried to read at least some of the work
15/60	Plans were presented at the session – few specific
0/60	Understanding of the module learning outcomes, or expository texts
0/60	Discuss the key arguments that they sought to make

Table 4-4 Period of time between tutorial and submission date

Frequency	Timeline
45/60	Within the week preceding a deadline 1st request for support
10/60	During the deadline week
7/60	On day of submission
8/60	More than one week in advance of the module submission date

Table 4-5 Length of tutorial

Frequency	Length
32	approx. 15 minutes
21	approx. 20 minutes
7	approx. 25 minutes

Summary

45/60 of additional tutorial sessions took place within 9 days of the submission deadline in most of these students had fewer than 700 of an average 3000-word essay written. All had their appended work fully complete; a further 7/60 tutorials took place on the actual day of submission. In general, the tutorials were short with very few taking place for more than 15 minutes, average number 4 additional tutorials, maximum number was 5 minimum number 2.

Table 4-6 Nature of support requests

Three case study students across all 3 years of study

	Non-Specific			Referencing			Coverage of LOs			Adequacy of Work		
	Year of Study			Year of Study			Year of Study			Year of Study		
	1	2	3	1	2	3	1	2	3	1	2	3
Student D	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Student E	Y	N	Y	Y	Y	N	Y	Y	N	Y	Y	Y
Student F	Y	Y	Y	Y	Y	N	Y	Y	N	Y	Y	Y

4.4.1 Summary

Analysis of the three case study students showed that all three sought support for a similar range of difficulties at tutorial and these learning needs continued throughout their degree.   These matters were directly related to the assignment tasks rather than skill or knowledge based.

All sought to understand:

1. whether or not their work would achieve a pass grade, they did not seem to be able to make this judgement for themselves,
2. the relevance of their reference material
3. a request for help as a consequence of being 'stuck' and not knowing how to progress.

The issues that were conspicuous by their absence were that no student came to the tutorial with a discernible plan or specific questions. Given that these students were self-professed to be disappointed by their marks, there was no evidence that they sought ways to improve their understanding of the module. The only specific request was where students clearly wanted to know if the work was likely to achieve a pass grade. Teacher engagements with students during these tutorials were very heavily based on traditional, 'request and responses' paradigms where the student would approach with a given set of issues and the teacher would respond to these verbally and in a way that was referenced to academic study and the content of the modules. They were dialogue based and heavily focussed on intended learning outcomes of the module. It was clear from the data in table 4 - 6, rows 3 to 5 that despite the

additional support that the students were given over the period of their degrees that they exhibited similar learning needs throughout their degree.

4.5 Overall summary of findings – phase one

The pattern that emerged from phase one of the research seemed to point to a cycle of learning behaviours which students became part of very early on in their degree, these are illustrated in Figure 5 - 1 below. Many of these learning behaviours were underpinned by a negative self-identity as a student and a difficulty in building academic confidence. These difficulties very quickly manifested themselves in students not achieving the best possible outcomes for their assessed work. It seems that students worked in isolation and developed ineffective survivalist learning behaviours - they entered a cycle of negativity that they found very challenging to break. The diagram on the succeeding page describes their trajectory to academic vulnerability and DO.

Figure 5-1 Cycle of student learning behaviours and academic performance
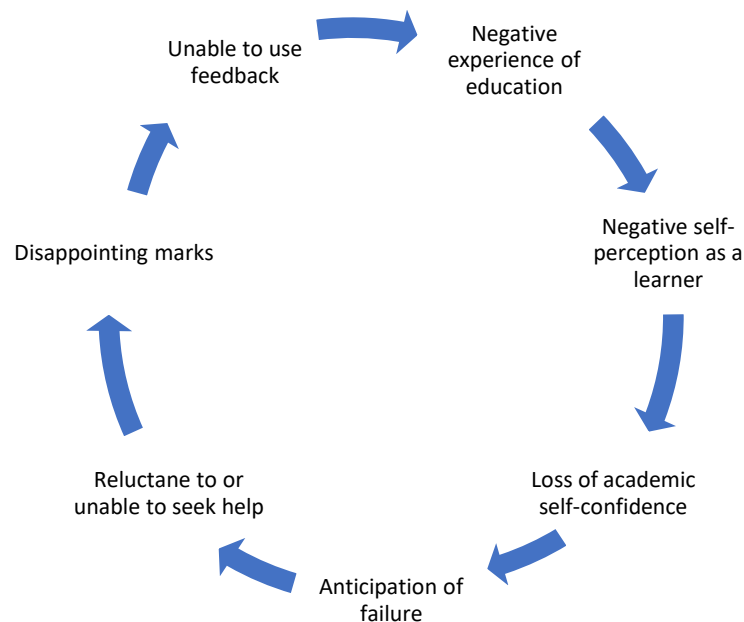
Underpinning this cycle several contributory factors became apparent;

Several contributory factors became apparent that underpin this cycle. The findings of the students' interviews (chapter 4, section 4.2) demonstrated that

prior to enrolling on to the course, all three interviewed students anticipated academic problems and they specifically related this to their negative earlier educational experiences. None had communicated this anxiety to the curriculum team at interview, for fear of being refused a place on the course. They also seemed to have difficulty in accurately self-assessing their learning needs and associated their difficulties with their literacy skills. They indicated that they had a long-term dislike of reading and literacy-based activities. These issues appeared to be exacerbated by a sense of alienation within the learning environment; all three students who were interviewed expressed anxiety, citing uncertainty of expectations before and during the course.

As a result of this information I consulted students' Basic Literacy Level tests that had been carried out on entry to the course and while this showed that the majority of students within the subset held relatively low literacy skills, as a group, they were 5% lower than their peers using the Adult Literacy Scale. This is not statistically significant, given that there is a 12% range across a given entire student intake, in essence their literacy skills were no better or worse than the full cohort of students.

When the interviewed students were studying on the course, their situation was exacerbated by their difficulty in using feedback; during interviews student unequivocally stated that they could not use feedback effectively. Firstly, they felt criticised and secondly, they could not understand its meaning and did not know how to apply it to a new assessment task. Students further indicated that they could not use tutorials effectively and that while they could usually follow the discussion during the tutorial, it made little sense to them thereafter. They believed that the tutorial record, while detailed, had little useful meaning for them and they could not relate to it usefully after the tutorial.

Students' anxiety seemed to contribute to a loss of agency over their learning that led to ineffective learning behaviours, and these appeared to perpetuate their difficulties. There was evidence of this in the end of year student survey, (table 5 – 2, rows 2 to 5) showed that respondent students looked to external or inherently unchangeable factors as the source of their difficulties. This

would seem to indicate that they did not perceive the solutions to lie within their own actions. Also, the examination of 1:1 additional support (table 5 – 3) records showed that students frequently had up to five additional support sessions for each module of the course; most were within the week of a submission deadline and in one case a student had completed just 245 words of a 3000-word essay on the day preceding the submission deadline. It seemed that students adopted learning behaviours where they became part of a cycle of negativity; their outcomes were disappointing and did not do justice to their apparent potential. This led to a further erosion of their confidence and less capacity to adopt agentic learning behaviours.

This is not to suggest that students did not have support needs; they generally did not demonstrate the tacit thinking skills of criticality, conceptual thinking, reasoned argument, or synthesis in their written work. Much of their work was below the level of the course but the reasons for this were not clear particularly since their appended work was at an appropriate level or indeed above. This was exacerbated by low basic literacy skills, while not significantly below the cohort this factor is likely to be unhelpful for students. No interviewed student had external support mechanisms this led to isolation and dependency on teachers. Students frequently located their learning needs with language and literacy this in itself created difficulty in seeking help effectively.

Chapter 5   Discussion – Phase 1

5.1   Introduction

In this chapter, I discuss the findings of phase one, I have set out my discussion to reflect the way I made sense of the findings together with the ways in which the findings and their interpretation influenced the second phase of the research.   There are three sections to the interpretation, each representing the key themes that emerged. In each case, I give a brief outline of the findings relating to themes; I then follow this with a more detailed interpretation of the impact that this had on students' learning behaviours.

The three main themes that emerged from the findings were:

1. academic confidence as HE students,
2. students' critical and conceptual thinking skills,
3. academic and basic literacy and its development.

These are discussed in the following paragraphs.

5.2   Academic confidence and self-identity as HE students - the impact on learning

5.2.1 Summary

Negative self-identity, under-confidence, and anxiety seemed to influence several aspects of students' learning behaviours, and led to:

1. an anticipation of failure, loss of academic control, difficulties with self-assessment and self-regulation;
2. poor use of feedback and inability to see it positively;
3. little reasoned argument and the loss of their own voice in their work.

These issues are discussed in the succeeding sections.

5.2.2 Anticipation of failure - loss of academic control - difficulties with self-assessment and self-regulation.

Anticipation of academic difficulty was a notable feature in student feedback and seemed to impact their capacity for agentic learning behaviours, self-assessment, and self-regulation. The studies of Cassidy (2011), Batchelor (2006) and Morley (2012) relating to student attainment highlight academic self-confidence as a key element of academic success. Batchelor argues that low academic confidence leads to the anticipation of failure, and this manifests itself in a 'paralysis carried forward from the past thus eroding the capacity to work in the present past' (Batchelor, 2006, p 798). This contributes to a further loss of agentic learning and the externalisation of academic control, this theme was clearly observed in the students' survey (table 5- 2); of the five issues identified, four were outside the students' immediate control. These included their initial preparedness for study at HE, time available to study, volume of study and English as an additional language. Academic Literacy was the only area where students could bring about change while on the course. Central to Batchelor's argument is the view that students need to feel that they can influence their own outcomes, but it is evident (table 5 – 2) that the respondent students did not feel they could do this. This may indicate, by extension, that the students do not see the solution lying either within their own learning behaviours or through any given teaching strategy.

The issue of locus of control beliefs reflects the findings of Perry (2003) who, drawing on the work of Bandura, warned that the students' control of their learning and their explicit understanding of this is critical to their academic success. Key to his argument was that students needed to believe that they were capable of achieving their intended outcomes. This resonates with the findings, which were in some ways contradictory; if students anticipated failure based on earlier negative educational experiences and felt that there was little that they could do about their level of attainment, it was less likely that they would be motivated. They may result in a defeatist approach to the situation. Moreover, if this subset of students were inclined to look beyond those factors

that they could control, it might belie a characteristic of their motivation that in turn could contribute to differential and disappointing outcomes. This finding was reinforced through the in-depth students' interviews. All three interviewed students had identified poor levels of attainment in their earlier education and again on the course and described their own academic capacity as fixed and immovable. Yet, all respondent students had remained on the course, all had met deadlines, and all had good attendance and participation at taught sessions and had sought additional support to complete their assessed work as best they could; this describes motivated, rather than demotivated students.

To understand this more fully it is important to consider the circumstances of the survey and in-depth interviews. Both research activities were carried out with students who were reflecting on their learning experiences and who were self-professed to be disappointed in their outcomes. They were motivated and had tried very hard to improve their marks, but this had only measured success simultaneously they had seen other similar students make good progress and achieve well. It is unsurprising that they concluded that their difficulties lay with their own fixed capacity or unchangeable external matters. This interpretation drew me more towards the matter of self-assessment and self-regulation as a key factor, rather than motivation per se. Orsmond and Merry (2013) raised the issue of DO in relation to self-assessment and acknowledged that high-achieving students were better equipped to make accurate and purposeful self-assessments. This argument suggests that an underlying issue is located in the extent to which students were equipped to self-assess their learning needs and adopt effective learning behaviours. While the respondent students were motivated and generally hard working, they may not have had the skills or knowledge to understand or self-assess their own learning needs together with the expectations of the learning environment. Thus, locating the cause of their difficulty externally.

It seemed that the precise nature of the students' learning needs evaded both staff and students because while students did seek support, the evidence of the tutorial analysis (table 5 – 3, row 2) told us that they could not communicate

their needs or regulate their own learning. It is unsurprising that students located their difficulties with fixed aspects of themselves as learners or largely unchangeable external factors.

Orsmond and Merry (2013) and (Cassidy, 2011) outlined a further dimension of self-assessment and associated self-regulation. They argue that the capacity of students to understand and self-assess their own learning needs is the first step in taking action and this assumes that the students understand the expectations of the learning situation together with their own learning processes. Given that the interviewed students clearly stated (chapter 4, section, 4.2, (8)) that they felt disorientated and that the learning environment was different and unknown. They stated that they did not know what they 'had to produce', they seemed to be the 'outsider' (Smit, 2012, p 375) to the discourse and they could not self-assess their own learning needs within the HE learning context. This may have contributed to the trial and error and the eventual reliance on survivalist behaviours and the recurrence of fundamental difficulties with assessment tasks that were found in the analysis of their work and their attempts to seek help.

This seemed to lead to a situation where students did not seek effective support for their academic skills, either because they did not recognise their own needs or what help to ask for specific to the context that they were learning in. The evidence of the tutorial record analysis (table 5-6) showed that the students sought support for similar issues throughout their degree and that these were low-level, task-specific issues such as the length of citations or the number of parent interviews, rather than skill or argument orientated. This would suggest that they did not recognise their underpinning learning needs. Equally, this would suggest that staff did not recognise this learning need and that we too seemed to have addressed symptoms rather than causes. This situation was recognised by some students; for example, Student A said:

> 'when I go to tutorials, I'm not sure what to ask, we are supposed to go prepared… and I do, I have never missed a lecture or miss reading a book but I go and all we seem to do

> is go round and round the houses. I come away more confused; I can remember some ideas but not all'.

When prompted further this student stated:

> 'I wish that I'd said its [the tutorial] not good enough, 'this is what I am trying to say so tell me how I should put it?' I'd only need to have asked a few times and I'd have got it right, but I didn't admit that the tutorials were useless... it was not the teachers' fault I just did not know what to ask and I did not understand what I was being told'.

This response demonstrates that the student located her difficulty in her capacity to both identify and articulate her learning needs, but equally demonstrates that the many extra tutorials she sought were ineffective. As such, the student remained vulnerable to a cycle of DO and ultimately blamed herself.

5.2.3 Poor use of feedback and difficulty in seeing it positively

Unmet learning need led to lower than expected marks; this diminished students' self-esteem even further and because the student perceived assignments as a test in which they had 'failed', they equally perceived feedback, no matter how diplomatically constructed, as criticism. According to Orsmond and Merry (2013) students' use of assessment feedback is a key feature of self-assessment, they found that high achieving students make productive use of feedback, whereas non-high achieving students do so less effectively. They explain two aspects of this, firstly; non-high achieving students used feedback at a superficial and reductive level and did not demonstrate the capacity to tolerate variability in lecturer's styles. Critically, they argued that students were unable to transfer feedback into different situations and new assessment tasks. Secondly, drawing on the work of Hattie and Timperley (2007), they argue that because feedback is a consequence of performance, an academically unconfident student is unlikely to receive feedback with confidence and make good use of it. They posited that the

combined impact of feeling criticised as well as being unable to transfer feedback to new contexts, limited students' access to an important self-assessment tool and thus they remained unaware of their own learning processes.

Student interviews indicated two reasons for students' difficulties in using feedback; the first reflected the issues that Merry and Orsmond (2013) identified relating to the perception of criticism. The students' view that assessment tasks served only as a test of knowledge, with the binary outcomes of high achievement or not, did not serve her well when considering the teachers' commentary. This, together with a legacy of anxiety, meant she was unable to engage effectively with the feedback and referenced her achievement externally to the perspective of others.

The second reason for students' difficulties in using feedback reflects a deeper academic issue. In that feedback is, as is the nature of academic discourse, framed through the lens of conceptual and abstract thinking and this may create a problem for some students. This was clear in Student 2's interview,

> It didn't seem to matter, of course I could read it, but I was
> never sure how to use it [the feedback] in future or if I did then
> I was told that it was wrong. I just wanted to pass by the end,
> I knew what to do for that [to gain a pass] but I didn't know how
> to change it. Nothing seemed to work... it's just me.'

This closely reflects MacLellan, (2005), Billing, (2007) and Heikka and Lonka's (2006) findings relating to conceptual thinking in HE; each refers to the situation whereby conceptual knowledge is encoded and structured so differently that students cannot recognise meaning and consequently cannot transfer it to a new context. The analysis of the students' work indicated that respondent students were still developing the skill of thinking and writing in a conceptual way, as such feedback framed within the conceptual frameworks of the discipline is not likely to be useful to the student. All three interviewed students indicated that is only when discussing their feedback with a teacher

that they began to see why their mark was disappointing and identify ways that could have improved the work, yet they could not transfer this understanding to a new essay or assessment task. Either situation, the perception of criticism or difficulty in understanding the meaning of feedback, or a combination of both, left the student unable to engage usefully with their feedback.

5.2.4 The development of reasoned argument - the student's valuing of their own voice

The vulnerability of the students' voice is discussed by Morley, (2012), Batchelor (2006) and Kierkegaard (1989), who posited that as students sought to escape a previous negative educational identity that they risked developing the 'imitative voice' (Batchelor, 2006, p 798). This view spoke to the findings of the research; the analysis of student work showed that much of their work (chapter 4, section 4.3) was descriptive or a reiteration or description of work appended to their essay, absent from the essay was independent reasoned argument. Where students did independently form critically based reasoned argument, it was either tentative to the point where they were almost indiscernible; or, on the opposite end of the scale, it constituted emotively based over-concluded assertions that did not withstand scrutiny. Student interviews reflected this issue, when assignment feedback suggested that *they find their own voice*, they reported to be non-plussed and generally there was little emerging evidence that students understood that they had to bring independent thinking to their discipline. An example of this is Student 3's response when discussing a curriculum plan for the implementation of the National Curriculum in KS1,

> I'm not sure what I should have said, I don't think it matters what I think, I mean either he [the pupil] met the level descriptor [of the National Curriculum] or not, if he didn't, I need to go back, ... I mean I know why he didn't and why it didn't work for him but that doesn't matter ... he didn't so I need to find another activity for him.

This comment would seem to indicate that the student was focusing on the child's learning exclusively and while she could form a well-reasoned judgement, she did not use it in her essay. This may be because she did not value her voice sufficiently or, did not know to include it, or did not know that this would be of value within the essay. The consequence was that in her assessed work she is likely to have described the activities that she had devised for the child in some detail but did not conclude or form a reasoned argument about children's learning.

5.3 Abstract and conceptual thinking skills

5.3.1 Summary

A complexity that appeared to underpin much of the students' obstacles to higher levels of achievement was their capacity to demonstrate the tacit critical thinking skills associated with study at levels 4 to 6, and in particular, abstract and conceptual thinking. It followed that the students' assessed work was descriptive, not structured on thematic lines, had little coherent argument and was poorly organised, this was exacerbated by poor use of reference material. This pattern had remained throughout their degree. However, the detailed analysis of the students' work (chapter 4, section 4.3) demonstrated that respondent students were thinking conceptually and that this was underdeveloped rather than absent. It was not clear why this fundamental skill remained underdeveloped throughout the course for respondent students. My professional experience told me that few students enter the programme with well-developed conceptual thinking skills but the evidence of progression and high completion rates (see chapter 1, section 1.8) would indicate that the majority of students did develop these skills. It was unclear why respondent students did not.

5.3.2 Reflection and meta-cognition

To try to understand the reasons why students did not make significant improvements throughout their degree, these findings need to be considered within the context of two other results; firstly, the respondent students did not seek additional support until very close to the submission date; (table 5 – 3)

shows that less than 25% of any given essay presented at tutorial were written within a week of the submission date and the majority of additional support sessions were 15 minutes. This gave both staff and student a contracted and highly pressured timeframe in which to work; consequently, support became focussed on task completion rather than engagement with the more nebulous and conceptual aspects of the work that might bring about more long-term benefits. This working pattern is also likely to preclude the opportunity for critical reflection on assessment tasks and knowledge acquisition more generally. Student 3 viewed it in this way, 'It just becomes a huge mush of words ... I couldn't make sense of it ... I couldn't see what I am saying; I just wanted to get it done'. (Section 5.2.9. iii). As such, she did not have the opportunity for reflection and critically she did not get the full value from the writing experience to use going forward. In essence, the assessment experience became dominated by task completion.

Bereiter and Scardamalia (1989), in their research, maintained that where the student focusses on task completion they miss the opportunity for 'intentional learning', (Bereiter and Scardamalia, 1989, p 361) which they posit requires both a deliberate and conscious effort to make sense of, and learn from, a given task. In a similar vein, relating to the potential for learning from a written assessment task, Bjork et al. (2003) drew on the work of both Porksen (1994) and Bean (1996) to illustrate the relationship between writing, thinking and learning.   He argues that, 'Writing promotes thinking, learning and communication; writing expresses the self of the writer;' (Bjork et al., 2003 cited in Bean, 1998). This view indicates that the cognitive functions associated with the process of writing promotes learning; that the act of writing is meta-cognitive and creates further opportunity for learning. The deliberation and intentionality described by Bereiter and Scardamalia (1989) is a critical factor and combines the writing experience described by Bjork et al. to give the student a deeper understanding of subject matter. However, the contracted timeframe within which respondent students completed their work would largely preclude any such reflection or meta-cognitive activity. This is likely to have diminished the opportunity to gain from the written assessment

experiences cumulatively throughout their degree, thus leading to a perpetuation of significant learning needs.

5.3.3 Students' perceptions of knowledge

A second matter that may have precluded effective learning progresses relates to a mindset that the students seemed to hold relating to knowledge. Students' interviews, (chapter 4, section 4.2) indicated an almost debilitating intolerance of ambiguity either in teaching, feedback or the reading of expository academic texts. The need to avoid any ambiguity within their discourse may have made them less inclined to consider the nebulous and equivocal theoretical aspects of their course. Instead, they may have sought the security of describing their appended work. With little time to reflect and consider their assessed work at a meta-cognitive level, it seems that students did not give themselves sufficient opportunity, or have the skills to, critically reflect on and evaluate their own essay; this in turn may have made them more dependent on describing their appended work. Because the students' experience of writing for assessment was fraught with anxiety, avoided ambiguity and was compacted within a contracted timeframe and without the opportunity for reflection, it was unlikely to contribute to the incremental development of conceptual thinking skills or enable the development evaluative and meta-cognitive skills.

5.4 Academic and basic literacy

Clarke (2005) in the USA, Pletzen (2009) in South Africa and (Lea and Street, 1998) in the UK all found, to a greater or lesser degree, a similar set of circumstances in their research relating to academic literacy. Bjork et al. (2003), writing from a European perspective, found two principal features in his research results; firstly, that many students did not have the fundamental mechanistic skills of reading or writing at a deep level. Secondly, that students did not appear to understand the symbiotic relationship between reading and the development of critically based academic writing. Both of these aspects spoke to the findings, in that students told me that they both disliked reading and writing and got little value from either activity. This was of particular concern to me, as students did not seem to understand the symbiotic

relationship between reading and writing. No interviewed student had understood that they would need to independently use research to inform their thinking and writing prior to enrolment. They indicated that they were concerned only about how read material might be used in essays or reports and they only read for assessment purposes. It is therefore unlikely that they would approach the reading task with the view of learning broadly and deeply, as such they are unlikely to get significant benefit from their reading. It followed that students used a narrowly focused range of reading material and took a limited view of its usefulness. The analysis of student work corroborated this, showing that reference material was misunderstood, and assessed written work was permeated with either short or very long quotations, many of which were not directly relevant to the learning outcome or point under discussion.

As with the development of conceptual thinking skills it was unclear why the students within the subset were not making progress in reading expository texts when their peers did. However, given that the critical literature of a discipline will be written largely for and about abstract and conceptual frameworks of the discipline, without fluent conceptual thinking skills (see chapter 4, section 4.5) the respondent students would find it difficult to understand the deeper conceptual meaning of the text. Maclellan, (1997) uses an analysis of Kintsch's (1988) 'situation model' (Kintsch 1997, cited in Maclellan, 1998, p 278) to argue that the students' barriers to reading are effectively located in the unfamiliar and abstract nature and structure of academic expository texts, and this is worsened by students' mental representations of their extant domain knowledge. Respondent students tended to seek unambiguous certainties of knowledge from their reading material; this created a significant misalignment of purpose between the reader and the probable function of the read material. Students seemed to be seeking something fundamentally different from what the text was likely to be offering. Maclellan (1997) went on to argue that some students are so alienated that they were unable to bring their own extant knowledge to the reading task. It followed that even where students could understand the text only within the

parameters of the read material and as such their learning became atomised and difficult to transfer to new situations.

Given the evidence that students had some difficulty in thinking effectively at conceptual and abstract levels, it is unsurprising that respondent students do not engage effectively in, or place value on, reading tasks. Moreover, even if they did successfully read for deeper understanding, their capacity to use this in their essays is predicated on their ability to fluently apply and transfer the principals of the conceptual frameworks to their assessed work and to communicate this understanding confidently. Because this group of students experienced some difficulty with basic literacy skills even if they did have the tacit understanding, it is less likely that they would have been able to grasp and communicate their meaning efficiently.

5.5   Conclusions - Phase one

This phase of the research did not give a clear explanation of why some students are vulnerable to DO and others not, or why most students within the department make a smooth transition to HE studies and acquire the necessary academic skills and other students do not appear to do so. The issues outlined in the discussion above are not unique to the students within the subset; anxiety is pervasive across many student' groups, as are low level literacy skills. Few students on the programme have external support nor do they demonstrate the tacit thinking skills of conceptual analysis or critical thinking on entry to the programme. The difference being that while the significant majority of students on the programme make good progress in their learning and achieve well, the students within the subset appear to make far less progress than their peers.

The only specific issues that was unique to this group of students was underdeveloped conceptual thinking skills together with very low levels of academic confidence, this issue was evident throughout student interviews (section 5 - 3).The consistency with which students discussed issues related to academic confidence and the fact that they volunteered information

regarding early educational disadvantage at the outset of their interviews seems to indicate that it was formative in their view of themselves as learners. There were other data that seemed to indicate a lack of academic confidence; the analysis of students' assessed work showed almost a complete absence of the students' voice and the data from the analysis of 1:1 additional support records, demonstrating high levels of teacher dependency. The extent to which this feeling of negativity was caused by, or a result, of their feelings of helplessness is uncertain; however, the findings of the student survey (table 5-2) showed that students did not seem to see the solution to their issues as lying within their own, or the department's actions. Additionally, students unexplained difficulty in reading, writing and thinking conceptually created a substantial limiting factor in their progress. This issue appeared to be exacerbated by slightly lower than average basic literacy skills and, more importantly, students attached a disproportionate importance to their literacy skills.

5.6 Framing the challenges - rationale for the research actions

The department believed that there were some key considerations for the research when considering the findings. While we needed to bring about swift and positive changes for students, at the same time we also needed to resist reductive models that sought only to address the manifestation of learning need. We felt this would be self-limiting in that it would not enable students to fully engage with the wider range of skills necessary to engage independently with study at this level. We perceived the students to be in a double bind, in that they had difficulty in acquiring knowledge through reading and even when they had they had done so, they had difficulty in synthesising this with their own mental representations of knowledge and, ultimately, communicating it efficiently. We were also mindful of time pressures as the academic year was advancing and so we sought to make progress as soon as possible.

5.6.1 The key considerations:

1. I did not understand why some students found reading of expository texts so challenging and why they had such little value from it.

2. Students stated that they did not find tutorials helpful; they could not retain the details and the notes they did make could not be used effectively by them after the tutorial. This had been the department's primary response to unmet learning need.

3. Students' writing and thinking skills made little progress throughout their degree in comparison to the level of apparent effort and the amount of support that they received, to continue with our current approach, I felt, would be futile.

4. Students completed much of their assessed work in highly pressured and contracted timeframes, often in the week preceding the deadline. This meant that their work was rushed, and it seemed to preclude the opportunity for students to reflect and consider their learning and ways of working.

5. Students did not use assessment feedback effectively or positively and while I recognised that it is an important academic improvement tool, it was not useful for these students. The department believed that this was a very important issue to consider.

6. Students were sometimes very unhappy, distressed and in some cases were 'just surviving', and the sense of isolation was clear to us. This issue was of some considerable concern and was important in our decision making.

5.6.2 Rationale for the approach to the challenge

At a three-day staff review at the beginning of the academic year 2014, the department considered the impact of both students' academic self-confidence together with their conceptual thinking skills and we believed that these were critical issues with far reaching consequences for the respondent students. We did not believe that it was appropriate to attempt to resolve the students' academic self-confidence needs *per se*. We had several reasons for this; we believed that the students' lack of academic self-confidence was underpinned by underdeveloped academic competence in accurate self-assessment together with thinking, reading and writing at conceptual levels. As such,

confidence building activities alone were likely to have a limited impact, if students were no better equipped in terms of their learning and academic competence. Moreover, as educationalists we did not want to, in the language of Smit, 'refract[ed] and recontextualise[d]' (Smit, 2006, p 372), unmet learning need as a deficit issue to be dealt with outside 'universal pedagogical practice' (Hockings, 2010, p 3). We believed that it was incumbent on us, as professionals, to find ways to meet all learning needs through 'universal' pedagogical practice. Moreover, we did not have skills or sufficient knowledge to put into place effective confidence building activities and, given the pressure on students' time it would be very unlikely that they would be able, or want, to participate in such activities. For the same reasons, we did not target students' literacy skills specifically, we were not fully skilled in either English for Academic Purposes (EAP) of any other recognised format of developing academic literacy. Moreover, while I do not wish to establish a causal relationship, it is clear that where students complete their work in such a rushed fashion it is unsurprising that their written English would suffer. Consequently, we decided to focus attention on understanding more fully the students' learning need, together with framing pedagogical responses to them and in doing so building students' academic competence and concomitantly their academic self-confidence.

For this research we, as a department, had wanted to do something pedagogically innovative; we believed that the respondent students had different learning needs and we felt that we needed to 'do something' that reflected this. We did not want to put yet more Additional Learning Support (ALS) tutorials in place replicating the existing pedagogical practice in ever increasing levels of granularity in the hope that some improvements might come about. Maclellan makes this point, stating that, '[U]unsuccessful teaching tends to be remedied by repeating the curriculum content, breaking the communication into smaller parts, and finding different ways to express the idea to be grasped.' (Maclellan, 2005, p 138). Maclellan challenged the assumptions that this approach was predicated on and, we too, believed that the respondent students needed a different approach to their learning.

Moreover, we felt that if we missed this specific opportunity to innovate our practices it was unlikely that the college would allow us the opportunity to fully investigate the matter in a succeeding year. We discussed these issues while I simultaneously undertook a literature search relating to DO (discussed in chapter 2) and undergraduate learning needs, and we were particularly interested in the work of Hounsell (1997), Lea and Street, (1998), Pletzen (2009), Lillis (2006) and Bjork et al. (2003) in relation to the need to make the procedural knowledge of academic study 'visible' to students. We considered this in the context of the findings of the student interviews where they had frequently discussed the difficulty that they had encountered in using tutorial notes and gaining value from traditional tutorials. We discussed this together along with the frequency with which students had discussed their difficulty in using and maintaining focus through linguistic exchange in tutorials and their frequent references to the need to 'see' their thinking.

5.7 Our decisions

In terms of a specific teaching focus and the purpose of our interventions, the departmental decision, discussed below, was to prioritise the development of students' capacity to read, write and learn at conceptual levels. In recognition of the inextricable link between writing and thinking (Bharuthram and McKenna, 2006) we placed the development of these skills together within the same set of actions and coaching teaching strategies. The development of reading skills would then need to be considered separately under actions specifically related to this skill set (discussed in chapter 5, section 5.7.3).

5.7.1 Writing and the development of conceptual knowledge

We decided to develop a 'coaching tutorial' model where we could support students through coaching and mentoring them through the writing process and in so doing make the procedural knowledge of essay writing and conceptual thinking more 'visible' to students. We made a tentative decision to, as far as appropriate, try to use diagrammatic and visual means to record the work of the tutorials and in so doing make the thinking processes described by Hounsell (1997), Lea and Street (1998), Pletzen (2009), Lillis (2006) and

Bjork et al. (2003) 'visible' to students. We aimed to keep this under constant review using student feedback as a key source of information.

The ways in which we made students' thinking visible varied from student to student and it was very much a shared experience. Our intentions were twofold, firstly, to document the student's thinking in a structured way that made salient their thinking journey and thus available for their reflection and scrutiny. The second aspect was to 'map out' and 'make 'visible' the component cognitive functions related to a given academic task and in so doing allowing the students to 'see' for themselves the key aspects of thinking. For example, where students experienced difficulty in constructing a evidence based and critically considered argument the teacher would support the student by constructing a map where the student could outline their observations of an issue, formulate a hypothesis based on this and locate this within the critical literature relating to the subject. While this seems simple to many academics for many students the findings of phase one told us that it was not, and they were more likely to describe their findings without taking he final step towards creating a hypothesis or reasoned argument. There is an example of this in appendix F, penultimate page and Appendix L figure 5.

This approach meant that grids or thinking diagrams were not prepared in advance, to do so would dislocate the students' thinking from its recording and this was an important matter. Moreover, it would place the ownership with the staff member not the student, the contemporaneous documentation of the students' thinking became a crucial matter for the development of a co-located thinking experience. It also allowed the teacher to modify their plans and approach to suit the students' needs at a particular point in time. As Elton points out that students need to be supported simultaneously through 'word and deed' (2010, p 157).

The role of the teacher in these situations was very much as facilitator and questioner, in many situations the teacher initiated the construction of a thinking frame but was focussed on enabling the students to develop the technique independently.

Students described their difficulty in identifying their own needs. As such, it was unlikely that remaining with the pre-existing transactional tutorial, which is predicated on students' capacity to identify their own need and assimilate the advice of teachers, was likely to bring about significant results, Or, indeed, to develop the knowledge of staff in relation to students' unmet learning need. Consequently, we decided that each student who was identified as vulnerable to DO would have three tutorials for each module studied during the remainder of their time on their course. The first tutorial would take place not less than four weeks before the assessment deadline and the final not less than one week before the assignment deadline. This was in excess of their entitlement under the validated document; as such we believed this to be a curative intervention. While we did not want to resort to this methodology, we did not believe that we were sufficiently well-informed to meet students' needs through our 'universal practice' (Hockings, 2010, p 3), but that we could use this learning to advance our universal practice in the longer term.

5.7.2 Key priorities

Our analysis of students' work (section 4.3) told us that students' underdeveloped conceptual thinking skills manifested themselves in poorly structured essays and ineffective use of reference material and highly descriptive work that lacked reasoned argument. Consequently, as part of the intention to enable students to develop conceptual skills, we specifically sought to target these areas:

1. coherence and structuring their written assessed work on thematic lines;
2. supporting the student to make more effective use of reference material;
3. development of reasoned argument.

We fully recognised the interdependent relationship between the areas and, indeed, that one and two above are predicated on students' understanding of three. The intentions were not to develop reductionist strategies for students to follow and we were equally aware that learning is not reducible to a change

of behaviours. We sought to create a grounding in the lower order thinking skills (Moffett, 1981) of structuring and using appropriate reference material as a means to promote dialogue that would open a space for student led discussion relating to the more significant aspects of their thinking and work. For example, where a student might provide a reference that was not clearly related to the point under discussion, this could lead to a discussion related to clarifying and refining the reasoned point the student was trying to make; as such the student would have the opportunity to explore and try to clarify their meaning more clearly.

We also fully recognised that we were not focusing on all learning needs identified in phase one of the research, particularly the students' use of standard English. However, it was impractical to try to meet every identified learning need and we decided to focus on those issues that we believed had impacted on most students and had the greatest impact. We believed that it was equally important to establish a focus for our activities in order that we could evaluate the impact of the coaching approach. We would regularly observe the coaching tutorials' and build up a picture of both student learning needs and their responses to the coaching tutorial paradigm, as such I could build on the outputs and findings on on-going student feedback to steer the project incrementally.

5.7.3 Reading and knowledge acquisition

We did not understand why some students found reading academic and expository texts so challenging and of so little value to them. Historically, the department recognised academic reading as a learning need in all students and we had organised comprehensive support sessions together with explicit in-class universal teaching practices to mitigate this need. Student' feedback over several years clearly indicated that these actions were highly valued by all students. Consequently, we were ill-equipped to take effective actions to improve reading skills until we understood more about the matter. To make progress we believed that it was important to undertake close in-class observations of students' reading behaviours, with a view to identifying those

issues that may contribute to difficulties and devising strategies to overcome the issues.

Chapter 6   Findings - Phase Two

6.1   Introduction

In this chapter I present the findings of the second phase of the research, this includes data relating to students';

1. reading and knowledge acquisition behaviours;
2. development of conceptual thinking skills;
3. development of academic confidence.

Although we did not target academic self-confidence, with specific interventions, we recorded those behaviours that demonstrated higher levels of confidence, for example, autonomous working and developing independent lines of enquiry.

There are four data sets in this phase these are;

1. Staff observations of student' in-class reading - Sample Appendix F
2. Staff observations of the coaching tutorials-samples and tabulated findings are in Appendix Gi & Gii;
3. Students' feedback regarding the coaching working tutorial paradigm - samples Appendix Hi & Hii;
4. Students' outcomes and GPA and contextualised within this
   a. Analysis of students' summatively assessed essays
   b. Student satisfaction with their outcomes.

6.2   Phase 2 - Students' reading and knowledge acquisition behaviours

There were two parts to in this research activity; the first was to identify students' learning needs in relation to reading academically, this took place in cycle 1. The second was to implement coaching teaching strategies and to track students' responses to these, this took part in cycles two, three, and four.

6.2.1 Findings - cycle 1

6.2.1.1 Summary

There were four key behaviours we identified through the observations that seemed to diminish students' learning from reading expository texts; students primarily read extant knowledge together with ancillary aspects of the text to the exclusion of deeper conceptual aspects of the text. They also concentrated on those aspects of the text that they believed to be, 'true'. [belief consistent reading], Moreover, students' interpretation of the expository text was based on personal and emotional responses.

6.2.1.2 Findings

The single most noticeable feature of students' reading behaviours related to the extent to which students read familiar knowledge and aspects of the text. All 20 observed students primarily engaged with extant knowledge, of these 20 students 18 engaged with work that was at a level below that which they were studying. For example, students read aspects of the text that related to either the previous year's work or in some cases those the pre-dated the course. During whole-class feedback sessions 17 of 20 students fed back pre-existing knowledge and critically, this was not congruent with the level of their course. Three of 20 students did feedback new knowledge, but this was at a low level and closely reflected the feedback of peers outside the subset.

The second issue we observed was that few students engaged with the more challenging and the conceptually based aspects of the text. For example, students would underline or highlight examples that the author of a journal article had provided to substantiate an argument but there was little evidence that the students had read or understood the underpinning argument. Five of 20 observed students read and engaged with the deeper meaning of the text, 17 of 20 read ancillary parts such as introduction, conclusion, examples, and exhibited no reliable evidence of engagement with the conceptual aspects, there was no specific evidence relating to the other three students. Frequently during feedback session students remained either reticent or fed back multiple

work-based examples. Four students did ask meaningful questions and at a conceptual level but only to clarify the feedback of other students outside the subset. Two students frequently referred to the ways in which they might use the reading material in their assignments.

The third observed issue was that 13 of the 20 students tended to engage with the read material based on the extent to which they believed it to be consistent with their own beliefs or not. Consistently, they would disregard aspects of the texts that did not tie in with their own perspective.

The fourth issue related to the critical faculties that students brought to the learning situation; 18 of 20 interpreted the material based on their own professional practice of these 15 used their own emotional beliefs to substantiate their perspective. This interpretation including for example, citing very personal viewpoints relating to pupils with SEND entitlement to learning support.

6.2.2 Discussion – implications for learning

The behaviours described in the preceding paragraphs behaviours meant that students' knowledge and learning progressed little as a result of reading. Students read selective material that was low level and already within their existing knowledge of the subject. They further limited their reading to pre-existing strongly held personal beliefs and presented it thus in feedback sessions, frequently disregarding opposing perspectives presented in the read text and in some cases misunderstanding the read material. This issue was exacerbated by students' reading attention being focussed on ancillary aspects of the text and not on the conceptual frameworks or the central tenet of the author/s arguments. Consequently, students formed incomplete and erroneous understandings. Where they did read new material, it too, was primarily considered within the context of personal and often highly emotional personal beliefs or, in a minority of cases, very narrowly within its usefulness to assignment tasks.

6.2.3 Key priorities and strategies

We believed that it was important to support students' capacity, and recognition of the need, to engage with new learning in reading material. Of equal importance was to support students' capacity to engage with the conceptual aspects and deeper meaning of the text. The intention of the intervention was informed by the learning model suggested by MacLellan (1997), Kintsch (1989) and Billings (2007) who posited that the optimal learning from reading expository texts is to create a situation model by synthesising the textbase of the expository text with the extant knowledge of the reader. As part of the reflection and analysis we recognised that we had a tacit expectation of students to read new material and to do so seeking deeper meaning and to focus on the conceptual aspects of reading material. Those students who were vulnerable to differential outcomes had not understood or were aware of this expectation.

We undertook to make this expectation overt and explicit during in-class reading tasks. In succeeding in-class reading sessions staff explicitly instructed all students to scan read familiar aspects of the text and to focus their attention on the unfamiliar aspects or those that were more challenging. We recognised that students could be reluctant to do so and were mindful that they could be academically intimidated by this activity, moreover that they may not explicitly understand that there were conceptual aspects to the text.

To overcome these potential issues, we explicitly asked all students to work in mixed attainment groups and instructed them to scan read familiar aspects of the text and to identify and read fewer familiar aspects. All students were expected to identify the central tenet of the authors' arguments, this was to be written in a fully formed and rounded sentence. Students were to collegiately (in their groups) form 3 questions relating to the author's main argument, this would be the only feedback sought. Clearly, as the given teaching session advanced the questions would be explored within the context on the discipline.

In focusing students' attention on the central aspects of the article's arguments we sought to focus students' attention less on ancillary aspects of the text and extant knowledge and more on the key principals and conceptual aspects of the text. In only forming questions and by doing so collegiately we sought to reduce anxiety of students who may have felt that they were being put into an assessment situation where they would feel uncomfortable.

6.2.4 Findings cycles 2, 3, 4

6.2.1.3 Summary

By the end of the research, of the 30 students who were observed, 26 improved their reading behaviours, in that they engaged with unfamiliar aspects of expository texts and read for deeper conceptual meaning. The remaining 4 students made few changes to their reading practices and remained dependent on tutors and peers. Of the 26 who improved their reading behaviours 16 seemed to make learning gains and their feedback and discussions with teachers indicated an accurate knowledge base. Although it must be stated that there was much inconsistent, conflicting and seeming contradictory data that did not produce a clear linear progression in students' reading and knowledge acquisition skills. For example, students might read new material, seeking conceptually based knowledge but misunderstand the content. Students did not make consistent progress, so while they might exhibit improvements at one point in the research further along, they might demonstrate inefficient practices that were more consistent with their previous reading behaviours.

The full range of students' reading behaviours throughout the research are described in table 6 -1 on the succeeding pages.

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Table 6-1 Students observed reading behaviours

Observed behaviour expressed in number of students	Cycle 1 20 students	Cycle 1 20 students	Cycle 3 20 students	Cycle 4 10 students
Reading Behaviours				
1.1 Engagement with extant/new knowledge				
1.1a Reads predominantly extant aspects of text	20/20	6/20	2/20	1/10
1.1b Reads predominantly new aspects of text	0/20	14/20	18/20	9/10
1.1c Cumulative number who consistently read new knowledge	4	14	20	26
1.2 Engagement with abstract and conceptual aspects of text central argument of the expository texts				
1.2. a Conceptual arguments unrecognised	12/20	8/20	4/20	1/10
1.2. b Conceptual arguments recognised	5/20	12/20	12/20	8/10
1.2.c Appropriate level of understanding of conceptual arguments [subset of 2.b]	2/20	8/12	9/20	6/10
1.2. d Cumulative number consistently demonstrating knowledge of conceptual arguments	5	11	13	18
1.2. e Reads low level and ancillary aspects of the text	18/20	8/20	4/20	2/10
1.2. f Reads belief consistent aspects of text	14/20	16/20	13/20	3/10
1.2. g Cumulative no. who consistently read belief consistent knowledge	14	17	13	13
Interpretation of Read Expository Texts				
2.1 Students' feedback to the whole class				
2.1a Number of students who fedback to the class	20/20	16/20	20/20	10/10
2.1. b Fedback extant knowledge	17/20	8/20	6/20	4/10
2.1.b i Level of feedback - below course level [subset of 2.1.b]	17/17	7/8	5/6	2/4
2.1.bii Level of feedback – at or above course level	0/17	1/8	1/6	2/4
2.1.c Fedback newly read knowledge	3/20	8/20	14/20	6/10
2.1.ci Level of feedback - below course level [subset of 2.1.c]	3/3	6/8	8/14	1/6
2.1.cii Level of feedback – at or above course level	0/3	2/8	6/8	5/6
2.1. d Fedback belief consistent knowledge [extant or otherwise]	16/20	14/20	13/20	3/10
2.1.d. i Interpretation primarily related to emotional interpretation	15/20	12/120	16/20	6/10
2.1.d. ii Interpretation primarily related to professional experience	18/20	17/20	11/20	5/10
2.2 Questions raised by students				
2.2. a Number of questions raised by students	5	23	29	13
2.2. b Number focussed on conceptual argument	5	4	9	10
2.2.c Number focussed on ancillary aspects of text	N/A	0	5	2

2.2. d	Number focussed on emotional and/or personal opinions	N/A	19	15	1
2.3	Text base – situational model				
2.3. a	Demonstrated accurate textbase [by end of session]	0/20	6/20	16/20	5/10
2.3. b	Demonstrated accurate situational model [by end of session]	0/20	5/20	9/20	4/10
2.3. c	Cumulative number who demonstrated accurate and full situation model	0	5	11	16
Communication of meaning and understanding					
3.1	Used multiple examples from work or read text [new material]	8/20	6/20	8/20	3/10
3.2	Used long citations from read text	8/20	8/20	8/20	4/10
3.2 Student perception of perceived challenges to communicating feedback					
3.2. a	Inadequate linguistic dexterity	16/20	18/20	15/20	6/10
3.2. b	Expository text too complex	5/20	7/20	8/20	4/10
3.3	Fluently fedback extant abstract and conceptual aspects of text				
3.3. a	Number of citations observed	Not ob'd	3	13	11
3.3. b	Number of students observed	Not ob'd	4/20	8/20	5/10
3.3.c	Cumulative number who fedback fluently, extant conceptual knowledge	Not ob'd	4	12	17
Other					
	Dependency based learning behaviours e.g. multiple questions, seeking confirmation,				
	Staff	20/20	20/20	18/20	6/10
	Peers within subset	18/20	16/20	15/20	7/10
	Peers within whole class	6/20	8/20	9/20	2/10
	Compliance with task completion	2/20	4/20	3/20	1/10

6.3   Phase 2 - Observation of coaching tutorials

6.3.1   Conceptual and abstract thinking

Full data are tabulated with supporting examples in Appendix Gi & Gii

We had chosen key learning behaviours based on the findings of phase one against which we anticipated and sought improved performance these were students' capacity to develop;

1. coherence and structuring of written work and assessment plans (focussed on conceptual frameworks of the module being studied);
2. supporting the student to make more effective use of reference material;
3. development of reasoned argument specifically;
   a. the development of specific questions relating to the concepts they were seeking to explore in their assignments,
   b. the evaluation their own work within the expectations of HE study and plan improvements autonomously.

6.3.1.1   Summary

Notwithstanding methodological difficulties associated with observing on-going cognitive processes, the learning need that underpinned most students' learning behaviours was consistent with our original belief from phase one. That is to say that students needed support to develop their capacity to think, and to articulate their thinking, at a conceptual level. This learning need manifested itself in multiple ways, observations showed that students needed support to categorise, identify patterns and repetitions in their work and to differentiate between descriptive and analytical text. While most students demonstrated progress in their conceptual thinking a minority of students continued to engage at reductive and superficial levels. These students needed to revisit very basic essay writing strategies consistently throughout the research.

Table 6-2 Schedule of observations

Coaching Tutorial Observations							
Cycle 1		Cycle 2		Cycle 3		Cycle 4	
Student Identifier	No of observations	Student Identifier	No of observations	Student Identifier	No of observations	Student Identifier	No of observations
Student 1	3	Student 1	3	Student 19	3	Student 16	3
Student 14	3	Student 15	3	Student 10	3	Student 21	3
Student 17	3	Student 8	3	Student 9	3	Student 13	3
Student 4	3	Student 4	3	Student 12	3	Student 8	3
Student 15	3	Student 27	3	Student 22	3	Student 6	3
Student 17	3	Student 16	3	Student 13	3	n/a	
Student 11	3	Student 23	3	Student 23	3	n/a	
Total Cycle 1	21	Total Cycle 2	21	Total Cycle 3	21	Total Cycle 4	15

6.3.1.2 Autonomy, self-evaluation, development of reasoned argument, use of reference material

Cycle 1

At the first tutorial none of the seven observed students had assessment plans or specific questions to ask when they came to tutorial, the most frequent request was to read all, or some aspects, of their essay and to gain generalised feedback, students did not state any aspect of their work they sought feedback on.

By the second and third tutorial all seven students had coherent assessment plans, but this is unsurprising since the work of the preceding tutorial was largely focussed on creating these. 5 of 7 diagrams were well-developed and described reasoned argument based on the conceptual arguments of the module. Although these arguments were based on some of the more obvious conceptual frameworks of the module. All 5 students had included some reference material of these 5, 4 demonstrated some congruence with the matter under discussion.

5 of 7 students had specific questions relating to their work. Questions predominantly related to ancillary aspects of essay writing such as quotation

lengths and word counts and did not evidence engagement with the conceptual aspects of the module being assessed. It was evident that these five students had independently worked on their plans and all work was at least congruent with the level of the course.

2 of 7 students had made little independent progress on their planning or development of reasoned argument or conceptual aspects of the module between tutorials, while planning was in place it only represented the work of the preceding tutorial. One was at the level of the course the other was significantly below and primarily consisted of examples or reiterations of her appended work.

Cycle 2

At the first tutorial 3 of 7 students had plans using diagrams and visual representation of their lines of enquiry, two of these three students asked specific questions relating to their arguments and conceptual aspects of the module. Their plans were supported and informed by the critical reference material, although no student chose to discuss or ask questions in relation to this aspect of their work.

4 of 7 students did not have plans in place but three of these four could verbally identify conceptually based lines of enquiry and constructed appropriate assessment plans during the tutorial. Within this there was some minor dialogue relating to the reference material they sought to use. One student explained that she did not have a clear focus for her essay.

By the second and third tutorial 5 of 7 students had plans in place and these had been independently developed between tutorials demonstrating clear reasoned argument and conceptual knowledge. All 5 had specific questions, 4 students' questions, related to their arguments and the conceptual frameworks of the module as well as the expository texts drawn upon. The remaining student's questions related to ancillary aspects such as word counts and citation lengths. 4 students demonstrated the capacity to evaluate the quality of their own work and the extent to which it met the requirements of

their level of study. There was no specific evidence relating to the remaining student in this respect.

Two of seven students did not have plans at the second and third tutorial; one, had changed her mind regarding the focus of the previous tutorial, the other student had forgotten to take her planning to the tutorial and could not recall the details of the previous tutorial, both exhibited high levels of teacher dependency.

Cycle 3

At the first tutorial 4 of 7 students had well-developed diagrammatic plans in place and all four asked specific questions relating to the conceptual arguments that they were seeking to make, together with their use of critical reference material. This pattern continued throughout the succeeding 2 tutorials where students would pursue and extend conceptual lines of enquiry. All 4 students had taken a holistic view of their work with thematic arguments running throughout. All 4 students demonstrated a clear capacity to evaluate the level of their work together with the extent to which they had covered the conceptual elements of all learning outcomes.

3 students did not have plans or framed specific questions at the first tutorial but did ask whether the teacher agreed with some work that had they completed in essay format without planning. In one case, the work was congruent with the level of the course and one was not. One of these focussed the two succeeding tutorials on developing and refining written essay text and equally to ensure that all learning outcomes were adequately covered. This was not done in diagrammatic form but through colour coordinating sections of an existing essay. One student did not take plans to or want to focus on completing work for the designated module and sought to improve her sentence structure and language use, this model continued for the succeeding two tutorials each of which were the full 15 minutes.

Cycle 4

At the first tutorial four of five students had specific questions, these related to conceptual frameworks and were supported by a very focussed and well-developed assignment plan. During second and third tutorial these three students focussed their questions on the literature surrounding the module and how this influenced their arguments. In all cases their work was highly diagrammatic and included process charts, branch diagrams and colour coding of learning outcomes. She had a skeleton plan in place and no specific questions. The focus of the tutorials related to the development of the arguments identified on her plan into fully rounded sentences. One student focussed all three tutorials on refining the clarity of her written meaning.

6.3.2 Academic confidence

These data were recorded as part of the observation of tutorial; we had chosen key learning behaviours based on the findings of phase one against which we anticipated and sought more positive responses and progress; these are detailed below.

6.3.1.3 Students' evaluation of own work and response to feedback

Cycle 1

In cycle 1 no student demonstrated the capacity to manage feedback positively and would return to self-depreciating and defeatist behaviours, most frequently this would include, becoming self-critical and despondent. They associated their difficulties with long-term learning needs, this included, 'I was always rubbish at writing' or 'I just can't do it' or in a very small minority of cases some students became defensive. one student demonstrated the capacity to evaluate their own work accurately and 6 of the 7 observed students were very teacher dependent for all aspects of task completion.

Cycle 2

By the end of second cycle 2 of 7 students managed feedback positively without being self-critical. Of those remaining self-critical the foremost reason was because that they did not consistently evaluate the quality of their work

accurately. In that, they would overcome a specific issue relating to their essay but believe that this was the sole issue requiring their attention. They did not observe several other issues relating to the quality of their work, most frequently this was the level at which the work was written. For example, when Student 1 presented her work at a second tutorial in cycle 1, she showed that she had taken on board and understood the work of the preceding tutorial and had edited her essay with some skill; removing most repetitions and extraneous material. Yet, she did not easily see the low level of her arguments or some remaining repetitions and absences of key information, she became very uncertain and concerned when she came to understand that there were other important issues relating to her work, and this manifested itself in reverting to teacher dependency and self-depreciating language.

Cycle 3

By the end of the third cycle, of the 7 observed students, 5 could evaluate the quality of their work with accuracy and determine their own lines of enquiry and revisions. 4 of these 5 students no longer reacted negatively to feedback, 1 of whom was making good progress continued to focus 'blame' on herself when evaluating their work. Her language remained pejorative e.g., 'it was rubbish before I came to tutorial' or 'I've wasted my time writing nonsense'. 4 of 7 students took a leading role in tutorial, this was the first time that this was observed. The remaining 3 students frequently sought confirmatory feedback and there was little evidence of their own voice in their work. While they demonstrated some capacity to evaluate their work this was low level and used rigid reductionist paradigms that did not demonstrate deep knowledge.

Cycle 4

At the end of cycle 4, 4 of 5 observed students evaluated their work accurately and made consequent autonomous revisions and determined their lines of enquiry. 3 responded positively to their feedback and 1 continued to be self-critical and continued to blame herself unreasonably, this was primarily related to her understanding of the iterative nature of writing will inevitably require

revision and redrafting. SC would frequently say, 'I don't know why I can't just get it right first time, or why I keep making mistakes with it. 1 student did not evaluate the quality of her work well and was very self-critical.

6.4 Phase 2 - Student feedback on coaching tutorial strategy

Full data are tabulated with supporting examples in Appendix Hi & Hii

6.4.1 Summary

It is unsurprising that students' feedback primarily related to assessment, they seemed to focus on those aspects that brought about positive outcomes, they showed little interest in discussing aspects that they might have felt to be ineffective. There was practically no difference between the feedback of those who made good progress in their marks and those who did not. In the first cycle of the research students focussed their attention on discussing practical and organisational matters together with their confidence building. As the research progressed their attention turned to critical thinking and how this related to time management. In the last 2 cycles students focussed on the development of their language and related this to their critical thinking in some detail. Although they did continue to include issues related to confidence and organisational issues.

The findings are consequently presented under the following headings;

1. practical and organisational support
2. psychological issues and confidence building,
3. development of academic thinking skills together with time management
4. language and cognition.

6.4.2 Practical and organisational support

There were 3 main issues identified by students relating to practical and structural issues these were;

1. an increased capacity to ensure that they had covered all learning outcomes of the module equally;

2. the scheduling of tutorials;

3. easy and constant access to a planning document.

There were 42 comments across all 4 cycles that related to the visual impact of diagrams in allowing students to ascertain the extent to which they had covered each module learning outcome. This was the first issue that students' feedback and it was clearly highly valued by them. Specifically, students responded that by being supported to construct a diagram they were better able to 'see' if each learning outcome had been covered adequately in a way that they could not do with the text of their essay. Within this judgement, they reported that they could see whether there were overlapping, and repetitive points being made, and this allowed them to be more succinct in their writing.

32 comments indicated that the structuring of the tutorial sessions created an impetus for them to complete work and focused their thinking early on in the assessment window. Students did not explain why this was helpful other than indicating that a structured timeline was supportive.

28 comments indicated that having easy access to their planning document[ii] enabled students to constantly think about their main arguments and to make swift and frequent amendments. Students closely associated this with an improved capacity to improve their thinking and development of reasoned argument. All students who cited this issue compared it to previous experiences where they would have to find long periods of protected time to attempt assessed work and only at this point begin their thinking.

6.4.3 Confidence building and psychological-based responses

There were three key features to students' responses in the category relating to psychological issues and confidence building;

1. reduced feelings of isolation;

2. the learning situation being different and unfamiliar avoided;

    a. pre-existing feelings of inadequacy;

    b. students' use of ineffective but 'safe survivalist' writing and assessment task completion strategies;

3. early and progressive support led to early self-belief and confidence.

6.4.3.1 Isolation

39 comments referred to their knowledge that they would be supported throughout the assessment window by having a pre-determined entitlement to three tutorials was reassuring and reduced isolation and anxiety. This issue was cited in the first three cycles but not in the final cycle. Students stated that the previous model led to feeling of isolation and inadequacy, where they were working alone without family or professional support. This created a high stress situation and when they sought additional tutorials these were highly pressured that they could not feel free to ask for the support that they needed

6.4.3.2 Defamilarisation – avoiding pre-existing feeling of inadequacy

The opportunity to work within a different and unfamiliar paradigm was mentioned 79 times during the research. Students identified two impacts of this; the first, (40 references were made) was related to the non-threatening nature of the coaching tutorial, students directly related the unfamiliar visually based working paradigm to avoiding pre-existing feelings of inadequacy. That working differently avoided triggering their usual highly emotive responses to being confronted with completing assessments. For example;

Student 9

It doesn't matter how much feedback, when you sit down to do the next assignment it's the same again, because you don't really know any better [little cumulative improvement] you get... so it's all down then and I can see it really see it not just a clutter of words and ****... and I know that that I can do it from then on [the beginning].

The main thing is I don't waste time on just writing writing and writing something I know isn't put right and stopping and starting the first two years were torture.

Student 14

There was nothing I could do to change it … it was always the same ** mark … always the same but when I first did the Branch Diagram it was different, and I could get proper feedback without falling back to the old way of doing it and know what to do next before the assignment went in. When I saw the grid for writing paragraphs, I thought it is so easy, but you still have to think for yourself… and I could see that I could no one will think for you it's my work ... Sometimes it comes rushing out and I type like the wind, but I am normally just blocked up for the words. But now I can see it at least, I am not going back to the old way … it [the old way] makes me feel sick

Student 11

Well, I don't know for me at least it was different and I could give it a try because I would always work in the same way and just try harder work harder well what does that mean I work life a dog and just end up with the same marks but the Branch Diagram was different at least but you still have to do the thinking .... It's not going to do it for you.

6.4.3.3 Defamilarisation – interrupted cycle of ineffective survivalist behaviours

Second, students told us that an unfamiliar way of working interrupted cycles of ineffective, survivalist task completion practices, this feature was cited 39 times throughout the research. Students cited their perceived difficulties with linguistic dexterity on 40 occasions as the key matter that had previously led to their feelings of inadequacy and this feedback was almost evenly distributed throughout the four cycles of the research. They indicated that working more visually and co-operatively with a teacher avoided this perceived barrier and enabled them to think and write more effectively. For example;

Student 16 - I'm not sure what has helped, my marks have come up a bit [12%] I think it's because I always did [in the past] the same thing over and over because I knew that I could scrape a pass and if I did [tried] anything else [different strategies] I might fail and I'd never failed an assignment I just couldn't face failing how could I go home with a failed mark I just couldn't face it, I was always the family [student makes a pejorative comment about her own self] . I don't have time to redo the work but mostly it is because I can say I have never failed anything, not yet anyway. So, I think when I went to the working tutorial, I got feedback really definite and I could look at the diagram and it was definite not all lost in a pile of words that could mean anything. It was a bit different too so there was something concrete for me to point at and ask yes or no is this ok? And then I slowly got a bit better at it, I got 58% the last assignment … It was easier too I don't actually spend as much time just wasting it on things that I know won't work at all.

Student 19 - Because we used to do the same thing over and over and get the same advice over and over it was always the same the same little gang of us just hanging on and the others got going and moved forward but we didn't … but at least I knew that I'd get a pass or at least get it [assignment] in. So when I sit with a teacher at tutorial and she writes what I say on postits and we organise it together and if I go wrong she will ask me about it straightaway right there and then and then it forces me to think in a way that I didn't before… it is easier … and before we were told to plan or use postits and I tried but what to I write on a postit at home just the same naff stuff… but on a postit… and I can start earlier because I can just do a bit.

Student 15 - Basically when you have failed at everything all your life you still expect to be rubbish and so it was not surprise to me, but I always felt that I could do a bit better not that much I always understood things in class but the reading was too hard and you find a way to keeping going and doing the same thing, when I first started putting the diagram together with you it was different and not the same old… read, get bored, not understand, try to write [student becomes upset] feel stupid, just keep going somehow… keep asking for

tutorials and not even know what to ask for… And get a low mark and do it over and every year for every module… but you don't know what else to do, what else could I do I didn't know.

6.4.3.4 Early and progressive support led to early self-belief and confidence.

Students also indicated that early support in the assessment window together with the two featured cited above allowed them to see that the task and challenge was within their existing skill set and capacity. This allowed them to make a positive early start that avoided task avoidance and panic.   They directly related their feeling of competence to their use of language and explained their previous tendency to prioritise language had led them to prevaricate and ultimately rely on survivalist task completion strategies. For example, Student 19 reported, 'never seen this before' and 'it just felt different I realised I was looking forward to picking up my plan' 'I felt excited … I knew I could do it, just looking I though is that all there is. I can I didn't have to think about the words ... and got going early'.

Students also closely aligned the positive aspects and mutable nature of working more visually with the ease and efficiency of making alterations without having to rethink full paragraphs of text and find language to do so. For example, Student 14 reported,

> 'it is a different way of working, I push them [words] away, …
> it's not the same old, same old where I've spent ages writing
> and then I'm stuck with it … I know it's [her work] poor and I
> just panic at the end… it's easier to do this way… I just rewrite
> the post-it notes and or change my plan without having to put
> it in to paragraphs'.

6.4.4 Academic thinking skills and time management

Students discussed their time management and improved capacity to effectively organise their thinking simultaneously. They identified 3 features relating to this;

1. co-constructing visual planning documents during tutorial made more effective use of time and this allowed them to feel better 'equipped' to work and make progress independently;

2. the visual impact of diagrams facilitated their capacity to evaluate the quality of their work;

3. a reduction in the amount of written material produced at the planning stage allowed time to focus on thinking and analysis in preference to their use of language.

6.4.4.1 Co-construction of assessment tasks

There were 34 references in cycles 2, 3 and 4, there were none in the first cycle to co-constructing visual planning documents, students related this to time management. Students indicated that, now, tutorials did not become, 'just talk', by using and co-constructing diagrams they, 'knew exactly what was going on', [student 26] and could remain focussed throughout the tutorial. This, they believed allowed them to continue to make independent and productive progress between tutorials more successfully. Students indicated that the visual impact of, for example, a diagram or colour coded text organisation strategies created a clarity in their thinking that allowed them to independently develop and organise their thinking and that this was not possible through dialogue-based tutorial alone. In the third and fourth cycle students extended this dialogue by adding that they used diagrams specifically, branch diagrams, to select their best material for inclusion in their assignment and this contributed to their capacity to evaluate their work. They specifically stated that the visual juxtaposition of their thinking on a diagram better allowed them to select their best material.

6.4.5 Time-management and cognitive load

32 comments related to how the use of diagrams and visual means to communicate their meaning during tutorial freed their time and allowed them to focus on their analysis, thinking and clarity of communication. Equally, students indicated that they could develop more focussed questions for tutorial

by using a diagram rather than by producing large amounts of text. Student 23 explained as follows,

> before when I came to tutorial, I wanted to prove that I'd been working and not just turning up expecting you guys to do it for me so I would write as much as I could … and just to get it finished … but now I can just keep adding and taking stuff out [of her planning diagram] and think about it and what I want to talk about [at tutorial] or ask so the main thing is to just think about what I'll put in the grid [thinking plan see photographs 1, 2, & 3].

Two students indicated that while they found the working tutorial and diagrams useful in tutorial that they were unable to progress their thinking in this way independently and continued to need support. These students did not extend this or offer any explanation other than, they could not remain as focussed as was necessary or that they found their contributions to the diagram sub-standard and they did not have the skills to improve them. They did however indicate that the branch diagram supported coherence in their essay writing.

6.4.6 Language, cognition and critical thinking.

6.4.6.1 Language

While no student cited improved language in the first cycle, there were 28 comments relating to improved language throughout cycles 2, 3 and 4. Students did not expand on this issue in detail or provide many examples; simply that they felt that their language had improved. One student, Student 17 who did expand on this described her learning journey in some detail;

> 'sometimes you'd write something, and you keep it just because it sounds good but that's all ... it sounds good and then you don't want to lose it and it's the only thing in your essay that sound good … you write everything around it, but it doesn't make sense'.

The student went on to say,

> 'if you work with the teacher to begin with and you know what you want to say and it's [thinking] sorted from the beginning … you think about that [thinking] not how you say it… but you have to write it down on the grid or the branch [diagram], you don't have to write too much on the diagram the thinking is more important and keep it simple but detailed…….the language just comes then.

6.4.6.1 Critical thinking

There were 32 references to cognition and learning, none in cycle 1, 5 in cycle 2 and the remainder in the 2 succeeding cycles. Students' discussion relating to cognition and learning focussed on 4 areas;

1. visual representation of their thinking facilitated thinking and reflection;
2. the symbiotic relationship between writing/representation and critical thinking;
3. increased capacity for self-evaluation led to the valuing of their own thinking;
4. a clearer understanding of the purpose of academic assessment and the need to think critically.

Students discussed writing and learning simultaneously and made 28 references to the impact of their diagrams in facilitating reflection and meta-cognitive engagement with their work. Specifically, they stated that a user-friendly writing paradigm e.g. diagrams or grids not only enabled them to write more easily but enabled them to more fully develop their capacity to 'see' their own thinking and to make consequent evaluations of it.

16 citations referred to the critical reflection they undertook on their own thought processes to understand how they came to their argument and indicated that this was a significant challenge for them. Students indicated that

the use of visual diagrams was a compelling force that focused their attention on the critical aspects of their thinking and consequent writing, indicating that the use of a diagram exposed and made clear their thinking.

Student 14 explains her perspective,

> 'When I stood back and looked at my diagram I could see what the teacher could see, all the details but no point at all to that paragraph [reasoned argument]' I was writing just wordage to try get an essay in and get it finished, I didn't know what I was saying, or even what I'd put in my essay'.

Student 22 responded;

> [I did] lots of grids and filled them in and sellotaped them together I put the theorists in green pen and the LO [learning outcome]in magenta and put them beside each other it kept me on track all the way and I knew if I was wasting time reading something that was not relevant because I knew it would not fit on my grids ... Eventually, eventually, eventually for the first time in 3 years I could see the difference between description and analysis … after 3 years ... It was clear from my grid the first part was missing [substantive point see photograph 12]. ... It didn't matter what anyone ever said to me until I had done paragraph grids for 3 months, I could see what I hadn't [seen] for 3 years.

21 references related to the symbiotic relationship between critical thinking skills and writing, where students began to identify the critical relationship between the two activities. Student 19 explained that;

> ... you have to start writing early it's not real writing but just writing your ideas down and it is no trouble just to write down your ideas ... what you think...on paper slips or even sometimes on a paper bag when the idea comes to you, I can

> then stick them on my diagram... because you have written it ... it makes you think more about what you are saying, ... just writing it down, forces me to think ... then I see it and I can see better ... but I have to write it... is this what I really think and why do I think this? ... it [writing] made me think different[ly] about what I was trying to say ... like what is the point I'm trying to make … it is not just trying to make it sound good because if you are writing on a bus ticket or a paper bag or whatever you can find it doesn't matter if it sounds good ... it's not like writing an essay.

Students explained this in some detail and frequently focused their thinking on the non-threatening aspects of working on diagrams nonetheless, their meaning was unequivocal; writing promoted thinking, the more accessible the writing paradigm is the more they will write and the clearer their thinking became.

Students also associated their growing capacity to think critically with a clearer understanding of assessment practices. 21 references related to a growing awareness that assessment was, 'not only a way to test us [students]' (Student 2) but relied primarily on their critical thinking faculties. Students did not expand on their view about 'testing them' but reported that they had not previously understood that, 'thinking could be such hard work'. (Student 16) Critically, these students indicated that they had not had the experience of deep thinking in their earlier education and professional training where they just, 'did as they were told' and, 'in our line of work no one is interested in what we think'. (Student 15)

12 references related to the capacity to form reasoned arguments and synthesise this with academic literature. Students simultaneously indicated that they placed greater value on their own thinking and as such were not, 'afraid' (Student 16) to use this in their academic work, while this was daunting initially their confidence grew exponentially.

Students did not discuss their capacity to read academically specifically and there were just five references to this skill, these were almost incidental references when discussing the use of a writing grid (see photograph 12). All five students acknowledged that previously they had been uncertain about the points that they were trying to make and had not thought deeply about it. Consequently, they could not evaluate the appropriateness of their reference material.

6.4.7 Students' assessment outcomes and analysis of students' assessed work

My original intention was to consider student' marks at the end of each cycle with a view to monitoring the impact of the interventions. This however was not possible because the time frame between the end of a give cycle, the submission of a piece of work, to it marking and moderation meant that a considerable amount of time had passed. Given annual leave for staff and term-time breaks there was a distance of some nine to twelve weeks between the submission date and the opportunity for analysis. This precluded associating any intervention with the student work as such while we did continue to consider students' work on an ongoing basis the final work that I used in my research was the students' final dissertation.

6.4.8 Summary

Students' marks which were averaged over the research period to create a final GPA this was compared to their GPA at the beginning of the research. The most obvious feature of the student outcomes was that all 6 students who had failing GPAs [35% to 38%] at the beginning of the research received at least a pass GPA when the research finished and no student who participated in the research received a referral grade for any module. However, while all 6 of these students made rapid improvements during the first cycle of the research, two did not continue thus, their rate of acceleration diminished, and their grades plateaued at approximately 41%. The student with the highest GPA on entry, 62%, made some of the smallest gains, whereas the student with the lowest GPA on entry, 35%, made the most significant gain. Both

students who made nett losses to their outcomes had entered the research with mid-range marks of 50% and although both passed, although their marks were lower.

6.5 Phase 2 - Analysis of students' assessed work in relation to outcomes

The following data is tabulated under the grade profile of the students - in terms of the students' GPA on exit from the research this is followed by an outline of the analysis of their Dissertation - the final piece of written work.

Table 6-3 Students' Final GPA - Grade Band 40% to 44%

(5 of 30 students)

Student Identifier	Level of study	GPA before	GPA after	Nett Gain/Loss in GPA
Student 3	5	40%	40%	0%
Student 29	5	40%	40%	0%
Student 25	5	35%	40%	5%
Student 2	5	38%	42%	4%
Student 7	5	35%	42%	7%

The analysis of these students' assessed work demonstrated that the foremost reason for low marks was the level of work was only just at the expected level. Their work was rigidly structured within learning outcomes of the module and there was little independent development of arguments or thematic synthesis between learning outcomes. Up to 50% of their work remained descriptive and while there was evidence of conceptually based thinking it was based on low level and weakly formed inferences. Equally, while the use of reference material was appropriate it was not evident that it had been used to develop and deepen their thinking. The students' use of English language was appropriate with clear paragraphing and sentence structure.

Table 6-4 Students' Final GPA - Grade Band 45% to 49% (6 of 30 students)

Student Identifier	Level of study	GPA before	GPA after	Nett Gain/Loss in GPA
Student 13	5	45%	45%	0%

Student 28	5	45%	45%	0%
Student 3	5	40%	47%	7%
Student 19	6	54%	48%	-6%
Student 17	6	35%	48%	13%
Student 21	5	38%	49%	11%

The analysis of these students' work demonstrated a coherent well-applied knowledge that was well-understood. It did remain descriptive and with predominantly low-level inferences and conceptual application. The students' use of reference material was somewhat rigid and was not fluently integrated into their arguments. A notable factor was all students in this group demonstrated a significant improvement in their written English. Most conventions of Standard English were securely in place, work was clearly paragraphed, and sentence structure was appropriate. There were few situations where students' meaning was obscured through poor written communication. For the three students who had made significant gains of between 7% and 11%, I conducted a brief analysis of their work prior to the research and the primary cause of failure or low mark was related to their coverage of the learning outcomes. In that previously they had omitted learning outcomes of had not addressed them sufficiently well.

Table 6-5 Students' Final GPA - Grade Band 50% to 54%

(6 of 30 students)

Student Identifier	Level of study	GPA before	GPA after	Nett Gain/Loss in GPA
Student 24	5	53%	52%	-1%
Student 6	5	42%	52%	10%
Student 27	5	51%	53%	2%
Student 15	6	35%	53%	18%
Student 10	6	53%	54%	1%
Student 26	5	53%	54%	1%

The analysis of these students' work in this band demonstrated that for the two students who improved their marks while there has a very significant improvement in the quality of the students' work from an organisational perspective. As with the remaining students in this group their substantive conceptual arguments remained hesitant and did not exploit the full potential of their appended work. Reference material, while not inappropriately used, was often reliant on very short direct quotations that did not deepen, frame or form argument. As with the previous group, all students' written English improved conspicuously, the conventions of written English were very securely in place. Generally, their meaning was communicated clearly and there were very few instances where meaning was obscured through poor use of English. As with the previous group I conducted a brief analysis of pre-research work of the two students who had made significant gains, the primary cause of failure or low marks was insufficient coverage of learning outcomes.

Table 6-6 Students' Final GPA - Grade Band 55% to 59%

(6 of 30 students)

Student Identifier	Level of study	GPA before	GPA after	Nett Gain/Loss in GPA
Student 30	5	54%	55%	1%
Student 9	6	51%	55%	4%
Student 23	6	55%	56%	1%
Student 8	6	53%	56%	3%
Student 12	6	50%	56%	6%
Student 14	6	54%	58%	4%

The analysis of these students' work demonstrated a sound knowledge of the conceptual arguments of their discipline. This was reasonably well applied to the assessment tasks in four essays, but key conceptual arguments were not well developed. There were long descriptions of theoretical frameworks that were not clearly applied to the assessment tasks, almost all work was rigidly ordered under the module learning outcomes.

Table 6-7 Students' Final GPA - Grade Band 60% and above

(7 of 30 students)

Student Identifier	Level of study	GPA before	GPA after	Nett Gain/Loss in GPA
Student 22	6	52%	60%	8%
Student 16	6	51%	60%	9%
Student 19	6	48%	60%	12%
Student 8	6	52%	62%	10%
Student 18	6	62%	64%	2%
Student 4	5	55%	64%	9%
Student 1	5	60%	72%	12%

The analysis of work in this grade band demonstrated a thorough conceptual knowledge that was convincingly synthesised across the critical discourses of the discipline and effectively applied to their appended work. Students communicated their meaning skilfully and there were very few aspects of written language that obscured the students' meaning. However, with one exception all students' work was located within the taught aspects of the module with few independent approaches to the assignment. While the students demonstrated a very well understood knowledge it did seem to create some unnecessary limitations to their analysis and interpretation. Reference material and the critical discourse used by the students did not extend beyond the module bibliography and the key arguments covered through the teaching of the module. Just one student, demonstrated an innovative and creative approach to her work and in this case the marks improved notably and were very high; at an average of 72% with the highest grade being 79%.

This student's feedback indicated that the key influence on her improved capacity was the opportunity to co-locate her thinking with the teachers' and this allowed her to recognise the limitation inherent within remaining within the confines of the taught aspects of the module. She indicated that the visual representation of her thinking facilitated her evaluation, somewhat candidly stating that, 'when I saw my diagram, I could see what you [teacher] could see, lecture 1, 2, 3. . . you won't get a first-class degree, by repeating the lecturer'.

6.6 Phase 2 - Satisfaction with final outcomes

I have organised these data into four bands, according to the improvement in their GPA and I have contextualised the final student feedback regarding satisfaction with outcomes within these bands.

Band One

13 of 30 students made less than 4% improvement to their marks, of these, 11 were content with their progress. These 11 fed back comments such as; level 6 work is much more challenging and as such they were happy with their outcomes; they were less stressed about their outcomes and 'knew' what mark they would get and the reasons for it. They spent less time completing their work and enjoyed using visual means of unpacking their meaning and they enjoyed using English Language much more fluently and placed a high value on this particularly in relation to their workplace opportunities.

Band Two

7 of 30 students made between 4% and 7% improvements, of these six were satisfied with their marks and they fed back similar issues to the previous group, in that they recognised the greater challenge of working at a higher level particularly level 6, were less 'stressed', they used their time more effectively and placed a high value on their use of English language. They indicated that the coaching tutorial strategy was a more effective means of working and contributed to their understanding more successfully.

Band Three

6 of 30 students who made between 8% and 11% progress, five were content with their attainment, their final feedback was notably different in that they reflected on long-term unmet learning needs going back to their early educational experiences. They were less specific about the coaching tutorial but made comments relating to how they had always felt that they had underperformed in school, that, 'something had been missing' (Annette) from their earlier learning experiences, Three, related this to their use of English language for example reporting the importance of being able to communicate their thinking efficiently and 'smoothly'. The remaining three students indicated that learning how to think rationally and independently had made the most significant impact, but they did not relate this to any aspect of the coaching tutorial.

Band Four

4 of 30 students who made progress of greater than 11%, as with the previous group they were more reflective about their long-term educational experiences and were less specific about and particular aspect of the coaching tutorial strategy. They discussed their previous educational experiences in some depth, this was characterised by negative and sometimes angry reflections, for example Student 1 forcefully stated that she had been 'pushed to breaking point by ambitious parents.' On the other hand, student 19 stated very calmly that her, 'school was rubbish failed every Ofsted… eventually it closed, and we were moved … it's just how it was in that area.'

4 of 30 students were dissatisfied made the following comments; one was very unspecific and continued to blame herself. She did not make fulsome comments but stated that she did not know 'what was wrong with her… why she could not get it together'. Two further students indicated that they did not have sufficient time working with the coaching tutorial strategy to make sufficient progress. They indicated that their learning needs were such that they needed a longer time to complete their studies. The fourth student indicated that the coaching tutorial strategy should have been introduced earlier and that the time frame was too short.

Chapter 7   Discussion Phase Two

7.1   Introduction

This chapter discusses the findings of phase two and draws on the most relevant and important findings from phase one. I begin by summarising the findings relating to students' learning needs and describe the circumstances that led to their vulnerability to DO. I have organised the discussion into two key areas; these reflect those learning needs which contribute to students' vulnerability to DO and which were identified during the first phase of the research. These two key areas are, firstly, the development of the students' capacity to read, think and write conceptually; secondly, the development of the students' academic self-confidence. I discuss how these factors influenced the students' learning behaviours and, concomitantly, their attainment. The students' academic self-confidence need was not specifically targeted by the activities of the coaching tutorial for reasons discussed in chapter 5, section 5.6.2. However, I have included this in the discussion as it was critical to their development and learning. Moreover, I had anticipated some improvements in the students' academic self-confidence because of their participation in the coaching tutorial. The discussion and conclusions are tentative, because observing ongoing cognitive processes is methodologically difficult, as is observing psychological behaviour, and to infer causation from observation could be unsound (Cohen, Mannion and Morrison, 2017).

I draw on a wide range of disciplines to explain and more fully understand the students' learning as afforded by the coaching tutorial. I was particularly motivated to understand the nature and value of using visual and dual-coded diagrammatic representations to support learning. This reflects the key driver of the research in phase two; to develop a 'different and more innovative' approach to the respondent students' learning needs. The reasons for this approach are discussed in chapter 5, section 5.6.2. As such I have drawn on the cognitive sciences, visual cognition, and aspects of Design Thinking Theory (DTT), together with aspects of Science, Technology Engineering and Mathematics (STEM) education psychology. I have also drawn on educational

sociology and psychology as it is related to learning in higher education. My discussion draws together the key findings relating to the observation of in-class reading behaviours and coaching tutorials, student feedback, student outcomes, and the analysis of students' assessed work.

7.2 Student learning needs summary

The evidence of both phases of the research indicates that the respondent students experienced difficulties in making a positive transition into higher education. They experienced both cognitive and non-cognitive learning challenges and found it difficult to overcome these. From a cognitive perspective, it was evident that the students had difficulty in engaging effectively with the conceptual knowledge of their course. This seemed to create multiple barriers to their learning, from knowledge acquisition to its assimilation and its communication. From a non-cognitive perspective, it was evident from both phases of the research that the students had little confidence in their academic capabilities. Student interviews in phase one and further findings in phase two showed that they had anticipated problems from the outset of their course and held a negative self-identity as an undergraduate, and as a learner more generally. This self-identity seemed to be the consequence of unsatisfactory earlier educational experiences, particularly at their secondary schools in Key Stage 3. It followed that the respondent students made negative, situation-sensitive capability judgements, as described by the studies of Cassidy (2011), Orsmond and Merry (2013) and Papastephanou and Angeli (2007). These negative self-assessments permeated their engagement with their course and were formative influences on their identity as learners. The impact of this, for the respondent students, was, as Batchelor's (2006) research found, a diminished capacity to perform in the present, and the perpetuation of academic difficulty. This, coupled with an apparent difficulty in understanding the expectations of the HE learning environment, seemed to lead to a further loss of orientation and confidence.

Students could not gain purchase on their learning environment: most students' attempts to assess their own learning needs did not proceed further than their

recognition of its most obvious manifestation. This was their use of language. This resulted in little progress, and they compounded their difficulties by increasingly seeking rigid and reductive solutions that were based on convergent thinking. While their peers progressed in their academic development and made effective use of the support systems available to them, the respondent students seemed to become hampered in their academic development. They repeated earlier mistakes and grew in frustration and confusion at their apparent incapacity to make the progress that they, and we, felt that they were capable of. Unable to self-regulate their learning, they became reliant on peers and teachers. Ultimately, they developed an imitative style of learning together with an over-reliance on extant knowledge and skills; they adopted survivalist learning behaviours and ineffective models of assessment completion.

7.3 Conceptualising and deepening thinking

7.3.1 Knowledge acquisition and reading behaviours

7.3.1.1 *Summary*

This part of the discussion focusses on the students' reading and knowledge acquisition behaviours in relation to conceptual thinking and learning. The intention of this intervention into their reading behaviours was to support the students to read unfamiliar and challenging material, and to seek out the conceptual arguments of expository texts. To do this, we set out this expectation clearly at the beginning of each in-class reading session and encouraged students to form questions relating to the more challenging aspects of the text (see chapter 6, section 6.2.3).

The extent to which the revisions to the in-class pedagogical practice enabled the students to learn by effectively having them engage with unfamiliar and conceptually based material in expository texts remained equivocal at the end of the research. Table 7-1 shows that 26 of 30 respondent students consistently focussed their efforts on new and unfamiliar reading material, and 18 of 30 focussed on the conceptual and key arguments of the texts. This, while encouraging, did not necessarily evidence learning progress; there

seemed to be three features of the respondent students' reading and knowledge assimilation behaviours that influenced their capacity to learn effectively from the read text. These were:

1. Students' 'situated' mental representations of knowledge, underpinned by their conceptual thinking skills;

2. Their propensity to read and assimilate 'belief consistent' material;

3. The thinking skills that they brought to interpreting the reading material.

The impact of each of these features is discussed in the following paragraphs.

Maclellan (1995) argues that for students to construct meaning and to learn from expository texts, they must synthesise their extant conceptual and strategic knowledge with the newly read material to form accurate 'situation models' (Maclellan, cites Kintsch, p 278), (this is conceptual knowledge that was already in their existing knowledge base prior to reading a given text). However, it was evident from the observation of their reading behaviours that many respondent students exhibited difficulty with this aspect of their learning. They found it difficult to make connections between newly read knowledge and their pre-existing or extant conceptual knowledge; as such, the value that they gained from reading was diminished. This was particularly evident when students fed back to the whole class following an in-class reading exercise. Table 6-1, rows 3.1a shows that many students sought to communicate their meaning by using multiple examples from their work-based experiences. While these were relevant to the key points of the read text, and the students had clearly made a purposeful connection, they demonstrated little synthesis with the text or a deep understanding of the read material. Additionally, row 3.1b of the same table also shows that many students presented long citations from the read text, as they were observed to do in the first cycle preceding the intervention. While, again, these contributions were largely relevant to the key conceptual arguments of the text, the students could not summarise or paraphrase the text and did not demonstrate a level of understanding that was appropriate to the course. As such, while the student may have understood

the content of the read material and formed an accurate textbase (Maclellan, 1997), this knowledge remained isolated from the students' own knowledge structures. This means that the students were unlikely to have extended their own knowledge effectively and therefore their learning remained incomplete. These findings and the interpretation may go some way to explaining the students' poor use of reference material within their written work (see chapter 4, section 4.3.).

The underlying reasons for these reading behaviours were not clear; however, Toynton (2005), Orsmond and Merry (2013), Billings (2007), Lee and Malick (2015) and Maier and Richter (2013) found that student mental representation of knowledge is a fundamental consideration when seeking to understand the value that can be gained from reading. They argue, as does MacLellan (1995), that the students' extant knowledge can be structured and situated (Greeno, 1997) in such a dissimilar fashion from academic texts that transfer and synthesis between extant knowledge and newly read material is inhibited.

Situated knowledge, and its mental representation, also raises questions relating to conceptualisation, knowledge transfer and how this impacts student learning. Billings (2007) and Maclellan (1995) locate the individual's capacity to transfer knowledge with their conceptual thinking skills. Drawing on Perkins and Salomon (1989), Billings argues that knowledge is transferred through the deliberate and purposeful act of 'mindful abstraction' (Billings, 2007, p 491). This is where the individual deliberately forms connections between their own extant knowledge and new knowledge to formulate new thinking. Billings (2007) posits that mindful abstraction requires fluent meta-cognitive and conceptual thinking skills to find similarities and differences between the individual's extant knowledge and the read material and thus synthesise and personalise knowledge. This assumes a congruence between the individuals' knowledge structures and the newly read material or, at the very least, the individuals' capacity to navigate such complex knowledge structures to mitigate any dislocation between their own knowledge and that of expository texts. It was evident from the observations of reading behaviours and the

analysis of students' summatively assessed work (chapter 6, section 6.2 & 6.5) that students had difficulty in writing and thinking conceptually. Moreover, the findings of phase one demonstrated that students demonstrated few meta-cognitive skills; it is therefore unlikely that students would have easy access to the means to 'mindfully abstract' the principles of their knowledge and form new learning.

The implication of these factors is that almost half of the respondent students (table 7 – 1, rows 2.3 a & b) seemed to gain limited value from their reading activities because they had difficulty in effectively synthesising new and extant knowledge. These difficulties were further compounded because table 1-1, rows 3.2.a and b shows that, even in the final cycle, six of ten students did not recognise the situation and could not self-assess their needs. They continued to focus their attention and frustrations on the most obvious manifestation of their difficulty related to knowledge acquisition, which was their language use, and their reflection did not seem to progress beyond this level of analysis.

The students' self-assessment in relation to their language use was not corroborated by the in-class reading observations. Table 6 – 1, rows, 3.3 a, b, & c demonstrated that the students' linguistic skills were not the sole, or even the primary, reason for difficulty. These data show that students could feedback fluently, without observable linguistic difficulty, when they were feeding back extant conceptual knowledge. Their delivery was fluent and not reliant on multiple examples from their workplace or long citations from the text. The example of Student 17 illustrates this finding: during a reading session when she was discussing the concept of *Internal Working Models*, she did so succinctly and coherently, and her analysis was synthesised effectively with her professional experience. Her comments had some innovative insight. Notably, she did not rely on multiple examples from her workplace or long citations from the read text to communicate her meaning.

The extent to which this finding was evident is notable. Within the group of respondent students, 17 students, (four in cycle 2, eight in cycle 3 and five in cycle 4) consistently exhibited a confidence and a deep conceptual knowledge

from the preceding academic year's teaching, and they communicated this fluently. However, because in the example cited above, the discussion was associated with a module studied in the previous academic year, the contribution was below the level of the year of study. Nonetheless, the communication of conceptual knowledge relating to the topic was both accurate and linguistically fluent; this indicates that she did not have linguistic difficulties per se. Conversely, Row 3.1 of table 6 -1 shows that when students fed back on unfamiliar conceptual knowledge, they remained reliant on long citations and multiple examples from the read text to communicate their meanings. These findings seem to indicate that the students' linguistic skills were not the underlying issue relating to the difficulties they had in learning from their reading.

Students' learning was further diminished because this study found, as did Richter and Maier (2013) and Newsome (2000), that students consistently read and retained belief-consistent material; that is, knowledge that is in keeping with the students' own beliefs. Table 6 -1, row 1.2.g, shows that 13 of the 20 the students who were observed in cycle three continued to read belief-consistent material. Rows 2.1 a-c of the same table shows that approximately half of the observed students continued to interpret the read material based on a combination of emotional or work-based professional practice to the end of the research. This meant that although they had read unfamiliar material and they were reading for conceptual knowledge (as was the intention of the reading intervention), their interpretation was overly simplistic and reductive. It was also contextualised and confined to their pre-existing understanding and only related to their own professional practice. Additionally, they consistently interpreted the read material using highly emotional personal opinions. They gave little recognition of wider theoretical perspectives, and these learning behaviours placed an inherent limitation on learning.

This finding is not unique to academically vulnerable students, belief preservation permeates many students' learning behaviours. Van Gelder (2005) makes this point in relation to the development of critical thinking, as

did Douglas in 2000: both posit that such behaviours place inherent limitations on a student's capacity for reasoned argument and criticality. This finding, considered within the context of Val Gelder's perspective, may go some way to explain why so much students' work (chapter 4, section 4.3) demonstrated little reasoned argument and/or held much unsubstantiated personal opinion. Billings describes this approach to learning as 'cognitive encapsulation' (2007, p 502), where students use familiar, but in this case insufficiently rigorous, interpretations of a given text. However, the key limiting factor being that the respondent students in this research did not recognise the reductive nature of their approach, as such they did not self-assess or self-regulate this aspect of their knowledge acquisition skills. It was conspicuous that no student, either in phase one or two, indicated that they had difficulty in understanding the knowledge content of their course. Indeed, several stated the opposite.

For the respondent students, the combined impact of belief-consistent reading and the emotional interpretation of expository texts was that their understanding of the read material was frequently incomplete or inaccurate and did not withstand scrutiny. While this was not the only issue contributing to poor understanding, they were significant contributory factors. Rows 2.3.b and c of table 6-1 show that of the 30 students observed, just 16 formed a full and accurate understanding of the read text. It has to be recognised that these behaviours were recorded in a classroom setting, and this is likely to have has some influence on the students' reading behaviours. However, if these behaviours were replicated in their personal reading time, these findings may go some way to explaining why those students who were interviewed in phase one had acquired such poor value from their reading. Unsurprisingly, they became bored and frustrated with the poor learning gains that they had made.

The students' reasons for reading extant material, belief-consistent reading and emotionally based responses remained unclear, as did their propensity to use personal or emotional perspectives to interpret a given expository text, but they may have been using the thinking tools most readily available to them. The students may have been doing what Wenger (1998) found, orienting

themselves in familiar knowledge structures rather than non-opaque and unfamiliar ones. It seems that they were using those tools that they could and, without having a clear knowledge of the expectation of HE study, they were ill-equipped to change this working paradigm.

7.3.2 Writing behaviours – conceptual thinking

7.3.2.1 Summary

As discussed in chapter 2, section, 2.5 the skills that underpin conceptualisation of knowledge are observation, categorisation, and the use of culturally valued language, together with using the agency of the self to extend and form self-generated knowledge (Kolb 1987, MacLellan, 2005, Billings, 2007, and Dumontheil, 2014). In this study, the coaching tutorial sought to create the opportunity to tacitly develop these skills by enabling the students to represent and make visual their thinking through, for example, dual-coded diagrams, thinking grids, writing frames or heavily annotated essays; the reasons for this are discussed in chapter 5, section 5.6. Discussion with the teacher during the tutorial support sought to create the opportunity to implicitly promote deeper analysis, culturally valued language, and to enable the agency of the student to think independently.

Notwithstanding the issues related to observing ongoing cognitive activity (identified in the opening paragraph of this chapter), those aspects of the coaching tutorial that seemed to benefit students in terms of their deepening and conceptual thinking skills were affected by the opportunities to articulate and represent their thinking within a shared thinking experience. These matters are discussed in the succeeding sections, and they worked together with the students' growing confidence (discussed later in section, 7.6) to form a more accurate self-assessment and to place value on their own voice. The effective representation of their thinking was fundamental to the students' capacity to think conceptually and at deeper levels. It was evident that where the students developed both the capacity to engage with the conceptual aspects of their course and to self-regulate their learning, they made and sustained the most progress. Figure 8.1 describes the students' process.

Figure 7-1 Cognitive and non-cognitive influences on student thinking and self-regulation
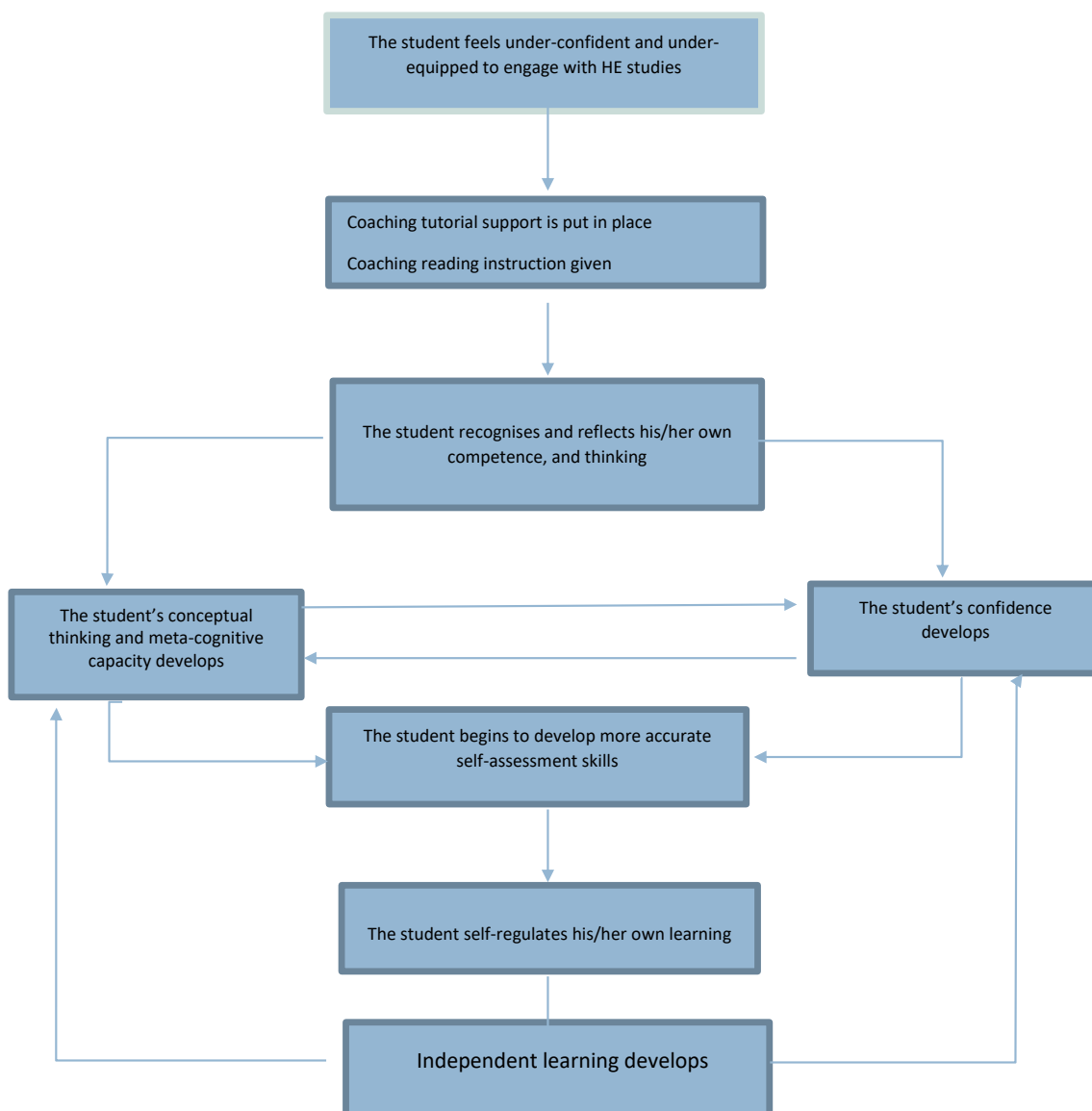
Principally, the act of representation created a tangible vehicle which:

1. made visible and explicit the processes of the students' thinking and learning;

2. made more effective use of time while on task, thus deepening thinking;

3. reduced cognitive load, thus allowing a more focussed approach

to their work.

These opportunities, in turn, supported students to:

1. engage meta-cognitively, self-assess and self-regulate their thinking and learning;

2. conceptualise their thinking and deepen subject specific learning;

3. develop ownership over their thinking.

These matters are discussed in the succeeding paragraphs, there are two parts to this discussion; firstly, I discuss how representation seemed to promote student learning. In the second part, I consider what the ostensible benefits may have been.

7.3.3 Representation of thinking – writing and visualisation

The view that writing, as a process, is beneficial to student learning in that it enables them to develop and consolidate their thinking and integrate extant and new knowledge is a recurrent theme in much literature: see Sampson and Phelps Walker (2012); Hunter and Tse (2012); Reynolds et al. (2011); Anderson and Hounsell (2007); Knoblaunch and Brannon (1983); Mitchell and Evison (2006); and Wingate and Tribble (2012). Similar findings were described by Zinsser (1988) and MacLellan (2005), who, in citing Emig's (1997) earlier work, explain that the value of writing is to discover one's own thinking and, in so doing, form connections across and between domains to create reasoned argument more fluently. Clarke (2002), Lillis and Turner (2001),

Monroe, (2003) and Zizek (2009) also make the argument that thinking skills and writing are inextricably linked and that proficiency in each skill leads to gains in the other. Reynolds et al. also explain the value of writing, 'Writing affords one of the most effective means for making thinking visible' (2011, p 19), and as such gives the learner greater clarity and the opportunity for meta-cognitive engagement and self-regulation. Many share the belief that learning, and the articulation of knowledge, hold a symbiotic relationship and they underline the importance of writing in knowledge acquisition and development. Few, however, can describe in detail the intersection between writing and learning other than it makes thinking processes more salient or visible to the learner. For the respondent students in my research, the value of writing as a tool for learning, or indeed making thinking processes visible, was neither automatic nor even clear and consistent. That is to say, writing on its own, did not support the students' learning in a way that might be expected, and it did not consistently make the students' thinking sufficiently clear or visible to them. It had little discernible learning value for students, and several described their writing experiences as 'practicing getting it wrong' (Student 11). This seemed to create a significant disadvantage for the respondent students.

The value of writing as a means of learning and developing meta-cognition was questioned by MacDonald and Coopers' 1992 research into journal writing. They challenge the uncritical view that writing promotes learning. They found, that some forms of writing were counter-productive for student grades, concluding that 'left to their own devices, students may fail to perceive the issues [pertinent to the professor], perceive them in ways different from their professors, or remain at too low a level of abstraction' (MacDonald and Cooper, 1992 p 139). They strongly advocate against the uncritical use of writing as a means of learning. Additionally, while Reynolds et al. (2011) do posit that writing makes thinking visible, they have also called for further research into writing and learning; discussing what they call 'the mechanisms of effect', they ask, '[H]ow does writing "cause" learning to occur? Is it simply a matter of increasing time on task, or do students learn by applying cognitive and metacognitive strategies while writing?' (Reynolds et al., 2011, p 19).

Bazerman et al. in a similar vein, had previously questioned whether the results of his experiments into writing and learning were '… due to some special quality of writing or simply a function of time on task, [this he posits 'remains[ed] unexamined' (Bazerman et al., 2005, p 59). Clearly, these arguments evidence that the nexus between writing and learning is neither clear nor agreed upon.

I knew that writing had little learning value for the respondent students from the first phase of the research; respondent the students had written extensively prior to my research project. Although they had generally avoided writing for any purpose and they also prevaricated on completing the academic aspects of their assessment, they had completed and submitted many essays, and in a timely way. Yet, their learning behaviours and thinking skills had remained underdeveloped throughout their programme of study. The value of writing as a means of representing thinking and as an important tool for learning did not seem to be available to them. Therefore, a key challenge for this research project was to find ways to allow students to represent and make visible their thinking, and in a way that was useful to them, thus accessing the learning value that many other students gain directly from writing.

The importance of making the invisible skills associated with academic writing and conceptual thinking visible to all students, particularly those who are educationally vulnerable, is described by Hounsell (1997), Pletzen (2009), Haggis (2009), Lea and Street (1997), Lillis (2001) and Bjork et al. (2003), Railton and Watson (2005) and Hunter and Tse (2013), who point to the much earlier work of Knoblaunch and Brannon (1983). None of this work indicates how to make this happen in practical terms within a teaching environment. However, there is much clearer and more focussed discussion relating to visualisation and the use of visual representations as a means of supporting learning and knowledge acquisition in the STEM disciplinary areas (Gilbert, 2010; Wu and Shah, 2004). Similarly, Design Thinking Theory (DTT) offers useful explanations of how visual and diagrammatic depiction, as a means of representation, facilitates dialogue, learning and thinking, as Razzouk and Shute point out, '… [diagrams] serve the purpose of representing and testing

the designer's intent. In other words, diagrams serve as a primary vehicle for thinking and solving problems' (Razzouk and Shute, 2011, p 335). There are several aspects of the arguments related to the sciences and DTT that are analogous with my research. Not least of these is the capacity of diagrams and graphic organisers to make the invisible both visible and accessible to a wider range of students.

Within my research, dual-coded diagrams and visual learning tools had initially been used in quite a reductive way. This was because, although the intention of the second phase of the research was to develop more innovative pedagogical strategies, diagrams and visual learning tools had initially largely helped students to complete an assessment more successfully. They very importantly reduced student reliance on linguistic dexterity, and it was a *different* approach to supporting students. However, the use of visual learning tools and dual-coded diagrams came to have far great utility to student thinking than I had anticipated. Clark and Mayer (2011) describe the learning benefits of concurrently using visual and linguistically based learning tools as the contiguity principal. The contiguity principal is also described by Paivio's (1990) dual-coding theory, outlined by Gilbert (2010) as,

> … importantly, the two types of associative structures [verbal and non-verbal] are capable of 'cross-linking' to form 'referential connections'. When called upon to do so, an individual will either produce a verbal or a non-verbal output based on the relevant associative structures or will produce one or both of them based on the referential structures that have been developed.

> (Gilbert, 2010, p 3)

Similarly, Mayer and Sims explain the value of the contiguity principal in learning, they describe the learning processes as follows;

> For meaningful learning that supports problem-solving [and] transfer, the learner must build an internal verbal

representation from the presented verbal information, an internal visual representation from the presented visual information, and [make] referential connections between these verbal and visual representations.

(Mayer and Sims, 1994, p 391)

Mayer and Sims are careful to point out that 'meaningful learning involves more than building either a verbal or visual representation; the additional component is building referential connections between the two kinds of mental representations' (Mayer and Sims, 1994, p 393). Thus, learning becomes multifaceted, deeper and not reliant on a single cognitive resource. Importantly, dual-coded diagrams and visual organisers offer the student the opportunity to form those critical connections that contribute to their learning, and this seemed to have real utility for the respondent students in developing their understanding. It was evident from the observation of tutorials (see table 10 – 3, App. G (i), sections 4 to 6) that dual-coded diagrams enabled many respondent students to meaningfully represent their knowledge, and as such to form their own referential connections between their linguistic and visual understandings. This supported the formation of critical reflection and deeper understanding.

While Mayer and Sims' research is contextualised within the presentation of learning materials within a lecture, the participating students in my research had the additional benefit of creating their own dual-coded diagrams. The benefit of this reflects Van Gelder's (2005) argument regarding the importance of independent thinking in academic development; the creation of dual-coded diagrams not only formed the opportunity for students to make visible their own thinking and form their own referential connections but also to gain ownership of the process (this is discussed in chapter 7, section 7.3.8 below). The opportunity to use a variety of cognitive faculties to create and represent meaning differently was highly valued by students. While much of their feedback reflected the unfamiliarity and non-threatening aspects of the

processes, had this been the only value and a placebo for academic anxiety, it soon would have become self-limiting (as indeed it did for some students).

7.3.4 Timing

The students' effective use of time was also an important factor in supporting their thinking and learning, and the use of dual-coded representations of their thinking was important in this. Key aspects were the time-period over which students worked on their assessments and frequency of access to their assessment plans, as well as a more focussed approach to their work. Avgerinou and Pettersson's review of visual literacy makes the argument that the effectiveness of a visual representation 'depends on the medium, on the type of information, and also on the amount of time learners are permitted to interact with the material' (Avgerinou and Pettersson, 2011, p 11). Prior to the research, the students' submitted essays were frequently their first attempt to commit their thinking in written form. The analysis of tutorials told me that, although they had completed much of the preparatory work, their essay was frequently completed within a week of the submission date, sometimes even on the day. The shortened, high pressure timeframe contracted the students' thinking space, and it seemed to have precluded students from the critical opportunity to conceptualise or deepen their knowledge or to reflect on their own learning. Their opportunities to engage with the consciousness of their subject at a reflective and meta-cognitive level were diminished; as such, the value of the writing experience is likely to have been diminished too.

Additionally, observations of tutorials (see chapter 6, section, 6.3.1.2) indicated that a conceptual representation of the students' thinking broke down and made salient the component steps of their thinking, thus concentrating and focusing their attention on matters that were relevant to their essays. In that, the use of a diagram seemed to distil and focus their attention on a narrower and more relevant range of matters (see photograph 12). This meant that the volume of information was narrowed, and they did not lose valuable time pursuing matters that did not contribute purposefully to their essay. Cognitively, it required students to interrogate their own thinking regarding the relevance of

those matters that they wished to include in their essay, thus promoting their capacity to select and evaluate material for inclusion. In turn, this seemed to enable the students not only to identify those matters that needed attention but also to lead to deeper and more thoughtful analysis.

In the second phase of the research, the coaching tutorials were deliberately scheduled over a four-week period preceding the assignment submission date. This maintained the students' momentum but, more importantly, created the opportunity for slower, but more detailed and deliberate, engagement with their thinking and their consequent representations. Additionally, the dual coding of their diagrams meant that it was cognitively encoded twice; as such, the conjoint retention (Kulhavy, Lee, and Caterino, 1985; Robinson, Robinson and Katayamac, 1999) meant that students could more easily retrieve their thinking from memory. This gave them more frequent and more detailed access to their thinking.

The lengthened thinking time and more frequent access to their own thinking thus allowed deeper engagement with students' own thinking. Students cited matters such as 'it [writing] forces you to think earlier' (student 22) or 'it [writing] makes you think constantly' (AS). They compared this favourably to their previous working paradigms, when they worked infrequently on their essays and most often, through a lack of confidence, left the most challenging aspects to the last minute. Prior to the research, students had completed fewer than 700 words on average within a week of the assessment deadline, but table 10 - 3 (App G (i), section 2.d), shows that by the end of the research, students had completed, on average, 2,200 words of a 3,000 word assignment within a similar timeframe. It seems that while students wrote less (because of their planning document), they wrote more frequently and arguably with greater purpose, and this they believed had some real value for them.

7.3.5 Cognitive load

It was evident from student feedback that students believed the coaching tutorial strategy and the use of visual plans also reduced cognitive load, thus

allowing them to focus more clearly on their thinking. Students found that this way of working reduced feelings of being overwhelmed by the assessment task, and this seemed to support them to regain the locus of control (Cassidy, 2011) over their work and learning. The key point that students made was that by creating dual-coded visual representations of their thinking, it reduced the quantity of text necessary to communicate their meaning for the tutorial, and this allowed them to concentrate on the content of their work. This, in turn, created thinking space and an opportunity for evaluation and reflection without the distraction of finding appropriate language to communicate their meaning. The benefit of this was that it allowed the students to become *learning* rather than *task* conscious (Rogers, 2003). There were 32 citations (chapter 6, section 6.4.5) where students believed that previously, as they sought to manage the multiple and competing assessment tasks associated with essay writing, they became focused on completing the task rather than exploiting the full learning potential from it. As such, as they progressed through their degree programme, they gained little incrementally from each individual task, and their cumulative progress was similarly limited. This finding tied in with the earlier finding relating to the analysis of support requests: table 4 - 6 shows a consistent pattern in the nature of support requests throughout their degree. This demonstrated little cumulative progress in their acquisition of skills. Their clearer focus, together with the co-working nature of the tutorials, created greater opportunities for deliberate and focussed learning.

In addition to their having a greater focus on their learning, students also discussed other connected benefits related to reduced cognitive load; they cited being in 'control' of their work and an improved capacity for self-assessment. Student feedback included the following: 'I only have to think about one thing at a time'; 'I don't have to think about how I am going to say it'; and, critically, 'I can think about what I'm thinking.' It seemed that prior to the research, as students split their attention between the multiple tasks associated with essay writing, their focus seemed to become obscured. They could only see that they could not find language to communicate their meaning, and they located their difficulties within linguistics, and this commanded most

of their attention. However, when the need to communicate their meaning in fully rounded text alone was reduced, it seemed that students were able to concentrate more fully on the content of their work, and this led to more accurate self-assessment and self-regulation and ultimately improved the quality of their work.

7.3.6 Meta-cognition, self-assessment and self-regulation

It is evident that the students' capacity for self-regulation was fundamental to their progress, and many studies provide theoretical perspectives on this matter: Rogers (2003) argues that self-regulation assumes levels of intentionality and deliberation, while Orsmond and Merry (2013) posit that self-regulation is only possible where students make accurate self-assessments. Pintrich and De Groot (1990), Boekaerts (1997), Vermunt and Verloop (1999), Boekaerts and Niemivirta (2000), Pintrich (2000) and Zimmerman (2006) comment on the extent to which self-regulation requires students to engage at metacognitive levels both with their domain knowledge and with their own learning processes, thus allowing deliberative and proactive modifications to learning behaviours. Beyer, Gillmore and Fisher usefully describe the cognitive processes involved in meta-cognition,

> … this technique [meta-cognition] engages students in reflecting on, verbalizing, sharing with others, and analysing what, step by step, they recall doing ... Use of this technique helps students become more aware of the cognitive procedure(s) they employed and of procedures employed by others to carry out that same operation…

> (Beyer, Gillmore and Fisher, 2007 p 34)

Beyer et al.'s description assumes several skills that the respondent students were not adept in. Findings in both phases showed that they were not confident in verbalising their ideas; additionally, they saw themselves as passive recipients of knowledge rather than autonomous agents. These matters precluded them from sharing or reflecting on their thinking effectively or

carrying out a step by step review of their approach to their learning. In this study, I observed students, (chapter 6, section 6.3) incrementally developing the multiple skills associated with self-regulation. For example, many worked purposefully and independently on their assessment plans between tutorials, formulating independent lines of enquiry and specific questions for tutorials. Prior to the research, students demonstrated few of these behaviours and attended tutorials most frequently with little clear idea of what they sought to gain from their attendance.

The example of Student 16 is useful for illustrating the journey that one student made to self-regulation. The student left the first of three tutorials where she had completed three substantive points relating to a single learning outcome; these were described on a large sheet of paper using a colour-coded annotated branch diagram. When the student returned to the second tutorial, she had used her branch diagram (which evidenced many purposeful revisions and modifications) to plan evidence-based, reasoned arguments on all three learning outcomes of the module. Additionally, she could verbally reason these points with some clarity. Through the process of planning and revising, the student had given herself the opportunity to evaluate and articulate her own thinking holistically across the entirety of the module as well as the opportunity to revise and review her thinking. Her discussion with the teacher was interesting. She explained: 'I think, I just look and think, … I didn't know that all I had to do was think or think about thinking or that … thinking would be such hard work'.

Though representing her thinking in a meaningful way, it seems that this student had found a way to make the transition to self-regulation; having found her own knowledge of her own volition, it was not foisted (MacLellan, 2005) upon her. Through the use of her annotated diagram, she was empowered to do her own complex thinking, as described by Smit (2012). It seems that for this student, the newly developed skills of competence self-assessments and self-regulation had led her to finding and critically valuing her own voice. The value of meaningful representation could not be over-estimated in this example

and is reflective of Do and Gross's (1999) argument in relation to the cognitive functions underpinning design; that the visual representation supports both inferences and analysis of a problem. Equally importantly, they argue, the diagram keeps the student's thinking at an appropriately abstract level that does not become cluttered with inessential details. This keeps the student's attention firmly on the analysis of the problem and consequently focussed attention on self-assessment and ultimately self-regulation.

Towards the end of the research, it also became apparent that some students were using their annotated plans to self-assess their thinking more holistically regarding a given topic or indeed the programme of study as a whole. This is an important matter. Langer and Applebee (1987) point out that successful learning in HE requires students to be able to integrate their thinking related to a given issue or phenomenon into the coherent whole. This, they argue, allows the learner to take a position and to create thematic arguments surrounding a topic. Essentially, the meta-cognitive nature of holistic thinking contributes to the deepening of learning and more thoughtful enquiry. Bazerman et al. (2005) also identified the importance of holistic thinking in HE assessment. Drawing on the work of Newell (1984), they argue that the nature of essay writing offers students the opportunity to connect the component parts of their thinking in relation to a topic; this improves learning, analysis and evaluation and, concomitantly, a student's marks. The analysis of the students' essays in phase one had demonstrated, *inter alia*, fragmented discussions and incoherent arguments, and this had remained a feature of their work throughout their studies. It seemed that for the respondent students essay writing alone did not create the opportunity to connect and integrate their thinking cohesively about a given topic. This meant that they had not had the opportunity to holistically assess, and consider, their thinking related to a phenomenon, and this may have been a contributory factor to the erratic and fragmented nature of their essays.

It was evident from the observation of tutorials (see chapter 6, section 6.3) and students' feedback that some students were beginning to use their dual-coded

essay plans to mitigate this lost opportunity and to take a more global view of their work. Again, the value of meaningful diagrammatic representation cannot be underestimated as it created the opportunity for students to view their thinking holistically. This was very important. Where previously (phase one) students had reported 'it's just a mush of words', diagrammatic representation facilitated clearer thinking. This point is made by Razzouk and Shute in relation to designers' thinking paradigms,

> … diagrams facilitate the designer's reflection, dialogue, and self-critique and therefore serve the purpose of representing and testing the designer intent. In other words, diagrams serve as a primary vehicle for thinking and solving problems, … with time the design becomes a clear and complete image

(Razzouk and Shute, 2011, p 335).

The clarity and completeness of the representation was an important matter for the coherence of the students' reflection as it contributed to their capacity to assess holistically. Students fed back matters such as 'I could see how it [essay] all hung together' or 'I could see it in the round' and importantly 'I could see what I hadn't thought about'. It seemed that because students' essay plans described the content of their essay in totality, they could see the architecture of their thinking relative to a given phenomenon, and thus carry out holistic evaluations and make improvements. The importance of this being that the fuller representation of their thinking afforded the opportunity to connect the component parts of their thinking in order to create an integrated and deeper whole.

It was also apparent from the example of Student 16 (described above) that the student had come to understand those skills and learning behaviours that are of value in an HE setting. A clear understanding of the expectations of any environment is fundamental to self-regulation, yet the research gave me very little information specifically relating to how students developed this knowledge. Smit's research into academically vulnerable students identified this as a key

issue, and she describes such students as 'outsiders to the discourse of academia' (Smit, 2012 p 375,). My research also found that the respondent students had described themselves thus, displaying little understanding of the expectations of the learning environment. However, by the end of the research, just three students described how they came to understand how those skills are of value in higher education. It seemed that for these students, the opportunity to 'see' as well as to co-locate their thinking with a teacher was important. Interestingly, these students used almost identical language: Student 1 commented [looking at her branch diagram]: 'I could see what you could see, I was just repeating the lectures, you won't get a first-class degree doing that'. Student 14, while looking at her paragraph grid, stated: 'I could see what you could, all words and not a point being made'. Student 3 said: 'Looking at it [annotated essay], I knew what conversation we would have [at tutorial]'. Notwithstanding these examples, it remained very uncertain how the students' knowledge of the expectations of learning within HE came about, and I believe this to be an outstanding line of enquiry for further study.

7.3.7 Conceptualisation - deepening subject specific learning and a context for thinking

Observations of the tutorials showed many students growing the capacity to conceptualise their thinking. It seemed that through a combination of using their visually based planning documents, together with being supported through discussion, students developed the capacity to observe patterns and to grasp and isolate underlying principles; as such, to conceptualise their thinking. Maclellan (1997) describes this as 'finding the more coarse-grained generalisations, which can, therefore, include more instances or examples, and as a result be more powerful and economical in the thinking process' (1997, p 134). The example of Student 26's tutorial in the third cycle illustrates Maclellan's point in relation to conceptualisation. When she was asked for her view on a specific learning outcome, she answered in some detail, but by using many repetitive examples. While these were relevant, they were, in fact, multiple examples of two underlying issues related to the module content. Reflecting Kolb's model of conceptualisation, it seemed that the student had

undertaken the first two steps in the model but had not yet taken the additional step of conceptualisation her thinking. Only when her thinking was captured in writing on her assessment plan and she had the opportunity to observe her thinking did she notice and identify the repetitiveness of her work and take the final cognitive step towards conceptualisation. Through discussion, as well as the visual stimulus of her plan, she quickly identified the common features and repetitions and isolated the underpinning principals to form a conceptual point.

The example above demonstrates several critical aspects of the learning experience in terms of developing conceptual thinking skills. Firstly, Billings (2007) and MacLellan (2005) argue that where the student is given an abstraction or has learned it in a formulaic fashion, the relationship between the concept and the observed instances will not be understood by the student. In the example cited above, it was critical that the student exercised agency to form her own connections and seek her own meaning, but she clearly needed the visual stimulation, together with the shared thinking experience of the tutorial, to do so.

A second important aspect relates to the combined function of language and action, Elton argues that students need to be supported simultaneously through 'word and deed' (2010, p 157) to create the close connection between their learning, conceptualisation and language. He states that where either language or deed (in this case, the development and discussion of the assessment plan) is absent, the student cannot effectively form the abstract rule and their mental representation of the discourse remains located in the specifics and is, therefore, incomplete. It is also important to understand the value of visualisation in this process. Ho (2001), in his discussion of a group of design students' journey from novice to expert, argues that the capacity to conceptualise knowledge is critical for student progress. He makes the point that the expert can stand back from the specifics of the accumulated examples and form abstract or conceptualised knowledge related to their domain of expertise (Ho, 2001). In the example cited above, by locating the discussion and dual-coded representation of the student's thinking within the same

thinking space, the student had the opportunity to stand back and, of her own volition, isolate the pattern from the specific instances. This allowed her to extract the conceptual point. The experiential nature of co-locating her thinking with her teacher's, as well as representing her thinking both visually and linguistically, seemed to allow her to focus and fluently grasp her conceptual meaning.

In addition to the direct evidence relating to the students' growing capacity to conceptualise their thinking, it was apparent that their thinking was deepening more generally, and this impacted positively on their subject knowledge acquisition. According to Beyer (2008), there is a symbiotic relationship between subject matter acquisition and the improvement of thinking and academic skills. Subject-matter learning and thinking-skill improvement, he argues, each reinforce and contribute to the development of the other. He draws on Glaser (1984) and Resnick and Klopfer (1989) to describe the cognitive processes,

> First, one's knowledge of the subject matter and the nature of that subject matter inform the selection and application of thinking skills just as the selection and application of these skills shape the insights and knowledge derived from subject-matter study

> (Beyer, 2008, p 81)

It was apparent that many, but not all, of the respondent students improved and deepened their knowledge throughout the research. Although there were some important issues relating to their reading behaviours (see chapter 7, section 7.3.1), the evidence of the tutorial observations told me that enhanced engagement with the critical literature of the subject being studied was key to improved subject knowledge. As students constructed their planning diagrams, they concurrently incorporated the critical literature that they sought to use in their essays. This created a visual synthesis, or contiguity effect, where students made connections between extant and new knowledge and the

findings of their appended work to construct their own understanding and knowledge.

The students' deepening subject knowledge was particularly evident when they, of their own volition, began to revisit and improve their appended work. This was not an eventuality that I had anticipated because all the students' appended work had been assessed for its appropriateness as part of the tutorial strategy, (see chapter 3, section 3.11.3 and table 10 – 3, App G(i) section, 2c). This phenomenon became apparent from the outset of the research, where many students improved the quality of, for example, their curriculum planning or child observations. They fed back that they had believed that they saw opportunities to improve this aspect of their work and did so successfully. Improvements of this kind created the means for more conceptual and deeper analysis in their essays and evidenced deeper subject knowledge. Thus, subject-matter learning, and deepening thinking skills were mutually reinforcing each other, leading to gains in a cohesive and seamless way.

7.3.8 Ownership

The matter of ownership in learning was critical for the students' academic development. This is a matter raised by Van Geller (2005) in his discussion regarding the development of critical thinking skills. Van Gelder argues that 'unless the students are actively doing the thinking themselves, they will never improve.' He continues his argument to say that where teachers believe that students will learn simply by being exposed to a given skill through subject learning, this is, '…about as effective as working on your tennis by watching Wimbledon', (2005, p 43). Similarly, I found that unless students were developing their own thinking to form their own meaningful representations (as in the example in the preceding section), it had little value for them. Prior to the research project, the students' attempts at writing were characterised by imitation and were fraught with anxiety (discussed in chapter 5, section 5.2 to 5.4). Findings in phase one showed that their behaviours in representing their thinking in writing lacked ownership, deliberation and purpose. This meant

that writing, and as such representation, had little learning value for them and that they were missing out on a valuable opportunity. This is not to suggest that the department where the research took place had anticipated that students would acquire appropriate thinking skills through a process of intellectual osmosis or an incidental outcome of subject matter learning. The study programmes had been specifically written for non-traditional students studying a work-based degree. This meant that specific opportunities to develop those skills that are appropriate to HE study were built into the programme design, and the college support mechanisms recognised this too. However, these were not useful for the respondent students, and they remained vulnerability to DO.

Interestingly, the key elements of the coaching tutorial that promoted ownership were related to its non-cognitive features but were closely associated with the use of diagrams and other graphic organisers. The students reported that the more visual strategies used within the tutorial were non-threatening and the tutorial itself was highly supportive. These features enabled them to take their first steps towards representing their own meaning without the fear of 'being wrong' or having to find the appropriate language. The dual-coded diagrams gave students a practical strategy that avoided them getting over-involved in trying to find fully rounded language to communicate their meaning. Using a diagram or other visual graphic organiser, they could communicate their meaning more easily and follow and extend their thinking quickly and effectively. This is a key point; it was apparent that where students independently constructed their own meaning and found ways to represent it, they made the most progress. Where they did not or did so less and remained dependent on teachers, they made less progress.

7.4 Limitations of the coaching tutorial model

In contrast to the majority of observed students, it was evident that some continued to experience difficulty developing conceptual thinking skills. Table 10-2, (App G (i) sections 4), shows that a minority of observed students continued to use reductive and formulaic thinking skills, and the coaching

tutorial seemed to make little difference to this. During tutorials, they identified low-level patterns and developed rigid mental representations of their knowledge. Reflecting Billing's (2006) argument relating to knowledge transfer, they had some difficulty in reapplying and transferring knowledge if the new context was even marginally different to the situation where they were likely to have first acquired their knowledge. This was particularly evident when some students did not seem able to transfer knowledge between modules or assignments and needed to revisit the pattern recognition strategies from one module to the next. The example of student 11 demonstrates this: by the second tutorial in cycle two she had made few developments to her planning and when discussing a specific phenomenon in a tutorial, she volunteered several repetitive examples of the issue. While the teacher captured these on her planning, she did not identify the common feature. When heavily supported to do so, she only asked if 'she should always find what they have in common' and attempted to do so in a very reductive way. This not only limited the student within the immediate context, but it also necessitated additional time to be allocated by her to revisit basic issues. This in itself was debilitating.

7.5 Impact on students' summative outcomes

A surprising finding was that students showed little interest in discussing those aspects of the tutorial programme that were ineffective for their learning. As a department, and as research leader, I had anticipated some feedback or clarity in relation to this matter, but this did not happen. I saw this as a lost opportunity because I was aware that almost half of the respondent students were not noticeably improving their summative marks. Although the evidence of the tutorials seemed to indicate that the students were making progress in their conceptual and critical thinking skills, it did not seem to carry forward consistently to their assessed work. As such, I believed them to remain vulnerable to DO.

To more fully understand this issue, it could be considered in the context of other results, particularly relating to the value that some students placed on

their use of the English language. Student interviews in phase one (chapter 4, section 4-2 (3)) showed that they placed disproportionate importance on their use of English and closely associated it with their identity as a learner. In phase two, students repeatedly referred to how their use of language shaped their identity as a learner and their engagement with the course. Additionally, the observation of tutorials (chapter 6, section 6.3.1) showed that of the 26 observed students, four sought to use the tutorial time to develop their language and did not focus on the content of their work. There may be some significant value to enabling students to develop sufficient language to grasp and understand their meaning in that language may well define the limits of what we can and cannot understand (Zizek, 2009). Had the students focussed on the core arguments of their essay, it may have brought about improvements in marks. Also, the analysis of students' assessed work, particularly at the lower end of the marking bands (chapter 6, section 6.5), demonstrated significant improvement in their use of English. The inference of these findings can only be tentative; however, some students may have, as they moved from their planning to their writing, continued to see their use of English as the priority, above translating the key arguments of their plans into essays. On the other hand, students may have self-assessed their competence in terms of their language skills. They may have believed themselves to be inadequately equipped to complete their essay to a standard equivalent to their planning, thus limiting their arguments to the extent of their language. While their English language had improved, it was not congruent with the quality of their planning.

7.6   Academic Confidence

7.6.1   Summary

Students identified several features of the coaching tutorial strategy that supported the development of their academic confidence; conversely, they identified nothing negative about the coaching tutorial, nor was there ambivalence in their feedback. A key issue for them was their entitlement to support; students reported very positively on this feature of the intervention. They reported that the knowledge that they had an entitlement to three tutorials for each module avoided negative and debilitating emotional responses to the

assessment challenges. Students reported that prior to the coaching tutorial strategy, they felt isolated when attempting assessment tasks. This led to panic and damaging prevarication around attempting the more challenging aspects of their work.

In addition to feeling less isolated, students discussed at length the defamilarisation of their learning process that was afforded by the coaching tutorial, the nucleus of which was their perceptions of their language skills. Firstly, students believed that by reducing the primacy of language from the tutorial and creating an alternative method of communication, they had the opportunity to recognise that the given task was within their capacity to achieve. This was highly motivational. This finding was corroborated by the observation of tutorials, (table 10 – 2, app G (i) section 6.d) where most observed students moved from highly dependent to agentic and more self-motivated learning behaviours. Secondly, related again to language, students believed that by working in a different way, which was less reliant on their language skills, they did not experience the familiar anticipation of 'failure' and 'despair'. These feelings had previously led them to a sense of hopelessness, where they adopted ineffective survivalist learning behaviours of reliance on descriptive assessment work and low-level arguments. This too was corroborated by the observation of tutorials, (table 10 – 2, app G (i) section 4) where the work produced by many of the students evidenced higher levels of criticality and critical reflection. Unfamiliar working methods and patterns were the single most frequently cited (79 occasions) feature of the tutorial programme and seemed fundamental to creating a break from a previous educational identity.

7.6.2 Isolation – entitlement and disempowerment

Crozier and Reay's (2008) investigation into DO identified the students' feelings of entitlement to support as a key issue in their attainment of better grades. They contrasted the sense of entitlement between middle-class students and working-class students. They make the argument that middle-class students are not only more likely to know about support services but are more likely to make use of them. In the case of this research, the significant

majority of students were non-traditional, including first-in-family students, or were from areas of low participation. This may suggest a pre-disposition to reluctance to seek support from the outset of their studies.

Their entitlement to support was cited 39 times in the first three cycles of the research; it was not cited in the final cycle (chapter 6, section 6.4.3.1). Their predetermined support entitlement negated the need to ask for support and, as such, may have mitigated some students' feelings of disempowerment. Although students elaborated little on exactly what they valued about the pre-determined support (citing only reduced feelings of isolation and panic), it was the first issue that students mentioned when giving feedback, and this remained consistent throughout the first three phases of the research. This was an important finding because the value of support entitlement may be related to the students' anticipation of difficulty and academic failure, which was a key finding of the first phase of the research, (chapter 5, section 5.2 discusses this). The knowledge that tutorials were part of their entitlement may have mitigated these feelings and was clearly very important to students.

The students' sense of non-entitlement was surprising, I had believed that they had felt empowered to seek support because prior to the research they had frequently sought many additional tutorials. It seems that I had not understood the circumstances under which these had been sought or how this had impacted the efficacy of the tutorials. Student feedback indicated that they had previously only sought additional tutorials when they were at a crisis point, and the findings of the 1:1 support records analysis carried out in phase one (chapter 4, section 4.4) corroborate this. The students sought most additional tutorials within the week of the submission deadline and sometimes on the day of submission, a time of high stress and a highly pressurised learning situation. It thus seems likely that the students approached the tutorial with a sense of failure and disempowerment; this is unlikely to contribute to a positive experience or to develop confidence for the future. Students had become reliant on ad hoc, frequent, but poor-quality tutorials that were focussed on reductive task completion strategies and very probably on aspects of the

assignment where they already felt as though they had failed. It seemed that the knowledge that three tutorials were being planned as a matter of course allowed the students to approach the tutorials in a more confident and effective way as it may have ameliorated their anticipation of failure.

7.6.3 Student self-identity

Student feedback showed that 28 of 30 respondent students cited unsatisfactory earlier education experiences, where they felt negatively labelled (table 10 – 5, appendix I, section, 6). This seemed to lead to a predisposition to judge themselves negatively and to anticipate academic failure. Moreover, the students did not gain an accurate understanding of the requirements of their new learning situation when they entered, HE and they reported that they were very uncertain of expectations (chapter 4, section, 4.2). The combined impact of these issues was a reduced capacity to make an accurate self-assessment of their own capability. The situation was compounded because it did not appear that the students had developed the detailed self-knowledge, described by Orsmond and Merry (2013), of their own individual learning processes and working paradigms either. When they were confronted by challenging learning situations, they seemed to have access to little 'recognisable capital' (Nomdo, 2009, p 184) to meet these challenges and tended to develop blanket defeatist attitudes to their learning.

These circumstances meant that the students had seen their learning as an unintentional and passive experience rather than the consequences of the hard work involved in constructing their own knowledge 'through their own cognitive efforts' (MacLellan, 2013, p 66, cites Sakiz, 2008). It seemed that students adopted and internalised ineffective learning behaviours, which became part of the usual way that they approached their learning and assessment tasks. This led to high levels of dependency on teachers and peers and, although probably unintentional and reflecting the concerns expressed by MacLellan, they seemed to hold the 'expectation that others would do the complex thinking for us [them]' (2005, p 142). Possibly of greatest detriment to their progress and achievements, the students'

underdeveloped confidence seemed to lead them to a reliance on extant knowledge and skill sets that were frequently below their current level of study.

A key feature of overcoming pre-existing negative identity was the defamilarisation of the learning process. There were 40 citations (chapter 6, section, 6.4.3.2 & 3) relating to how an unfamiliar way of working reduced the fear of being 'wrong' and exposure of their perceived shortcomings, either to themselves or their teachers, and this seems to have motivated the students. Phan's (2010) research into learned hopelessness shows that feelings of inadequacy do not have a direct effect on performance but induce task avoidance, and this leads to an indirect impact on student outcomes. While the respondent students did not avoid tasks per se, they did avoid certain aspects of their assessment tasks. The analysis of the 1:1 ALS sessions (table 5 - 4) shows that prior to the research, students completed more challenging aspects of their work in a very rushed fashion (discussed previously). While all the respondent students completed their appended work and associated research, the average word count completed was just 700 out of a 3,000-word essay within a week of the submission deadline. However, during the research, the students gained the confidence to attempt more challenging aspects of their assignments earlier in the assessment window and with greater independence.

In the final student feedback forum, all of them, whether or not they had made significant improvements to their marks, indicated that the opportunity afforded by the coaching tutorial had allowed them to form more accurate self-assessments. In addition to this, the students had learned to understand their own learning needs more fully. They believed that this was brought about by the unfamiliar and non-threatening means of working, which again they related to a reduced reliance on language to communicate their meaning. Students reported that because previously they had had few tools with which to self-assess their work to any significant level of granularity, or any tangible means to work differently, they had (sometimes knowingly and unknowingly) produced low-level work, but were at least confident that they could either make a

submission on the due date or achieve a low-level pass. Essentially, the students indicated that they had previously been ill-equipped to change their work patterns and were too intimidated to do so lest they do even worse in their assessments.

To enable students to know themselves academically and, as such, to make accurate self-judgements was an important benefit of the research. Critically, students believed that through working in a different way, and by being supported through the coaching tutorial, they understood that they had the capacity to execute the assessment tasks, which was highly motivational. Gebka makes this point, stating that,

> Students with low perceived competence seem to avoid situations in which their perpetual deficiencies may be revealed (performance avoidance). Hence, it would seem important to support students' belief in their competences, as this leads to more achievement-orientated goals.
>
> (Gebka, 2013, p 18)

In effect, the students came to know themselves more accurately as learners. Kierkegaard (1989) too makes this point, stressing that becoming oneself always begins with knowing and accepting oneself in the present and not through denying or seeking to escape from oneself by imagining a future identity or by imitating others. Moreover, performance avoidance behaviours would have also meant that, prior to the research, they did not use the opportunity to work on their academic weaknesses, remaining weak throughout their degree. The findings in chapter 6, section 6.4.3.2 show that there were 79 citations predominantly in cycles 2, 3 and 4 relating to unfamiliarity. These data indicate that because the learning situation afforded by the coaching tutorial strategy was non-threatening and critically unfamiliar, it created the means, as well as the confidence, to attempt alternative ways of working. This allowed students to break from using and relying on, ineffective

survivalist working paradigms, many of which were based in using extant knowledge and skill sets.

7.7 Summary- academic self-confidence

According to Maclellan (2013), academic confidence is a complex issue, and there is much debate surrounding the impact of confidence on student achievement. I too found conflicting and inconsistent data. As stated in the preceding paragraphs, the students' academic confidence, and their perception of self, seemed to be inextricably linked to their previous educational identity. This seemed to manifest itself in their perception of language and the power differentials that this created. Student feedback referred consistently to the unfamiliar ways of working together with their use of language; very often they had difficulty in seeing past their language use as a key barrier to their engagement with the course. It is, therefore, unsurprising that students placed value on those features of the coaching tutorial that reduced the primacy of language and which allowed them to disassociate themselves from their negative self-perception. Students discussed this aspect of the coaching tutorial simultaneously with their view that they gained a clearer understanding of their own competence and, again, closely associated this with a reduced dependency on language use. The combined impact of more positive competence self-judgements, together with an unfamiliar way of working, contributed to the re-imagined self of the learner. This was underpinned by the students' perceptions of language and their use of it. Yet the observations of in-class reading behaviours, together with the Basic Adult Literacy scores, indicated that language per se was not their most significant learning need.

7.8 Research summary and reflection on key learning points
7.8.1 Student outcomes and student satisfaction

There were very high levels of student satisfaction as measured through the college's internal mechanisms and the NSS (95% satisfaction question 22) and the evidence of the tutorial observations seemed to indicate that almost all the students improved their confidence and competence. Yet, student marks did

not consistently represent this progress. By the end of the research, 17 of 30 students improved their marks by more than 4%; the remaining 13 students showed little progress. For these students, there remained a disparity between their apparent capacity and their assessment outcomes at the end of the research, and this was clearly evident in the comparison of their appended work to their academic essays. The reasons for the disparity were not clear. The analysis of the students' work demonstrated that the foremost reasons for low marks were low-level reasoning. These issues were not evident in tutorials, where the majority of observed students presented well-developed assessment plans that made good use of the conceptual frameworks of the subject. With just two exceptions, the students' use of English was not a contributory factor. It is worth noting that while low-level reasoning was a significant factor of their work, there was some diversity within this. For example, one student's work was unfeasibly short and barely extended the details in her planning document. A further student's work was written in such unequivocal terms that it over-claimed her arguments and did not recognise either the limits of her own knowledge or knowledge in general. Although not all the students made progress in their summative marks, many students (90%) in the final student feedback indicated that they were satisfied with their outcomes.

7.8.2 Limitations

I did not gain a clear understanding of why some students benefitted from the research project in terms of their GPA and others did not. I understand that some students seemed to have found the activities of the coaching tutorial useful in terms of recognising their own capacity and made better use of it, but they did not extend their knowledge to the point where it would make a significant difference in their assessed work. They seemed to be content with their improved capacity to execute the assessment tasks more quickly and efficiently. Others seemed to place a high value on the development of their English language skills. The evidence of the tutorial observations is that a minority of students remained reliant on teachers and sought reductive solutions and analysis, and their assessed work reflected this. But the

underlying reasons were not clear, and I was unable to reach a deep understanding of these students' learning needs by the end of the research.

Chapter 8   Conclusions and recommendations

8.1   Introduction

In this chapter, I present the conclusions and recommendations to my research; these are contextualised within its intended outcomes. In keeping with the explanatory nature of the research, the conclusions and consequent recommendations are situated within the research site, that is the department and college where the research was carried out. However, where there may be wider lessons to be considered, I have included this in my discussion. I describe the research outputs and how these have been implements in my current employment. I outline the dissemination of the findings and describe my personal learning. I then provide a reflection on the methodology that I used and describe the ways that I have recontextualised my learning in my new employment. I finish by describing the ways in which the students have contributed to my learning.

The new understandings from the research conclusions are outlined in the succeeding sections and these relate to the research outputs together with recommendations for future practice which are also described below. I outline the implementation strategies of the research outputs that I have adopted within my current employment, where I have found many very similar challenges to student outcomes, together with high levels of staff willingness to offer students a more nuanced pedagogy. These implementation strategies are based on the findings of this study and through the discourse arising from my dissemination of findings. Particularly, following a symposium of colleges with a partner university in March 2019, where there was significant interest from the group to understand the issue of DO more fully, and to develop innovative ways to support students.

The overall aim of the research was to develop universal (Hockings, 2010) pedagogical practices that would mitigate students' vulnerability to DO. It became an expansive project which was planned, and did, take place over two consecutive phases. The first phase sought to investigate the causes of DO

and the second sought to use these findings to devise and implement teaching strategies that would mitigate student vulnerability to DO.

While phase one of my research did give me much valuable information and identified a cohort of respondent students, it did not, however, give me sufficient knowledge (as I had hoped) to develop improved universal teaching strategies that could be implemented across the department. It was important, therefore, that I understood student learning needs more fully as I moved into phase two. To do this, as well as to bring about a better experience for the respondent students, I implemented a coaching tutorial. This approach created the opportunity to give these students a better service and simultaneously for the department to understand the matter of DO more clearly and completely.

Only those students who were selected for the research (see chapter 3, section 3.11.5) had access to this resource and I saw this as partially a curative intervention. I, along with the department, had originally been ideologically opposed to adopting a curative intervention approach for the reasons discussed in chapter 1, section 1.8. However, the learning taken from the coaching tutorial primarily relates to how this can inform 'universal' practice rather than act as a curative intervention in itself.

8.2 Research outputs

Through this research, its dissemination through symposium, modelling and presentations I have recognised the need to develop an institution-wide approach to DO to open the discourse as a reality of some students' lived experience. I see this approach as a starting point for my organisation. In doing this I have sought to create a mind shift in teachers, curriculum leaders and the college executive away from seeing DO as a macro-based phenomenon that is best considered as an issue external to the college, to an issue where all stakeholders can make a positive contribution. As such I have developed an Institutional Framework of Reflective Questions - Differential Outcomes (Appendix L) aimed at raising the profile and reality of DO across the institution. This creates a vehicle for staff to reflect on DO and to identify other matters

that it might influence their students' engagement with the programme of study. It will give departments the opportunity to contribute to a developing, cross-college evidence base and these data will be considered through departmental focus groups. It will be adopted by my current employer in October 2019 where it was apparent that there was a significant issue relating to DO across the college.

In addition, I have developed, a practice model - learning to learn through assessment coaching, (Appendix K) this is a set of tutorial guidelines that may be used to support students who are identified as vulnerable to DO. It is aimed at teachers and support staff who are supporting those students who currently identified are vulnerable to DO and have difficulty in developing their own independent learning strategies. The practice model takes a case study approach to create a set of guidelines to enhance staff capacity to support those students who are identified as vulnerable to DO. It draws on the specific findings and new understandings collated from the coaching tutorial. It principally focusses on developing alternative and visually based models of practice to foster student ownership of the learning process, deeper conceptual learning, and to enable a more accessible means for the students to carry out detailed and accurate self-assessments. The practice model pilot is starting in September 2019 in my current employment with a group of students and its continuation is contingent on a formal review in January and June 2020. The learning from this will be used to possibly extend its use with a wider range of students.

The Practice Mode and the Reflective Framework will work together to support a wider and deeper understanding of DO across the institution, together with directly supporting those students who are vulnerable to DO. Their implementation was made possible because, as with my co-researchers at the research institution, of the determination of my current colleagues to ensure the best possible outcomes for students. Their implementation and dissemination are discussed under the original research questions which form the headings below.

8.3 Research conclusions linked to research questions.

In the succeeding paragraphs I discuss and draw conclusions relating to the research questions, within this I have contextualised the recommendations.

8.3.1. Primary research questions

a) What is the extent of DO within the student population of the college?
b) What unmet learning needs contribute to DO?
c) What practical pedagogical strategies can be employed to meet academically vulnerable students' learning needs, thus mitigating their vulnerability to DO?

These questions are discussed, together with recommendations below.

8.3.1.1 *(a) What is the extent of DO within the student population of the college?*

The research began with an extensive literature search surrounding DO. As discussed in Chapter 2, I was somewhat surprised that there were so few publications, at that time, on matters relating specifically to DO in higher education. My reaction may reflect my professional background as a secondary school teacher, where there is an extensive range of publications relating to matters surrounding DO. These include demographic, ethnic, gender and socio-economic information, as well as pedagogical practice, and these have been published over a significant period. This level of knowledge was not available in the HE sector and it seems that the understanding of DO within the HE sector is relatively new. This appears to have led to a lack of clarity about what is understood by DO. The discourse relating to DO remains associated with WP agendas and continues to have its basis in power differentials relating to socio-economic factors, ethnicity and gender, with possibly too few articles relating to pedagogical issues (Haggis, 2009). The emerging and multiple understandings of the matter seems to lead to disparate attempts to both identify those students who are vulnerable to DO as well as

to address the matter (Jacklin et al. 2007). Interestingly, there was practically nothing published relating to DO in HE delivered in FECs.

The body of work relating to DO has expanded over the period of the research; for example, Mountford-Zimdars et al's (2015) report discussed in Chapter 2 elucidates some of the matters identified by Haggis and Jacklin. Many attempts have, as Mountford-Zimdars et al. have pointed out, become focussed on increasing interrogation of data sets with diminishing returns. While this goes some way to identifying the extent of DO within student populations, the subtler difficulties that students experience in their learning may have become neglected within the literature. As such, many students may be quietly struggling as Lowe and Cook (2003) pointed out, their experience remains unrecognised, and they remain uncounted. I, therefore, believe that the extent of DO within the sector has yet to be fully described in the literature.

Within the context of my own research, I was as confident as I could be that all the enrolled students who were vulnerable to DO were identified. This was, as anticipated, approximately 10% of all students. No further students became apparent that might have fulfilled the descriptors outlined in chapter 1, section 1.8; neither did I have reason to revise the list of respondent students throughout the project. Nonetheless, as the project ended, I did find myself reflecting on those students who had withdrawn from study in previous academic years. It was only very occasionally that a student permanently withdrew from the course where they were succeeding academically; the significant majority were receiving failing or very low pass grades.

Consequently, I briefly examined a small sample of exit interviews from the preceding three academic years and found that 55% of withdrawn students had cited either external commitments or time pressures for leaving, 28% indicated professional work-related issues, 9% indicated that the course was not what they expected and the remaining 4% indicated that the course was too challenging. I became increasingly unconvinced about these explanations, particularly in light of our findings in phase one, table 4 - 2, where I found that

students who were vulnerable to DO tended to identify external matters. As such, I believed that at least some students were likely to have been vulnerable to DO and that this may have contributed to their decision to withdraw from study. Therefore, the original population that was surveyed in phase one was already depleted of many students who may have been vulnerable to DO.

The explicit outcome of this research was to develop practical pedagogical strategies that mitigate students' vulnerability to DO. This means that the phenomenon of DO as a reality needs to be understood at the macro, meso and micro levels in order that the scale of the matter can be described. As discussed earlier the sector-wide discourse relating to DO is yet in its early stages and much is reliant on macro data sets.

Similarly, the college needs to more fully understand DO, as it relates to their institution, and within this, to understand the multiple realities of students who participate in its higher education courses. The college is very supportive of a diverse range of students, however, as with the sector more widely, the matter of DO has hitherto been considered largely in terms of data sets that describe students' demographic background. This may lead to a belief in managers and senior leadership teams that we could accurately describe the extent of DO, and that all was well with their HE provision; and indeed, it was for many students. Nonetheless, as this research has demonstrated this approach neglected the experiences of some students.

Recommendations

I, therefore, recommend that DO needs to be discussed and made explicit as a concept to generate some institutional (and sector-wide) consensus on its extent. Leaders and teachers need to become literate in understanding students' lived educational experiences in order to identify those students who may be vulnerable to DO. This is best brought about through a whole college systematic approach to DO and inclusivity more generally. The key really is how often and at what levels the institution, leaders and teachers reflect on their own practice using consistent probing questions that would explore their

approaches to DO and inclusive practice. Therefore, a primary recommendation is, as with the sector more widely, to promote a more prominent dialogue with regard to DO and inclusivity of practice more widely across the HE departments of the college, where the needs of all students are considered systematically.

In order to do this, within my own institution, the Institutional Reflective Framework (discussed above) seeks to embed the question of DO within the college quality enhancement processes and ethos. It considers responses from individual teachers, through to course leaders and programme area managers through to senior leadership. I have designed the Framework in a way that contributes to an institutional evidence base that systematically captures nuanced vulnerability to DO. This would act as a key enhancement to add to those statistically well-represented aspects of student vulnerability and as such, facilitate a more accurate description of the extent of DO within student populations.

The Reflective Framework will now form part of the college quality assurance and enhancement methodology and is seen as an initial step in giving greater prominence to the DO discourse as well as creating an evidence base for future practice. It is reported at several levels from the individual lecturer through to programme leaders, directorship and governance.

8.3.1.2 *(b) What unmet learning needs contribute to DO?*

The findings of both phases of the research indicated that DO was a complex matter, underpinned by multifaceted and deep-seated learning needs, many of which were related to the students' perceptions of themselves as learners. The second phase of this research focused on two primary issues that are conceptual thinking and academic self-confidence together with ineffective knowledge acquisition behaviours. I am aware, however, of two key matters, firstly, in phase one, there were very many other issues that contributed to DO, but the scope of this research precluded our consideration of these (discussed in chapter 5, section 5.7). As such, there are many issues that this research

could not fully describe and therefore there are many factors that remain outstanding for consideration. Some of these matters included, for example, time-management, or the students' capacity to understand effectively the expectations of HE. These issues amongst others, yet unidentified, certainly need to be explored further. I am also aware that almost half of all students did not make significant progress in their marks and many students consistently used ineffective knowledge acquisition behaviours.

Recommendations

I would, therefore, recommend that there is further longitudinal research carried out that seeks to identify and develop an evidence base of those unmet learning needs that contribute to DO in order that institutions should articulate better the characteristics of DO. This is closely associated with the previous recommendation relating to the extent of DO; the reflective questions included in the Institutional Framework of Reflective Questions - DO creates the opportunity elicit reflective responses from those closest to the students; that is teachers and course leaders. It draws on their professional experience and is contextualised within their understanding of their disciplinary area together with their knowledge of students. It creates a systematic vehicle that captures data, from the key stakeholders to build an evidence base that describes those learning needs and behaviours that contribute to DO. This learning can be articulated at institutional level through existing quality enhancement structures, such as module, and course reviews, through to departmental and college self-evaluations.

8.3.1.3 *(c) What practical pedagogical strategies can be employed to meet academically vulnerable students' learning needs, thus mitigating their vulnerability to DO?*

The development of pedagogical practice that ameliorated the students' vulnerability to DO, and that could be adopted into universal practice, was at the core of this research. As stated previously the primary learning needs that were addressed by this research were the students' knowledge acquisition

behaviours, their academic confidence and their thinking skills in relation to conceptual and abstract thinking. These are discussed with recommendations in the succeeding sections.

Academic Confidence

The respondent students reported very low levels of academic confidence, their self-perception seemed to stem from a range of issues that were frequently traced back to their (negative) early educational experiences. They held very negative views of their own capabilities, particularly literacy skills, and this self-perception influenced their learning behaviours which, in turn, placed significant limitations on their learning opportunities. The respondent students made negative, capability judgements, as described by the studies of Cassidy (2011), Orsmond and Merry (2013) and Papastephanouon and Angeli (2007). Critically, it also led students to expect academic failure; they were unable to accurately self-assess their own capacity and had developed blanket defeatist attitudes. Ultimately, they adopted imitative learning practices, reliance on pre-existing knowledge and skillsets, lost agency throughout their work.

In effect, prior to the research, many students' self-assessment was reduced to criticising their own literacy skills, and they had no effective strategy to proceed beyond this level of analysis. Damagingly, many respondent students also conflated language skills with social-class, and this reinforced their sense of otherness. There was no evidence that the students' literacy skills were at odds with the main cohort of students, yet some carried this belief to the end of the research project and continued to locate the efforts with this perceived learning need. The respondent students' learning situation was further complicated because, their reluctance to engage in written activities or other effective means of representation, meant that they did not have a tangible mechanism to make their own learning processes salient or visible to themselves. Consequently, they had few practical strategies or tangible means to promote self-assessment or meta-cognitive engagement with their studies or, indeed, their own learning behaviours. Therefore, improving the students'

self-assessment, and concomitantly, academic self-confidence was a central feature of improving their attainment.

The development of academic confidence was critical to the students' progress, but the most effective way to do this was to develop their academic competence, as Marsh and Craven (2006) found, when students are more competent learners, they become more confident learners; in effect, each led to gains in the other. Although I did not put specific confidence-building activities in place for the reasons discussed in chapter 5, section 5.6.2, it was apparent that many of the respondent students were becoming more confident in their approach to learning and there was a symbiotic relationship between the students' improving academic confidence and their growing competence in adopting effective self-assessment strategies. The development of self-assessment was underpinned by finding innovative ways to enable students to accurately self-assess their own capabilities positively, and in detail, therefore avoiding blanket negative self-judgements. This was an important finding and the benefits were two-fold, many students could see that the task was within their grasp and as discussed in chapter 7, section 7.6 this was highly motivational. Additionally, accurate self-assessment steered the student away from blanket negative self-judgements (Cassidy, 2011) which were quickly followed by task avoidance behaviours, (Phan, 2010). The students could understand where to focus their attention and this brought about improvements and greater levels of pro-active learning. As such accurate self-assessments with a significant degree of granularity were extremely valuable to many students and enabled detailed and purposeful modifications to their efforts.

Recommendation- academic self-confidence and self-assessment

It was clear that the students' use of text-based activities alone did little to support them to develop self-assessment skills (see, chapter 7, section 7.3.6). This research suggests that some students are better supported by being given practical, more visually based strategies, that enabled them to carry out detailed evidence-based, self-assessments. Visual strategies enabled

students to see the 'gaps' in their thinking more readily. Additionally, they reported that they had a tangible means to keep themselves focussed on those matters that were of greatest relevance to their work.

Given our current levels of knowledge in relation to this matter, I believe that for students who are, or maybe, vulnerable to DO within my current institution, that improvements in their outcomes is best brought about through either small group or individual tutorial learning. Visual, dual-coded representations can be used as just one means to support students, this should be implemented carefully, intelligently and informed by the guidelines described in the Practice Model – learning to learn through assessment coaching. The third case study of the guide specifically supports students and staff to develop a personalised means to self-assess effectively, using non-threatening and visual methods. The implementation of the Practice Model is, as stated earlier, an incremental approach I am working initially with two departments that have demonstrated an interest, modelling the practice, as well as the use of the guide, have been critical.

Conceptual and abstract thinking

Undoubtedly, and appropriately, studying at HE level requires students to engage in complex systems of knowledge, thinking habits, learning behaviours and communication skills. Understanding complex knowledge systems requires students to manage multiple, interdependent, non-linear cognitive functions and conceptual knowledge. The analysis of students' assessed work in phase one and further findings in phase two indicated that the students' conceptual thinking skills, together with their capacity to navigate knowledge systems, had remained underdeveloped throughout their programme of study.

Underdeveloped conceptual thinking skills were a very important limiting factor in the students' learning and academic performance. Their thinking remained in the specifics of the subject, and their capacity to grasp the more abstract and conceptual features of knowledge remained elusive. Although this was the most significant limiting factor in the students' attainment, the reasons for

this learning need were not clear. Possibly the multiplicity of cognitive functions necessary to manage the conceptual knowledge structures, together with under-developed academic confidence, may have made it difficult for the respondent students to confidently develop conceptual and deep levels of domain knowledge, and to represent this accurately in assessment tasks.

It was very clear, however, that there was a relationship between the students' perception of their language use and their academic performance. Believing themselves to be inadequate readers and writers, the students held an intense dislike for writing, and reading, in any form, and they avoided either activity if possible. This meant that prior to studying at HE, the respondent students had rarely taken the opportunity to represent their meaning in writing for any purpose other than the most superficial of matters, and their reading was limited to only to those issues that were necessary. The consequence of this was two-fold; students had little experience, and few skills, in using writing as an erudite means of communication. They had equally little experience in using writing, or any form of representation, to deepen, conceptualise or reflect on their thinking and learning. Moreover, they rarely read to inform their thinking in a meaningful way. Thus, their acquisition and assimilation of knowledge were dependent on their capacity to mentally synthesise, and recontextualise complex conceptual knowledge, and to mentally restructure it to the expectations of HE. They had to do this largely without the facility of being able to represent their meaning fluently or effectively in any format.

The challenge that this presents for the respondent students exists on several levels; the findings in the second phase demonstrated that the students' mental representations of their knowledge were linguistically encoded and structured very differently from academic texts. As such, the deliberate transfer of knowledge within and across domains using the 'mindful abstraction' that Maclellan (2005, p 134) argues for became very challenging for them. Effective learning also assumes the students' access to their tacit knowledge. If Somech and Bolger's (1999), Zheng's (2010) and Maier and Richard's (2014) arguments relating to student difficulties in accessing tacit knowledge

are taken into consideration (see chapter 2, section 2.3.1.1), the task confronting the respondent students becomes increasingly difficult. Moreover, while the students' language and literacy skills were in keeping with their peers, they were not of a standard that was likely to facilitate such cognitive dexterity. I could not help but see this as someone trying to work out a standard deviation by using mental arithmetic; unsurprisingly, the students encountered multiple difficulties. Ultimately, they resorted to dependency on peers and teachers, together with reductive learning practices, and sought unequivocal fragmented pieces of information, which failed to help them develop a systematic and integrated understanding of complex phenomena.

The matters described above worked together to make the students' learning opportunities very challenging for them. The key focus of the research, and central to supporting the students, was the quest to find strategies that enabled them to represent their thinking meaningfully, and which allowed them to conceptualise and assimilate their knowledge effectively. Within this, it was critical to make thinking processes visible, and therefore available, for scrutiny and evaluation.

The invisibility of thinking processes is one of the many challenges for teachers and students alike and this seemed to be at the forefront of this research. It was evident that there was little value in trying to make the tacit cognitive functions related to thinking and its articulation overt through dialogue; they are 'clumsy to describe' as Maclellan (2005, p 134) points out, and a linguistically uncertain student is unlikely to grasp the finer subtleties of meaning. Additionally, to attempt to make the students' thinking visible by focusing on language specifically would miss several important matters. Seeing the representation of knowledge and thinking only in terms of the mechanics of the English language would certainly fail to recognise the more complex cognitive aspects of representation within a multi-dimensional knowledge system. As discussed earlier, it was evident that the students' erratic writing patterns were frequently a consequence of ineffective knowledge conceptualisation and assimilation behaviours. Addressing these

matters by seeking to improve their use of English would be to address the symptoms rather than the causes of their difficulties. Consequently, students would be very unlikely to be any better equipped to succeed academically.

There would be significant psychological barriers too; a focus on literacy alone may mean that the students were presented with a 'solution' that many were unlikely to engage with effectively, given that they may have not wanted to expose their perceived shortcomings and, moreover, they did truly dislike writing. A focus on language may reinforce the students' self-belief of inadequacy as a learner and undergraduate, and where students conflate the institutional solutions with social class, it could become a toxic mixture that reinforces power differentials and academic disadvantage. Furthermore, a focus on language may reinforce the students' belief that their difficulty was primarily related to their literacy needs, whereas the findings of this research demonstrate that this was not the case, given that their literacy skills were not statistically different to the main group of students. Thus, it would be tacitly reinforcing inaccurate self-assessments; the messages that are sent to students need to be accurate and very well-considered. Any attempts at supporting the students through literacy-based activities alone could create further confusion and mis-focus the student, thus becoming counter-productive.

On the other hand, a failure to recognise the value of well-developed language and literacy skills for the students' capacity for deep thinking and ultimate attainment would be equally erroneous. As Bean states clearly and unequivocally, 'Writers who do not conform to the standards of academic language can hardly expect to be recognised in the academic world' (Porksen, 1994, cited in Bean, 2003, p 25). Bjork et al. (2003) is equally pragmatic, indicating that the 'students' success or failure depends to a very large extent on the quality of the students' written course work, dissertation or thesis' (Bjork, 2003, p 88). These pragmatic views in relation to the impact on summative assessment cannot be overlooked because there is a danger that student work is not an effective reflection of their understanding or knowledge, and so they

remain vulnerable to DO. On a somewhat deeper level, much research (see chapter 2, section 2.3.1.2 and chapter 7, section 7.3.3) makes connections between literacy, and writing in particular, its impact on thinking skills, and any consequent academic attainment.   There are, however, challenges to the uncritical view that writing and/or representation promotes learning (see section 7.3.3) and this needs further research.

Addressing these matters and meeting the students' needs was a significant challenge to the research project. However, I found that the development of practical strategies that facilitated meaningful representations of thinking (the nature of which is discussed throughout this research) made many students' thinking, knowledge and learning processes visible to themselves and to their teachers.   Visual and dual-coded representations gave the student and teacher a shared means of communication but most importantly of all, they made salient the students' thinking journey and allowed students to reflect, rethink and to construct their own thinking and knowledge. As Van Gelder found in relation to argument mapping, 'visual representation gives the teacher x-ray vision into the student's mind' (Van Gelder, 2005, p 45). More importantly, it gave many of these academically uncertain students x-ray vision into their own thinking.

Visual meaningful representations were key to enabling students to develop their knowledge and extend their learning, as well as to structure their essays effectively.   The development of dual-coded and multimodal planning documents helped many respondent students to develop a more coherent understanding of complex phenomena. This way of working supported the students' understanding of interrelationships complex knowledge structures by highlighting and making visible key aspects of their thinking. Van Geller also points out '[I]f evidence forms complex hierarchical structures, then those structures can be diagrammed. Put another way, we can draw maps that make the logical structure of the argument completely explicit'. (Van Gelder, 2005, p 44). While he is clear about the value of language, he is also clear that there are alternative means of representing meaning and in so doing make visible

thinking. Dual-coded or multi-modal diagrammatic representations helped students to synthesise abstract, conceptual knowledge to make sense of and reflect on their thinking. Employed at the early stages of a students' thinking, in relation to a given assessment task, they facilitated flexibility in thinking, thus allowing more divergent and deeper analysis, and this facilitated meaningful enquiry at an appropriate level.

The key question is how the learnings from this research can be implemented within universal practice? Clearly, more research needs to be carried out to enable all students to find useful ways to represent their thinking, but the extent to which this is, or could be, adopted into the universal practice of the department in a way that allows systematic evaluation presents a challenge. Lea and Street (1998), amongst others (see, Thesen, 2009), identify some of these challenges, particularly in relation to the representation of knowledge and thinking in teaching environments. They too make the point about the matter of 'visibility', (chapter 2, section 2.3.1 discusses this) to argue that university teachers 'are likely to have spent many years developing acceptable ways of constructing their own knowledge through their own writing practices,' Lea and Street (1998, p 163); therefore, their knowledge of writing and the construction of knowledge is tacit and 'invisible', even to themselves. This may mean that they do not know how to make writing practices of representation, knowledge acquisition and its communication visible to students either. Similarly, Elton argues that the 'taken-for-granted activities' of academia means that 'the knower is not aware of the knowledge [or skills] that they have to teach' (2010, p 153) and this, he argues, presents the greatest of all difficulties.

These certainly are challenges within the complex learning systems of HE. Yet, if the department, and the college more widely, are to move towards an inclusive learning environment, it needs to take seriously matters relating to the 'invisibility' of both staff practices and their expectations. Ways need to be found to make practices and expectations accessible to and understood by all the students, not just those who have the social and economic advantage that

gives access to the tacit expectations of HE. Within my discussion, I have drawn on a wide range of literature to more fully understand the students' learning needs in relation to representation. This demonstrates that there are already well-established diverse modes of representation that make knowledge and thinking visible across the disciplines.

There is much valuable knowledge relating to these matters that could be used more widely to inform practice. The sciences and mathematics use diverse, highly visual and symbolic means of representation, for example, photographs, graphs, as well as, multimodal and dual-coded texts. Designers and engineers find culturally valued ways to communicate, using models, artefacts and design drawings. These formats speak to the knower, they draw on multiple cognitive functions, including visual literacy, linguistics, spatial and symbolic knowledge, to communicate meaning, and they are culturally valued within their respective disciplines. These means of representation could have real learning benefits to the department in enabling the students to represent and come to know their meaning. Clearly, the nexus between writing and/or representation and learning needs to be explored by researchers and more fully and understood by teachers. It remains, however, that there are well-established alternative methods to represent, develop and extend meaning across the disciplines that could have utility to staff and students.

Recommendations

The development of students' conceptual thinking skills was a complex matter and, as with self-assessment, I found that there was significant value in using dual-coded visual means to represent thinking and support the students' conceptualisation of knowledge. However, I have no wish to argue for the uncritical use of visual, dual-coded representations per se anymore that it is useful to argue for the uncritical use of writing (see chapter 7, section 7.3.3). The value of either activity is in its capacity to represent, communicate and make visible meaning, this matter is recognised by many researchers, but particularly in the STEM disciplinary areas. For example, the importance of meaningful representation is made clear by Gilbert (2010) who unequivocally

posits that '[R]epresentations are the entities with which all thinking is considered to take place. Hence, they are central to the process of learning and consequently to that of teaching' (2010, p 2). Given the diversity and multiplicity of the students' learning needs within the respondent group and the student body more widely, Gilbert's argument represents quite a challenge for the department, the college and arguably the sector more widely. Nonetheless, I have found that dual-coded, visual means of representations to have real value to students. More importantly, students placed high levels of value on these strategies themselves and used them independently and with some innovation, as such, it is a strategy that I will seek to continue to implement and evaluate.

As with the development of students' self-assessment skills and concomitantly, their self-confidence I believe that those students who are vulnerable to DO and need to develop conceptual thinking skills are best supported in small group and individual tutorials. This allows the teacher to adopt a highly personalised approach in supporting the student to develop a complex and nebulous cognitive skill. It will seek to elucidate the existing opportunities that make the cognitive processes related to thinking and learning 'visible' to all students. Currently, in two departments, we have begun to implement the Practice Model – learning to learn through assessment coaching, which includes guidance on developing conceptual thinking, I am adopting an incremental approach or starting in a 'small way'. I am adopting a modelling approach for dissemination which staff and I feel is essential. The use of this Practice Model is the beginning of an iterative process that will draw on feedback from students and staff. The learning from this reflective process will form the basis of further cross-disciplinary research that will be undertaken and reported through the annual self-evaluation quality processes. This research can be shared within the department with a view to being adopted into universal practice and embedded into the learning and teaching strategies of the college. This will enable us to not only need to know more but to know differently (Haggis, 2009).

Knowledge acquisition behaviours.

Observations of the students' knowledge acquisition behaviours demonstrated that they had little experience of using their reading to inform their thinking in a meaningful way. Additionally, the expectation to acquire knowledge through independent reading seemed to represent a new experience for the students and as previously discussed they demonstrated few effective reading skills. Their reading behaviours were deeply entrenched and often unconscious, thus students had little practical means to address them. Their reliance on pre-existing knowledge and beliefs together with ineffective self-assessment skills meant that, by the end of the research, almost half of the students made small gains in their reading behaviours and consequently their learning. While this finding was somewhat dispiriting for staff we were aware that many (14 of 30) students did make very significant gains in their reading behaviours and knowledge acquisition.

Key to making improvements was the staff's commitment to analysing both the behaviours of students and reflecting on their own tacit expectations of students within a reading situation. The expectation to read new material, recognise our own bias and perspectives as well as to understand the relevance of the material to the phenomenon under discussion seems obvious. Making these expectations explicit and reinforcing them within the learning situation was critical for students. Although, we only made small alterations to our delivery of reading activities, yet this did bring about some very significant benefits for many students. For the team this did represent new learning, in that we came to understand the value of critically and deeply reflecting as a community of practice on our tacit expectations of students within the learning situation. This reflection enabled us to improve the learning experience for many students, and while there were many unanswered questions relating to students' reading behaviours the value of reflection that led to small, nuanced changes to practice was significant. Therefore, I am recommending going forward that reflection relating to tacit expectations is considered by both the teachers and department. This is accommodated in the Institutional Reflective

Framework and can be fed into personal and curriculum reviews and CPD events.

8.3.2 Ancillary aims

a) Make more efficient use of staff time through a reduction in the number and frequency of curative interventions provided by staff

The amount of staff time that the respondent students used reduced over the course of the project; the overall time given to tutorials fell from 62 minutes on average in cycle one to 32 minutes in the fourth and final cycle of phase two. While this remained greater (by 10 minutes per 20 credit module) than the entitlement available to all students, as set out in the validated document, it was significantly shorter, and I believed, more effective than the use of ALS time. Nonetheless, I was very conscious of the amount of support that the students were given, and while this decreased during the project, I could not suggest that the institution adopt this as a strategy per se. Notwithstanding the resource implications, there are entitlement issues. It would be unfair not to recognise the possibility of some other students whose learning needs were perhaps less obvious and who were coping independently. Equally, for those who were participating in the research project, and for similar students in the future, it was clear that our 'universal' practice was insufficiently inclusive.

I had wanted to move away from interventionist practice, and all the students are entitled to a pedagogical practice that meets their needs. Because it was evident that many of the respondent students made progress in their learning and were less dependent by the end of the project, I would recommend that coaching tutorials and innovative ways of working are focussed in the first year of study. Were vulnerable students to be supported specifically in their early years of study, it may avoid the development of survivalist learning patterns and negativity and allow them to gain purchase on their learning environment early on in their study. I am, however, aware that almost half of the respondent students did not make significant improvements in their summative outcomes and need further exploration of their learning needs; they may also need further

ALS to support their studies. Given that the department is ideologically opposed to the massification of curative interventions as a response to unmet learning need, the need for ALS for some students has to be recognised in some circumstances. I recommend developing a methodology for evaluating ALS both in the long and short term, taking account of the students' short and long-term learning needs and their employability. Critically, and mindful of Smit's (2012) concerns relating to staff perceptions, it is important to also take account of staff responses to this both inside and outside the classroom.

b) Higher levels of autonomy in students' learning behaviours

The extent to which this was truly measurable is difficult to fully ascertain. As stated above, data from the observation of tutorials told me that the amount of additional learning support that the respondent students used fell from 62 minutes on average in cycle one to 32 minutes in the fourth and final cycle of phase two. Additionally, in the final cycle, five of six students came to tutorials equipped with assessment plans and specific questions related to their work. This seemed to indicate that students were both equipped to, and had the confidence to, work more autonomously. Observations of in-class reading behaviours told me that 26 of 30 students were focussed on unfamiliar reading material and were less reliant on their peers and teachers for support. However, it is worth noting that the improvement in the students' outcomes did not correlate closely with these indications, and 13 students continued to perform less well than I believed that they could (chapter 7, section 7.3 discusses this). Therefore, the value of autonomous working had yet to be realised and further exploration of how this might benefit the students' needs to be undertaken. While autonomous working is critical for student attainment, it was clear that there was more work to be done in realising the benefits of the coaching tutorial for all the students.

The issue of autonomous working came to the attention of the QAA review team in March 2014, when they undertook an HER at the college. They identified in the research an example of good practice in promoting independence in the students' learning. Interestingly, this information did not

come from the HE department; the students who chose to speak to the QAA review team volunteered this information. This (I understand) led to an enthusiastic discussion between the students and the reviewers that led to this commendation. The review team chose the project to appear in the QAA publication for the dissemination of good practice in FECs. (Appendix A) There were two aspects that they identified: first, our effective engagement with students; and second, the promotion of autonomous learning for non-traditional students. As a consequence of this, I have been invited to support three other colleges in the development of their pedagogical practices and the promotion of autonomous learning for students.

c) A critical knowledge base to inform a framework for staff CPD and training courses for HE teachers at the college.

The opportunities to develop CPD was a key benefit of the project, which has become extended beyond the research institution. One of the key areas that has attracted the most interest from staff both at the institution where I now work and the research site relates to the students' acquisition of knowledge, particularly related to their reading skills. In my new organisation, I have delivered seven 'end of year' sessions to departments. I have built on this to develop two specific modules for our teacher education programme. These have been validated by a partner university for inclusion in the ITT programme for the post-compulsory sector. I delivered this for the second time in the academic year 2016 to 2017 and am currently delivering these modules in a partner organisation.

I also reflected on some of the challenges to the sector regarding inclusive practice. I was surprised, and somewhat wrong-footed, by the lack of critical knowledge relating to the pedagogy of HE (see chapter 2, section 2.2). I felt that there had been little to inform our practice or to give our project direction, and while the situation relating to knowledge of DO has changed over the period of the project, there yet remains a significant knowledge gap. Haggis (2009) identified this matter and raises the important point of using existing knowledge bases from other complementary areas. She suggests that there are opportunities for knowledge exchange between adult education and

sociolinguistics that are directly relevant to the understanding of learning in HE. This view is also reflected in the Mountford-Zimdars et al's report on the causes of differential outcomes in 2015. Drawing on my own professional experience, I could not help but recognise some of the challenges to pedagogical knowledge and inclusion in HE that had resonance with other age-phases in the education sector. For example, the 'goodness of fit' challenge laid down by Laing Chao and Robinson (2003) resonated with Tomlinson's (1997) earlier challenge in the 1990s to primary and secondary schools to create the 'match or fit' between learning needs and educational provision. Given that many universities have large, well-established education departments that contribute to national and international policy, it seems that there is a lost opportunity to share knowledge and information and to carry out a meta-analysis of the existing knowledge across and between institutions to the mutual benefit of all age phases.

I would therefore make a recommendation that the institution seek to consider the existing knowledge within the wider education sector with a view to sharing best practice as one means to understand student learning need.

d) Higher levels of student satisfaction and improved results

At the final stage of the project in September 2014, the NSS results placed the college in joint seventh place in all institutions in England and Wales at 95% satisfaction for question 22. This was a 4% increase from the previous year. For the courses being researched, 100% of students indicated that the courses were intellectually stimulating and 97% of students indicated that they were satisfied with the course. Our internal survey showed that 90% of the respondent students were satisfied with their outcomes, although just 56% made more than a 4% improvement on their marks. The Board of Examiners results for the year 2014 for the groups where the research was located were as follows: Retention 97% [improvement of 8%]; Completion rate 100% [improvement of 6%]; and there were no resits for a September Board.

8.4   Dissemination of findings with the wider HE community

The findings and outcomes that have come from this project reflect the practices of one institution, but I would argue that the findings could contribute to the wider discourse surrounding DO and more widely relating to pedagogy of HE. A key consideration is to continue this work and to maintain the focus and dialogue of DO.

The key dissemination outputs from this project were:

5. Following the inclusion of the college on the QAA Knowledge Base for student centred teaching and promotion of independent working, I was contacted by three colleges in the UK to support them with the development of their Learning and Teaching Strategies for Higher Education. I completed this work in 2017, and I am currently working in two further colleges.

6. I presented interim findings of the project at the University of Roehampton Learning and Teaching Annual conference in July 2015.

7. I presented the complete findings at the Association of Colleges HE in FE Scholarship conference in September 2016.

8. More recently, I made a presentation to Maryville University, St. Louis, Tennessee (visiting the UK), focussing on enabling and supporting knowledge acquisition in April 2017.

9. The key findings of the research have been used to inform the Learning and Teaching Strategies of the two colleges where I have worked since the project's inception.

10. The key findings are being used to inform a framework for evaluating the impact of ALS and the observation of teaching in my current employment.

11. I had been invited to and had prepared a presentation for the QAA annual conference in Nottingham in June 2017 but, unfortunately, I was unable to attend due to work commitments.

12. The findings have been used to prepare three, credit-bearing modules for delivery to staff teaching HE in FE; these have been validated at level 6 by a partner university.

13. In February 2019, I presented my findings to the Canterbury Christchurch University Post-Compulsory Initial Teacher Training Partnership Learning and Teaching Conference. (15 FECs across London and the South East of England were in attendance). As a consequence, I have been invited to complete my submission for Principal Fellowship of the HEA by the university (Advance HE).

8.5 My personal learning

8.5.1 Methodology

In this section, I reflect on the research methodology and what I learned from this, together with the impact on my unconscious beliefs and the learning of my research more widely. Most importantly, I reflect on the lived experience of those students who are vulnerable to DO.

I believe that the primary strength of the methodology was the collaborative approach, together with the centralisation of the student voice. This gave me a multidimensional perspective of the students' lived experience, while creating a critical distance from my own value-laden perspectives. The research methodology I chose was interpretivist, based on the cyclical paradigm described by Atweh, Kemmis and Weeks (1998). Within this, I used a mixed methods approach that allowed me to consider the research subject from a variety of perspectives, and this worked well. An epistemological issue became apparent, however, as I began to interpret the data, and this necessitated reflection on my own unconscious values and value-laden judgements relating to teaching, learning and pedagogy.

As a secondary school teacher, I and the department are enculturated into the Ofsted regulatory framework (this reflects our prior professional qualifications and practice in primary and secondary schools). It seemed that, as I interpreted the data, I was tacitly seeking a similar model of operation and

approach to inclusive pedagogical practice. The primary and secondary school model is based in the notions of identifying learning needs, devising strategy, implementing, measuring and reviewing, and in so doing inferring direct impact as a result of intervention. For example, the National Curriculum tells me exactly what to expect of a pupil in a specific year, in a specific term and, very specifically, how they might demonstrate their learning. This is tested rigorously to nationally agreed standards. When pupils do not attain at the specified level, this requires teacher intervention, with a very well-defined intended outcome. While this may work in a primary or secondary school classroom, it did not work in my interpretation of data for this research project. I became more explicitly aware that HE is a very different learning environment, and this challenged my tacit expectations and working paradigms. While I did not intend to pursue causal relationships in my approach to interpreting the data, I believe that I leaned unconsciously towards this. It became very frustrating at times and, following several conversations with my supervisor, I realised I had to see the findings and data for their descriptive and multidimensional strengths, and to move away from cause/response analysis.

Centralising the student voice as a primary data set was another key learning point, and it was a complex ethical and practical dilemma for both myself and other staff within the department. While we sought to centralise the students' voice, it was apparent that there were limitations to this. For example, no student ever questioned their own disciplinary knowledge, although the observations of reading indicated that many students experienced difficulty in forming clear textbases and situation models of the reading material. While they did indicate difficulty in and poor value from reading, they did not self-assess their own needs accurately in this area. Silverman identifies this matter too. Drawing on the findings of Halstein and Gubrium (1995), he questions 'whether interview responses are actually to be treated as giving direct access to the experience, or as actively constructed narratives' (Silverman 2011, p 45). This needed very careful consideration because, on the one hand, students engaged in those activities that they valued whether they were useful or not for their learning. This was based on their own view of their perceived needs.

On the other hand, while I was attempting to centralise the students' voice, I knew their self-assessment to be often fundamentally problematic and those activities that they placed value on did little to address their underpinning learning needs. It was very evident from student feedback that many placed value on those activities that enabled them to access wide vocabulary and improve their use of language. Yet, it was clearly demonstrable from their marks that this was not necessarily supporting them to improve their GPA (see discussion in chapter 7, section 7.3). In the same way, the interpretation of students' reading behaviours (see chapter 7, section 7.3.1) indicated that students located their difficulties in reading with their language skills, while there was clear evidence that this was not consistently the case.

Therefore, while student feedback was critical to the project, it did need to be tempered with consideration of other data. This being said, I needed to remain committed to centralising the student voice within the ethics of the methodology. Moreover, I was abundantly aware that the students' own voice was largely missing in their assessed work. Had I failed to listen or act on the students' views, it could have denigrated their self-belief even further. The outcome of this complex situation was a sharp learning point regarding balancing the need to develop the students' own voice while at the same time acting in their best interests. There was no simple way to overcome this issue, and I had to draw on my years of professional experience and harness the professional strengths of the department to guide me in each individual case.

8.5.2 Re-contextualising findings

My learning journey became very challenging after I changed my job and moved to another organisation the primary source of my disorientation was moving away from the department and the shared thinking practices of that group. Nonetheless, the move allowed me to recontextualise my knowledge within new situations, thus creating disequilibrium and assimilations of knowledge. I was struck by the transferability of the key findings. The clearest example of this was the need for students to think conceptually and to articulate their conceptual thinking. This was not just within the disciplinary

areas where the research took place, but it extended beyond this. This was brought home to me when, in my new position, I attended an end of degree sculpture exhibition where students had included a very short written piece about their artefact. The most striking aspect of the written piece that seemed to speak to our research was that those students who chose to describe their work tended to have lower marks, while those who discussed their conceptual frameworks and ideas that influenced their work tended to have higher marks. Even in this vastly different disciplinary area, the influence of conceptual thinking seemed to be fundamental, and I was reminded of Maclellan's work (2005) where she posited that the development of conceptual thinking was the key priority for all age-phases in education. Although I do not have immediate solutions (even had this been appropriate) to this challenge, I did feel better equipped to participate in the discourse and to support staff and students in developing this skill within the disciplinary area.

8.5.3 Students' contribution to my knowledge

One of the key points that I will take away from the project is the students' very personal lived experience of their education, and how this impacted their wider life. When I began this project, while acutely aware of the 'issue', I was not, and I do not believe the staff team were, fully aware of how strongly students felt about the issue. Students felt genuinely hurt, suffered low self-esteem, and were disheartened and self-deprecating. While they tended to externalise their learning needs, they rarely associating their difficulties with anyone but themselves. In some situations, I was emotionally very moved by some students' truly distressing self-image, and this seemed to have very real influences on other aspects of their lives and relationships.

The students' feelings had become apparent from the very outset of the research and it seemed that once these silent students were given a vehicle and recognition of their learning needs, they released years of hurt and frustration. After phase one of the research, I also felt as though the 'genie was out of the bottle' and I needed to understand the issue further. I was somewhat overwhelmed by the volume and range of needs identified in phase

one, but despite the collective years and range of experience within the department, I did not have solutions and there was a lot of 'feeling our way' and grasping ideas, a feeling which continued throughout the project. This created a clear exigency to seek student feedback continuously, and with some thoroughness, as the project progressed.

As a teacher of some years' experience (and at least some success), I could not help but reflect on the reality that students had experienced in my classrooms over my years of teaching. I reflected on the opportunities that I had not taken to observe and listen more carefully to vulnerable students because it is from these students, as with my clients in social services some 38 years ago, that I believe that I could have learned most.

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Appendices

Appendix A – QAA Commentry

http://www.qaa.ac.uk/publications/information-and-guidance/publication?PubID=3086#.WfTuxWhSzic

Colleges support students in understanding what it means to be an independent learner by:

- discussing with students their expectations of the course – how they are expecting to be taught and assessed
- discussing students' role in lectures, classes, and online discussion forums
- suggesting the development of learning communities outside scheduled contact time, through reading groups and study groups
- peer tutoring at programme level
- giving clear guidance about what is expected of students week to week, for instance the amount of reading they are expected to do and how to approach it
- using exemplars of previous assignments to discuss standards.

✔ Feature of good practice

The student-centred teaching and learning approaches that support and engage students as independent learners

Carshalton College

The College has, over several years, worked with staff and students to identify the most effective teaching and learning approaches. The current Pedagogy in Higher Education project, building on previous research in the College, aims to develop practice that recognises the diverse learning needs of students studying vocational higher education in a further education environment. The project is being piloted on University of Roehampton validated awards, with the intention of developing and implementing findings on other provision in the future. Students commented positively on the enthusiasm of staff and their ability to make learning interesting and intellectually stimulating. As a result of this, students felt more confident in achieving their learning goals and in tackling unfamiliar problems.

Creating a higher education

Key findings

QAA's judgements about Carshalton College
The QAA review team formed the following judgements about the higher education provision
at Carshalton College

1. The maintenance of the threshold academic standards of awards offered on behalf of its degree-awarding bodies and awarding organisation meets UK expectations.
2. The quality of student learning opportunities meets UK expectations.
3. The quality of the information produced about its provision meets UK expectations.
4. The enhancement of student learning opportunities meets UK expectations.

Good practice

1. The QAA review team identified the following features of good practice at Carshalton College.
2. The student-centred teaching and learning approaches that support and engage students as independent learners (Expectation B3).
3. The arrangements for delivering learning opportunities with work-based mentors (Expectation B10).

Recommendations

The QAA review team makes the following recommendations to Carshalton College.

By September 2014:

1. take steps to have student representation on the Higher Education Steering Group (Expectation B5)
2. ensure the consistent and systematic use of data and action planning in the programme area reviews (Expectation B8).

Affirmation of action being taken

The QAA review team affirms the following action that Carshalton College is already taking
to make academic standards secure and/or improve the educational provision offered to
its students.

1. The steps taken to improve the identification of specific issues relating to the College in external examiner reports (Expectations A5 and B7).

Theme: Student Employability

The College is very aware of its role within the local and regional community in contributing to economic prosperity, as well as the benefits that higher education can bring to individuals.
The focus on student employability manifests itself at the programme design stage, where attention is paid to employer needs and students' opportunities on programme completion.

The College's Learning and Teaching Strategy has an explicit focus on employability and professionalism.

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ii E.g. large scale that is in excess of their entitlement as laid out in the validated document of their degree

branch diagram 14 references, essay grid 12 references, other 1 reference available in their home or at work or transferrable between the two

Appendix B – Detailed research timeline with roles of my co-enquirers

The data collection was carried out between May 2013 and January 2015.

Phase 1		
Research Activity	**Carried out by**	**Participants**
All student Forum 27th May 2013	Head of college, All teaching staff on programmes and FF	All registered students on BA Early Years Education, BA Education and Learning
Open Interviews 5th, 12th 15th Oct 2013	FF, as research leader	3 students self-identified as vulnerable to DO
Analysis of students' summatively assessed work 10th July 2013	All teaching staff	12 Essays
Analysis of 1:1 additional support records 19th - 23rd August 2013	FF,	60 records considered
Analysis of Adult Basic Literacy Scores 22nd – 30th August 2013	FF,	30 students self-identified as vulnerable to DO

Phase 2											
Research Activity - Reading Observations											
Cycle 1			**Cycle 2**			**Cycle 3**			**Cycle 4**		
16th Oct 2013 – 16th Dec 2013			**2nd Jan 2014 – 15th Mar 2014**			**16th Mar 2016 – 25th May /2014**			**25th Sep 2014 – 2nd Jan 2015**		
Observer	**Group & Topic**	**Obs No.**	**Observer**	**Group & Topic**	**Obs No.**	**Observer**	**Group & Topic**	**Obs No.**	**Observer**	**Group & Topic**	**Obs No.**
AM	*Level 5, EYS Social & Emotional Dev.*	1	SS	*Level 6, EYS Mathematics in National Curriculum (Williams Report)*	1	DI	*Level 6, EYS SEND*	1	FF	*Level 6, E & L Understanding Behaviour – links with SEND*	1

DI	Level 5, L & T Social & Emotional Dev.	2	FF	Level 6, EYS Mathematics in National Curriculum (Skemp)	2	MR	Level 6, E & L Working in the Wider School Community	2	AM	Level 6, EYS Issues in Child Health – Blanket Policies	2
JH	Level 6 L & T Dissertation - Lit Review	3	AM	Level 6, EYS Acquisition of Literacy Skills EYFS – role of play	3	JH	Level 5, EYS Health Care in Early Years Settings	3	JH	Level 6, EYS Implementation of Curriculum	3
FF	Level 6 EYS Dissertation - Lit Review	4	AM	Level 6, E & L Acquisition of Literacy Skills National Curriculum	4	FF	Level 5, E& L National Curriculum Planning (Regulatory Frameworks – Ofsted)	4	N/A	N/A	N/A
FF	Level 5, T & L Mathematics in EYS Curriculum	5	FF	Level 5, EYS Cognitive Development 0 – 3 yrs	5	AM	Level 5, EYS Health Care in Early Years Settings	5	N/A	N/A	N/A
SS & JB	Level 6 E & L Planning for Nat Curr	6	FF	Level 5, E& L Society and Family	6	JB	Level 5, E & L Safeguarding in Early Years Settings	6	N/A	N/A	N/A
N/A	N/A	N/A	FF	Level 5, EYS, SEND- Concepts and values	7	JH	Level 6, E & L Managing chronic conditions in mainstream education	7	N/A	N/A	N/A
N/A	N/A	N/A	JB	Level 6, EYS Safeguarding – (Howe – Internal Working Models)	8	JH	Level 6, EYS Soc. and Emotional Dev. Separation and Attachment (Simpson)	8	N/A	N/A	N/A
N/A	N/A	N/A	JB	Level 6, E & L Safeguarding – (Corrie – Revictimisation)	9	SS	Level 5, EYS, Values, Leadership and Management	9	N/A	N/A	N/A
N/A	N/A	N/A	MR	Level 5, EYS Cognitive Development 0 – 3 yrs	10	N/A	N/A	N/A	N/A	N/A	N/A
Staff Discussion Dates 28th Oct 5th Dec, 2013 6th Jan (2014)			Staff Discussion Dates 28th Feb 3rd and 18th Mar (2014)			Staff Discussion Dates 28th March 16th April and End of Year Forum July 2014			Staff Discussion Dates 30th Nov, 20th Dec, (2014) 12th Jan 2015		
Phase 2											
Research Activity – Coaching Tutorials Observations											
Cycle 1			**Cycle 2**			**Cycle 3**			**Cycle 4**		

16ᵗʰ Oct 2013 – 16ᵗʰ Dec 2013			2ⁿᵈ Jan 2014 – 15ᵗʰ Mar 2014			16ᵗʰ Mar 2016 – 25ᵗʰ May 2014			25ᵗʰ Sep 2014 – 2ⁿᵈ Jan 2015		
Observer	Student	Obs No.	Observer	Student	Obs No.	Observer	Student	Obs No.	Observer	Student	Obs No.
FF	Student 1	1	FF	Student 1	1	DI	Student 19	1	JH	Student 16	1
AM	Student 14	2	FF	Student 15	2	SS	Student 10	2	AM	Student 21	2
DI	Student 17	3	JH	Student 8	3	FF	Student 9	3	FF	Student 13	3
MR	Student 4	4	JB	Student 4	4	FF	Student 12	4	n/a	n/a	n/a
MR	Student 15	5	SS	Student 27	5	MR	Student 22	5	n/a	n/a	n/a
JB	Student 17	6	RH	Student 16	6	JB	Student 13	6	n/a	n/a	n/a
JH	Student 11	7	AM	Student 23	7	JH	Student 23	7	n/a	n/a	n/a
Staff Discussion Dates 28ᵗʰ Oct, 5ᵗʰ Dec, 6th Jan (2014)			Staff Discussion Dates 28th Feb, 3rd and 18th Mar (2014)			Staff Discussion Dates 28th March, 16th April and End of Year Forum July 2014			Staff Discussion Dates 30ᵗʰ Nov, 20ᵗʰ Dec, (2014) 12ᵗʰ Jan 2015		

Appendix C – Historic Data of Differential Outcomes

Table 0-1 Students number of self-referrals matched against full cohort of students with outcomes

Year of completion	Total number of students Enrolled	Total number of self-referrals in-year	% of whole year groups	No. of self-referrals who meet DO descriptors	% of whole year groups	Qualifications on Entry of self-referees		Completion status of students considered to be vulnerable to DO
2010	411	81	20%	52	13%	NNEB	29%	Course failure 3 students Pass – 49 students Merit – 10 students Distinction 0 students
						DCE	40%	
						NVQ 3	31%	
						GCE A Level	0%	
2011	359	78	22%	43	12%	NNEB	26%	Course failure 6 students Pass – 22 students Merit – 5 students Distinction 0 students
						DCE	28%	
						NVQ 3	44%	
						GCE A Level	2%	
2012	382	83	22%	41	11%	NNEB	10%	Course failure 4 students Pass – 42 students Merit – 6 students Distinction 0 students
						DCE	48%	
						NVQ 3	42%	
						GCE A Level	0%	

Appendix D – Sample of Individual Interviews, 3 former students
Student 1

I always struggled in school it wasn't like I didn't know what was going on but I wasn't great at exams, and everything in school is about exams and you try, and others get all these great marks but not me. They talk about getting extra help but no one wants that in school and being known as th***. It was embarrassing, I pretended that I didn't care or that I didn't work but I did every time I'd keep quiet and hoped but it [results] never worked out. They would say work harder and I did but I didn't know at what or how. It was the same here I hoped that I could put it [academic difficulty] behind me. I never though in a million years that I'd get a degree but I have and I AM proud but it [academic experience] was the same again.

I hadn't got a clue what marks I was going to get I'd look at my work and it looks fine to me I think I've covered everything but then I get a fairly medium mark and I am disappointed because I thought that I'd covered everything in the essay and I must have to get a pass but then I have so, any tutorials and I still don't know how to improve my work. Every time I really listen and try to do what I've been told but always I am disappointed, and I know that I should be doing better,,, I needed a 2.1 to get on to the PGCE. I go over and over my work [before submission] but it never seems to improve. When the teacher says come with a plan, xxx the only person who gave us an example of a plan and actually showed us what to do we do not know what to do we have never had to do this before and you get so much help with the Diploma. [Level 3 in Childcare and Education] An example of a plan was really helpful I could see what to do with it, the 'stick' diagram was really useful to help because there is so much to remember, and so much research, so when I did my plan in file paper and sellotaped it together on one big piece it was a huge roll but I knew what I had to do,

FF what might you do differently in future?

I should have kept my writing smaller so I did not use so much paper. I cut it back up and stuck it to sugar paper then I could see it better, and I put the references in green pen.

When xxx sat with me and went through it [the plan] bit by bit it made more sense to me.

It [using reference material] feels like we are copying and that it is not our work, we are just using someone else's work to get credit for ours, I thought that we should be coming up with something original and I still try to but to think of something that is original is hard and we are pressed for time. We should be told about the reading because you don't do it [read] anywhere else [in life] in work you don't learn in that way you can't just read about everything, the practice is more important.

It feels like we are just applying theory to something that we already know and we have not really learned anything new especially in the first year. ….. but I still get no great marks ……… but when I see the people who get good marks I think that they don't know any more than I do but they must and sometimes even they ask me things but they get the better mark. I never know how good my work is I just wanted to pass in the end, I thought to begin with that it would be easy because I worked in the sector for 7 years and I thought what else is there to know. When we started it was not at all like we expected – and I nearly gave up in the first term but I kept coming for tutorials and it got a bit easier to do the work I still hate reading everyone does if you ask anyone they will tell you the same thing – we don't see the point of it I know that we need references but that is all we need the reading for.

When I got stuck I didn't know what to do so I'd write another couple of hundred words and ring ccc to see what she has done then we write a bit more but we do not want it to be the same as each other then when we look back at out notes it gives us some ideas and we try to remember what we did in class. It is great when we have the ideas gathered on the board, that makes a real difference, you could actually see how it looked like – when we do work in class we really enjoy it and it is so interesting but then when we think back to the class we cannot remember and most notes don't make any sense afterwards. When we feedback you manage it really well and all our ideas are discussed and gathered on the board in full sentences so it helped us to have better words and writing and we remembered better when we are doing the assignments. And it is our words so we can do it [assignments??] easier. **Being made to write** in every class and don't let us go off the point and when we feedback we can only read what we have written so we sound like a teacher and think, 'oh did I really say that'. And have to use what we have learned sss is very clear about what was expected of us not everyone else is and we are allowed to go off the point – and then

the feedback is forgotten or it is just one words and we cannot remember what it was about so we get mixed up.

And the activities that xx used are really good and make us think. The feedback doesn't help much either, and it' not always the same [i.e. contradictory] one teacher will tell you to do something and the other will tell you not to. I can read it but it doesn't make sense, it's so vague and going around the houses … not specific, if you said *do this here* and showed us then I would have done it but I can't see how I could use it in the future, I don't read it not it just puts me off and then I look at the next essay and I feel that I can't do that either. How could I after all that [feedback] it was just a mess of words.

Student 2

I was always in the rubbish set' I did think that it would be hard but because I had worked in the sector for years, I thought that I would know it......I'd be OKish I still though that it would be hard. The thing that everyone hates is wishy washy teaching it goes around and around but never gets to the point of what they are going on about so we just lose interest in it and we never get a straight answer for anything or it is different and it is ok to be asked another question it you ask one but I get the impression that sometimes they don't know the answer, and you get another vague and wishy washy answer I know that there are no clear answers but there are to some things, and being told to just read such and such a journal without a good reason is not an answer. I don't like reading the journals too much and they don't often make sense, just go read… is not an answer to what we are asking, if we read less better than we would find the assignments easier to do. I love most of the teaching and it is so relevant to my job, I can see Skemp and the Ortons happening right there in front of my when I am teaching but the assignments are always difficult, I always seem to know what I want to say but cannot seem to get it down I writing and am then told that I am being descriptive but I don't know what else to write, I then run out of words .... at first I thought 3000 words I'll never fill that but I could write 5000 but I'd still get a rubbish mark. We do not have time to read every journal published about education so we never know what we are do is right or not and then we are told that there are no right answers which I understand but clearly I am doing something wrong or I'd be

getting better marks. 'when I saw 53%, I could have cried I had worked so hard on that essay and in the discussions in class I had done so well and had often been asked to share my ideas, ... that's how it [cycle of disappointment] started.... I did better in some things, but I didn't even have the heart to read the feedback I could not bear it.... especially when Jvvv who struggled all the time in class got such a better mark for that essay'.

I get nothing out of some classes and wonder what I was doing in there, it is all very interesting but at the same time we need to know how we might use this in our assignments. One of the most useful things that happens in class is being made to write all the time, when we share ideas and a lot of the time we just talk but then that is just us talking between ourselves and we don't know whether we are right or wrong or on the right track or not, even when we do feedback we are just listening to each other and there is no way of knowing how good it is it could be pants and we would not know. But when xxx says, 'no' that is not at the right level and give us an example of the difference we can immediately see that and it-makes sense and it sort of builds up. When we have to write down our answers and ideas and we have to really pay attention and focus on making sure that we have written it properly and then when we feedback it is much better and then we all discuss it as a class and the ideas are gathered on the board with the right language we build it up together - - -we all have a much better idea of the work and it is easier to move forward on our own because we have begun to think and write like that already

Student 3

I did not know that there would be so much reading to do and that the reading would be so complicated, when we first started we were told that there would be a lot of reading at the interview and I thought that that would keep me busy and wondered how would fit it in but I needed the course to become a manager. When we started the reading we didn't know what to do with it and it was different than what we had done before normally we only read letters but it wasn't difficult to understand what we read and we could make sense of it, all the references in the reading did made it difficult to understand. It was like you had to have read other things beforehand it was very interesting in the classes but I did understand it all and I couldn't always

understand it all then I came into the next class and lots of people felt the same but they then seemed to understand it a lot better so I used to keep quiet. And it was just about stuff that we knew from work anyway all you had to do was to look out the window to know and there didn't seem to be much point in writing about it.

Conversation moved to Climbie case 10 minutes. Refocused by asking about IT

That was the other thing that we didn't know about was the amount of research that we needed to do, at the end of the first year when nnn marked my essay all I was mostly using was what I had experienced at work and used this in my essay and about the couple I spoke about who were homeless although they had good jobs, we were never really told not to do that until you marked our essays and failed us all but then xx told us how to do it, but she should have got that at the beginning of the year. Anyway we used not fully understand what we were reading or how it all went together, all I'd do is read and not really know what to do with it we had real difficulty trying to get it down, I kept trying anyhow. We never knew how to chose the research there was so much to chose from. Other students SD etc could use the research a lot better and seemed to understand it clearly but some of us didn't.. It just becomes a huge mush of words.... I couldn't make sense of it. I couldn't see what I am saying; I just wanted to get it done'.

XXX used to correct my English too I never had to use real language and worry about paragraphs or real grammar but I was always getting corrected for it and when I used to get my work back I'd be able to see it and know what you meant but before I'd hand it in I thought that I was doing OK and then I'd either fail it or get a really bad mark I'd be glad just not to have failed. We had written nothing like this before and everything had to be perfect and use all the theorists and the bibliography too. It all took ages and I kept trying but then the next time I'd get different criticisms but I did start getting higher marks and started passing first time, when I look back at my first work I looked awful and I could see how far I had come on but I still couldn't face more study I'd passed and that was all I could do. I used to write pages sometimes but later I wrote less and it didn't seem to make much difference. I used to read the feedback but I didn't make sense until the 3rd year, I had never heard of a theorist or reflection until I came to the course and then it seemed that all they were interested in was the theory

of childcare. We used get feedback all the time especially on the journals… the problem is that I can't write …

I don't know why I applied for the degree I have no reason, I just did, everyone is applying for degrees these days and I just thought that if I worked hard enough, I'd get there……..I don't understand how I can be ok in class but so awful at writing essays…. It's not like I don't know my stuff about child education.

I would like to go on because I got so much out of the course, now I'd sack myself if I saw me doing some of the things I used do.

Appendix E – Analysis of Student' Assessed Work – Phase 1

Table 10-2 Phase one Analysis of students' assessed work

Appendices Work	
5/6	Scripts had valuable and thorough work contained within the appendix. In one piece the appendiced work contained valuable work but did not cover all learning outcomes and was insufficiently focused on the requirements of the assessment task.
Use of English	
9/9	Students' capacity to articulate their meaning was not always evident
	9/9 Language was frequently inaccurate 9/9 Punctuation was erratic, sentence structure, apostrophes, capitalisation 7/9 Fragmented paragraphing as low as 1 sentence or up to 700 words.
Structuring	
7/9	Scripts were not structured effectively. 7/9 No clear introduction 2/9 Very clear introduction but not congruent with the body of discussion 7/9 Conclusions erratically constructed including very long citations 4/9 Contained new undeveloped material
Development of argument and critical analysis	
7/9	Students did not make substantive points or reasoned argument
2/9	Students over concluded and these did not bear scrutiny
6/9	Scripts students either described or re-iterated their appendices without drawing out analytical points or considering their material within the conceptual framework of the module.
Use of disciplinary knowledge and reference material	
9/9	Students use of reference material was not fully developed
	9/9 samples students only used reference material to substantiate a personal perspective rather than to deepen argument,

| | 6/9 pieces of work the cited reference material was used as a very short quotation that did little to progress any discernible argument.

5/9 scripts quotations were arbitrarily inserted in the text with little use being made of them.

72% of quoted material did not directly relate to the point that the students seemed to be trying to make, more it was loosely related to the topic under discussion. |
|---|---|
| | **Criticality and Conceptual Thinking Skills** |
| **6/9** | Scripts between 25% and 60% of text was used in the description of practice and multiple work-based examples. |
| **3/9** | Scripts were heavily referenced descriptions of theoretical frameworks not applied to the essay title |
| **5/9** | Scripts demonstrated examples of critical and conceptual thinking |

	1st Example of Conceptual Thinking	Number of Examples of Conceptual Thinking
Script A	870 words	5
Script B	900 words	7
Script C	780 words	6
Script D	1200 words	8
Script E	2000 Words	8

| **4/9** | A discernible pattern of cited examples was evident.

50% of descriptive work held this pattern. |
|---|---|
| | Other Issues |
| **5/9** | More than 10% over the word limit |
| **4/9** | More than 10% below the word limit |

Appendix F - Students' Reading and Knowledge Acquisition – sample observations
Phase 2 - Cycle 1

Sample Observation (1), 1st of 18 in series

Level 5 students - 6 students observed

15-minute independent task – Child Safeguarding – Journal Article

Students read for between 5 and 6 minutes 3 looked around and began to highlight parts of the text. Slightly more than half the text had been read. 2 students annotated the text and had a discussion about the extent to which they agreed with the content of the text.   Their further discussion related to the meaning of the language. Highlighting is predominantly related to familiar knowledge – more challenging aspects of the paper are largely unread. Two questions were asked relating to the meaning of language [meaning of the words ambivalent, sociopathy]

2 students read for 12 minutes silently – read 60% of the text then returned to the beginning and re-read the text apparently scan reading the text – stopped highlighted aspects of the text wrote a question in the margin, conferred and agreed on the question which related to how the *theory of ambivalent attachment* was relevant to their practice, this is very low level and pre-dates the course. They did not engage with the most challenging aspect and stopped their reading at approximately 60% of the text.

2 students discuss an example that the author had given to substantiate the argument, having read 40% of the paper, 2 further students signal their agreement in total 4 of 6 students chose this example. They do not engage any further with the paper and discuss the complexity of language. Very basic issues were discussed more closely related to their research report from previous year were highlighted and read.

2 remaining students skipped to the end of the paper and read this. They then returned to the beginning and discussed the paper and as a pair developed two feedback points, returning over and again to the paper but did not highlight any part of the paper.

The feedback points although not fully formed and illustrated by examples related reasonably well to the conceptual aspect of the paper.

5 minutes - to initial disengagement

5.5 minutes - seeking help from peer

5.5 minutes – seeking help from teacher

Sample Observation (2) 2nd of 18 in series)

Level 6 - 6 students are observed; they have decided to work as a group.

30-minute paired task split into 2 parts – Social and Emotional Development

All students are sitting in relatively close proximity to each other on the left-hand side of the room in the uppermost seats closest to the teacher.

< 1-minute students confer almost immediately on the requirements of the task.

< 4 minutes they seek a consensus on salient aspects of the text, this is low level and related to level 5 study (Internal Working Models) this continues every 1 to 2 minutes.

Of the 6 students 5 highlight only, parts related to Safeguarding Module - this paradigm continues for 12 minutes

Student 17 disengages from the group and reads in silence. Highlights some key points and notes questions these are congruent with level of the course

Group fall into silence and read,

1 student highlights whole paragraph, this is part of the introductory material

1 student highlights 2 lines from first 4 paragraphs then turns to the last page highlights most of the conclusion. It does not seem that she can have read the conclusion.

1 student highlights familiar features of the text – related to very basic knowledge [sense of belonging in EY settings, this is related to level 4]

Student 15 notes a question 25% of the way through the paper – this relates to the value of risky play for children in SEC 4 and below, it is a valuable question, the student has written 4 sentences to form the question.

Student 17 asks the teacher a question about the meaning of the text but couches this in terms of some research completed at in the previous year of study, indicates that she does not agree with the author.

Student 23 reads and does not highlight any text reads to the end and has not made any notes – 11 minutes seeks advice from the teacher as to the requirements of the task.

Student 16 student highlights the introduction almost completely then turns to the last paragraph of the text [conclusion] and makes two notes, one is a question. Looks through the text leafing through the pages scanning but not reading in any discernible depth – highlights one example given by the author - returns to the beginning and reads becomes distracted highlights a word and places '?' says, 'yes, I think she's right' beside it, disengages and doodles.

1 Students highlights almost indiscriminately

5 out of the 6 students do not finish reading the text,

5 out of 6 highlights first 25% of the paper and conclusion.

The majority of work either read or highlighted as the least challenging aspects of the journal largely congruent with previous year of study.

< 6 minutes - to initial disengagement

< 6 minutes - seeking help from peer

7 minutes - seeking help from teacher clarified the requirements of the task

Whole class feedback

All observed students contribute to whole class feedback, this is largely related to research work that they had completed in the previous year. All contributed information that they were already familiar with. None asked questions relating to the content of the paper.

5 of 6 transcribe feedback that had been gathered on the board verbatim and asks questions about their specific research question from the previous year.

Student 17 discusses the task and confers with peers the issues that were fed back, and consequent discussion centred around the research work that they had completed in the previous year.

Much feedback was given in terms of the examples that the author had given – this relied on multiple examples and long citations from the work.

Feedback is focussed on asking questions about their specific workplace or question how they might have improved their work from the previous year.

There were 3 questions raised about how the journal might influence their current assignment.
Did not pose significant questions to the teacher. 5 questions relate to peers' questions.
1 student was the first to feedback this was confirmatory in that she stated that she agreed with the author on 2 specific points both were very basic in nature.
2 students' feedback was couched in terms of the feedback of a previous student's feedback and was relatively low level in nature, gave several work-based examples to illustrate.
Feedback was given in terms of the examples that the author had given.

Summary findings - staff discussion and interpretation

Students are not fully skilled in examining the text in order to extract meaning, they were far more likely to highlight aspects and features that they were already familiar with. This is at odds with the main group who were significantly more likely to highlight aspects of the text where they had questions; their questions were then framed around issues where they sought understanding or clarity, this seemed to give them a greater understanding of the deeper meaning of the text. Students within the subset sought either peer support or teacher support when they first encountered difficulty, they did not seem to demonstrate tenacity or the skills to solve the problem that they encountered without outside help. Students within the subset were less likely to complete a reading exercise and were more likely to read aspects that were familiar. Respondent students sought clarity about the task requirements much more frequently; on the two occasions when they sought clarity about the text, they couched it in terms of their previous work or professional experience. Respondent students highlighted the evidence that the author had presented not the key points of their argument and seemed to focus on whether they agreed with the author or not, their analysis did not seem to extend beyond this. Respondent students only asked questions in response to peers' questions, their own feedback was confirmatory and focussed on previously known aspects of the text. This seems to have diminished their learning experience. They engaged more fully with the evidence cited by the author, but they are missing the opportunity to engage at a conceptual level and their thinking remains in at a concrete level. Students within the subset did not give themselves time

to formulate their feedback and read until the point where they were told to begin their feedback.

Critical issue: If students are engaging with the text and are recycling **extant** knowledge the reading exercise is limited in its value to them and their time is not used effectively. If they are not reading all of the material, we need to know how to overcome this. If they are engaging only with the **concrete aspects** of the text I.e. the evidence cited, then this may reinforce concrete thinking skills and they are **missing the central tenet** of the authors' arguments. Students' analysis was focussed on the extent to which they **agreed with what they believed** the author to be arguing.

Phase 2 - Cycle 2

Sample Observation (3 of 18 in series)

4 students observed (48 Students in the group)
Reading task; Professional Practice
20-minute task
2 Students observed
Student 24 & 25

Student 25 Read from the beginning through to 2 paragraphs 13 minutes, then returned to the abstract highlighted part of the abstract – put a '?' in the margin returned to paragraph 2 seemed to reread it and put '?' in the margin read 2 more paragraphs and put '?' in the margin
1 minute read the conclusion – did not read anything between paragraph 2 and the conclusion
Wrote 3 questions at the end of the paper, each relating to the paragraphs noted with a '?', two were purposeful but were not incongruent within the level of the course. Last question related to assignment and workplace.
Asked the teacher, 'what sort of question do you want'

Student 24 Looked back over the journal, highlighted certain parts of the text, this seemed to be arbitrary closed the text and wrote 3 questions on the front cover sheet the first was very basic and related to her specific work setting, 2nd was more closely related to the text the 3rd was more in-keeping with the level and content of the course, but not relevant to the journal article. Re-opened the journal and read through with apparent concentration and engagement - did not highlight or form further questions.
6 < minutes - to initial disengagement
6 < minutes - seeking help from peer
7 minutes – seeking help from teacher

Whole class feedback

Student 24 Transcribed full notes from another student's feedback for approx 8 minutes then drew a mind map central point of the mind map was another student's question.

Did not contribute until asked to do so and then read the final question from her list then volunteered 2nd question and pursued an answer through whole class discussion.[3]

Had transcribed all other students' feedback into her notes.

Student 25 did not feedback.

Sample Observation (4), 6th of 18 in series

6 students (48 in Group) observed, Student 2, Student 8, Student 14 and Student 6.

Reading Task; Mathematics and Science in the Early Years Curriculum

Student 6; Distracted and conferred with peer after less than 1 minute very frequently highlighted and seemingly randomly sometimes it was not evident that she had read the part that she had highlighted and did not form a question throughout. Wrote bullet points these were not fully formed and were superficial.

Student 2: Clarified the requirements of the task immediately, had very many coloured highlighters and post-it notes. Wrote one word over the paragraph and then wrote three words in the margin, these formed the key point, the reference and the evidence. This was repeated for 5 paragraphs. There were no questions formed. She begins to read continuously from the beginning to the end was not distracted except very briefly x 2. Wrote one question this was not fully formed and related to how the work could be used in an assignment. Finished in about half of the time allocated began re-reading the paper, did challenged the author but not effectively, challenge was largely

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[3] On leaving the session this student indicated that, 'I really learned something tonight'

related to her own personal opinion. Student asked one question this was not written and related to how an author could quote themselves and was this not cheating?

Student 6 Confirmed requirements of the task with teacher. Seemed to read frantically – looked around quickly and very often did not ask any questions did not frame any questions or highlight any part of the paper and seemed to get to the end after 7 minutes – had taken copious notes. Looked back at notes and asked the teacher *you want three questions* teacher answers *yes*. Student looks back at notes these did not relate to the paper – wrote 3 questions numbered them – these were not visible to the observer but there were less 5 words. Had 2 minutes to go to end of activity looked around and back to the notes twice. [Seemed to be a focus on task completion sometimes rather than learning] During feedback offered one contribution it was not relevant to the paper but very fluently communicated – low level, wrote down virtually everything that her high performing peers said.

Student 14: Looked straight at the paper read the abstract highlighted three key words. Read sub-headings highlighted them – read part of conclusion highlighted one sentence – this was a critical aspect of the author's argument. 4 minutes. Looked at a peer very briefly and smiled. Read for 5 minutes wrote a question at the bottom of the page – more a bullet point this seemed to question the author's evidence base demonstrated a very keen understanding of the text and could engage at a conceptual and abstract level. Second question questioned the relevance of the research in today's education system. Third was not a question but identified 3 challenges to the argument in relation to children who experienced problematic parenting households. All were congruent with the level of the course.

Whole class feedback

During whole class feedback Student 14 did not offer a question about the given text but did engage with other students' lines of enquiry, this was at an appropriate level; one aspect that related to cultural cognitive paradigms was particularly insightful.

Student 2 Did engage well with other students' questions. Did not ask the question that she had formulated but pursued rigorous lines of enquiry with her peers' questions that indicated a very sound understanding of the piece.

7 < minutes - to initial disengagement

8 < minutes - seeking help from peer

8 minutes – seeking help from tutor

Sample Observation (5), 9th of 18 in series,

3 students observed 26 in group – Level 6, 5 students observed Student 16, Student 17, Student 23, Student 21, Student 4

Reading task 15 minutes - Children's Acquisition of Literacy Skills - Curriculum Implementation

Student 16

Student confers with another student who says, '*just find some questions to ask,*' the student looks back at the paper and says, '*what is there to ask*',

Another student, '*read it.'* Both laugh quietly.

Looks back to the expository text and glances through it she says hummh and picks up a pen begins to write a question she has not read anything. Student looks around smiles at another and looks back to the paper, no one else is writing she seems to notice this and then puts her pen down and looks at the abstract turns to the back askes the teacher, '*just 3 questions'* the teacher nods and gives her the thumbs up both smile. Student looks back and begins to read the article – reads for 6 minutes – underlines two sentences on 2nd page - turns to the back and reads the conclusion 4 minutes – has not sought support – has one question formed. Did not offer a question during whole class feedback but engaged with question of a peer who is very well known to her.

Student 17

Asks the teacher, 'you just want 3 questions'

Teacher '*yes'*

Student reads immediately, asks the teacher to clarify the meaning of the abstract teacher does this through Q & A - students says, '*I don't get it'*

Teacher asks, '*what part'*

Student*,* 'well I don't know what it's about I mean he says........... *but what's it meaning?'*

This leads to some dialogue and the student refers to her workplace. The issue is clarified to the point where the student can work independently. Student reads for 7 minutes highlights a full paragraph – writes a question – is in the form of a bullet point notes and references to her to workplace. Has written, *this is too much to expect of children aged 4 it is not realistic[4]* with a '?' Reads to end scan read last two pages. During whole class feedback did not ask a question directly related to the author's argument but the premise of the author – this assertion was not evidence based and related to personal opinion.

Student 23

Reads the paper writes a question beside the abstract this is purposeful – *why is this important to practitioners?* reads for three pages very briefly confers with peer writes a question in the margin the question refers to the requirements of the assignment. Continues to read, does not highlight or write any further questions – loses focus after 3 minutes and a further 2 minutes later but quickly re-engages. Asked two questions during whole class feedback that are purposeful but not fully formed – takes a little time to make meaning clear, multiple examples and citations from texts are overused – both questions refer to the assignment. Contributes very well to a peer's question. Makes copious notes.

Student 21*, 'Asks what sort of questions do you want*?'

Teacher replies *you just need to think about any aspect of the argument that you do not understand.*

Student replies, 'So anything at all then?' Teacher, 'yes what would like to know more about or cannot make sense of.'

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[4] This refers to children's understanding of the double consonant rule

The student looks at her peer and then back to the paper, begins to read and highlights almost immediately this continues for 5 minutes asks peer a question then continues – looks very uncomfortable – frequently looks around continues to highlight – does not write anything asks another question then writes *I don't agree* and stops reading, considers her peer's question looks up again and say to a peer, *'I don't agree with any of this'*. Looks back at the journal goes to the back of the journal and immediately highlights the majority of the conclusion. Could not have read this. Looks up task time finished.

Student 4

Looks at the paper flicks through it and looks at subheadings highlighting them this is in reverse order from back to front. Starts at the beginning and works to the back, drawing circles around most sub-headings. 3 minutes starts reading the 1st paragraph has not read the abstract[5] writes in the margin the content cannot be read by the observer. Continues to read 6 minutes confers with a peer says, '*I think that he is saying that school is not a great idea for every child,'* peers says, '*yes' (this has been the key argument for two weeks lecturing)*

Student 4 *'That cannot be right children have to go to school'*

Reads to end key focus of feedback dialogue is that she disagrees with the author and does not understand *'why we would read such nonsense.'*

Both students were very hesitant and did not offer a question to the whole class feedback session until several other students had done so, Student 21's question mirrored that of peers there was no evidence that she had highlighted anything that was in-keeping with the question that she had asked. Student 21's contribution was not in the form of a question but she gave an opinion about what she felt was the key

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[5] This was on a first and separate page

point of the author's argument – she had misinterpreted this – neither student offered material that they are likely to have been familiar with at the outset of the class.

Both students engaged purposefully with their peers' questions and could sustain debate surrounding the issues being raised.

Phase 2 – Cycle 3

Sample Observation (6), 9th of 18 in series,

3 students observed 26 in group – Level 6, 4 students observed

Student 20, Student 4, Student 24 and Student 25

Reading task 15 minutes - Children's Acquisition of Literacy Skills - Curriculum Implementation

Child Safeguarding Class focussing on the concept of, 'Significant Harm' and professional report writing

Student 24 and Student 25 are engaged in the set task i.e. preparing an evidence-based report to propose the removal of the children from the care of their parents. This necessitates the extraction of key data from the text, its analysis within the context of the Children Act 1989, and the presentation of the case succinctly and with a clear evidence base.

Both students are engaged in the task and are in conversation, both appear to be experiencing difficulty and are not making progress with the task, although both students did demonstrate a very sound knowledge of the associated legislation and its application. Both students had completed the preparatory reading task and had demonstrated a very clear understanding of it during the session. Student 25 had led a small group discussion with clarity and purpose earlier in the evening.

All associated paperwork and resources are laid out on the table.

10 minutes passes and neither student has recorded any key points or started to write.

The teacher approaches and through her discussion with the students ascertains the extent to which the students have secure subject knowledge- it is clearly evident that both students are fully equipped [in terms of subject knowledge] to complete the task. Student 25 begins to describe the evidence base that she would use to substantiate her case for example she lists 5 separate issues relating to the children's physical health, this is followed by a list of 3 further issues relating to the children's psychological needs. The teacher then asks the student how she might present this evidence within her report. The students do not answer this question but moved to the problem, as they perceive it with their approach. Student 25, 'It will be too long' I have

only 500 hundred words, but I have used about 200 just with this bit there are other things that I need to write about'. The teacher asks,' how else might you present this?' Neither student answers' I'm not sure', should we have more word space?' The teacher explains the need for succinct reports in work with Social Services, Student 24 then states, 'I am not up to this I worked on this all weekend, but I cannot do it',

The teacher then reassures the student that she is completely satisfied with their subject knowledge.

Student 24 then asks well 'why can't I do it then?'

Tutor then asks, 'what have these issues got in common? (points to the students' list of health issues)

Student 24 & Student 25 'They all have to do with physical health'

Tutor, 'Ok then are you saying that the children's physical health is compromised as a consequence of poor parental capacity to care for the children'?

Both students chorus, 'yes 'that's it that's is exactly it, I wish I had your language'

The teacher laughs and says, 'it took a lot of practice'

The teacher then asks both students to list all further issues related to the case both students engage eagerly with this done the teacher promises to return to them.

At this point the group has attracted the attention of several other students. Several other students were looking closely at the engagement one commented, that's just what I wanted to say but I had just given loads of examples and not actually said anything.

'Yes, it is like a dictionary definition that you need to give and then give the example'.

1. **Sample Observation (6), 12th of 18 in series**

Student 23, Student 19 and Student 21

Student 23 reads the text and highlights several aspects of this, she looks around frequently and tried to catch her peers attention – then asks a friend a question pointing to the text – seems to seek clarity regarding the meaning of the paragraph – nods and continues to read and highlight – has not written anything 12 minutes have passed – student looks around and seems to notice that other students are writing – returns to the beginning of the ==paper and without hesitation writes a question in the margin, this is basic and is more related to her own professional practice rather than the content of the paper== – turns the page and repeats the action again the question is superficial and reflects her professional practice – continues to read the paper and to highlight parts of the text. Feedback reflects an inaccurate understanding of the text.

Activity ends

Student 23 does not offer a question for consideration and does not contribute to the whole class discussion – speaks to peer frequently throughout the feedback – this is about the journal article – seems to be listening with interest to her peers frequently looks back to the paper – makes frequent notes – 2 to 5 words long these are instructions to herself such as *read xyz, note this for later* – as the session ends she asks a question that allows her to summarise the logical progression of steps to the development of *internal working models* in a clear and succinct way. She notes these down as follows see screen shot. Looks happy with this then asks the teacher, '*can this change*' then expands on her question and gives an example from her professional life. This leads to a discussion about some interventionist strategies used by Social Services which is very beneficial to the class.

2nd Session
SEN Module School Readiness – Release on request (The student works in a setting where all children have Statements of SEN, she has a significant knowledge of, and confidence with, the subject)

Student 19 The student opens the paper and scan reads through very quickly, reads the conclusion and then the abstract, this takes about 3.5 minutes – reads with significant concentration highlighting and underlining frequently – she frames two

questions very clearly and illustrates her query with an example – both are congruent with the level of the course, fluent but not relevant to the read paper– reads to the end of the paper and forms a further question – writes these separately on file paper – looks back at the paper and seems to think for a few minutes then writes a further question and highlights it.

Offers her questions straight away during whole class feedback then says, 'those are my questions but what is more important is how he has not defined SEN or School Readiness within the context of segregated education.' All questions are illustrated with and example. This level of questioning is at a very sound level for the previous years' study and it is not relevant to the paper.

Key features;

Student 21 for the first 12 minutes Sought assistance from peer on four occasions in the first five minutes, then sought to, 'help' her peer and became very involved in a discussion about a specific aspect of her peer's work her peer seemed to benefit from the discussion and together they progressed reasonably well, Student 21 conversation then turned to what she felt was a parallel situation within her own work and the conversation became centred around this for some time. Her peer then suggested that she begin to record some of her observations on her 'diamonds', Student 21 made a tentative attempt at this and recorded and example taken from her child observations not the read material, while this was relevant to the module learning outcome it was not related to the read text. When the teacher arrived at the group Student 21 was the first to ask if her work was correct. The teacher avoided   giving a direct answer to this question and opened a more general discussion with regard to why the example was important within the context of the given task. The student's responses to this were fairly superficial and were   more focussed on whether or not her initial suggestion was correct. The teacher then asked, 'how many more examples have you got of this?' After some time, the student gave two further examples, she was asked to write them down, all examples were clearly visible to the student, with this done the teacher asked, 'what have these examples got in common? The student began to rationalise

her selections and explain why she felt that these examples were important but did not identify the common feature. Following this the teacher re-focussed her on the question relating to the common features of the examples that she had given, the teacher then encouraged other student to participate asking for just key words one student made a suggestion this was recorded, following this another student made a suggestion this too was recorded, then the target student made a suggestion, all three words were recorded and were visible to the student. The target student was encouraged to build these into a fully rounded sentence. The students were then encouraged to expand the sentence further. Student 21 could only do this with some significant amount of help and the outcome was inclined to return to the specifics of the example cited nonetheless eventually, a clear conceptual point was made and substantiated by examples.

A similar pattern followed until the target student had made 6 rather than 9 points.

Student 19 approached the task with some apparent trepidation and sought support from her peers initially for 6 to 7 minutes, this support was related to the requirements of the task rather than the learning intentions. She did not make any attempt to record her thoughts or ideas on her 'diamonds' the majority of her time was dedicated to discussing the requirements of the task with her peer. Much of the discussion centred around key theorists relating to the subject, this dialogue was well-informed, relevant and detailed. The student then began to record some of this theoretical perspective on her diamonds Each 'diamond' (4) held 3 to 4 well considered theoretical perspectives that were relevant to the findings of the child observations, but there was no substantive point made associated with each theoretical perspective. There was no reference made to the child observed. When the teacher approached the group Student 19 was very keen to gain feedback on her work although she appeared to be equally uncertain, the teacher started to discuss their approach to the work asking what had led Student 19 to her approach. Through the ensuing conversation it was apparent that Student 19 had almost 'jumped' a critical step in the communication process in that she could cite clear examples to rationalise her choice of theoretical perspectives but she had neither made a clear abstract point neither had she actually

communicated an example to either substantiate or illustrate her point. On a separate sheet of sugar paper, the teacher drew the following diagram.
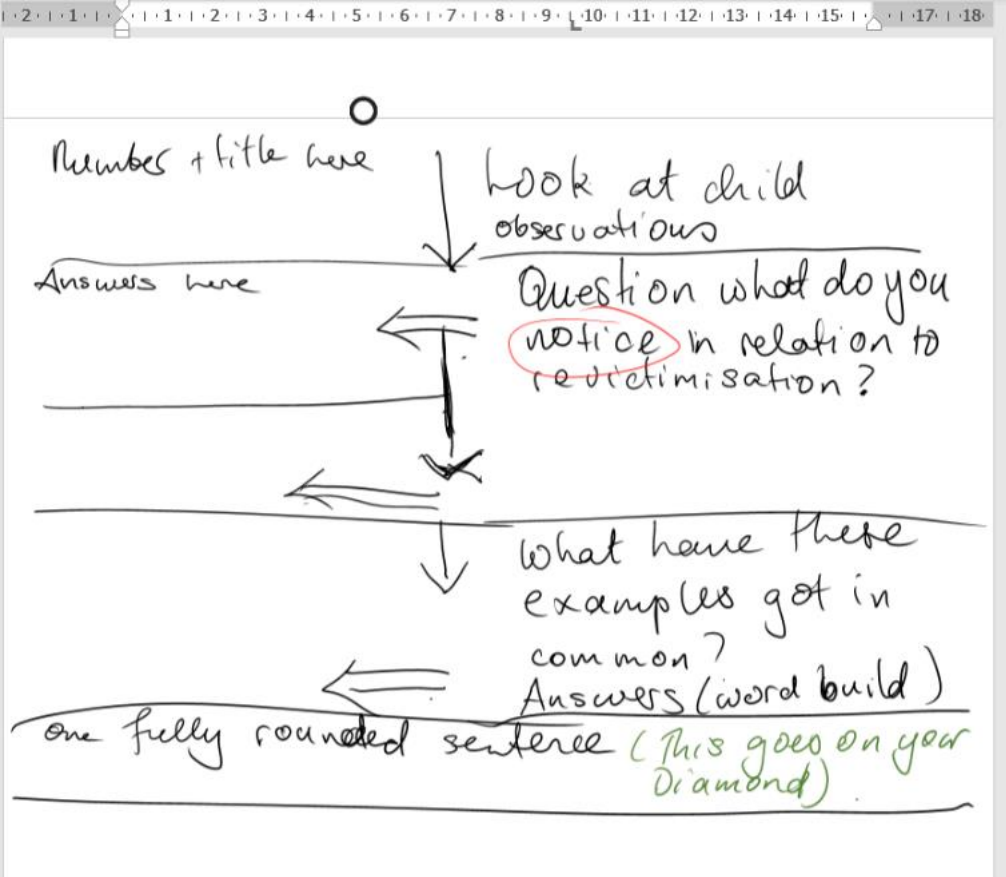
Sample Observation (7), 16th of 18 in series

2 observations, 1 student, Student 14

Student 14 X 2

1st Session

Reads the complete text in silence without disruptions (7 minutes) – highlights key parts of the text – makes bullet point notes – writes a question, makes a herring bone diagram with key words – writes another similar sentence very large gaps between words – inserts further words – crosses out uses different coloured pen – the sentence seems to seek clarity it begins with, '*if ... then why .. and how would this impact on ...'.* the content of the reading is clearly understood to a good level. She continues to rework the sentence – confers with peers – then says, 'y*ours puts it in a nutshell'*

Whole class feedback

Student is most silent during whole class feedback (this is unusual as she can often dominate the discussion) seems to be listening to the discussion of the class when she is asked a question by the teacher, her contribution is hesitant somewhat unclear but demonstrates a very deep understanding of the text as well as some of the inherent tautologies and detail of the reading. When asked for her question she contributes an excellent question that extends beyond the remit of the paper – it is not clearly communicated although she did try to read from her paper. It is clear that she had moved her thinking into new learning.

2nd Session – Personal, Social and Emotional Development of Children aged 8yrs to 11 yrs. *Resilience – Friend or Foe*?

Students are working in groups of 3[6] to construct an evidence-based challenge to a journal article – this necessitates forming questions - challenging presented evidence

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[6] Only Student 14 is in the subset of students who are vulnerable to DO

and, at the highest levels, identifying possible issues that go beyond that which is presented in the journal article. In order that students have a sound and accurate knowledge of the content of the paper they have been asked to summarise the main point of each paragraph in one fully rounded sentence in the margin[7] of the handout.

30-minute activity

All students read for approximately 2.5 minutes Student 14 has written a sentence – it is gapped and she looks back at the text and highlights it, inserts a word into her written sentence – her peers have finished the paragraph – they confer Student 14 does not contribute – peers look at her she makes a contribution and they all 3 write this down – this continues for approx 17 minutes – all three discuss the paper – Student 14 has highlighted sections in two colours – one seems to be the evidence base the other the key arguments – discussion continues then one student reaches over and asks J for her paper all three look at it – parts are numbered and there are ?s in the margin – more discussion – they move around to sit more closely now all 3 can see her paper. Student 1 then gives a summary, and all seem to agree – she writes this down then Student 14 offers another suggestion and points to the paper she says, *there are 3 issue's* and lists them very quickly, she is looking at the time student 1 then writes these down but they are succinct and very much to the point.

Activity Ends; Student 14 writing does not reflect a very valuable contribution to the activity her notes on her paper are still not fully formed. She did not transcribe from student 1's notes.

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[7] All handouts have extra wide margins and footers and headers are 3.5 inches wide – this allows students to make comprehensive notes in the same location as the text

Student 1 feeds back to whole class Student 14 is silent when there is some confusion, she turns to Student 14 who explains the point and although it is a little long winded it leads to a very in-depth class discussion.[8] Her evaluation of the author's evidence was exceptional, logical, evidence based, objective and demonstrated the capacity to think beyond the scope of the given journal.

7.8   minutes - to initial disengagement

8   minutes - seeking help from peer

10   minutes - seeking help from tutor

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[8] This discussion was the strongest learning experience of the 2 hour session.

Phase 2 - Cycle 4

Sample Observation (8), 17th of 18 in series

3 observations 2 students

Target students Student 18X 2, Student 17 X 1,

Whole subset group observation

Session 1, Extract from the reading list – *Assessing learning in Science* - all students within the subset are seated together in the same part of the room – upper left-hand corner.

Student 18 & Student 17

Student 18 Task is set, and Student 18 looks up to teacher makes a comment that is not relevant to the task or to the course teacher refocuses the student on the task and sets the time limit. Student looks down at the paper says something quietly, looks around and asks a peer a question peers answers briefly but continues with her work. Student 18 seeks assurance from the teacher about the requirements of the task and the meaning of the word *tenet* teacher refers her to the instructions on the board. The student looks down and begins to read the paper, seems to read intently for 6 minutes does not highlight. Writes a question in the margin – this is insightful and germane to the key argument of the author. She speaks to a peer but is not responded to, she looks at the teacher and says, *'I am going to fail'* teacher makes an encouraging remark. Student returns to the paper and highlights the critical aspects of the text, she continues to read highlighting the evidence base used by the author. She then writes in the margin, *'where was this evidence gained from?' 'Was its England?'* again this is relevant and a purposeful question. Moves to work with the group and makes discouraging commentary regarding her ability – does not get a response – groups engage with the task – Student 18 does not contribute, looks at Student 16's question then Student 19 makes other irrelevant comments.

Whole class feedback

Does not contribute until asked makes a value judgement based on her own professional practice X 2

asks how the text might be useful in an assignment

asks how the argument relates to a specific example in her work setting – this is very clear thinking and relevant makes copious notes - final consolidation activity – does not contribute in a relevant way

Teacher has asked the students for feedback on two tasks, the first task was the more accessible and the second more complex. The students had been working in groups and had gathered their views and thoughts on large sheets of sugar paper. These views were written often in the form of bullet points but more frequently in full rounded sentences there were clearly many modifications to the work as students tried to articulate their meaning in relation to instrumentalism and relationalism.

Student 17 feedback a point and this demonstrated a high level of understanding in that she argued that a child's capacity to work at a truly relational level was predicated on a range of skills that are associated with those children who come from middle-class backgrounds and consequently this approach to teaching could be inherently discriminatory, she gave three examples from her work place and could not easily see how there might be a different approach to the child's learning, on two occasions she said, ' but he will not be able to do any work like that he will just do nothing, he will not be able to complete the work' All three examples clearly illustrated her point and the features of the children's learning behaviours were congruent with her point.

All contributions were gathered on the board in fully rounded sentences and the students transcribed carefully and when the teacher asked if it was useful to them there were enthusiast chorus of *Yes* from the students this took approximately 20 minutes during this time the teacher re focussed the students on the key learning outcomes and skills frequently. There was a very high level of engagement and students valued it significantly. There was a constant interchange between the teacher and the students the level of engagement was absolute.

2. Sample Observation (9), 18th of 18 in series
Student 17

Engages immediately with the task reads seemingly intently she turns to the conclusion and highlights part of this, rereads the introduction, seems to scan read 3 or 4 paragraphs highlights makes a short note. Student 17 repeats this action twice

more and looks back at notes and forms a very insightful question. 10 minutes. Returns to the beginning of the text scan reads and writes main point of paragraph in the margin in a fully rounded sentence. She continues thus for 4 paragraphs all notes are in fully rounded sentences. Moves to paragraphs that were scan read – writes the main point in FRS –says to peer, *'we did this in the maths module.'*

Peer responds, '*yes I think so'*. Moves to the back of the paper and writes a hypothesis that is excellent, she does not share this during feedback.

Student 19 X 2,

1st Session

Student 19 looks at the paper flicks through from the back to the front, looks around pick up a pen and re-writes the requirements of the task from the board, she reads and highlights for approximately 5 paragraphs has not formed any notes, reads to the end without interruption. This takes 12 of the 15 minutes. She speaks to a peer and then looks back at the paper writes a question – this is fairly superficial – looks back to the conclusion.

All evidence cited by the author is highlighted

Activity ends

During feedback she does not offer any suggestion or make notes other than those ideas that are captured on the board, remaining silent throughout, apparently interested in the session, in the final few minutes of feedback she makes a comment that is contextualised within her work place this is very relevant and demonstrates a very sound understanding of the text.

Then forms a question synthesising this theoretical perspective with an opposing view – re contextualises this to the workplace – this analysis is excellent and demonstrates a very clear understanding of the central argument of the piece.

Activity ends students had written one very basic question and only those ideas that were captured on the board and nothing else.

2nd Session

Read consistently for 7 minutes highlighted the evidence that the author has used this is thorough. Made a bullet point beside each paragraph, this is not fully formed into either a statement or a question but does demonstrate an understanding on content. Scan reads 4 paragraphs and highlights roughly some short parts, towards the centre of the reading reads and rereads 3 paragraphs and discusses with a peer then asks the teacher to explain the meaning of a paragraph with this done forms a basic question and crosses it out says, '*that's rubbish*' looks away and says to her peer, '*what I don't understand is .....*' and continues to form a very good challenge to the author, this is not written down. She then returns to the reading and highlights periodically to the end, finishes reading as the task time is complete.

Whole class feedback

 Remains silent throughout the feedback but seems to listen closely to the feedback of others – transcribes from the board – clarifies one point – last question comes from this student again this is thoughtful, well informed and relevant – it is not written in her work – this question provokes an in-depth whole class discussion.

Activity ends the only work that this student has written is some short notes from her readings and that which has transcribed from the board.

9   minutes - to initial disengagement

11   minutes - seeking help from peer

13   minutes - seeking help from tutor

Student 23, looked at the paper flicks through reads the abstract and then highlights the title key words in the abstract – looked at the conclusion and highlighted similar words to the abstract – looked down 2 or 3 pages drew circles around the sub headings – flicked through 3 minutes passed. Started to read intently from the beginning highlights an amount of each paragraph and makes one word notes on separate file paper – reaches the end in this way – looks at her file paper and then returns to flicking through draws a diagram of the author's logical progression of thinking, this is linear and does not have any alternative options – highlights more text in a different colour

writes, *'how useful is this?'* doodles then writes, *'it doesn't explain.........'* Forms a single question that is congruent with the level of the course.

Whole class feedback

Looked at the paper flicking through read the abstract and then highlighted the sun-headings this took 3 minutes – looked at the conclusion and did not appear to read it, then returned to reading the paper, some key words are underlined or circled in each paragraph. The student then used a branch diagram to construct a sentence, this is not yet fully rounded – the students then continues to read and repeated the same model – her notes are still as bullet points. Approx. halfway through the paper returns to the beginning to read very briefly and then returns to the branch diagrams and bullet points stops to think then rewrites the bullet points as fully rounded sentences, two are framed as questions one as a statement these are written in the margin. Work is approx. 2/3 complete when the time is up, the work is congruent with the level of the course and the Main Point in the margin

9 minutes - to initial disengagement
12 minutes - seeking help from peer
14 minutes – seeking help from tutor

Appendix G (i) - Staff Observations coaching tutorial - findings tabulated

Table 10-3 Staff observations coaching tutorial

Writing and Conceptual Thinking		Cycle 1 8 Observations 7 students	Cycle 2 8 Observations 7 Students	Cycle 3 12 Observations 7 students	Cycle 4 8 Observations 5 Students
Section 1	**Student Engagement**				
	Responded very positively to the way of working and appeared very keen to engage with the strategies.	7/7	7/7	7/7	5/5
Section 1. b	Average length of the tutorial in minutes (observed sessions)				
Section 1.b. i	1st tutorial	25	25	20	25
Section 1.b. ii	2nd tutorial	17	11	12	15
Section 1.b.iii	3rd tutorial	10	10	10	15
Section 1.c	Average timing of the tutorial in relation to submission date in days (observed sessions)				
Section 1.c. i	1st tutorial	10	20	20	20
Section 1.c. ii	2nd tutorial	5	10	8	10
Section 1.c.iii	3rd tutorial	1	5	3	5
Section 2	**Learning Behaviours - approach to tutorial**				
Section 2. a	Had an assessment plan in place				
Section 2.a. i	1st tutorial	1/7	3/7	6/7	4/5
Section 2.a. ii	2nd tutorial	3/7	5/7	6/7	5/5
Section 2.a.iii	3rd tutorial	7/7	6/7	7/7	5/5
Section 2. b	**Arrived at the tutorial with specific questions**				
Section 2.b. i	1st tutorial	0/7	2/7	6/7	4/5
Section 2.b. ii	2nd tutorial	2/7	4/7	7/7	4/5
Section 2.b.iii	3rd tutorial	5/7	5/7	6/7	4/5

Section 2.c	Quality of completed appendices				
Section 2.c. i	Outstanding	2/7	1/7	3/7	2/5
Section 2.c. ii	Good	2/7	4/7	2/7	2/5
Section 2.c.iii	Adequate	3/7	1/7	2/7	1/5
Section 2.c. iiii	Inadequate	1/7	0/7	0/7	0/5
Section 2. d	Average word counts 3rd tutorial[9]	900	1500	2230	2270
Section 3	Language and Communication				
Section 3.a. i	expressed concern about their use of language	7/7	5/7	3/7	2/5
Section 3.a. ii	exhibited significant language, vocabulary or syntax difficulties.	0/7	0/7	0/7	0/5
Section 3.a.iii	sought to use examples to communicate their meaning.	7/7	6/7	6/7	4/5
Section 4	Knowledge its application and thinking skills				
Section 4.a. i	Could respond appropriately to direct/closed questions[10]	7/7	7/7	7/7	5/5

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9 Aggregated of all observed students

10posed by the teacher, this included questioning of complex and competing theories together with their application to practice.

Section 4.a. ii	Formed evidence based reasoned arguments and decisions using the findings of their appendices.	2/7	3/7	5/7	4/5
Section 4. b.	Students' use of reference material				
Section 4.b. i	To substantiate own opinion.	7/7	3/7	2/7	1/5
Section 4.b. ii	Not relevant to point being made.	4/7	2/7	1/7	1/5
Section 4.c	Criticality and conceptual thinking				
Section 4.c. i	Exhibited capacity to write critically and conceptually.	1/7	3/7	5/7	4/5
Section 4.c. ii	Demonstrated capacity to select most relevant material for inclusion.	1/7	5/7	5/7	3/5
Section 4.c.iii	Revisited their appendices with a view to improving their quality.	1/7	5/7	5/7	3/5
Section 5	**Engaged in creating diagrams and visual diagrams**				
Section 5.a. i	Sustained engagement with compiling diagrams during tutorial	7/7	7/7	5/7	5/5
Section 5.a. ii	Significantly developed Branch Diagrams, Thinking Grids, Mind Maps, Flowcharts between tutorials.	4/7	5/7	6/7	5/5
Section 6	**Confidence Building – Students;**				
Section 6. a	Appeared to be less tense and more positive at the end of their tutorial	7/7	7/7	7/7	5/5
Section 6. b	Exhibited the capacity to deal positively with setbacks	0/7	2/7	4/7	3/5
Section 6.c	Demonstrated capacity to evaluate the quality of their arguments.	1/7	5/7	4/7	4/5

Section 6. d	Independently made effective and timely developments and revisions to their work.	2/7	5/7	6/7	4/5
Section 6. e	Would clarify their own steps forward to assignment completion	1/7	3/7	6/7	4/5
Section 6. f	Exhibited responsive and compliant behaviours during the tutorial – teacher led	7/7	4/7	1/7	1/5
Section 6. g	Exhibited independent and autonomous behaviours during the tutorial – student led	0/7	2/7	5/7	4/5

Appendix G (ii) Staff Observations coaching tutorial - sample observations

Sample 1, Phase 2 - Cycle 1

Student Identifier	Student 2
No. of tutorial observations presented	2 of 3
Student's Average Mark	36%
Range of Marks	5%
Number of Days to Assignment Submission	3
Quality of Appendiced Work	Adequate

The student has clearly worked substantially on the essay; it is however incoherent, there is no plan, it is impossible to ascertain a structure and the student is clearly dissatisfied and complains bitterly about her marks indicating that she will, 'just fail this one too.' The level is congruent with the student's usual work. It would not pass on submission; the student is not told this.

Teacher, 'OK let's look at this', she spreads out the student's essay work on the table in page order – both are standing – the learning outcomes are in view – teacher says, 'Ok now 1st learning outcome what do you think?' The student describes her thinking about the Learning Outcome (LO) – this is reasonably clear but a little below the level required and does not make best use of the appendiced work by a significant margin. The teacher transcribes the student's contribution on to a sheet of A5 paper capturing key words; these words are randomly spread around the paper.

The teacher selects a highlighter (Pink) and she asks the student to highlight the key words on the learning outcome – similarly the teacher highlights, in the same colour, the word on the A5 paper and says, 'OK now where have we got these points in your essay?'

Student looks between the paper and the essay then points to a section[11] (this is mid-way through the work), and she explains her thinking – the teacher writes LO1P1 in highlighter across the text and in the margin, again in pink. Says, 'OK' and circles similar content on the A5 paper and says, 'good we've got that one now what else about LO1?' The student again explains her thinking points to a different part of the

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[11] There is not a fully constructed paragraph, there are several sentences and portions of text.

essay, this is the penultimate paragraph of the essay, and they repeat the paradigm. Teacher overwrites LO1P2.

After 20 minutes – they have covered one full learning outcome and the student is very pleased. The sections relating to LO1 are identified in pink highlighter LO1P1 LO1P2, LO1P3 & LO1P4, and are scattered around the work without any seeming logical reason. This is not commented on by either party.

They then return to the first section of text identified by the student as addressing LO1 and the teacher asks where the point begins and ends when the student indicates the teacher draws a large enclosing loop in the same pink highlighter around the section of text and asks the student if this is correct, students replies, 'Oh yes' this is repeated throughout the essay for the entirety of LO1 where the teacher asks the student to identify where in the text the point in question begins and ends. Teacher, 'you have to get these paragraphs in order, put all LO1s (pinks) together – just cut and paste tidy up the language, remember what a paragraph looks like; main point, cite evidence, discuss and conclude about 200/250 words,' the student is smiling and agrees.

Teacher, 'Can you see what I am doing with it?'

Student, 'Yes, yes I can I just need to organise it I can do that'

Teacher, 'OK do the same with the next LO and come back to me?'

Student, 'yes, yes I can do that…. I' [the student has retained her line of vision on her work]

Student then asks if she should start to write up the essay again, the teacher suggests that she does not. Student feels that she should do so. The teacher suggests that she makes whatever progress that she can but asks that the work is produced with extra wide margins.

Key interventions; *organisation, paragraph structure, retaining the work at a planning stage, capturing thinking, immediate feedback.*

Notes; *no commentary made on the quality of the work, no feedback given, no reference to the use of critical material. Student is clearly delighted with the tutorial and agrees to meet the following day.*

Tutorial 2 of 2

The student has returned, and the text has been rearranged as was discussed in the previous section, each learning outcome has been produced in a separate colour font and the student is clearly pleased. It is evident however that the work is highly descriptive and a little lower than the level that would be anticipated for the course,

reference material is not effectively used, it is however much improved since the last tutorial in that it is organised under LO headings and there are discernible paragraphs The teacher considers the work and the student begins to interject with justifications and rationalising her choices. It is evident that the work is much shorter.

Teacher, 'Did you lose some of it?'

Student, 'Oh yes it was rubbish'

The work is much shorter now and more relevant although still low level and descriptive. The student had not apparently observed this and was not aware of the descriptive nature of the work.

Teacher, 'We need to be very clear about what we are saying in each paragraph.'

Student, 'OK'

Teacher, 'So to be clear we need to be able write the main point in one fully rounded sentence with capital letter and full stop, two sentences at the most, in the margin.' The student does not reply.

Teacher, 'Ok let's get going'

Both laugh

The student begins and contributes a reasonably clear main point which the teacher transcribes on to the extra-wide margin verbatim, the student has hesitated twice, and the teacher is very encouraging. This continues for 4 paragraphs and it is clear that the student is beginning to struggle; this corresponds to the point where the paragraphs become more descriptive and are largely citations of evidence from the appendiced work, equally where there was the potential for greater depth of analysis. The initial points were fairly low level.

Student, 'I thought I was doing so well'

Teacher, 'You are doing so much better we just need to be uber clear'

The student indicates that she always had difficulty with language and getting down her ideas on paper. The teacher reassures the student that it is her job to help her to do so. The student then makes another attempt and is making some progress in communicating a clear generalised point – then becomes more hesitant again. The teacher then points to the paragraph and asks why she had cited the specific evidence in question. [there are 4 examples of children's behaviour, each of these behaviours has a unifying theme] The student explains, and the teacher captures the key words on the tutorial sheet, both look at it.

Teacher, 'So, what are we saying here?' 'What have these things got in common?'

Student looks at the paper and begins to qualify her initial thoughts, the teacher adds these to the paper, and slowly they build a sentence that describes the point that the student is trying to communicate, in order to do this the student referred to the cited evidence on two occasions. Ultimately, a clear coherent substantive point is made by the student. The student writes this in the margin beside the relevant paragraph. This is repeated twice before the tutorial ends. It is clearly new territory for the student who is keen to return the following day the teacher explains that this is not possible and that she needs to try to continue with the same working model. The student is nonetheless very satisfied and leaves.

The use of reference material remains weak.

This was the first module that the student passed on at first submission.

Key Interventions; *Organisation, strategy to think at a conceptual level – pattern identification, language development sentence building, capturing thinking, supporting selection skills*

Strategies; *visualisation the thinking processes, questioning, developing language, classification*

Notes; *The feedback was much more specific to the student's needs because the teacher could identify what the student was attempting to say and consequently their learning need.*

The student attributed her difficulty in communicating her meaning to underdeveloped linguistic skills this may be confused with conceptual thinking skills.

Sample 2, Phase 2 - Cycle 1

Student Identifier	Student 14
No. of tutorial observations presented	1st of 3
Student's Average Mark	53%
Range of Marks	9%
Number of Days to Assignment Submission	21
Quality of Appendiced Work	Outstanding

Notes; *Student has much written essay work approx. 2500 words – word processed and many notes, there is no plan; the student appears despondent and anxious.*

'The appendiced work is comprehensive, very organised and is of very high quality.

The student asks for, 'any help that I can get'.

Teacher, 'OK then let's have a look' and scans the student's work [essay and appendiced work] – says, 'you have quite a bit in here' student searches the teacher's face and looks a little less anxious,

Teacher takes a large sheet of light blue sugar paper and a Berol felt tip and says, 'Ok I just need to know what you are thinking about the whole module in a couple of sentences.' The student answers this succinctly to begin with but then drifts into specifics and cited the evidence of her appendix, the teacher refocuses her on the task and captures the key points on the sugar paper says, 'OK then so this gives us a good starting point' the student looks at the paper and says, 'that would make a good introduction I think.' Looks at the teacher, Teacher, 'yes, very good,' [it is very well informed, detailed and insightful]

Teacher, 'so right tell me about your thinking on ...?' [identifies a feature of the introductory work as captured on the sugar paper] and the student responds without hesitation, the teacher then captures the student's contributions on the sugar paper, the student begins to drift and says, 'do you know what I hadn't thought about' and pursues another very valuable line of enquiry but it is not relevant to the introductory work. The teacher captures this on a separate piece of A5 paper and says, 'OK that's really interesting and we don't want to lose it, so we'll park it for just a few minutes' she and refocuses the student. The student continues to offer contributions that are very relevant and purposeful but almost completely random, the teacher helps her to refine her thinking but continues to capture her thinking in single words or 2/3 words, these are organised in separate parts of the sugar paper.

After 6 minutes the teacher stops the activity indicating that there was enough material the student did however continue with 2 further points both were recorded.

Teacher, 'Ok let's organise this... so' she appears to be waiting for the student to make a suggestion none is forthcoming. The student asks, 'do I have enough ideas? She is answered positively. [The work is highly conceptual and theoretically based.]

Both look at the sugar paper and the teacher ask, 'can we group these ideas or see some themes emerging? The teacher reads them aloud and the student says, 'we could put these together' pointing to 3 points – there is an obvious connection – the teacher circles these in a dark blue Berol felt tip, the student then repeats this and identifies 4 further connected points this is circled in deep red felt tip. This continues and there are two exchanges of views regarding the classification of some of the groupings. There are 4 groupings all circled in a separate colour and some remaining points are outstanding, the student is reluctant to abandon these and links them to the main classifications by using a similar but lighter colour felt tip. This has created a thinking diagram classified by theme and identified by colour. The student looks at it closely and says, 'I can see what I am thinking now; I have done more in 20 minutes here than I did in three days at home.' The teacher reassures her that her prior work had contributed significantly to her capacity to engage with the current exercise. The student replied, 'I have the cart in front of the horse I should have done this first now I can write this up' both laughs.

Teacher says, 'now we need to refine this further', the student looks surprised but says nothing.

Teacher, 'Let's try to put these in order of some sort' the student does not respond teacher prompts' 'if we were putting these in your essay which chunk might we go for first?' Student looks, then looks at the introductory work first and says, 'this first', looks back at the thinking diagram and says. 'Ok I think the Blue first' and explains her reasons.

She then puts the remainder in order but returns to it, she says, 'what I am saying here is...' And writes her thoughts in the same colour pen that had been used to delineate the classification. She has improved the quality of the point in that it is more sharply focussed on the rationale for the module. Says, 'Ok' then and put 1, 2, 3, 4 alongside each grouping. 'That puts it in order.'

Teacher says, 'we know what you are thinking and how it fits together, we now need to sharpen up our language.'

Student looks confused says, 'ok'

Teacher, 'for example what we could say here is...' and gives an example

Student, 'Oh yes that's much better, I can write this up.'

Teacher, 'Don't rush before you do write each one up thinks carefully about your language and develop your diagram and bring it back to me'

Date is arranged for following week.

Student leaves very positive.

Key Interventions; *Organisation – ordering, classification, capturing thinking, supporting selection of material, retaining the student thinking at a mutable stage before firming up arguments, using appendix material more fully.*

Strategies; *visualisation the thinking processes, questioning, capturing thinking.*

Notes; *The work that the student presented at tutorial was unusable there was no introduction, definition of terms, very many one sentence paragraphs and largely divided into a rationalisation of the appendix or long descriptions of theoretical perspectives.*

Sample 3, Phase 2 - Cycle 1

Student Identifier	Student 17
Student's Average Mark	35%
Range of Marks	7%
Number of Days to Assignment Submission	4
Quality of Appendiced Work	Adequate/Good

Notes; little essay material written

There no plan

4 days to submission

Student has no specific questions.

Student takes out her appendiced work this is congruent with the level of the course and is appropriate to the assignment task. She asks several questions about the requirements of the assignment task these are clarified and there appears to be a good level of understanding. This is not unusual for the student.

Teacher, 'Ok let's have a look at your work, [both consider the appendices] Ok so what are we going to say about this?' Referring to a specific LO. The student responds and this is captured by the teacher on the tutorial record sheet.

Teacher, 'Where have you seen this happen in your appendix?'

The student responds and this is captured similarly but in a lighter colour pen and is headed *'evidence'* – the student then draws on two seemingly contradictory theoretical research perspectives and discusses this in some considerable depth – nothing is written by either party. Then the teacher summarises the two contradictory perspectives within the context of the incident observed. This is very brief and succinct; she then draws a flow diagram on the tutorial sheet mapping the logical progression of the student's thinking. There are 3 possible trajectories within the logical progression of the argument. The teacher has created long progression lines between the flowchart boxes.

Student, 'yes that is it, that is it exactly.'

Teacher, 'Good now we need to think about the language.' The student looks confused but engaged.

The student rereads the diagram and says, 'so what we are not sure about is ... so we need to say '... the student uses sharply focussed language and introduces language

that avoids absolutes. E.g. 'the evidence of the observation would seem to suggest' .... 'this seems to indicate' .... 'where the target child exhibited xx behaviours a possible explanation could be found within the research of xxx'

All are captured by the teacher in single or short words phrases in a different coloured felt-tip and are placed[12] throughout the progression lines of the flowchart. They then attempt to construct a coherent argument from the diagram. The student begins to dictate somewhat hesitantly and then flows through a full sentence, then continues on to a very convoluted sentence with several clauses, adjectives and adverbs. It is nonetheless far more reasoned argument and conceptually based than her previous work[13]. Teacher stops and says, 'So this sentence is a bit long how might we break it up?'

Student looks does not contribute.

Teacher, 'I think hummh well' looks again picks up a pen and underlines in two colours and says 'there are two parts .... we could put these parts together' and these parts and constructs two separate sentences.

Teacher, 'Is this what you want to say?'

Student, 'Yes exactly, exactly it is perfect I just need to learn to do this myself.'

Teacher looks back to the diagram and asks if it makes sense and is helpful the student replies in a very positive sense.

Key Interventions; Developing/capturing logical progression of thought and argument, capturing thinking, language development, using appendix material more fully.

Strategies; Visualisation the thinking processes, questioning, supporting the evaluation of the work.

Notes; The student presented report/essay work at tutorial was short random discussion of the appendix or long descriptions of theoretical perspectives.

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[12] *It is noticeable that the student knew exactly where to place the lines of argument.*

[13] *From previous submissions.*

Phase 2 - Cycle 2 - Sample Phase 2 - Cycle 3

Student Identifier	Student 19
Student's Average Mark	42%
Range of Marks	
Number of Days to Assignment Submission	30
Quality of Appendiced Work	n/a

The student has experienced significant difficulties in communicating her meaning and remaining focussed throughout her work, much of this is underpinned with considerable difficulty in thinking and communication at a conceptual level. In order to mitigate this the student has been working using grids to refine and focus her thinking on the most salient aspects of her work. The student exhibits high levels of dependency in all observed learning situations although she will work with some independence outside the College.

The student arrives at the tutorial she has completed much of the work this is for the most part around her view of children's handwriting, the appendiced research is of a reasonable standard, it is very closely aligned to her research proposal. It is very extensive and much of it is not relevant to the issue being researched. That which is relevant is of a very high standard. There are approximately 8000 words included in the appendix and the student has extensive notes. The maximum word count is 5000 words excluding appendix.

The student has no questions to ask the teacher but then asks if the teacher can read over her work. The teacher asks for the grid with which she has been working and the student opens her notebook, there are several grids throughout in a variety of colours after some time she finds the grid relating to her literature review. It is headed;

Author(s)

Date Published

Research Group

Research Location

Research Findings

Main argument of research

This is relevant to my research because....

These heading have been developed with the whole class over the past year. The grid strategy has been used in very many tutorials and the student has indicated that she finds that it helps significantly particularly in relation to keeping her focussed on her topic. The work contained within the grid however is largely incomplete, the student had completed cell 1 to 4 for the main part but there after the grid was only sporadically complete. Moreover, the research literature that the student had chosen did seem to have unifying themes but contained advertising material used by the publisher of handwriting and penmanship support package as well as reference to a Radio 4 programme relating to neuroscience. A brief overview of some of the literature review indicated that the student had chosen work relating to; gender, the impact of representation on cognitive development, children's self-esteem, literacy skills, writing skills, engagement with curriculum and parental disengagement. All of these categories are germane and relevant, but it is not possible to include the findings of all within the confines of the research project. These were randomly spread throughout the grid without any visible attempt to unify or categorise them. The chapter in the research project is similarly completed and largely describes the content of the grid, it is 3000 words long and in several instances the student has given autobiographical details of the researchers and theorists as well as long descriptions of their research.

Teacher, 'Let's have a look at this grid, you have done a lot of work here'

Student, 'Is it too long'

Teacher, 'Let's see if we can organise it'

The student looks perplexed but says nothing. The teacher then asks why the student has chosen the given research, the student shrugs, does not fully answer and says, 'They were the best I could find'

Teacher, 'What is it that interests you about children's handwriting?'

Student does not answer fully and then indicates that her work-place mentor has suggested it as an area of research, both laugh.

Teacher, 'What interesting things have you noticed about children's handwriting'

Student, 'Well if they cannot write well, they fall behind, and they are always behind .... especially boys, they cannot be asked most of the time'

Teacher, 'Ok so are you saying that you are interested in gender differences?'

Student, 'Well boys take up so much time in the class because they can't be asked'. 'and then staff have to spend time with them to get them caught up.......it is not fair to the girls'

Teacher, 'Ok so, let's look at some issues relating to gender.' There are 3 entries on the grid that relate to gender. The teacher picks up a deep blue pen and asks the student to tell her about the first researcher. The student does this easily and discusses the research with some skill, the teacher then asks her if she may write on her grid and the student agrees heartily, the teacher then asks, 'so where was this research carried out?' the student answers and the teacher says, 'Oh sorry you have then here, we just need to be clear,' and asks the student to describe the research findings. The student does this, again with some thoroughness as she does with the main argument of the research. The teacher then asks her to briefly summarise the two points and she write these verbatim in the student's grid. The student looks and says nothing. The teacher then asks, 'Ok so how might this be relevant to your research', the student says that it is not [although it is] and indicates that her research did not find a similar issue. This aspect of the grid is then left blank. The teacher then pursues a similar strategy with two further research papers that the student had attempted to use. In both cases the student experienced difficulty in relating the theoretical perspectives to her research although she could discuss the central tent of the authors argument with some fluency.

The teacher then said, 'Ok let's look at our blues here, so they are all about *gender* so that would give us a good theme to follow.'

The student looks and says nothing

Teacher, 'What else interests you?'

The student does not answer but describes a theorist that is not related to handwriting.

Teacher, 'Did you say earlier about children falling behind if they struggle with writing?'

The student becomes a little defensive and says, 'if they can't write well easily then they don't … and if they don't write they don't think properly about what they have learned … I have seen this in my research'

The teacher asks for the location and indeed this is the case. This would be a very valuable line of enquiry for the student, representation of though and meta-cognition are included in the emergent literature review, and there is much evidence relating to the issue in the research.

The teacher and the student follow the same paradigm as described previously and the student demonstrates some capability is discussing the key findings of peer reviewed research findings but as above stops short of relating these to her own research project.

Using the same paradigm, the teacher has copied her contributions on to the appropriate cells on her grid on deep green pen.

The student looks and says, 'I have only two parts to this now.... what about the rest?'

The teacher asked, 'can you see how we have divided this up and organised it under themes?' 'Just think about what interests you or what you found in your research and try to pick out another theme then just complete your grid as you did with me'

The teacher suggests that she use the visual prompts to rewrite this part of her literature review and to reflect on another aspect of her interests in relation to her research topic and to follow the same paradigm, the teacher further suggested that she do not proceed part this before having returned for another tutorial.

Student appears to be pleased and thanks the teacher then leaves.

Observation ends

3rd Tutorial 15-minute observation

The student returns to the tutorial with a much more developed Literature Review grid, there is much more handwriting on the grid, the student has remained within the colour categorisation, the last category has not yet been complete on any of the entries and she has taken her re-written work to the tutorial. The student appears to be more relaxed although she is still somewhat anxious.

The student asks the teacher to look at her written work initially and the teacher does this, the written work is rigidly compliant with grid and the language is very stilted, there is little development of argument or detail and there is no attempt to relate the chosen research to her project. The work is consequently and in direct contrast to her earlier work, very short. The work is categorised under three headings; Gender, Cognition and Relationship to Reading Skills. There is no introduction to the Literature Review. The teacher indicates that this is a very good start and structure, the student remains silent but looks surprised. They then focus on relating the chosen research and categories to the research project. The student struggles significantly with this and frequently x 8 refers to the findings of her research the examples that she gave were relevant and purposeful but did not follow a line of enquiry.

Key Interventions*; focussing student's capacity to relate the key findings of her research to the conceptual aspects of her choice of literature – while she could capably discuss her findings at a conceptual level as well as the conceptual aspects of the literature, she experienced difficulty in synthesising both.*

Strategies*; visualisation the thinking processes, questioning, capturing thinking.*

Impact; *Organisation of written work, otherwise little discernible impact*

Notes; *The work that the student presented at tutorial was presented as a set of unconnected research papers while there were themes in place the work was presented randomly without themes this led to a very fragmented and incoherent presentation. Very high level of dependency exhibited throughout the tutorial.*

Phase 2 - Cycle 4

Student Identifier	Student 23
Student's Average Mark	40%
Range of Marks	5%
Number of Days to Assignment Submission	14
Quality of Appendiced Work	Good

Student arrived at the tutorial with a laptop and wanted the teacher to read her essay from the screen, the word count stood at 5986 words on a 3000-word essay. The teacher explained that this was impossible. The student had a Lever Arch file of notes and two notes books, she asked the teacher to consider these, the teacher explained that this might not be the best use of the tutorial time and asked had she any specific questions the student responded that she did not.

Teacher suggested that they then focus on both the introduction and conclusion to the essay and the student nodded.

They both read the first section of the work and it was apparent that the introduction had largely paraphrased the assignment task and the module learning outcomes. They then turn to the conclusion and this contains much reference material as well as what appears to be new material. Teacher suggests that they refine the work.

4 minutes. Teacher asked the student some questions about the module rationale the student answered these fully and the teacher transcribed these ideas onto a A3 sheet of sugar paper – as the student spoke the teacher asked her what her understanding of the theoretical perspectives surrounding the issues were, the student answered hesitantly but with some clarity and detailed subject knowledge. The teacher captured these in a different coloured pen. [GREEN]

The teacher then turns the paper fully to the student and they both look at it the teachers then suggested that they build this work into a clearer introduction written in fully rounded sentences. The student stared at the work and did not speak the teacher then said, 'Ok let's look at our definition of terms', the student did not respond although her understanding of the subject was clear from the contributions that she had just made. The teacher then suggested some words and phrases to build the sentences and the student agreed, she then began to make notes in her already extensive notebook. The teacher said, 'OK let's just focus on this part,' the student looked back and stopped writing.

3 minutes. The tutorial continued thus for 3 further minutes where the student only responded to questions but did not voluntarily contribute to building the sentence structure or argument.

A similar paradigm continued for the conclusion. The student's contributions formed the only aspect that was recorded.

The teacher had recorded the introduction at the top of the sheet and the conclusion towards the end of the sheet leaving a large gap in the middle.

The teacher then asked the student what she had noticed from her appendices relating to each learning outcome, as these were given by the student the teacher recorded these in a similar fashion to form a Branch Diagram, each learning outcome was recorded in a separate colour. The student watches this very carefully and she looks between the teacher and the diagram. The teacher is capturing the student's thinking very quickly on the diagram, the student suggested up to 8 points for each learning outcome; many were multiple examples of a similar issue. As this became apparent the teacher circled these together in separately coloured pen. The teacher then asks the student why she thought she had done so; the student asked whether they were incorrect. The teacher reassured her that they were not [incorrect] and the exercise continued. The teacher then asked if the student could see what they had in common pointing to a fairly obvious example, the student identified the common feature. Teacher then asked what the student thought about the identified issue the student answered with some confidence and fluency. The teacher captured this and as such they constructed a fully rounded sentence. The student said, 'I see I see so I need to find what they have in common'; the teacher responded, 'Sometimes you do'. The student is clearly very pleased. It is very clear that the student has a sound understanding of the subject being studied. The teacher asks the student if the strategy is helpful the student answers positively.

As they complete, the student asked if she could have a copy of the diagram.

Key Interventions; *Organisation of the report, developing conceptual thinking, capturing thinking, using appendix material more fully.*

Strategies; *visualisation the thinking processes, questioning, capturing thinking.*

Notes; *The work that the student presented at tutorial was incoherent there was no introduction or definition of terms, mostly paraphrasing of the appendix with random quotations. Very high level of dependency exhibited throughout the tutorial.*

Phase 2 – cycle 4

Student Identifier	Student 16
Student's Average Mark	42%
Range of Marks	8%
Number of Days to Assignment Submission	28,
Quality of Appendiced Work	Good

Student 20 **and** Student 16 **tutorial observation Curriculum Implementation Module**

1-hour tutorial observed 25 minutes, (18 minutes and 7 minutes)

The student's essay was presented in different coloured fonts, these were linked to the notes that she had made and that were in turn linked to the Module Learning Outcomes. They were very difficult to read but they clearly made sense to the student. The student expressed the need for the teacher to read and understand the work in order that they could work together on the analysis. It is clear that the student is highly compliant with all the strategies and requirements of the previous tutorial but does not exhibit the strategies to analyse her appendiced work effectively for to communicate her analysis as it exists.

Teacher begins, 'so in lay man's terms what have you noticed about the children's engagement with the learning tasks?'

Student answers 2 or 3 significant points, these are stated in absolutes and do not appear to be evidence based, this takes about 2 1/2 minutes she then begins to qualify what she is saying, referring back to previous points made in the preceding tutorial and then making reference to a different module from the previous year, while the reference is linked it is not specifically relevant. Student stops and says, 'I've got mixed up here what I'm trying to say is... 'Again this is stated as an absolute, the point is low level and is not evidence based. The student becomes confused then stop talking and is clearly despondent. Says, 'this is what happens to me I start off Ok but then I get lost in it all and cannot see my way out of it I it is in my head, but I cannot get it down on paper'. She then looks back through her notes and describes much of her evidence

only making one or two brief points according as she moves through her notes these are somewhat under-developed and tentative, they are more congruent with the requirements of level 5.

The teacher asks her to return to her first point and the teacher writes this on a small sheet of buff coloured paper this is pinned to the work that is laid out on the table, teacher asks for the next thing that she noticed, and the teacher writes this again verbatim. On the third point the student began to cite evidence from her work and returned to her first point the teacher gently reminds her to move forward describing the, 'things that she had noticed in relation to the learning outcome' The student describes a significant substantive and generalised point that is conceptually based. The teacher transcribes the student's contribution verbatim on buff coloured paper. The student struggled after about three to four substantive points and began to falter.

The teacher then, with the permission of the student, spreads all her work out over the table, and says, they both lean over the work and begin to scan read it as they do so the teacher asks some prompting questions, but these are indistinct and vague. This seems to prompt the student into making further points, the teacher writes these down verbatim, on either buff or pink post-its, and pins them to the student's work. They continue thus for about 15 minutes, the student frequently drifts into discussing and citing evidence the student arrives at a point which is then recorded by the teacher this is pinned to the student's work, it is clear that the student needs support in maintaining the focus of the task, and frequently drifts off to discuss interesting but unrelated issues. The teacher frequently refers to the report title and the learning outcomes which she has pinned on the wall.

The student has chosen to identify two issues that are not easily related to the module in question but are related to her research project, the teacher records these and they are added to the forming tableau. The teacher and student have worked their way through the entire set of appendiced work and both stand back to consider the work. There are 12 notes pinned to the student's work. The teacher asks if she had noticed anything else in the work the student offers some more (ideas these are recorded and there is much discussion as to where they should be located on the work. There is

clearly a correlation between the colour of the notes and learning outcomes of the module[14]. There are only 2 learning outcomes covered and the student seems to be seeking to make 7 points relating to one and 5 relating to the other.

The teacher then asks the student why she might have chosen the different colours, to which the student responded' I suppose that it means something'. The teacher asks, 'what might the buff ones have in common?' The student looks at them for some moments and says, 'are they all relating to learning outcome 3?' The teacher supports the view and the student is clearly very pleased. Teacher then indicated that they need to capture this thinking and says, 'right let's get this in a diagram.' The teacher then takes a piece of A3 buff coloured paper and with the student constructs a branch diagram with each learning outcome identified. The student then transcribes the main points from the post-its to the branch diagram, it is not clear that she fully can understand the delineation between the two learning outcomes.

Following this exercise, the teacher and the student re consider the contents of the diagram and pinned notes and it becomes clear that there are repetitions and some weak points that are not congruent with the analytical requirements of study at Level 6. Teacher; '*right we need to have a look at these, what do we notice about them*'? The student is silent but then returns to the first points saying, 'these are not up to much'. The teacher gently moves her on saying, '*well those are Ok',* the teacher and briefly summarises the main points, it is clear that the student is very pleased with this work but has not spotted either the superficiality of some points or the repetitive nature of others, it appears that she is waiting to be led by the teacher and searches the teachers face for clues. The teacher then says, *'we cannot possibly get all of these into your essay we need to cut these down'* The student appears to be at a loss the teacher then begins and reads to notes saying, '*I think that we could pull these together as they are fairly similar, how can we rephrase this*?' With some teacher support the

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[14] The module has 4 learning outcomes

common feature of the points was identified and it seemed that the student did understand it she did however continually return to the evidence that had led her to the analytical point and seemed to have difficulty in separating the two. The student did reorganise the work to create a more coherent analytical framework. This is however hesitant, and the student did not seem to be particularly convinced about her work she did spend much time looking at the tableau and making minor suggestions, she did however appear to be far less anxious and more relaxed and indicated that, 'at least I have something that I can get hold of.' A similar conversation took place regarding the pink coloured paper slips. Teacher suggests that she take a similar approach to the remaining learning outcomes, the student asked if there would be any differences to the approach the teacher suggested that the reflects on what approach might work for her.

Observation 2 of 3 (15 minutes)

3 weeks to submission

The student arrives at the tutorial clearly very pleased but also expressing some anxiety about the work that she has carried out she, had continued to work in a vein similar to the tutorial, described above, and she had introduced two additional colours to the tableau. These had been transferred to the branch diagram. In total there were 18 additional post-its, each with an attempted substantive point. The points made were in part repetitive but did not re-visit the work of the previous tutorial, 8 were below the level for the course, 3 were clear and insightful and made good use the appendiced work, 7 seemed to be citations of evidence and were examples of a similar issue the essence of which was not stated. The work is spread out across the table together with the Branch Diagram.

Teacher, '*so where have we got to?*'
Both scan the work and the student begins to explain her thinking as she does so some of the issues begin to emerge and she becomes despondent, she then looks to the teacher and back to the work and says what I am trying to say here is and describes a reasonably clear point. The teacher has transcribed her words verbatim on a post-it and pins it to the branch diagram. This is repeated and the student makes swift

progress in identifying the critical points of her work, there are some obvious issues relating to counter argument and detailed analysis of the work nonetheless the student had developed several evidences based substantive points.

Student, 'why can't I just do this on my own?' 'I can see it now when I read aloud and … and can see it'

The student continues thus for some moments, but the teacher asks her what she has learned, the student replies, 'just look at it and think, just look and think, but there is no point in reading aloud to anyone but you, I would not see it as clearly…. and it would be harder…. reading it to you I can see it straight away.' I didn't know that all I had to do was think or ………. Thinking would be such hard work.'

Teacher assures the student that she has made remarkable progress. The student looks doubtful.

The teacher then reminds her of the need to use critical material to inform her thinking, the student looks concerned but offers some critical perspectives surrounding the issues being discussed without prompting. These do not directly relate to the points that have been made, the teacher suggests that they consider one of the more complex points that the student has made and asks, *'what have we read about this issue?'* the student makes a reasonable attempt at this but the answer lack specific detail, the teacher captures the thought in green felt-tip on the branch diagram and asks, *'what were XXX's key arguments?'* and the student answers with some considerable fluency. The teacher then explains the importance of engaging with critical material and asks the student to complete the exercise in a way similar to how they had just worked. Student agrees and appears to be very happy.

Observation 3 of 3, 12 minutes tutorial full observation

1 week to submission

The student arrives at the tutorial with 2 large sheets of sugar paper taped together, on this has formed a plan for her essay. Each learning outcome is denoted by a separate colour and there are approximately 3 points associated with each learning outcome. The student as also brought all her preparatory work as well as the work from the previous tutorials, this is extensive. The student states that she wants to consider the plan during the tutorial she is clearly very pleased with this work and

begins in a very positive way. The work is considered in order of each learning outcome; it becomes apparent that the student has revisited some of her appendiced work and has carried out further work within her setting. The student explains that an opportunity to improve the quality of this work occurred, so she took advantage of it, this is correct and the child observation[15] now included is of higher quality, this lends itself to a significant level of analysis and critical evaluation and as a consequence creates a better vehicle on which to construct her essay. Both the student and the teacher consider the work and there is a discussion relating to approximately 20% of the material, most of the points are conceptually based and those that were developed towards the end of the work are significantly stronger and securely based at the requirements of level 6 study. The student becomes aware of this and describes her early effort as, 'a bit naff but I will have to live with it, it is too late to change it now and I haven't time to keep going back'. The discussion was led by the student who sought reassurance on her work on five occasions. The conversation was then moved to the use of critical material by the teacher and the student appeared very anxious. The critical material was improved in that it was specifically related to the point being made by the student but was used to substantiate points made rather than to deepen thinking. The student had used the grid system to organise the content of her paragraphs and had remained within this paradigm throughout. The student could justify clearly her use of reference material.

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[15] This is 1 of 5 child observations

Appendix H (i) Student Feedback – tabulated

Table 10-4 Student feedback tabulated

Student Feedback – Coaching Tutorial Strategy					
	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Total No. of citations
Student' Feedback	*No. of students*	*No. of students*	*No. of students*	*No. of students*	
Practical and Organisational matters **Students reported that;**					
1. they had an increased capacity to ensure that they had covered all learning outcomes of the module equally - could see whether there were overlapping, and repetitive points being made, and this allowed them to be more succinct in their writing.	**15**	*8*	*15*	*Not reported*	*42*
2. the scheduling of tutorials; created an impetus for them to complete work and focused their thinking early on in the assessment timeframe.	*5*	**13**	*18*	*4*	*32*
3. having easy and constant access to a planning document, enabled them to frequently think about their main arguments and to make swift and frequent amendments. Students closely associated this with an improved capacity to improve their thinking and development of reasoned argument.	*Not reported*	*15*	*15*	*6*	*28*
Confidence Building and Psychological Issues **Students reported that;**					
4. They felt reduced feelings of isolation students indicated that the knowledge that another tutorial was booked allowed them to use the tutorial time more effectively; central to this was the reduced feelings of isolation and abandonment.	**15**	*8*	*15*	*Not reported*	*39*
5. The learning situation and strategies were unfamiliar; this developed confidence, competence and early success this interrupted the cycle of disappointment. Within this, students identified 4 areas *1) **This avoided old feelings of inadequacy.*** ***The reduction of text produced allowed greater ownership over the process.***	*5*	*13*	*18*	*4*	*40*

2) Growing confidence was motivational. This interrupted the cycle of disappointment that had led to despondency and the anticipation failure.					
6. They could clarify their steps forward in a more effective and progressive way and get feedback before submission, this; 1) *interrupted the cycle of panic* 2) *led to greater levels of confidence* 3) *reduced the use of survivalist learning strategies that had led to repeating mistakes.*	*Not reported*	**10**	*14*	*5*	*29*
Development of Thinking and Time Management **Students reported that;**					
7. The use of a diagram gave more focus to tutorials as well as allowing for more effective feedback during tutorial students cited the visual impact of the diagram as the key feature that had the most impact.	**3**	*10*	*10*	*n/a*	*23*
8. Students indicated that because they had to produce less text between tutorials that they made more effective use of time in that they spent time focussing on their analysis of their work and the clarity of their communication skills.	*Not reported*	**15**	*15*	*7*	*37*
9. Students indicated that working with diagrammatic strategies allowed thinking to be more organised/focussed 1) *more concentrated approach avoided a 'splatter gun' approach;* 2) *more focussed efforts in accessing peer reviewed material and stopped wasting time.*	*Not reported*	*n/a*	**9**	*3*	*12*
Cognitive **Students reported that;**					
10. working with a supportive tutorial programme together with diagrams allowed them to make an early and productive start to their work the key benefit of this was the way in which writing provoked a meta-cognitive and reflective analysis of their work. This led to early evaluations and consequent refinement	*Not reported*	*5*	**17**	*10*	*32*
11. more effective tutorials together with their diagrammatic recording allowed them to retain the discussion of the tutorial. This contributed to their capacity to work independently and with greater focus.	*Not reported*	*9*	**15**	*6*	*30*

12. *working in diagrammatic form enabled them to understand the importance of selecting material and within in this to select their best material*	*Not reported*	**12**	*9*	*10*	31
13. *the shared thinking experience together with a practical strategy helped them to develop the skill of identifying descriptive passages and either seek help or address the situation themselves.*	*Not reported*	*Not reported*	*8*	*2*	31
14. *the act of writing and representing their ideas deepened and refined thinking.*	*Not reported*	*Not reported*	*5*	*5*	10
15. *gave them the tools necessary to construct text effectively and to evaluate the quality of their work – this had not been present before.*	*Not reported*	*Not reported*	*6*	*15*	21

Samples of feedback are described in the succeeding pages; the samples are presented within the categories described in the table and are selected across all four cycles of the research period.

Appendix H (ii) - Sample of Student feedback
Cycle 1 Coaching Tutorials Student' feedback

> **Practical and Organisational Matters**
>
> *(1) An increased capacity to ensure that they had covered all learning outcomes of the module equally - could see whether there were overlapping, and repetitive points being made, and this allowed them to be more succinct in their writing.*

Student 13

When I saw the diagram I through that it would help to get me organised I was always told that I wrote too much and that it was chaotic and descriptive … the marker could not tell what Learning Outcome (LO) I was writing about … so when I saw 2 or 3 main points per LO with between 200 and 250 words for each one put on a diagram like that I thought that I could not go wrong it looked so simple that I couldn't believe that I had not though about it like that before. When I wrote my essay, it was much easier because I just had to think about a few things when I went to the tutorial, I was told that the work as not at the right level even though I had covered every LO, but it was easier to fix that.

Student 29

I failed nearly every assignment before I started to write with the diagram… we all loved it [the Branch Diagram] … it was so clear, and I stopped going off the point I wished that we had been shown this in the first year it would have made my life so much easier it is not just a mass of words.

Student 2

It really keeps me focussed and when I am writing I am thinking well is this point one or two or three and then I have to stop because I know that I need to do more work for the rest of the essay and I just don't have time to keep rambling on and to forget half the essay. I still don't get good marks, but I passed [the assignment] first time for the first time ever.

Student 1

When it was first put on the board, I thought that it cannot be that easy you can just look at it and it sorts the work for you, instead on writing oceans and then having to delete it later it kept me focussed …. I know that you have to change things but that is not the biggest problem and all the time I kept it in my head about where does this sit on my diagram and is it the best point to be making and if I want to make another point then something else form that LO has to go … I kept the blocks moving about in my head and knew what every one of them was about

Student 17 I used to write too much about one learning outcome because I was interested in it, I would pay a lot of attention to it and forget about the rest of it then I wouldn't pass.

Student 11

When I saw the Branch Diagram first, I realised how important it was to stay focussed I could see exactly what a marker might be looking for and if half of it isn't there you won't get the marks and I hadn't seen that before.

Student 17 I was never inclined to go off the point and drift around the place but using the branch diagram made me really stay focussed on the progression of the essay and not jump about to make sure that there was a focussed line through the essay and not jump from one issue to the next I could see my line of argument through the essay.

Student 18 I need it to keep me on track I read and read and try to include everything that I can't so I have to stop and think about exactly what I will say, and it is relevant to the module learning outcome.

Student 23 I use write too much about one or two things because that was what I knew about but when I did the 2nd essay I knew what it might look like so I did more work on the other learning outcomes earlier on and then I could focus on each Learning outcome more easily.

Student 30. Yes, I didn't actually know that I was doing it [going off the point] until I looked back at one of my essays … 0…I'd be told in tutorial and in essay feedback to be more structured … It wasn't like it [the content] wasn't there but it was all over the shop I knew what I was on about but no one else could make sense of it.

Student 17The best part about taking one stage at a time was only having to think about a part of the work and not all of it together – that is why I used to miss learning outcomes and fail I'd get fixated on one thing and write the report only on that and miss other learning outcomes and then I couldn't pass. Using the branch diagram and only thinking about the first part [stage of writing] first and not trying to finish too quickly let me think more and apply the theory earlier. I didn't have to think about exactly how I would put things … just what I thought about it [the learning outcome].

Student 19 When we started, we had never written like this before and we would write anything that we knew about even if it wasn't relevant to the module or the learning outcomes but with a Branch Diagram you cannot go off the point.

Student 23 the trouble is the I go off the point I think I used to get confused with what was happening at work and what was important for work and them I would write a lot about that and forget about the module learning outcomes.

Confidence Building and Psychological Issues

> *(4) Students reported reduced feelings of isolation indicating that the knowledge that further tutorials were available allowed them to use the tutorial time more effectively; central to this was the reduced feelings of isolation and abandonment.*

Student 1

It's because there is support according as you go along it's not one swoop here do that assignment see you in 4 weeks

Student 2

… we need to be shown how to do these assignments it's not fair to just give us an assignment when most of us never done this before

Student 8

we never wrote like this before the most I wrote was a couple of hundred words to try and write 1500 words straight off is too much. We needed gradual support, just knowing the tutorials are there means I don't panic. I don't have that dread. If you had done this in the first term of the 1st Year we would have had a much better degree.

Student 14

Some people are natural writers some are not it doesn't make you dumb for people who are not natural writers you need specific training… just being left to it is not fair.

Student 6

I didn't feel as abandoned to get on with it and just live with the results. Because we made an appointment before we left, and I had instructions I felt more confident.

Student 7

We should have done this from the off just having an assignment and only 20 minutes tutorial is not enough even when we asked for more and all the teachers were great, you only asked for more when you were at rock bottom and then you just ask pathetic questions at tutorial and never solve the problem and you just feel more and more pathetic, everyone is nice but it doesn't stop you feeling thick when you have to keep coming back.

Student 22

We never wrote like this before and if you didn't get it [how to write] no one ever showed you. When we started this year, I knew that I could come and see you again . . . just knowing that makes a difference.

Student 30

 Having the structure is the most helpful aspect, it's all too vague, just write an essay or a report just like that and the study skills were fine for most but there is no point in telling

me to be structured when I don't know what structure looks like. Doing it this way, shows you it is not just talk and get on with it … coming back properly (with a pre-made appointment) and not just because I'm desperate and up against it was much better … I can deal with the problem before I have created more for myself.

Student 4

It's just well harsh to say here's the assignment work hard, and you'll do it … we needed more than that from the beginning … it's not just about learning the course it's about writing about it too and no one ever showed us how to do that … not to write not even in school.

Student 17

… the thing is that you don't feel so alone with it, some of you got the hang of it really quickly and then you have the few who don't and although we always got extra help it was always more of the same and then you had to get on with it by yourself and who can you ask without feeling stupid

(5) Students indicated that the learning situation and strategies were unfamiliar this developed confidence, competence and early success this interrupted the cycle of disappointment – lower self-esteem – less confidence and further disappointment.

Student 15

The thing is that when you have struggled all your life in school and you feel you're a bit th*** and then when you are faced with writing again it's oh god and you're face with all the old stuff and you know that you can't do it and you're ashamed to say anything and staff tell you to keep practicing and to keep reading but you do but all you do is get it wrong again … When I say you working with the Branch diagram it looked a bit different it was a real thing [clarified to strategy] that was different from just practice practice, practice. I could look at it and do it … It didn't fill me with dread and because it was just a diagram, I couldn't get it wrong really, I just thought Thank God something different.

Student 21

I hadn't seen anything like this before and so I didn't think about it in the same was as writing an essay or report, so I spent time doing it but was not was nervous going to the tutorial, it wasn't here we go again.

Student 30

It got me started earlier because I wasn't thinking about have to do another essay I didn't feel as stupid or have to face everything again it was new … I would never have thought about it myself I think that a lot of us cannot plan there is no point in telling us to plan

we don't know how and so we just start writing and because we are not good at it like some we put it off and off... I think it was because it was different.

Student 17

The thing is because we are not great at writing and no one shows you and you just do the same thing over and over and make the same mistakes over and over even before I start, I know but with the Branch Diagram at least it looked different. And just looking at it I know I could do it (write the essay)

Student 18

I just thought it looked so clear on the board and I knew that I could do it, when I worked on it myself it was not something that I had done before, so I didn't mind doing it ... It wasn't same old same old, and I could come and go from it and I didn't think ******** another essay.

Development of Thinking and Time Management
(7) The use of a diagram gave more focus to tutorials as well as allowing for more effective feedback during tutorial citing the visual impact of the diagram as the key feature that had the most impact.

Student 6

It was very helpful to me because I speak English as a second language and I would spend a long time writing but not really get anywhere, when I did the Branch diagram, I could take it to the tutorial and then we could add to it and you understood better what I was thinking and I knew what to ask. If I could not think of the language you could see what I was thinking.

Student 8

It would be better if we had seen previous students' work that would have given us a better idea but at least with a diagram we went to tutorials and you could tell what we were going to write about and tell us if we were off the mark … it wasn't all just talk that we would forget when we were outside the door

Student 9

We only get a 20-minute tutorial and is was never enough when we went, we didn't know what to ask so we would just talk about general things … Not everyone some are really up there but we didn't know what to ask so when I did my diagram you could tell where I was going with it and where it was a bit naff.

Cycle 2 Coaching Tutorials Student Feedback

Practical and Organisational Matters

2. the scheduling of tutorials; created an impetus for them to complete work and focused their thinking early on in the assessment timeframe.

Student 9

When I began to use it [diagram], it was fine but then I wasn't sure what to include so I decided to write up what I had and then go back to it and I tried to but ran out of time so I just started to write as I used to I knew that it was not good and just filling words if I had started earlier then I would have done better.

 Student 15

You can't think when you put it [the main points or ideas] at the last minute, starting early is the best thing because I can then think about the language too, and say is that what I am trying to say, and you can go over it. [rethinking the essay]

Student 26

… so, you have to start writing early not too early but it [her thinking] is different written than in thinking so it was better to think earlier and to write it and think is that exactly, exactly what it means and then I can change the language to match exactly what I mean.

Student 23

I need to work quickly and I could by using my Lit Review grid I might think differently in a few weeks I would tell anyone starting this course to find ways of getting down your ideas early on but keep an open mind, if you don't find a way to write early you don't find the pit falls in your argument until it is too late.

Student 27

If I had to write a report for my work, I would have it done easily but because it is for college I get stuck so when you showed us the layout on a branch diagram, I was astonished could it be that straightforward? The key thing was that it got me going early [in the assessment window] so I could keep going then and kept it [working] up I did used to try to include everything but I know that I can't but I started to use it[branch diagram] but then ran out of time but I did keep asking myself about where I was going with my essay.

Confidence Building and Psychological Issues

(6) Students indicated that they could;

> 1. *clarify their steps forward in a more effective and progressive way*
>
> 2. *get the feedback before submission interrupted the cycle of disappointment leading to less confidence less likely to succeed,*
>
> 3. *reduced the use of survivalist learning strategies that had led to repeating mistakes.*

Student 9

The thing is when you have had your confidence knocked all the time in school and then you come here, and it is more of the same and you are always facing the same thing of getting your ideas down and you can't so you get rubbish marks again and again … You come to tutorial and that's OK but it wasn't enough, so you still get rubbish marks and you get more and more downhearted with it, so you are too scared to try anything else … It doesn't matter how much feedback you get you don't have the confidence to try it in case you fail so you do what you always did, and it get you nowhere. When I first started the working tutorial and working with a diagram it was a bit of a relief because I could get feedback and knew honestly how I was going to go it was different and I could get out of the trap.

Student 1

It was the first assignment that I ever passed first time because I had help early on and I got feedback before I put the work in, I stopped panicking leaving everything to the last minute and then just getting back in to the old habit of writing what I could because I was too terrified to do anything else.

Student 14

I am not a whiner the teaching was fine but no one taught me how to write and I felt substandard I knew that I wasn't stupid but I just didn't seem to get the marks I was desperate to see another student's work but couldn't and was always told to work harder, but I worked really hard at getting it wrong and go so down that I found a way of just describing things and rambling all over .

Student 1

I always had reasonable marks in the 60s, but I knew that I could do better I was always told to find my own voice ... That is not something that you are encouraged to do as a student in the Carribean but when I put all of my ideas on a branch diagram and looked at them on a sheet of sugar paper I could see what I was doing … it was just boring boring boring but I couldn't get out of it just playing it safe … that essay was in [already submitted] so I had to live with it. The next one I drew it out first and could see how boring it was and because I had started early, I could go back to my observations

[appendices] and redo them but I had to think really hard about it for days and weeks, but the next essay was amazing 75% it was harder work but it was different.

Student 4

I always had terrible marks but never knew what to do they had gotten a bit better but not much, so you know what is going to happen next no matter how hard I try, again rubbish mark!!!   I could not understand the feedback it didn't matter how many tutorials I had nothing worked but then at one working tutorial XX told me to write the main point of each paragraph in one fully rounded sentence in the margin [of the essay] I couldn't do it because there was no point to what I was saying. So, we sat and went through it together that was the Bridget Jones moment when I realised, I was writing ****. We went over it in highlighters and from then on it was different if I was writing **** I knew it so then working with the postits and the diagrams helped so much. You have to say something relevant I kept doing it now and I go back to the tutorial saying I am going to say this … blahed blahed is that OK? And I can get an answer or another question then I knew if I needed to go back to my appendix or do more reading.

Student 16

I'm not sure what has helped, my marks have come up a bit 12% I think it's because I always did [in the past] the same thing over and over because I knew that I could scrape a pass and if I did [tried] anything else [different strategies] I might fail and I'd never failed an assignment I just couldn't face failing how could I go home with a failed mark I just couldn't face it, I was always the family [student makes a pejorative comment about her own self]. I don't have time to redo the work but mostly it is because I can say I have never failed anything not yet anyway. So, I think when I went to the working tutorial, I got feedback really definite and I could look at the diagram and it was definite not all lost in a mush of words that could mean anything.

Student 19

… because we used to do the same thing over and over and get the same advice over and over it was always the same the same little gang of us just hanging on and the others got going and moved forward, but we didn't … So when I sit with a teacher at tutorial and she writes what I say on postits and we organise it together and if I go wrong she will ask me about it straightaway right there and then and then it forces me to think in a way that I didn't before … it is easier … and before we were told to plan or use postits and I tried but what to I write on a postit at home just the same naff stuff … but on a postit … When I sit with someone and we are thinking together I have to do the thinking and I can see how to build up the essay when I am on my own doing it it is not as good but it is better than I used do just start writing and ramble on but I remember the tutorial and how it works just having that experience to see someone actually put the essay together was the most interesting part I wouldn't go back to my old way of doing it … And I can start earlier because I can just do a bit.

Development of Thinking and Time Management

(8) Students indicated that because they had to produce less text between tutorials that they made more effective use of time in that they spent time focussing on their analysis of their work and the clarity of their communication skills.

Student 13

I can think about what I want to say more not so much about how I say it and then think of something that sounds good and keep it in because it sounds good, but I know it doesn't really make a lot of sense. I spend more time thinking about language than actually doing the work and reading but with the diagram I don't have to worry so much about that.

Student 8

For me I was never much good at writing and I never thought that I would do a degree ever and I spent more time trying to think of big words and things that sounded right rather than actually thinking about what I was saying when I work on a diagram I only need think about the content.

Student 4

I liked using the branch diagram and it helped to do it in the class, I could see where I was with the work and I could do it quicker, just writing on postits and slips of paper and having different colours helped to make it clearer to see where I was going with it [the essay]. I didn't have to worry about my language at that point just what I wanted to say. When I brought it to tutorial, and we used the green pen to see where I could put in the theorists and afterwards it was much clearer than just going through [re-reading] my essay. I could think for myself and it was easier to remember, because often I can understand in the tutorial but then I come out but then it's gone, and I have to go back to my notes.

Student 14

At first when I saw the diagram on the board I thought wow that's it that is exactly what I need to I can see what it looks like, it is like an equation and I could follow it, it meant that I could write the essay without having to face the blank screen and then have to find words for it. I could sort out what I was thinking and could go back over it without writing so much. Writing takes me such a long time and mostly I just sit and write, and I do not know how to plan I would if I could but with writing little bits on postits and slips of paper and putting them together. I know that someone else tried this with me but I got so confused because I could not listen, it was like the first time that I saw a spider diagram on a board I turned off and could not look at it... it just confused my brain everyone else said that it was really good, but I could not even look at it. So, I don't know what has

made the difference now I just put all my postits on the spider diagram and keep my writing small when I can see it and can move it about it is so much better than looking at a computer screen and just letting it flow out. I think that is where I went wrong, I used to just read sit and write. It [postits] was much harder to do on my own, but I kept thinking, where does this fit in my branch diagram? It saved so much time and I could not include everything in it. I only had to think about what I wanted to say and get this down easily – using green pen for theorists is a good idea too because I can see them at a glance.

Student 15

It's boring if I'm honest writing all the time and not getting anywhere and I wasted so much time and got nowhere when I'd go to tutorial the teachers would say nice things but I knew what they were thinking but when you work together and you don't have to write too much just the bare bones I can concentrate to getting it right and doing so reading

Student 17

It was much shorted to do a diagram and get feedback on that and exactly that not rambling on in an essay most of which will be chucked.

Student 16

… all the writing that I did for nothing, but I can work on the diagram or flowchart in your office and then home in on the important bits and find quotes and know what I'm looking for.

Student 23

maybe because I'm lazy I like it; it saves so much time really focussing in on a couple of parts properly ... getting those right instead of writing reams that's pants

Student 19

I feel like I'll miss something out and I worry about that, but it saves time between the tutorials not going around the houses and then not using it I don't have time for that.

Student 19

it felt like cheating a bit at first and it was hard not to include everything and then you look at a few points or parts of the work and give they some welly better than writing and writing and not getting anywhere and then having to dump it because you know it's not brilliant.

Student 17

The best part about taking one stage at a time was only having to think about a part of the work and not all of it together – that is why I used to miss learning outcomes and fail I'd get fixated on one thing and write the report only on that and miss other learning outcomes and then I couldn't pass. Using the branch diagram and only thinking about the

first part [stage of writing] first and not trying to finish too quickly let me think more and apply the theory earlier. I didn't have to think about exactly how I would put things ....just what I thought about it [the learning outcome]

Student 17

When I don't have to think about the language I just have to think about the thinking if that makes sense to you, I just put my thoughts on the postitis and then I can throw them away without thinking I wasted so much time and then I can think about why the child did something and that is all that I have to think about then, and you told me to only write on the postits until I saw you again so I knew that I could come to the tutorial without feeling bad for not working enough. So, with the postits all I had to do is think about what I'd seen [in the child observations or planning] and what it meant and not worry about how to say it … it was the same for the essay all I had to do was think about what I would write about and not worry about writing it and getting it right … and you can swop around your post-its to other places … I can just read more then and think about it more about what the essay or report was about when I came for tutorial, I could just ask about what I thought. When I put my postits on the branch diagram I could see how I would write it.... but the writing is still basically hard still. You still have to sit in front of a computer, but it is better now no one can understand my postits except you and me.

Student 23

I was always told that I wrote too quickly without thinking but I didn't have much time to spend on it especially when you have to redraft it, because I had XX [daughter] to look after I couldn't faff around so I would just blast it out and have done with it, when I went back over it I didn't really change much just reorganised it and tried to make it sound a bit better but it [the essay] was much the same. I still write too quickly and want to get it finished but if I only need to fill in a grid and diagram it is not so much to write so I can think a bit more to begin with and you tell me if it is ok and I can explain it to you at the tutorial then we can change it together.

Student 30

My life is such a mess I couldn't have kept going I couldn't face tutorials coming without even having done anything and not knowing what to say but when you only have to write a little and you know that that is going to be OK I can write it on the bus or the train or even at work so I don't mind and it is just about what I think and don't have the hassle of thinking how to put it together and find fancy language. I can keep adding to it until I know what I think even then it's easier to write the essay.

Cognitive

(9) Students indicated that working with diagrammatic strategies allowed thinking to be more organised/focussed – stopped going off the point or trying to cover everything. More focussed efforts in accessing peer reviewed material and stopped wasting time.

Student 15

The thing is when I had tutorials before they were mostly interesting but when I came out and looked at the record sheet and my notes, I was like what I couldn't put it together and it was so disappointing because when I had the tutorial I felt that it was great but at home none of it added up to an essay. But when I have a diagram and that is the record, I can remember that and keep working on it.

Student 16

I hate tutorial sheets they are useless you go home and look at it and thing yeah alright then so what am I meant to do with that, so I'd just have to keep going and I wasted so much time and effort. If we have worked on the plan or the diagram or whatever it looks like, then that is that I took away and it wasn't so bit of paper that said make links what is that supposed to mean?

Student 23

… there is no point in just writing out a conversation about some questions I was supposed to have because it just didn't make sense after it [the tutorial] was much better to actually work on something and be told what to do next and not stressing about doing everything. When I took away the sugar paper sheets well, I could look at that and say Oh yeah that's where we were.

Student 17

… because we could keep working on it and I knew where I was not just trying to remember what happened at tutorial and trying to make sense of it … It was just a mass of words by the end of the tutorial and I was on my own again with it [the essay]

(12) students indicated that working in diagrammatic form enabled them to understand the importance of selecting material and within in this to select their best material

Student 15

I hadn't realised how important it was to just focus on a small number of things [points] for the essay I used to try get everything in when I could only make two or three points it was much easier and then you can choose you best ideas.

Student 16

… it wasn't until I saw the plan on the board that I thought I am not doing that is that what they are looking for just that when I put them on my plan [diagram] the teacher asked me if that was really level 6 and it wasn't really I knew it was right but it wasn't level 6 the next point that I told her even as I said it I knew that it was better.

Student 17

If only I'd known in the first year that I just had to make two or three points for each learning outcome I would have spent more time thinking of the best ones to make … It's not easy not as easy as it sounds just make two of three points you have to think hard or you'll have some other problems like if it [the point] is too easy or is just wrong or you haven't read about it properly it's not just as easy as make some points but if you are just thinking about a few points you can concentrate more.......and then when you put the paragraph grid on the board it stuck in my head too and I could ask is this detail or a main point

Student 23

When you write [plan] everything that you might say about something [a learning outcome]and you look at it and then say well which of you guys is going to make it to my essay because I am not putting you all on my planning diagram only the best will do … only got space for 2/3 for each branch .... I know that I can only pick 2 or 3 for each learning outcome, so I make them audition for [to be taken to] the tutorial and I can see the teacher looking at my best performers and think about that she might say … before I used slap everything into the essay it was so much work and I could never make it fit.

Student 19

I think that the problem is that I tried to cover everything that we had been taught in class in the essay no one told us to pick a theme and focus on it … We did get feedback about selecting material, but I didn't really know what that meant but then it was a risk to write the report on so small an amount because then I was worried that I'd be marked down for not having covered everything.

Student 30

Before something can make it on to my diagram, I have a list of questions that I ask first is it level 6, then is it my best idea ... Sometimes I do swop them, then do I know any of the theory about it

Student 30

We should have been told to do this in the 1st year if we had I would not have wasted so much time just re-writing the same thing over and over I can focus on something that I

noticed in my planning [appendices] and develop that more … Instead of trying to cover everything.

Student 19

when you are confronted with a report to write you don't even know how to start and you can spend an afternoon just trying to find the first sentence and once you have written a few hundred words you don't want to lose it so even if it's descriptive you leave it in but we didn't understand how important it was to stay focussed and only to use the best points that you can make from your appendices … When you see it on a diagram you see what the marker sees, and you cannot fill your essay with not great stuff.

(10) Students indicated that working with a supportive tutorial programme together with diagrams allowed them to make an early and productive start to their work the key benefit of this was the way in which writing provoked a meta-cognitive and reflective analysis of their work. This led to early evaluations and consequent refinement.

Student 6

I didn't have to stress so much about how I was going to put it together or have to face sitting in front of a blank screen trying to get a first sentence so I started after the first tutorial and got into it more so after a few weeks I had done quite a lot without much stressing and I knew it was better.

Student 9

It just gets you going earlier, and you can spend time thinking about it and you know if you don't know something then, so you know what you need to work on. If you leave it until the last few weeks you don't have time to go back.

Student 8

I had more time to think about it and I wasn't so stressed about making a start a diagram or chart is easy to do you don't have to get it all down to begin with … Then I could ask questions and had time to think and I could just write down my thinking and stick it on [the diagram] I wouldn't have started the essay because I would have been putting it off and off until I got the panics.

Student 13

It just gets you started earlier just getting going makes you think about it and you can do a bit at the time … if your planning or observations are iffy [appendices] then you know, and you can go back to them.

Student 19

... Because I could start earlier with the diagram or working on postits or because I knew not to sit in front of a blank computer screen I could think more, and I had time to think because I was writing it made me think and write better

Student 19

 … writing earlier got me thinking earlier and I had time to think when I wrote this down, I had to think harder about it if I had not written it would just be going around in my head

Student 15

I could ask according as I was going along like does this sound Ok and if it didn't, I could go back and change it and I kept writing over the diagram, so I kept my writing smaller so that it didn't get too messy … When you write it do and look at it you can see if it is any good, I think the writing all the time makes you think more.

Student 17

… to be honest I would always rush it at the end … Because I knew that I could and every time I said that I wouldn't do it again because as I was writing it, I knew that I could do better and I knew that I could develop my arguments more and every time I'd do the same thing I just couldn't get started until I was really under pressure. … With the sugar-paper and the grid it was smaller, and it got me started and even if I could not complete the grid it was there what I'd done was still there and not just a half-baked idea in my head … I could continue it and the writing it down made me think better.

Student 23

… getting going earlier was one of the best things for me I used to hate writing it was so boring but I'd just get on with it and didn't think too much about it so I'd put it off and then I'd try to cover everything and I didn't know that you had to think so much about it but because I'd put it on my diagram and was making my points audition for the part I was thinking about it and then could ask questions in class … I don't think that I realised that you had to think so hard.

Student 30 when you start earlier there is so much less stress because if you don't all you think about is I have two more [assignments] to do before xyz then you begin to panic and you know that you have left it because you were not sure [what to do] Only getting something [assessed work] started is a relief because you know that you have made a start and then you get the feedback and then you think about it a bit more

Cycle 3 Coaching Tutorials Student Feedback

Confidence Building and Psychological Issues

(5) The learning situation and strategies were unfamiliar; this developed confidence, competence and early success this interrupted the cycle of disappointment.

1) This avoided old feelings of inadequacy.
2) The reduction of text produced allowed greater ownership over the process.
3) Growing confidence was motivational. This interrupted the cycle of disappointment leading to less confidence - less likely to succeed

Student 9

It doesn't matter how much feedback, when you sit down to do the next assignment it's the same again, because you don't really know any better [little cumulative improvement] you get... you don't have the confidence to try it in case you fail so you do what you always did and it get you nowhere. When I first started the working tutorial and working with a diagram it was a bit of a relief because I could get feedback and knew honestly how I was going to go it was different and I could get out of the trap. I didn't have to get in all down perfectly the first time, you see then the diagram it is just the main ideas first and get them down quickly … because I do know what I want to say… so it's all down then and I can see it really see it not just a clutter of words and ****... and I know that that I can do it from then on [the beginning].

The main thing is I don't waste time on just writing writing and writing something I know isn't put right and stopping and staring the first two years were torture.

Student 14

There was nothing I could do to change it … it was always the same ** mark … always the same but when I first did the Branch Diagram it was different, and I could get proper feedback without falling back to the old way of doing it and know what to do next before the assignment went in. When I saw the grid for writing paragraphs I thought it is so easy but you still have to think for yourself… and I could see that I could no one will think for you it's my work but I know that I can do it because I can see it but finding the language for the essay is always hard… I just block up just cannot grasp the words and the sentences. Sometimes it comes rushing out and I type like the wind, but I am normally just blocked up for the words. But now I can see it at least, I am not going back to the old way … it [the old way] makes me feel sick

Student 11

Well I don't know for me at least it was different and I could give it a try because I would always work in the same way and just try harder work harder well what does that mean I work life a dog and just end up with the same marks but the Branch Diagram was different at least but you still have to do the thinking .... It's not going to do it for you.

Student 16

It was a bit different too so there was something concrete for me to point at and ask *yes or no is this ok?* And then I slowly go a bit better at it, I got 58% the last assignment .... It was easier too I don't actually spend as much time just wasting it on things that I know won't work ever and then you always feel **** about yourself

Student 15

Basically when you have failed at everything all your life you still expect to be rubbish and so it was not surprise to me, but I always felt that I could do a bit better not that much I always understood things in class but the reading was too hard and you find a way to keeping going and doing the same thing, when I first started putting the diagram together with you it was different and not the same old … read get bored, not understand, try to write [student becomes upset] feel stupid, just keep going somehow … keep asking for tutorials and not even know what to ask for … And get a low mark and do it over and every year for every module. Always the same always and I always felt there has to be something different to do and it [diagram] I didn't feel the same about it because it felt different and just looking at the diagram, I knew I could do it ... I knew that I knew the module well. I might be a visual learner, but you can do a diagram or a grid it's much easier and you know that it is OK because you [the teacher] can see exactly what I am on about and it's different you feel you can do it and then you do, do it … it is like wakening up … I'm not that stupid. When you get a better mark, you know you can do it and get better.

Student 1

you get the usual … read more it doesn't help when you are in front of a computer at five AM and have to be at work by eight. But working with the highlighters really showed me how, this is it this is how you go about it; it was different that everything else and they are the best tutorials I have ever had... right from the get-go I knew that it would be different. And you don't feel just another essay just another report and keep doing the same ****.

Student 26

When it looks different and you are not so afraid of it it's much easier to do, it was still difficult to write it up. I still do not know if I had the right answer but at least it was different, and I got a better mark easier. It is not so much just doing it [the work] over and over and not making a difference. [improvement]

Development of Thinking and Time Management

(9) *Students indicated that working with diagrammatic strategies allowed thinking to be more organised/focussed – stopped going off the point or trying to cover everything. More focussed efforts in accessing peer reviewed material and stopped wasting time.*

Student 2

Well I knew what was happening I'd read something and then just write about it; it didn't enter my head to ask if it was relevant or what I was meant to do with it ... I would just then try to fit it in to some part of my essay ... I didn't know what I was supposed to do with it I never stopped to ask if it was relevant just if I thought that it was wrong. So when I go to tutorial and we have something in from of us and I can look at the L.O.s with the teacher and because it is all there [together] in one place I don't waste time just writing whatever comes into my head and so I stick to the point of the LO and only read journals that are on [focussed on] the LO and I know what question you will ask so I ask it myself before I get here so I can say this is relevant because... In one sentence.

Student 1

When you have to focus and it is plain to see you do not waste time reading stuff that you won't use and because you are interested trying to get it [the reference material] in there, I can see what you see now and I know that all I will do is boring boring boring so I make sure that my reading is focussed and not just vague and not just repeating what we did in class.

Student 4

you just can't [go off the point] because you can see that it won't measure up not when you have to write it on a branch of a diagram that says LO whatever, so you have to say so how does that measure up then... Well it doesn't so I need to make sure that what I read is up to scratch and not just drifting around, it is the same with using a grid where I have to say this is relevant because... Well it's not so I don't bother and off I go to keep looking and stop wasting everyone's time.

Student 6

… so helpful before I just used read everything I was given and try to get the bits that I understood in there I didn't think if it was relevant I thought that if we did it in class that it must be right so I never even asked myself, [questions why we would use some material in class if it was not - small discussion] that question … so now I know what to look for and the questions to ask myself it is better than essay feedback because it is at the point [of thinking in the tutorial] that we discuss it I don't have to try to remember and then I write it down so that's it then right there and that's what I should be doing. If I can't see how I would use it on my diagram I don't read it now because it might be better if I did but I

don't have very much time so I don't, and I only do what I can get on my diagrams or grids … I know what questions you will ask if I can't answer them Hummmh...

Student 7

… when I read before I know that I couldn't use everything we did in class, but I used the bits [of research material] I liked best or I was really interested in ... Like attachment and Croby... So, I'd use them and try to make them fit but really how can you put Croby on your diagram when the LO and your appendix is right there in from of you it just looks daft and Croby has nothing to do with it … I think that why my writing was daft but you don't see it like that sometimes unless you really spell it out on a diagram so I don't even read it if I can't put it on my diagram. ... Sometimes you have to write about things that are not you're not really interested in.

Student 22

I think that the most useful thing was the paragraph grid no one showed that to me in the past and I got feedback saying not sure what point you are making here so I didn't understand that it was obvious to me [the point being made] so I didn't know what to do. Then I saw that I was just giving examples and not actually saying much so I made myself up lots of grids and filled them in and sellotaped them together I even put the theorists in green pen and the LO in magenta and put them beside each other it kept me on track all the way and I knew if I was wasting time reading something that was not relevant because I knew it would not fit on my grids … eventually I could see the difference between description and analysis --- after 3 years … It was clear from my grid the first part was missing. Sometimes I changed my grid though because I found something better or re-did an observation.

Student 14

I couldn't sustain a thought in my head and get it onto paper, the grid was so great because it is like an equation and you cannot go off the point and you have to think really hard about the point ... it did get jumbled at times one point going into the next but I have to look at it like an equation … and if a point isn't going anywhere then I have to scrap it and stop wasting time and find something that is relevant even if you have to do another observation or activity plan[appendices]

Student 13

Well If I can't fit it in my grid, I know that it will not be any use but there is so much that I can put on my grid it is hard to choose.

Cognitive

(11) Students indicated that more effective tutorials together with their diagrammatic recording allowed them to retain the discussion of the tutorial. This contributed to their capacity to work independently and with greater focus.

Student 2

I could come and get feedback at the tutorial and the tutorial was good so I could make progress between the tutorials when we worked on a grid or a diagram or whatever I left and I could remember what we were talking about it didn't matter that the diagram didn't make sense to anyone but us I could work on it in my own time instead of looking at a tutorial sheet and thinking what??

Student 1

I didn't have much problem remembering what we said in the tutorial it was more a case of Q & A at a tutorial doesn't really help you go forward because you have to know what to ask and if you don't the conversation goes nowhere and there is no real development but if you have to draw the diagram yourself no matter what it looks like you have started thinking about something else and the diagram is a really good record of this.

Student 30

I never really knew what was going on at tutorial and I couldn't remember it really, it made sense sometimes but looking back at a tutorial sheet meant nothing to me … It was just words when I had the diagram or a flow chart, I could see what we were thinking, and I work on this more myself.

Student 8

By the time the tutorial were over I had forgotten most .... I used to try to remember the most important thing but that was all I had when I worked on the diagram especially when I did it, I could remember exactly what we had been doing.

Student 22

Yes, it's much better and I could remember and work on its other tutorials are just words that I know I won't remember in a day of so it is like white noise.

(13) Students indicated that the shared thinking experience together with a practical strategy helped them to develop the skill of identifying descriptive passages and either seek help or address the situation themselves.

Student 16

I think it was because I was desperate that I worked so hard, but I always worked hard but not very cleverly, when you have some one sitting with you to begin with and you are both thinking about the same thing … No-one gives you the answers but when someone is there... To being with at least and you cannot go all around the houses … What you think has got to go on a grid there is no drifting off the point .... you focus really focus and you can see all the parts of the argument that you are trying to make and you end up trying to duck and dive but you can't because there is no getting away from it you can plainly see it's [the diagram] description not anything of any depth … If I cannot find my point myself then I can ask at tutorial.

Student 17

… there is no getting around it you just look and yep that's description right there in front of you … then so next question why am I describing this? Why do I think that this is important? and outcomes my sentence building flowchart … sometimes I find that I am making the same point just with more interesting examples from my appendices or from the essay so that's got to go then or replace the other... I couldn't tell that a year ago. [student questions why they did not do this in the first year]

Student 15

Most of the feedback that I got was about being … Being organised and structured mostly not being descriptive well there was no point in telling me that I couldn't tell the difference between description and a banana or analysis I just wrote … what was analysis anyway what did it look like when it was at home? Just telling me that and [having] one 20-minute tutorial wasn't helping. When you do it different and we draw it out together then you can see for the 1st time … Not absolutely the 1st time I saw Student 17's essay it looked different to mine but I knew that I wouldn't be able to do that myself. But after working with XX in tutorials and setting it all out in a pattern so I could see it and you can't start waffling on because where would you put the waffle in a grid or a diagram then? It's still not easy and it takes a lot to get it out of my head and on to paper but I do know when I am just drifting and describing at last.

Student 19

I just helped me to see what you see in an essay before it was some king of mystery that we kept guessing at … when we sit together and put the essay together and I go away I can think about it like you do. When I use a paragraph grid or a flowchart to build the sentence you can see it there is something missing like when the main point goes at the beginning of the sentence, I now look at that and I can see immediately what is missing … Not saying that it is easy to come up with the words … doing it together to begin with

really helped if you just gave me the grid, I'd be like Ok but I wouldn't have done it … and because we do it in class all the time it gets into your head and it's then a habit.

Student 23

… there is no point in telling me these things [difference between analysis and description] I can't see them if I could I wouldn't do it but when we sat and did the paragraph grid and the branch diagram that's what made the difference to me, there is no getting away from it you have just written a paragraph where there is no point so either scrap it or work out what you're trying to say it's that easy. When I make a list of my main points in the margin of my essay that is well hard, and I can't do it all the time but when I do the marks are much better, I can see if its naff.

(14) students indicated that the act of writing and representing their ideas deepened and refined thinking.

Student 19

We were told [the outset of the course] to always keep a note book on your bag to write things down I did but I could not think what to write ... I tried and wrote sometimes but they were just odd words and I stopped. You open a notebook and ask yourself well what am I supposed to write in here and then you can't so you close it again and feel that it is something else that you cannot do, you think that others are doing it [keeping notes] and some are but some of us aren't and we don't know what we are to write [keep notes on]. When I went to the first coaching tutorial, I was a bit uuugh [sceptical] but gave it a go, I prefer using the spider diagrams than the branch diagrams because I could see it better.

Prompted see ...? where I was repeating myself and saying the same thing twice just in different words and not thinking or making links, when we look at the spider diagram and the teacher is with you it makes you think in the right way and you get so much more done … it is harder afterwards by yourself and you have to think for yourself but putting your ideas on a diagram cannot be wrong you just need to think about them more because when you see them written down … you can move a small postit around you know what you are trying to say and if it is OK or not. You made us start [the assessed work] earlier it is not so much pressure and looking at what you have written tells you if it is OK. I keep my writing very small and in different colours so I can keep adding to it without running out of space and crossing out. I only use my notebook to stick my postits in if I am writing something on the train, I write it down a stick them in my notebook and organise them there but that is all I use it for – not exactly making notes.

Student 23

It means that I can get on more by myself I can keep going I have something to get hold of and it is not just a huge jumble of words and I can think about what I am doing in my essay

and not just trying to get it done. I know what is there [in the notes] is better and I can think about what I am thinking and ask myself if it is Ok or not and because I have written all the small bits without wasting time, I can look at them and I know if it will be OK. I can think it a meta-cognitive way [student laughs] but if I did not write it down and sometimes, I am lazy and don't or because I have XX [daughter] with me I can't because she's just 6, if I didn't write it down it is not as clear in my head. I can put my postits on the branch diagram or spider diagram and then I can see where I am going with it without coming back to you all the time but sometimes, I look at them and cannot remember what I was on about

Student 15

… thing is you can think anything but until you write it you don't know how good or bad it is or is it relevant, it is where I went wrong I'd think that I knew what to do and had it all sorted in my head but when I wrote it down I wasn't so sure anymore, and then you write just anything to get it finished…

Student 17

Until you have written you don't actually know what you mean, and you can't leave it too late because you'll change your mind and them you know what you have written isn't exactly what you mean … but don't beat it to death either [over work it]

Student 16

… the very last piece that I wrote for this course ever I did in 20 minutes and the teacher said I'd *nailed* it. It was my conclusion I could not have done that at the beginning of the year, I spent 3 months writing the first assignment with every colour of the rainbow and huge sheets of sugar paper taped together. I think I developed the knack of making myself write to see what it was that I actually thought because until it is written down you cannot be certain and you then think uh ho not so good … you have to do it all the time ... Doing in in class is different because it keeps it [the skill]up there[current] .. And I think that I wrote the conclusion in 20 minutes, but my note book is full of scribblings about how I would conclude ... More than half crossed out. I didn't need the sugar paper for the last assignment, but I used it in any case and actually it still helped … Got 67% first mark was 43% progress …

(15) Students indicated that it gave them some of the tools necessary to construct text effectively and to evaluate the quality of their work – this had not been present before.

Student 16

I used to spend hours in front of the computer and not get anywhere and just now I have written the conclusion to my last ever essay in about 30 minutes before I would have

taken a day, if I had these tutorials in the first year it would have been so much easier and I would not have felt like a second rate human being … we could just think about one thing at a time and not fuss about the language all the time my writing was dross I can see that now but then I didn't … when I was given something concrete to do and not told to just read more I could pick a piece of paper and write what I thought on it in a felt-tip and I was doing something , the I could ask myself where I would put it in the essay and instead of trying to remember or just type it into the essay and it not fitting I could just stick it on my diagram and sometimes take it out if it wasn't good enough, and I could keep working myself … if felt different … it wasn't scary and I didn't feel so thick, I could decide what I thought about it and write it down and ask you if it was OK. When I could see my work on the sugar paper and in different colours, I knew that I had cracked it for that essay and if I could do it for that one then I could do it for the rest of the year. You have to think hard about what you are writing but when you change it you can just stick a piece of paper over it … putting it together like that was completely different and I didn't feel so bad about myself because I knew how to do it now, and it is not so hard … I'm not th*** … it gave me a different way of doing it before I would just do the same sort of essay as before and have the same problems and the same result, but I kept doing it because I didn't know what other things I could do, and I knew that'd scrape a pass at least.

Student 20

… when I put in my first essay, I knew that I wouldn't get a good mark because I never did at school, but it did make me feel bad and stupid I didn't know what was wrong with it let alone do anything about it I just accepted it I and try to improve the work but never got anywhere. when I got good at using the branch diagram and I used the paragraph grid I could look at it and say whether or not it was level 6, and a logical progression to the argument. The marks that I got weren't a surprise any, but I often didn't dare to hope.-. - . . - - . when I got the 1st 60% back I thought I was in heaven I had thought it was a good essay but then I was so confident for the next one I really went for that branch diagram

Student 17

the thing is you can't fool yourself when you look at your work you know if it's not going to be up there or not because you can see the points that you have made and if they are any good.

Student 15

towards the end really I began to see it and instead of just filling the paper you know what's in there and how good it is … it was on your plan … I still didn't know how to move into the 60%'s but I got better marks by about 17%.

Student 16

I always thought (when I submitted an assignment) that this is it, this will get me a good mark but it never did I was always gutted that it didn't when I looked at my first plan I thought yes this looks and sounds different, not so wishy washy and naff, I knew it looked like level 6 ... still when I saw the 1st mark back at 58% instead of the normal 38% I didn't need the train to take me home because I could have floated. When I got 72% in the external exam, I cried but I knew I'd answered really well.

Student 21

when I brought my plan to the 1st tutorial as a huge roll of paper it was the 1st time that I could ask a question and get an answer so I knew that the essay I was writing was better I knew that I'd get a better mark ... looked better there were clear things that I could improve.

Student 30

Basically, when you have to start writing early it's not real writing but just writing your ideas down and it is no trouble just to write down your ideas on paper slips or even sometimes on a paper bag when the idea comes to you, because you have written

Cycle 4 Coaching Tutorials Student Feedback

Cognitive

(13) Students indicated that the shared thinking experience together with a practical strategy helped them to develop the skill of identifying descriptive passages and either seek help or address the situation themselves.

Student 4

When xx sat with me and we tried to write the main point of each paragraph in the margin and we struggled it was then I realised where I had been going wrong, ... I hadn't been working as hard as I could because there seemed to be no point but then this was the problem and thank God for computers because I could cut and paste it around I deleted so much out of that essay because it meant nothing it was just description but then when XX asked why I was describing something about *significant harm,* I explained it to her and she said so that is you main point isn't it? And we wrote it down XX has great language it just flows. Mine was not as good so I did the word and sentence building … being together makes the difference … after that when I looked at my essay I could see where the description was then the question that I now ask MYSLF is why Pam are you describing this I think and think talking aloud and write it down and keep thinking but that is it and you can cut out half of it [the report/essay] because you have said it in a nutshell you don't need all the examples in there because you have said it already.

Student 22

I did lots of grids and filled them in and sellotaped them together I even put the theorists in green pen and the LO in magenta and put them beside each other it kept me on track all the way and I knew if I was wasting time reading something that was not relevant because I knew it would not fit on my grids …   Eventually, eventually, eventually for the 1st time in 3 years almost I could see the difference between description and analysis   …   after 3 years … It was clear from my grid the first part was missing. … It didn't matter what anyone ever said to me until I had done paragraph grids for 3 months, I could see what I hadn't for years. Prompted if she would have made the journey alone …   No not at all … Xxx printed out the Branch Diagram for us the first time we used it and it was so confusing we didn't know how to fill it in and there was chaos in the classroom you need someone there beside you doing it together to begin with and to do it together I don't know why it makes a difference but just talking together makes it clear what we have to do to put the essay together... Then after a while you can do it yourself and make the links yourself. All the time though I ask myself where I would put this [substantive point] if I had to put it on a grid and am, I just describing something that I have already said somewhere else in the essay.

Student 26

I used write too fast I'd try to do the essay and keep getting stuck I didn't know why I knew that what I was writing wasn't great but I didn't know why I just knew it wasn't up to much, <u>but I didn't know how else to do it</u>. So, then I'd write really quickly at the end and if I was asked to redraft it, I didn't think to look at my arguments [student laughs] just try to make it fancier but all I was doing was describing the children's activities. When you have to lay it all out and put your paragraph on a grid and someone is sitting with you for a while you can tell where the parts are missing like … I described all the legislation in the Children Act 1989 for the Safeguarding module and when I put that on my grid, I could see what was missing I still needed help to say what all the legislation was about … and that's why I didn't [make a substantive point] because I needed someone to sit and do it with me … If I had this last year it would have been so much better.

(14) students indicated that the act of writing and representing their ideas deepened and refined thinking.

Student 1

… when you have to write something down you have to think more deeply about it. It is almost when you see it written you have to think much more carefully about what you are trying to say, if you keep it in your head and you just keep thinking about it without having written anything then the thinking really starts with the writing and if you have left the writing late then your thinking is late too. Every time we say I'll start earlier but you don't because to face a whole essay is daunting, unless you are working off your plan [diagram]. When I write I now try to keep it open and make sure that I don't pin myself down too quickly

Student 14

I once said that I don't know what I am going to say until I've already written it and it's true but the final essay is not the place to do that, there is something about writing that makes you think, picking the language and having to think about exactly what it is you want to argue or say makes you slow down and focus … I use herring bones all the time, it's just so suited to how I think, here's the main idea and then all the sub-ideas and some where to put the words [appropriate language] …. If you don't write the ideas don't form properly in my head and it is all half-baked. Seeing the idea in front of you and saying is that what I think really think and how does the evidence stack up? Just doing that makes you think harder and from every angle, but you need to start early you won't have time to rethink it if you leave it too late … you need the habit of doing it we do a lot more writing

in class now ... A lot more and it gives you the knack of not just blurting out the best bit that you can think of and then being stuck with it.

Student 7

When I write I stop and start which is really grating because I realise that I don't actually know what it is that I want to say. I thought that I did but then putting it down on paper is much harder because you wake up to the fact that you are not clear about what you want to say and unless you can sort that out you are on a sticky wicket. Just sitting in front of the laptop is the worst thing all day could go by and I'd written nothing much of any use but unless you do that you don't know that you don't know that your thinking is still muddled. So, you have to start writing somehow, if I'd been given the branch diagram or the Venn diagram in the beginning I would have done so much better last year because it gets you writing and then you can see what you think and know if it's what you need [for an essay/report]

Student 17,

when you write it you look and think, 'maybe not' and go again if you didn't write it down you would never do that bit ... [of evaluation]

Student 21,

After I have written my work then I look at it and think again can this be improved? Unless I have a go at writing it, I don't think properly about it …   I think that I have but that's not really true until I see it in front of me then I have something to work on … who would have known it was so complicated? [student laughs]

Student 19

If I'd seen the diagram in the 1st year I wouldn't have put off [prevaricated] writing and then I would have had the chance to think about it again, but you put off the writing and then your thinking is only half way there. Basically, when you have to start writing early it's not real writing but just writing your ideas down and it is no trouble just to write down your ideas on paper slips or even sometimes on a paper bag when the idea comes to you, because you have written it … it makes you think more about what it is that you are saying, just writing it down, and the words going through my head made me think differently about what I was trying to say but when you have written it you think differently and it is not just trying to make it sound good because if you are writing on a bus ticket or a paper bag or whatever you can find in case you forget, it is better than just thinking it and not writing it down because when you just think and don't write it doesn't mean very much and you forget or it is not as good. So, I write it all down in bits and pieces and sometimes I have to search in my handbag for the bits and I don't always use them but often I do, and I cut them out or rewrite them and put them in my diagram or

chart. I know my writing is better because when I write it … it makes me think more and I think, when I see it, is that it is that exactly what I think. You still have to write the essay though and that's a pain but it's easier I don't feel so substandard.

(15) It gave them some of the tools necessary to construct text effectively and to evaluate the quality of their work – this had not been present before.

Student 14

When I started the course, I was very nervous and scared in some ways … I always knew that my writing let me down. I was always told to practice more and to read more, and I did, but it did not make a real difference and I knew that. I'd read and say okay so I know this but how does that improve my writing? It did not make any difference to my writing it got a bit better, but I was always wanted to see what other people's essays looked like, but you cannot ask, and no one offers. In all my time just trying different things at A Levels and talking about it but it didn't make any difference to my writing, or teachers would assume that I didn't know my stuff and tell me to do more work and I did but all I did was practice getting things wrong. So, when I had the first tutorial and it was for an hour it was brilliant, the best that I ever had ever. it felt different and I wondered if other people work like this and why I never see them doing it or do they do it in their heads. Instead of just the same old same old I could actually see how to put things together and how to organise my thinking without having to write too much it was just the ideas straight there in a piece of paper and only the idea I didn't have to worry about the whole thing … and then we built it up and it was fun just thinking and building it up … and I could still change my mind if I didn't like something. Because I was thinking with the teacher and writing at the same time it made it better. The colour coding helped me see exactly what was going on and I could find things easily. If I had done this at the beginning of the course or in school … (they don't teach you to write in school) I would not have felt a fool or being so embarrassed. It stopped me from doing the same mistakes over again because I didn't know what to do I just did the same thing for every report or essay and at least I knew that I would get in the fifties for it and I suppose that I almost gave up trying to improve it because it did not matter what I did I couldn't improve the marks. I use it with the children in my class now and some of the boys are writing more.

Student 1 I didn't understand last year why I couldn't get above a high 60% at the most nothing below 60% but I tried really hard and read everything, it was not until I wrote the main point of every paragraph in the margin and looked at it that all I could see was lecture 1, 2,3, boring! I knew then what you guys meant about finding my own voice and I knew that you'll never get a 1st class Degree by rehashing the lectures. It was easier [to write at a higher level) in the long run because instead of thinking about how to do the essay I was thinking about what I thought and had read. It was scary handing in the 1st

essay thinking have I gone off piste? Should I have stuck to something that I know … I got 75%.

Student 2

I was so angry about my marks I complained about the teacher marking me down I thought that my work should have been passing at least or getting in the 50% s after I had the 1st tutorial and I've always said it was the best tutorial of my life I began to think differently looking back my work was awful but I didn't think so I did know any better. So, I know what I need to do now, and I can see if it's level 5.

Student 15

I kept trying to do the same thing just better + I was convinced every time that I'd cracked it. Sometimes I'd get high 60% s but mostly mid-fifties. At least I know now but not always.

Student 8

I thought that if I saw another student's work who had finished the course that it would have helped but I would have tried to copy it. I never really knew what marks I was going to get but was disappointed for all the work I'd put it to it. When you look at a grid it's broken down and I can see what you are looking for. There are no hiding places it's either three or it's not … it's either at the right level or not so there is no excuse for pretending that you are going to get a 1st.

Student 6

.. when you look at your plan you at least can tell where it's weak and not pretend that it's better than it is.

Student 4

… when you write your main point in the margin and there isn't one you know you're in trouble

Student 27

I had no idea what marks I would get before and I was disgusted, it could be anything from a fail to mid-fifties I couldn't tell the difference and it didn't matter how many tutorials we had we still couldn't unravel it. So, if I plan and look to see what exactly I'm saying I know I can tell if I'm not saying very much or if I'm just playing it safe, an also normally tell if it is not level 5.

Student 26

when you have something to fill in can tell if it is not all there or if you are filling in words that mean nothing.

Appendix I – Respondent Student Profile

Table 10-5 Student' profile

Qualifications and WP Indicators	
1st in Family	23
NVQ 3 or Apprenticeship	19
Diploma in Childcare and Education	9
A level	2
Age Range	
Age range 19 - 22	1
Age range 23 - 26	7
Age range 27 - 30	5
Age range 30 - 33	8
Age range 34 - 36	13
Age range 36+	5
Employment Profile	
FT Employment	23
PT Employment	5
Not working	2
Basic Literacy	
Adult Basic Literacy Score	296
Difficult Early Education	28/30

Appendix J – Thinking grids – diagrammtic observations - photographs

Photograph 1 –Student 23 – This was the final of three tutorials, the student in question did not find using a branch diagram particularly useful to help her to organise her thinking. Yet, her essays were very unstructured and it was difficult to see [her lines of enquiry or her key arguments. Instead it was more useful for this student to colour co-ordinate her work with each learning outcome is represented by a specific colour. This student worked best in a non-threatening way using Berol felt-tips and sugar paper, the size of the sugar paper allows her to see her thinking across the module as a whole. During her final tutorial the students re-wrote out her main points on buff paper, cut these out and positioned them very clearly in relation to each learning outcome.

Although it might be somewhat difficult to see clearly, there is evidence of reflection and adjustment as the student had 'looped' one of her red points in yellow, thus suggesting that the point that she has made is better placed under a different learning outcome. I have marked this on the photograph below.
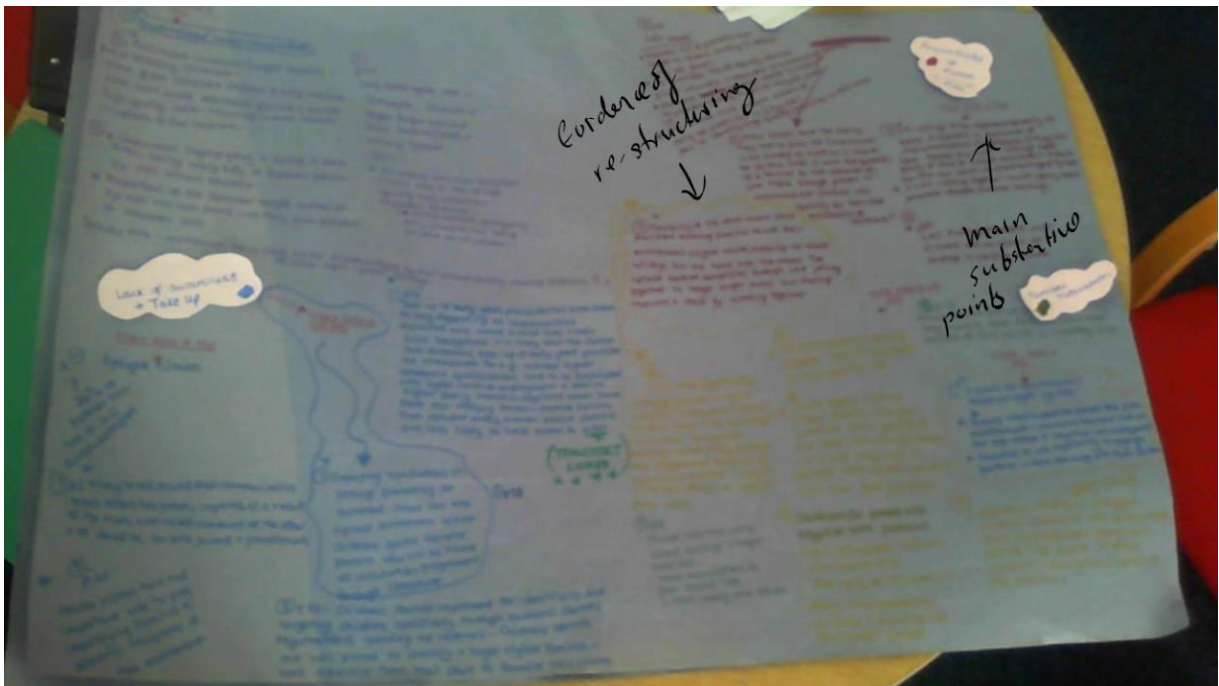
Photograph 2 – Close up photograph of one of the student's main points, interestingly she is beginning to question the absence of knowledge, she has noted this in red.
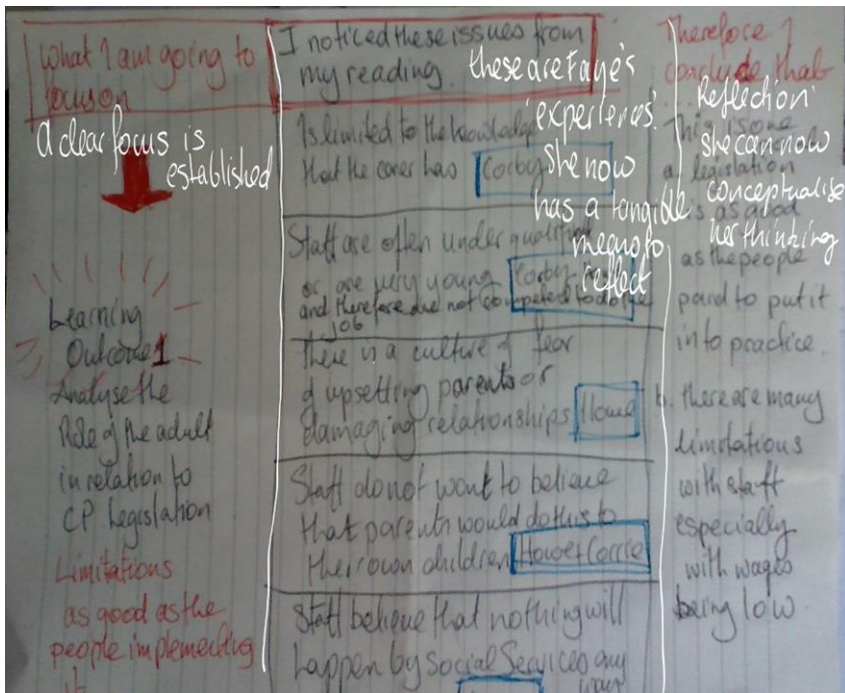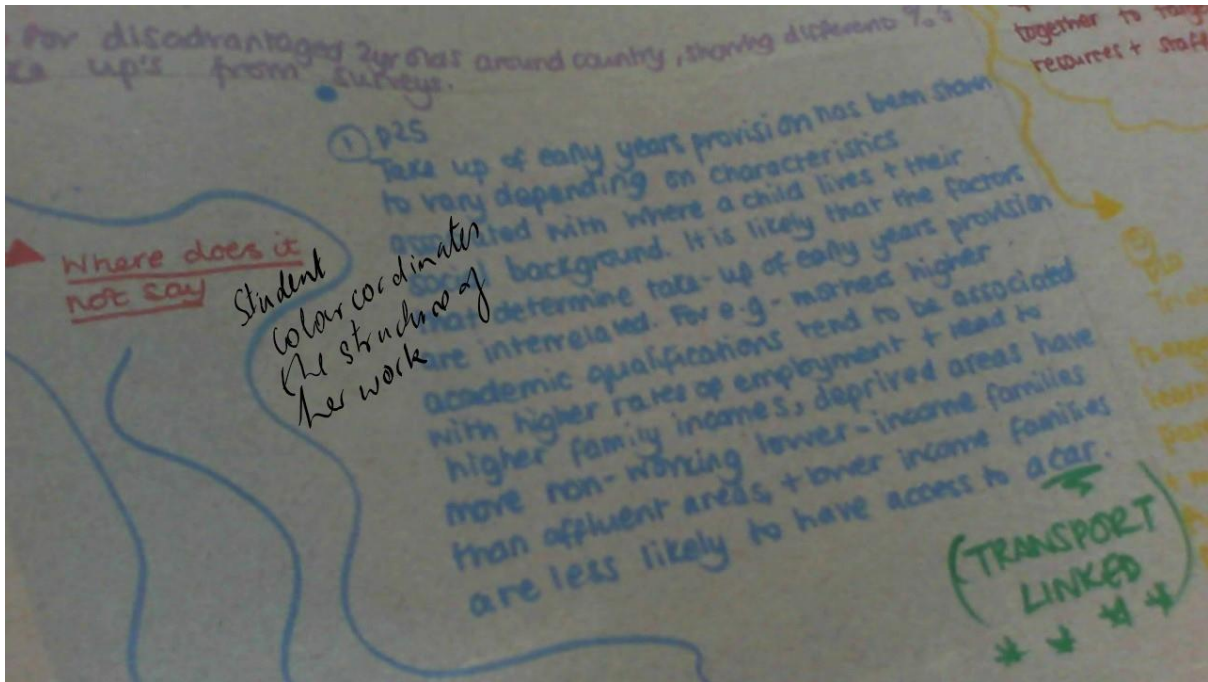
Photograph 3, Student 11 aps out the component functions of her thinking in relation to conceptualising her thinking and creating a reasoned argument

Photographs 4 & 5 – Student 15 – this is the second tutorial that the student attended, in the interim she has used her initial notes (sellotaped to the sugar paper) and typed the main substantive point on to seven small cards. This, the student tells the teacher allows her consolidate her thinking. This quickly allows the teacher to understand that the student is seeking to argue and thus gives them the insight to focus the tutorial.
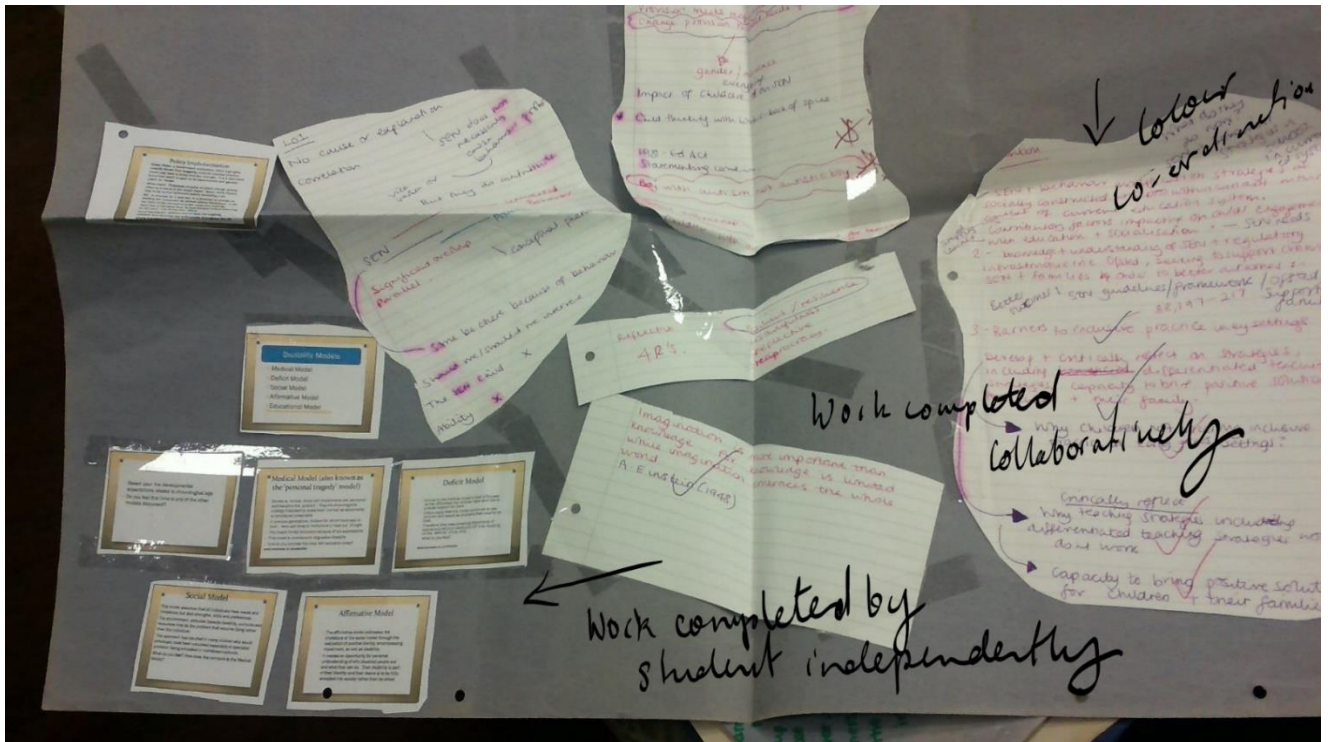
In the photograph below the student begins a similar process, splitting her paper into four parts, each dedicated to a specific cognitive function relating to formulating her main points in relation to the learning outcomes. She has identified, main points, she has made space for her own thinking on the subject, 'drive argument' in this part she has positioned her initial evidence or her thinking and finally she has begun to refine her thinking.

Enlargement of preceding photograph demonstrating the student's need to represent and refine her thinking.
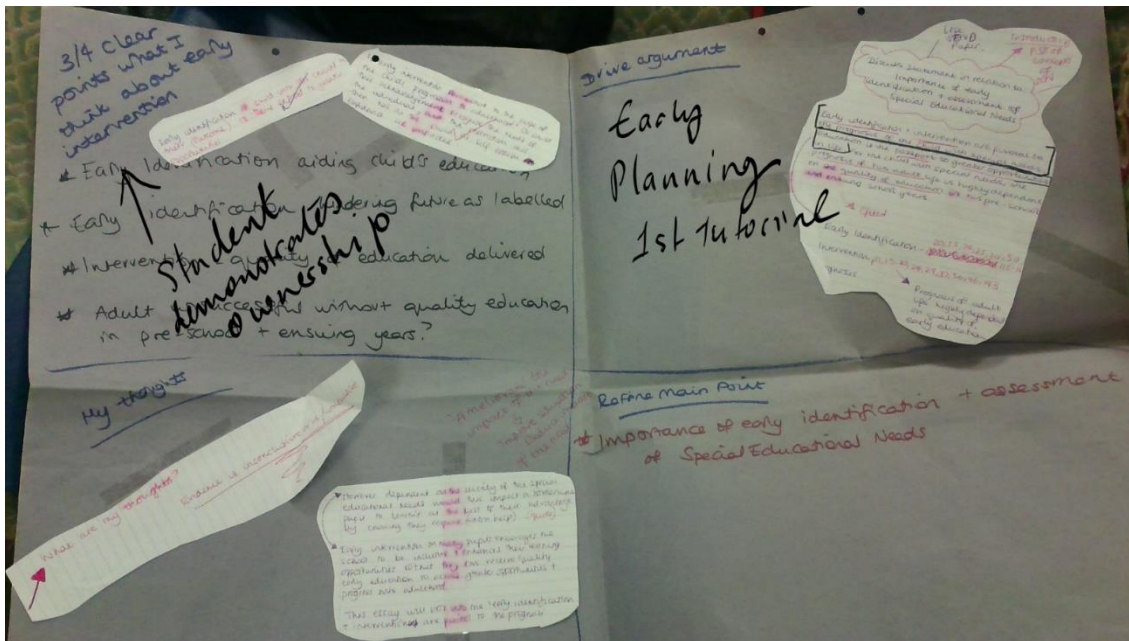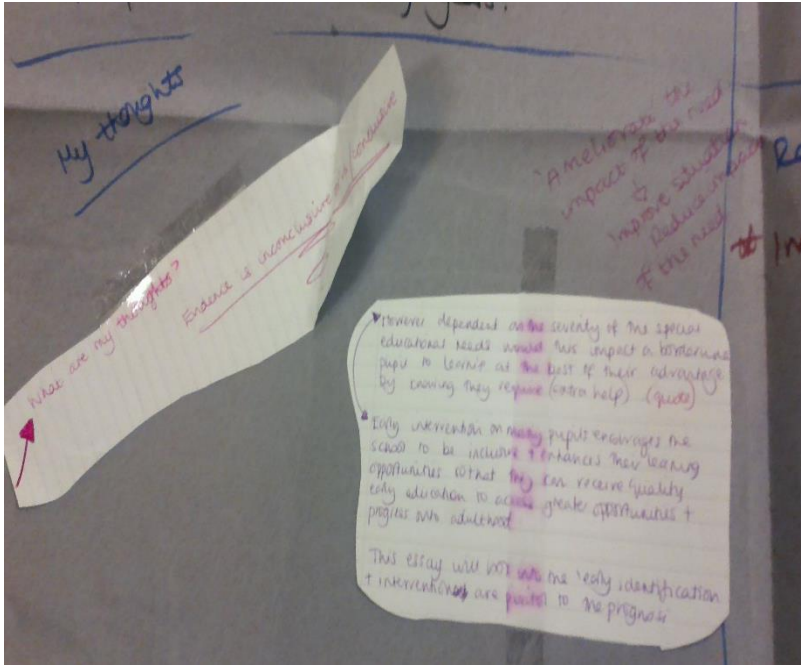
Photograph 6 a – c Student 26 – Tutorial one, the student begins to structure her work with the help of the teacher.
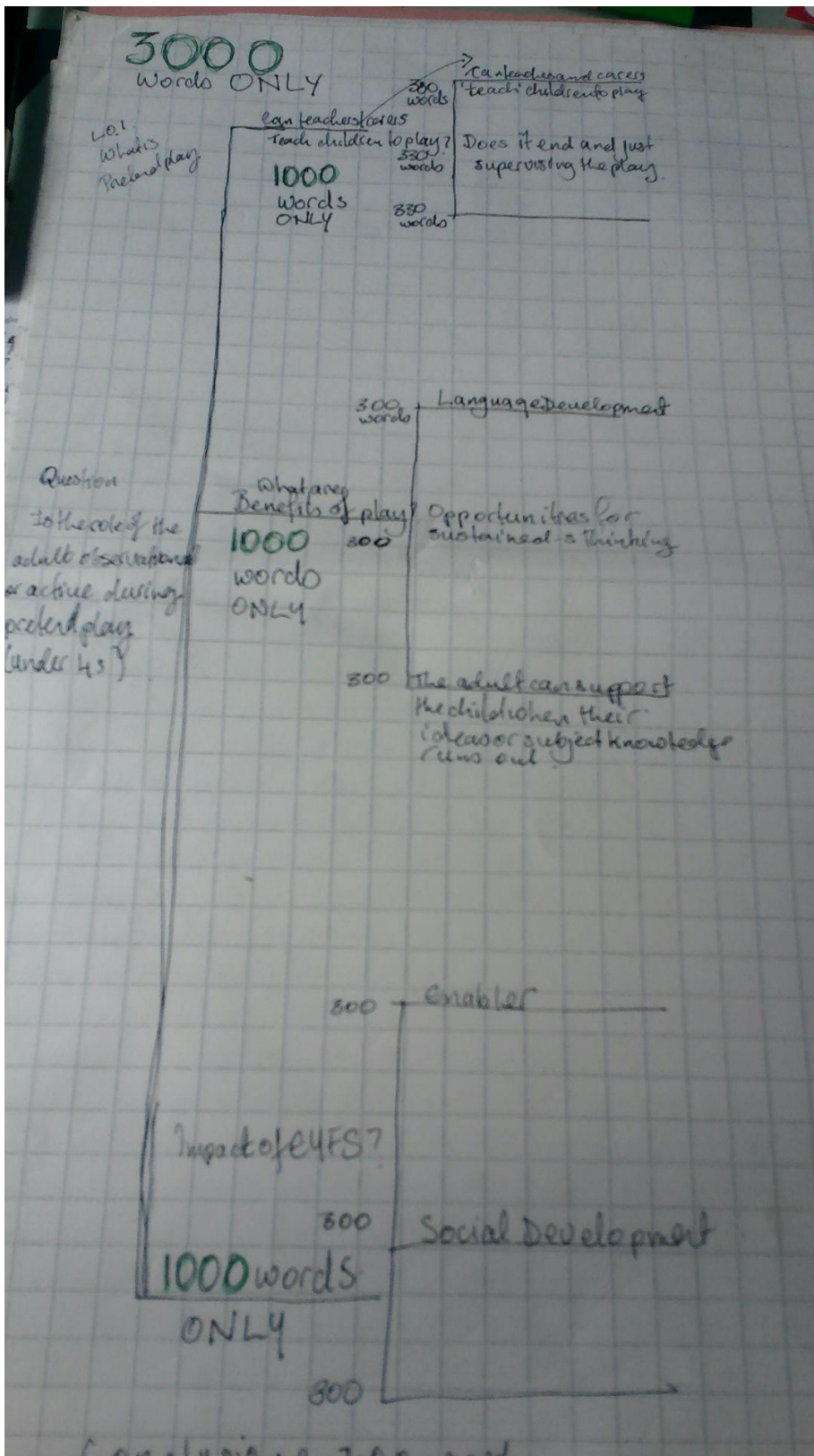
They have created a branch diagram with three main branches and subdivided this further.

This allows the students to see clearly the three main component parts of her intended essay, each branch represents a specific learning outcome.

And each sub-branch a main point to be made in relation to the learning outcome. Thus, maintain focus and relevance. Interestingly, she has assigned a word count to it. The three sub-branches allow the student to make three points in relation toto each learning outcome.

Handwritten diagram text:

3000 Words ONLY

L.O.1 What is Pretend play

Can teachers/carers Teach children to play?

1000 words ONLY

380 words → Can teachers and carers teach children to play

330 words → Does it end and just supervising the play.

880 words

Question Is the role of the adult observational or active during pretend play (under 4s)

What are Benefits of play? 1000 words ONLY

300 words Language Development

300 Opportunities for sustained-is Thinking

300 The adult can support the children their ideas or subject knowledge runs out

300 Enabler

Impact of EYFS?

300 Social Development

1000 words ONLY

300

Student 26 continued – Second tutorial
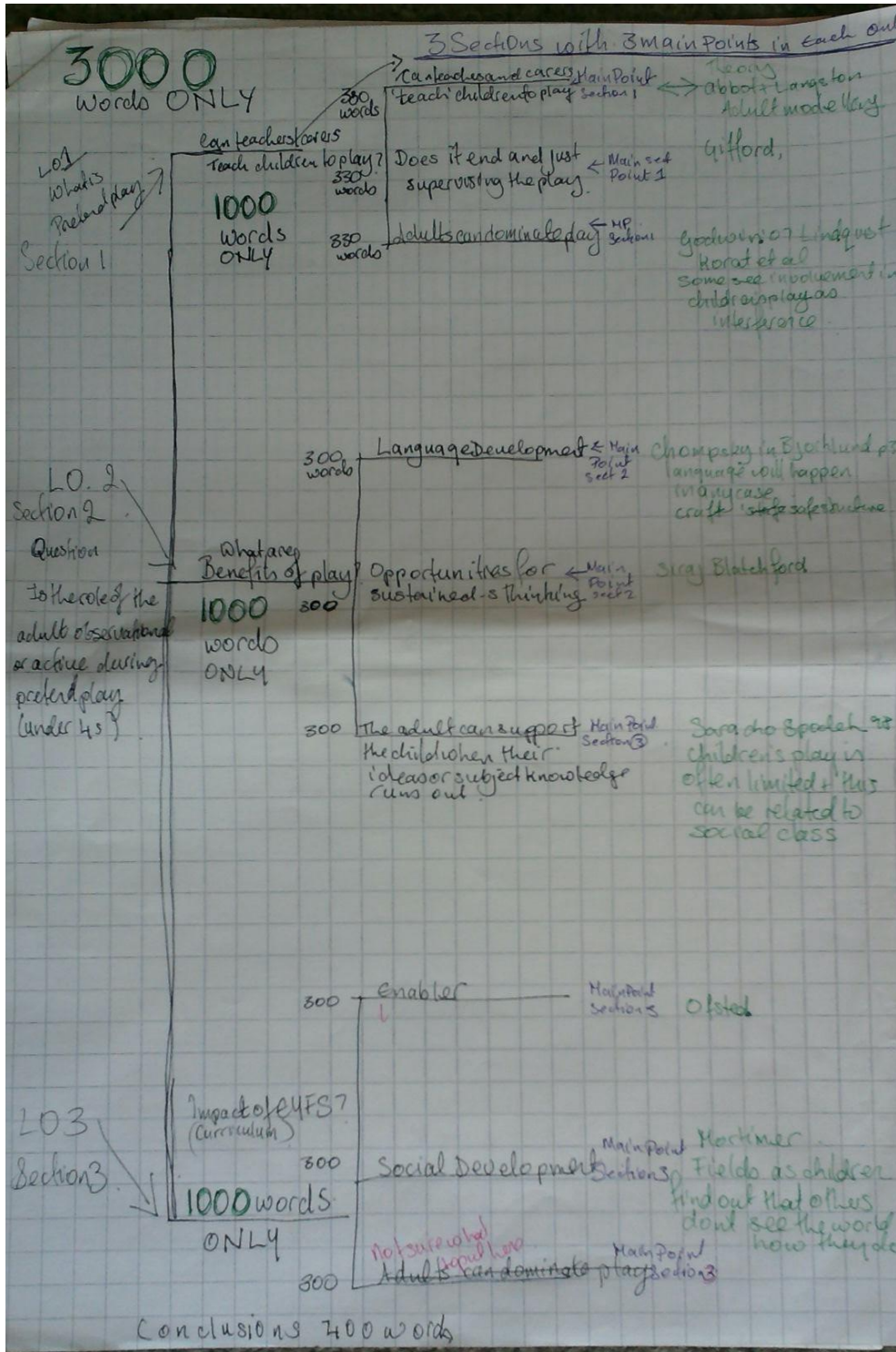
As the student has worked on her essay plan she has decided to put her reference material in green pen, this she tells staff allows her to think more clearly about how to work her critical literature into her essay more coherently. In is interesting that this is the only work that she has done on her essay plan between tutorials.

She has not developed her main points(on each stick of the diagram more fully at this point.

Student 26 – Work completed during the second tutorial
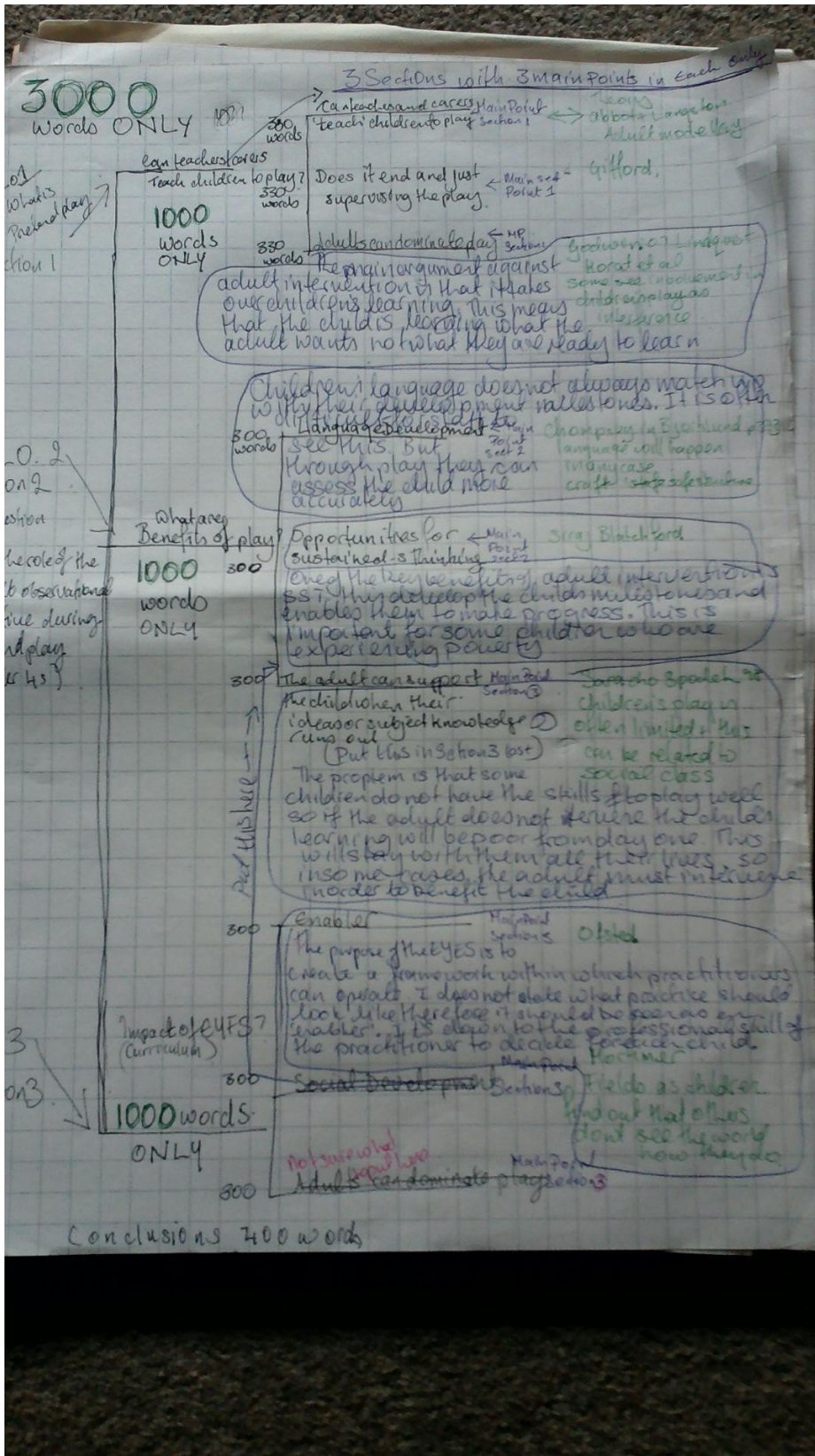
The student needed some significant levels of support to formulate her thinking during this tutorial. It is interesting that although she could formulate a basic main point for each paragraph and identify the relevant critical literature, she found the greatest difficulty in developing a full point.

By the end of the tutorial she has completed two main points for each large branch on her diagram. She was very pleased with this work, but it still remained that she had not fully completed the essay.

The student continued to work in this way during the final tutorial but unfortunately the final piece was not photographed.

Photograph 7. The photograph below demonstrates the student's final version of the planning document.

As with the preceding students we have used a branch diagram to enable her to organise her thinking across all learning outcomes.

This student has included the evidence base (her child observations) in pink and numbered these.

From this diagram the student has a clear plan of her essay.

Maths in the Early Years

LO1 Role of Adult?

Mathematics is socially defined. This should not just pick it up if we do not get the language – does special class matter? Observation 1

Sue Gifford – Roehampton ① + suggest ideas ② Skemp's PSI

Provide visual + big resources – no language – demonstrate. Observation (day) Play with purposefully sustained shared thinking

David Orton – visual + subject. Siân Blatchford ④

Assess the child he can do more than it thought – he is working at a low level. He can do much more. Observation 3. Role of adult is to know how to assess children properly. Observation is key – so is adult knowledge.

is this my main point? check FF.

Richard Skemp

LO2 Cognitive Functions

He can classify but then he knows it by colour/shape/button but he cannot describe it. Is language important for maths? Observation 3. Orton, D says no – but it is.

He has so little language he cannot ask questions. Williams Report bottom 6% is he one of the 6%? Observation. Look for language + ask maths FF.

MP?

FF → Jake doesn't recognise symbols. has no symbolic play – this is a big problem. significant barrier. could not play cards. he didn't know what to do – even the kings + queens. Siraj-Blatchford → why is symbolic play important?

LO3 Impact of Curriculum

Jake looses concentration in whole class activities – he looks out the window – Main Point is... Observation 2 he did nothing for ... Gifford. It means nothing to him.

The class is going too fast for him – so he is doing nothing – looking out the window. Jake needs differentiated lessons for him/small others – but this is segregated teaching. 27 pupils in KS2. Observation 4.

Williams Report chapter

The curriculum is not too advanced for him, he could do it with help he is better than we thought, but he cannot ask questions + doesn't listen. But he can do the work. Williams – but there's no more support.

Photograph 8, Second tutorial – the student begins to maps out her findings from having read critical material. Each heading on the grid seeks to make clear the component cognitive functions relating to constructing a literature review. This enables the teacher and student to focus attention where necessary.

Note; all parts of this grid that were completed in pink were completed during the tutorial.

Examination of the grid tells us that at the students came to the tutorial she, had could only identify the topic (column one) of the three articles that she had read. Additionally, although she could identify the main points of her reading, and these are comprehensively described, in column six, she could not relate these to her own essay easily (both column seven and eight

both were blank). During tutorial, the student had to be kept focussed on the key elements of the learning outcome and these are 'looped' for emphases. Had the student not had the opportunity to document her thinking in the way described above it could have meant that she simply described the theory that she had read in an attempt to demonstrate her reading, and this was a key feature of students' writing identified in phase one. Using a grid, it creates a clear exigent to focus on a critical element of engaging with academic texts.

Photograph 9 Sample of Staff meeting notes
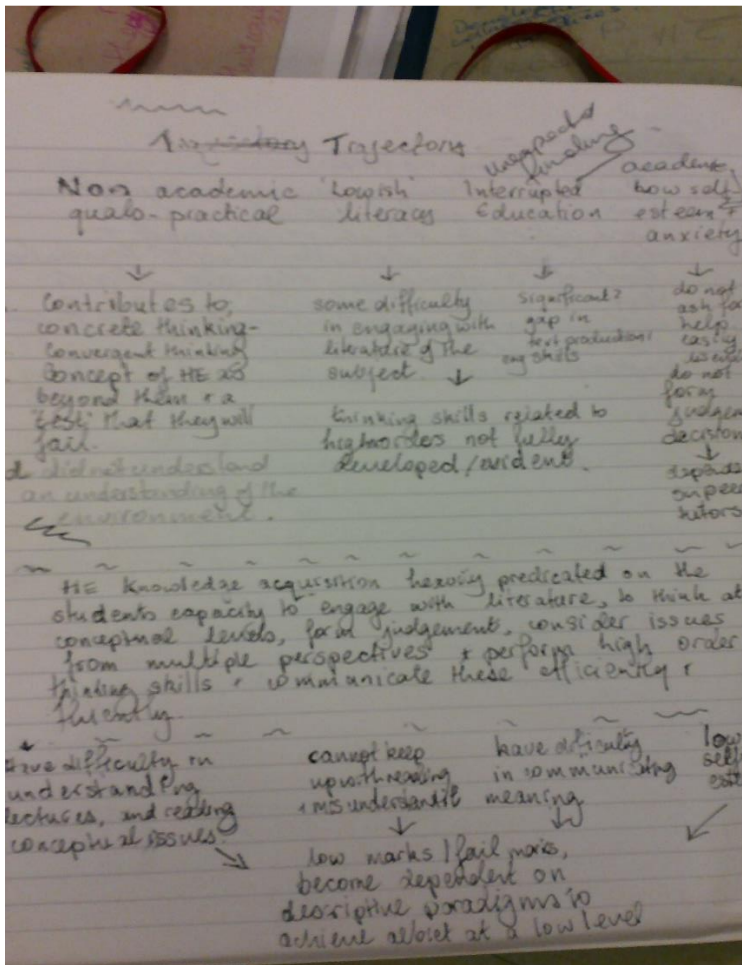
Photograph 10 - Staff Meeting interpretation of student feedback
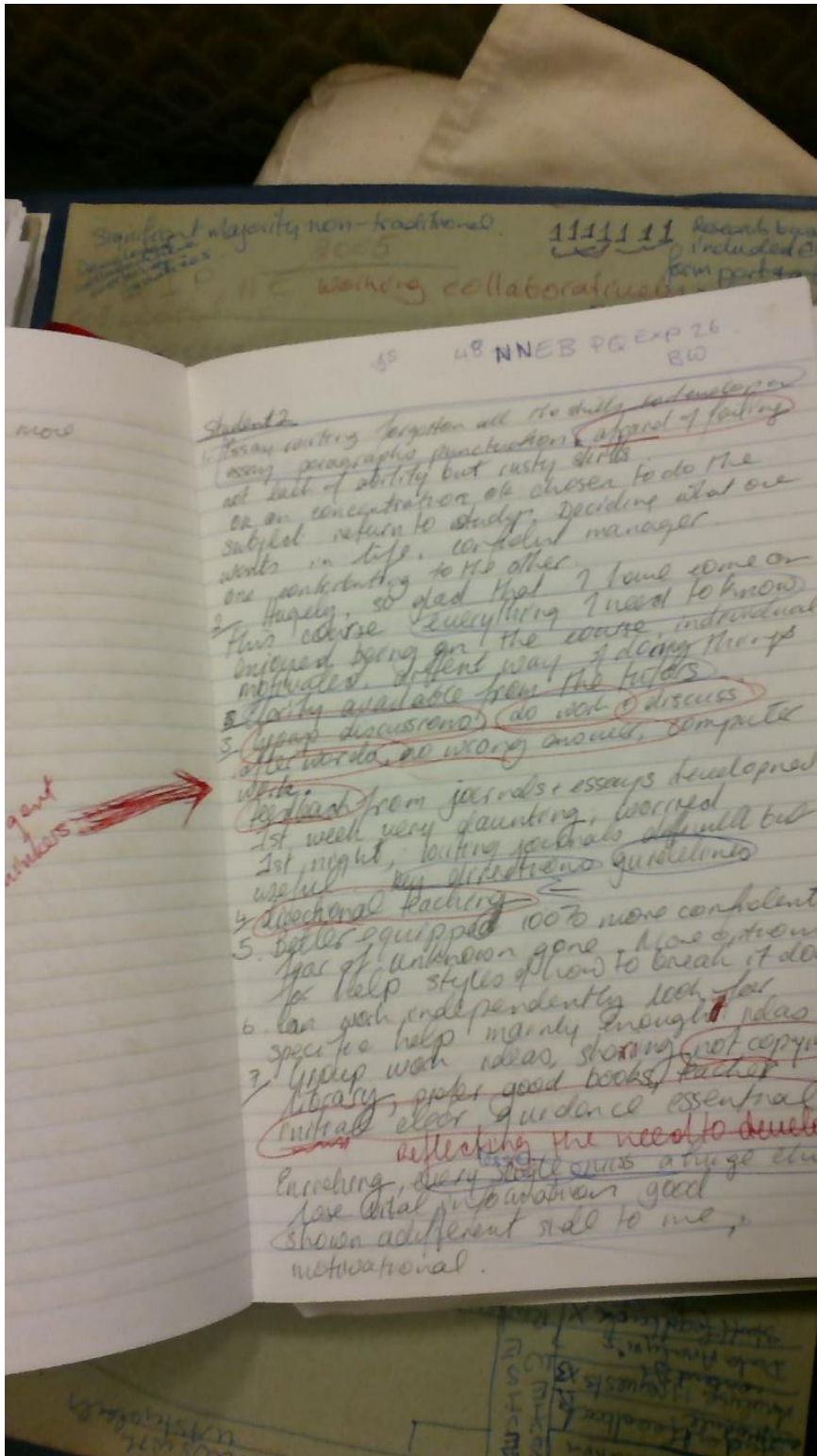
Appendix K - Practice Model - learning to learn through assessment coaching

Practice Model - learning to learn through assessment coaching

Table of Contents

Introduction

This resource has been developed following the symposium of colleges in April 2019, and a consequent staff development event in May 2019. The focus of these events was to explore and progress the discourse surrounding innovative ways to support academically vulnerable students to develop independent learning behaviours. I have developed this Practice Model for those staff and other interested staff who attended these events. It is designed to sit alongside existing traditional tutorial provision. It is different from the traditional tutorial in that its focus is on a 'coaching model', key to its success is to facilitate a shared thinking experience between teacher and student. The shared thinking experience is supported by constructing more visual tools such as thinking diagrams and argument maps, these work to support some students to develop academic skills. By supporting skills development in coaching tutorials, we can use a small group, and individual format that students may be more comfortable with from their college or school- based learning experiences. Through coaching we can create a scaffold to support their transition to becoming independent learners.

Why visual?

There are many reasons and there is much research relating to the value of enabling students to 'visualise' their thinking, for example, visual and dual-coded representations gave the student and teacher a shared means of communication but most importantly, they can make salient the students' thinking to themselves. As Van Gelder found in relation to argument mapping, 'visual representation gives the teacher x-ray vision into the student's mind' (Van Gelder, 2005, p 45). More importantly, it can give students x-ray vision into their own thinking.

Gilbert (2010) also makes the point that by documenting a student's thinking we create representations of their mental representations of knowledge and that 'they [representations] are central to the process of learning and consequently to that of teaching' (2010, p 2). A diagram or other visual may allow a student to represent their thinking, thus making it available for scrutiny and reflection.

What are the benefits for the student?

It is time efficient; it allows students to get their thinking '*down on paper'* without the need to develop fully rounded text. Many students invest much effort in producing significant amount of text and they are often reluctant to 'let go' of this investment even if they know aspects of it need to be addressed. The use of a diagram allows the student to '*get their thinking down on paper' Diane* efficiently without too much investment. This creates the opportunity for reflection and revisions to the work.

From a student's point of view is that **it can be non-threatening**; diagrams, writing frames, process diagrams or whatever you and your student chose to use are not as scary as a fully rounded essay – this means that students use them more often, and this can mean real progress in their thinking and learning.

Not all students respond to **assessment feedback** many see it as threatening (Cassidy, 2011), points this out, arguing that because most feedback is given as a result of performance many students see this as criticism AND many do not understand our feedback (Hounsell, 20xx). Small group purposeful discussion facilitated by a teacher who can feed forward incrementally into the learning process and allows for a tailored approach to academic skills development.

It can support self-assessment; diagrams and visual resources can make clear the student's thinking in a way that may not happen in text. This creates a vehicle through which the student can self-assess their own thinking.

How do I benefit from this and how can it improve my teaching practice?

The most obvious benefit for all teachers is the opportunity to understand your students' learning needs more fully. Close engagement with students allows this to happen. The other key benefit, staff have reported is that by spelling out the cognitive steps to students it creates the opportunity for us to understand and make explicit our tacit expectations explicit to both the student and us too. This also helps us in our mainstream practice.

The topics included are as follows, supporting student to:

1. structuring of assessed work
2. conceptualise of knowledge thinking
3. developing self-regulation skills

Within each topic is an example of the learning activities that took place within the tutorial. The supporting photographs, which the participating students kindly allowed me to take, are the real live artefacts which they created. The photographs were taken at key points during the students' tutorial/s and are designed to illustrate the ways in which the students sought to make their thinking visible to both themselves and their teacher.

Our Practice Model for coaching tutorials is a developing resource; it allows us to create some innovative and pioneering ways to meet students' learning needs, but this not deter practitioners' own creativity and autonomy in this area, and where practitioners wish to add to these resources this will be welcomed.

What is my role?

1. Encourage students to take a lead in the tutorial. You can do this through questioning and opening discussions with your tutees.

2. Avoid the temptation to re-run lectures in tutorials. It is absolutely essential that the student's knowledge is drawn out and creates the key points of discussion. Even if you are concerned about the level of a student's knowledge it is likely that they will learn best by unpacking their thinking, testing it out, and with the right teacher questioning tease this out where they need to focus their attention. If you are really concerned that the student has very limited knowledge you can of course refer the students to reading that is appropriate to both the course and the level of study.

3. Keep the discussion focussed clearly on the module learning outcomes, do not let the tutorial drift into unstructured discussion, even if it is interesting.

4. 'Documenting' the student's thinking is a critical aspect of the tutorial, the ways to do this are demonstrated in the succeeding sections.

5. Acknowledge and thank the student for participation.

6. Be positive students are far more likely to participate in a positive experience.

How is this resource organised?

I have created a series of three case studies where students exhibit very common learning needs, also included is a summary of their most common feedback following assessment, together with how the student describes their own needs. This is followed by a brief summary of learning needs that the teacher may seek to address with an explanation why these are important.

The case study then proceeds to describe the student's learning journey, this is advanced by providing a photograph of each stage of the student's completion of their diagram, this maps out the student's cognitive processed. The photographs are supported by a commentary to the right-hand side. This commentary supports our understanding of the student's thinking journey. Where there are staff questions included these reflect those matters raised during the staff development events.

All three students (names have been changes) were offered to have their work used in this way in order to benefit other staff and students.

Case study 1 – Supporting students to structure their assessed work.

Diane is studying in the second year of her degree in Education and Learning where they use much work-based activity as the basis of her assessed work. She is highly thought of in her workplace a primary school and she is hoping to find a place on a primary school PGCE on completion of her degree next year. However, she frequently is disappointed in her marks, she frequently had low marks and failed assignments (normally she has failed because she has not covered all learning outcomes) and does not always understand her feedback. She is often told to 'structure' her work and paragraphs more coherently and to remain focussed on specific lines of enquiry … Diane though that she was doing so.

Diane needed a practical strategy to help her organise her thinking and to respond to feedback because it was clear that discussion in tutorial alone did little to support Diane. When Diane attended a tutorial with her most recent assignment, she had very good work-based activities complete, she had made multiple notes and had attempted to write her essay. However, the teacher felt that it was unstructured and lacked coherence, it was difficult for the teacher to ascertain which learning outcome Diane was discussing, and what exactly her argument was, moreover her use of reference material was erratic. This was exacerbated by her use of English which seemed to want to use long words very often inaccurately.

The teacher has several tasks;

1. To enable Diane to focus on a specific learning outcome
2. To develop lines of enquiry related to each learning outcome
3. To address each learning outcome adequately and equally
4. To use reference material appropriately
5. To develop her understanding of the role of language in assessment

Figure 2, a – Structuring
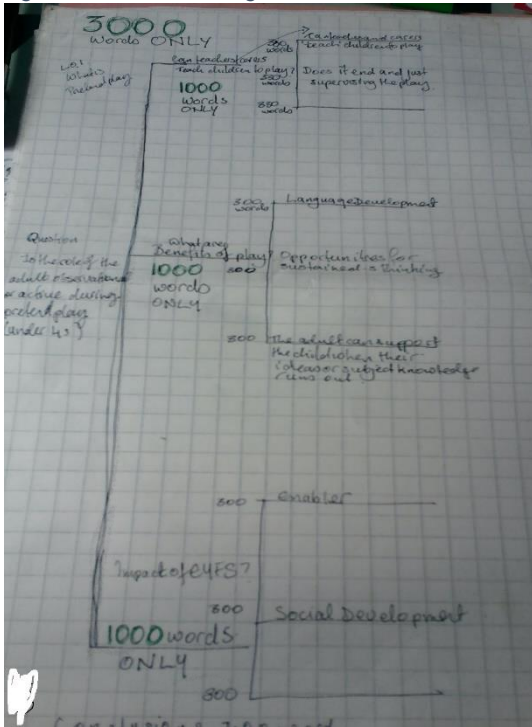
Diane's teacher helps her to construct a branch diagram that helps Diane to see the three learning outcomes that she must meet, together they reinforce the 3000-word limit and divide this between the learning outcomes.

This creates a clear visual representation where Diane can see her own structure.

Diane and her teacher then split this into further sub-divisions, each one of which represents a key point that Diane wants to make in relation to the learning outcome. At her own volition she then gives each point a word limit.

Note, as Diane has progressed down the diagram, she has become less clear about what points she is seeking to make. This may be a clue as to why her work has become unstructured in the past and indeed why she has been referred on some assignments.

Nonetheless, both teacher and student can easily see this and attempt to rectify it.

Figure 1, b Structuring and focussing
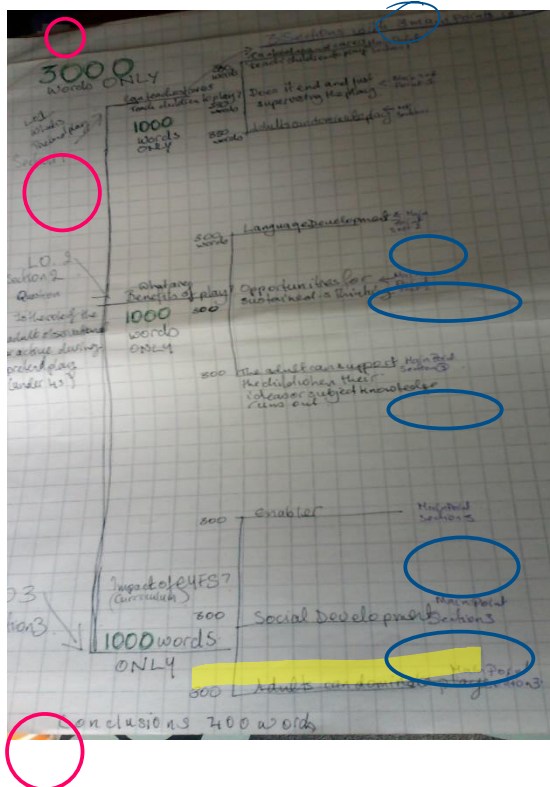
As the tutorial progresses Diane attempts to develop her arguments more fully, she includes some text on the final branch of her diagram (highlighted in yellow) but quickly notices that she is repeating herself, and crosses this through.

She then refocuses herself towards the end of the tutorial and reaffirms her learning outcomes (circled in pink)

She also reaffirms the need to make a main point for each branch of her diagram and does this in a different colour (eclipsed in blue).

This may not seem as though Diane has made significant progress during the tutorial, however she was very pleased with her progress and indicated that she could 'see' where she needed to focus her attention, and probably more importantly could 'see what it [essay] needed to look like'

Figure 3 - Developing and deepening thinking
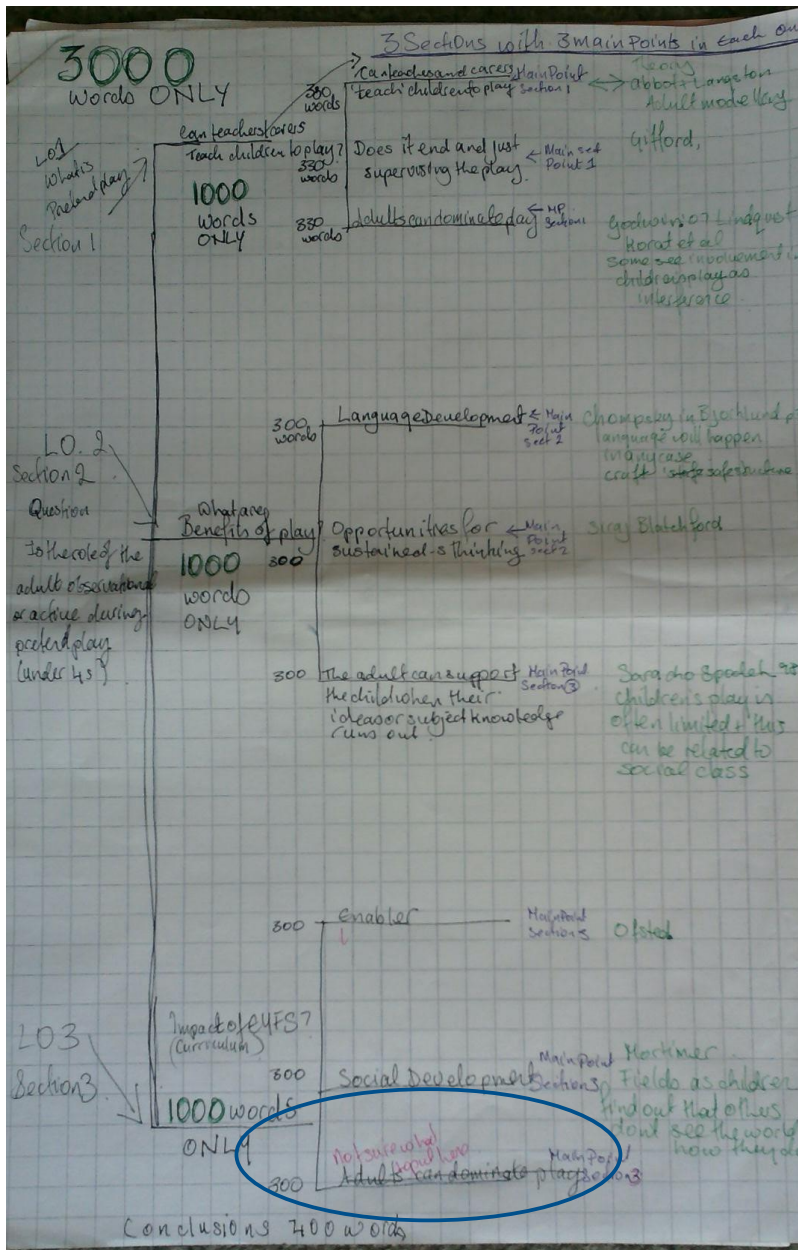
Before the second tutorial Diane had made some good progress in developing her thinking. In particular she has begun to include reference material (in green pen), this is perfect way that allows Diane to ascertain the relevance of her reference material.

The 'branches' on the diagram allow Diane to see whether she has covered the learning outcomes adequately or not. It is interesting that she has not developed her main or substantive points and in fact has indicated that she does not know what to write, (see blue ellipse)

Her teacher can also see this quickly and easily, you can also ascertain whether there are repetitions, and whether the work is at an appropriate level. This information gives you a clear 'steer' for the focus of the tutorial.

Figure 4 - Developing thinking
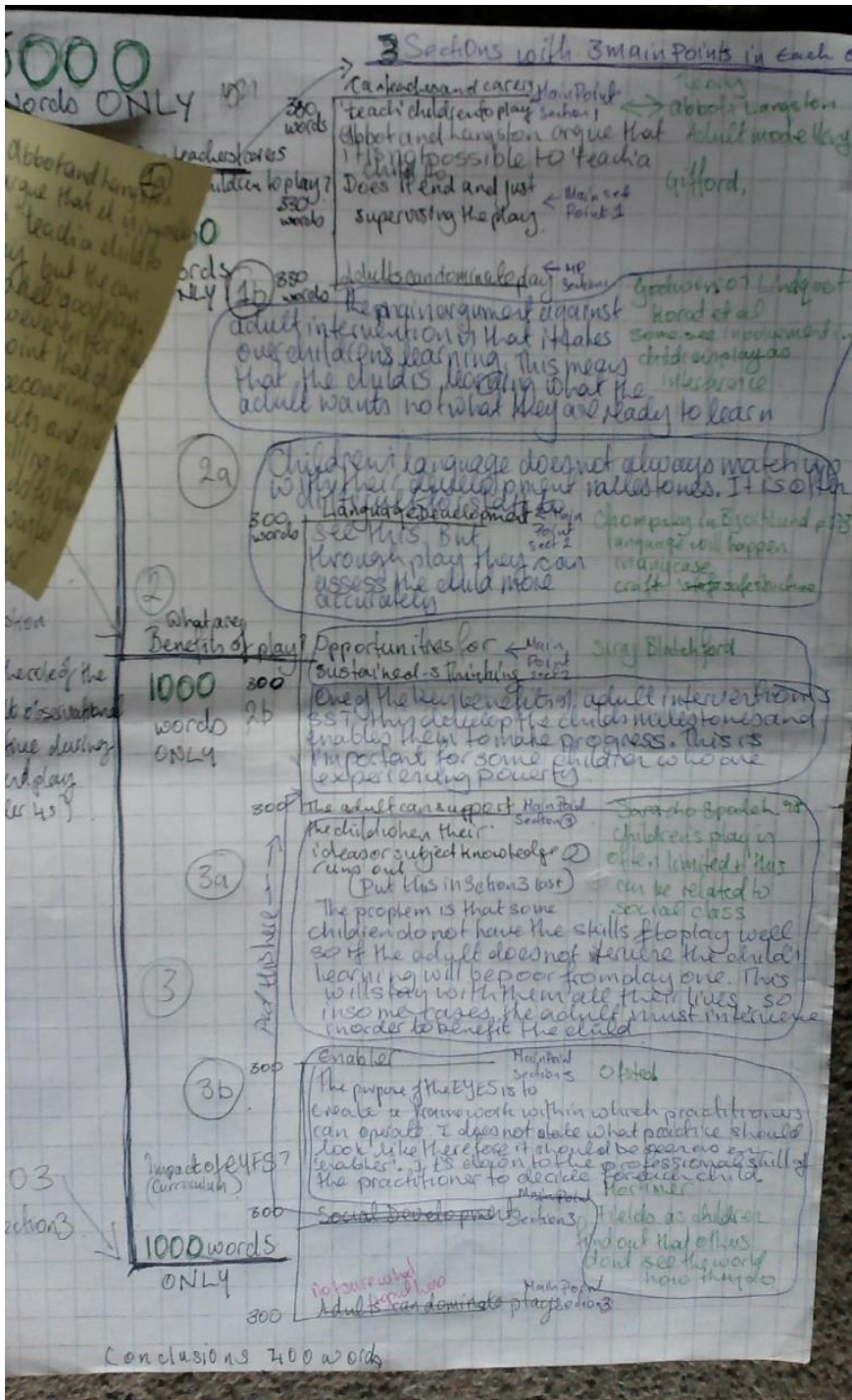
As the tutorial progressed Diane has developed substantive points relating to many, but not all, of the 'branches' of her diagram. This required some support from her teacher, and it is evident from the use of a post-it note that she ran out of space.

Interestingly, she has numbered the sections of her diagram, 1 – 3 and sub-divided these into 1a, 1 b, and so on, this makes it easier for her to be clear about exactly what she is seeking to include in each section of her essay.

She has also decided to make two substantive points for each leaning outcome. This is a matter of judgement for both she and the teacher whether or not this is sufficient, but in terms of structuring her work and addressing each learning outcome Diane has a working structure that she can develop further if she needs to.

To move this work forward into an essay, Diane will need to remain within the structure that she has created for herself. This emphasises the importance of student ownership, as Diane leaves the tutorial her diagram and associated work will need to have meaning to her, in order that she can work independently and effectively.

Some questions raised by staff.

1. Does it matter if it's messy? Absolutely, not, it is the student's work as long as it makes sense to the student that is the main objective.
2. Does it matter if it is not finished? Sometimes yes! But not absolutely, in some cases when a student begins to work in an innovative way, they feel very empowered and feel that they can continue but when working independently they can run into difficulties. This can be very demotivating for students. Others do not experience difficulties and make great progress independently. This was the first time that Diane had worked in this way and like all skills it will improve as she practices.
3. How long did this take in tutorial? No tutorial was more than 20 minutes.
4. What is my role?
    a. To prompt focussed discussion **and** ensure that the student captures their thinking progressively,
    b. Do not allow the tutorial to drift into unstructured discussion. The representation of thinking is critical to Diane's capacity to ordering or structuring her thinking.
    c. Remember carefully couched questions really can focus a student's thinking without doing it for them.
    d. Stay positive, friendly and approachable but **IT IS, AND HAS TO BE, THEIR WORK** keeps students focussed on competing as much as is appropriate.

Case Study 2 – Conceptualising thinking

Faye is studying in her final year of her BA degree in Education, she is frustrated that she cannot seem to improve her marks no matter how hard she works. Faye often had feedback telling her that her work was 'descriptive', she had tried to, 'be more analytical' and 'structured' in her work, but she continued to receive similar feedback. Faye did not explicitly know what made her writing descriptive or how to address this, she had listened carefully in class and all tutorials and attended well, often she resorted to having to paraphrase others' work or just write, 'what sounded good'.

When staff analysed Faye's work it told them that she needed to 'conceptualise' her thinking, much of her written work either described the research that she had read (and mostly understood) or described the work that she had completed on work-placement.

As such, the overriding objective to this teacher/student engagement was to enable Faye to tacitly conceptualise her thinking, and she needs a practical strategy to develop with this cognitive function.

What are the pedagogical challenges for this tutorial?

Conceptualisation, or abstraction, of knowledge is complex, and there is much debate about when this starts to happen in life. Piaget's research over many years and publications, for example, suggested that it starts to happen at the end of primary school or beginning of secondary school. Maclellan (1995) indicates that it happens much earlier. All agree that it is developed in a tacit way, incrementally over long periods of time. Moreover, the processes are clumsy to describe, and should such an attempt be made it is likely to create more confusion in academically uncertain students. This is what creates the pedagogical challenge.

To support Faye the teacher therefore has several tasks;

1. first is to enable Faye to **focus** on a specific relevant matter or learning outcome,
2. second enable Faye to identify what she **understands or has noticed** about the specific issue from the research that she has carried out, this could be her reading or interviews, observations etc.,
3. third to support Faye to **interpret** what this means in terms of her module
4. fourth to **relate her interpretation to the current research**,
5. finally, to ensure that Faye **captures or represents her thinking** in an effective way, throughout the thinking process.

This model reflects Kolb's abstract conceptualisation see the diagram below;

Figure 5
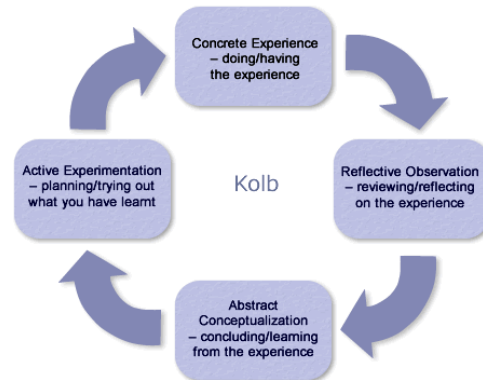
To support Faye, the teacher works together with Faye to create a diagram (below), to map the thinking processes. There are three rough columns each one of which represents the first three elements of Kolb's theory.

 First. A Clear focus has to be established from the outset and capture this on her plan. This keeps the discussion relevant and directed at a clear goal. It is critical that Faye has completed her reading. These are her **concrete experiences** which will form the basis of her reflections.

Second, Faye needed to capture her observations from her reading simply and without complicated language. It is critical that she captures these in order to **create a tangible vehicle to facilitate her reflections** Note; during tutorial Faye has usefully outlined the authors that underpin this thinking in blue felt tip.

Third, Faye now needs to **interpret** these **independently**, i.e. what is/are the common feature/s of her observations? It is important that we do not foist our own ideas on the student.

Figure 6 – Concrete experience, Reflection and Conceptualisation – Faye creates visual representation of her knowledge
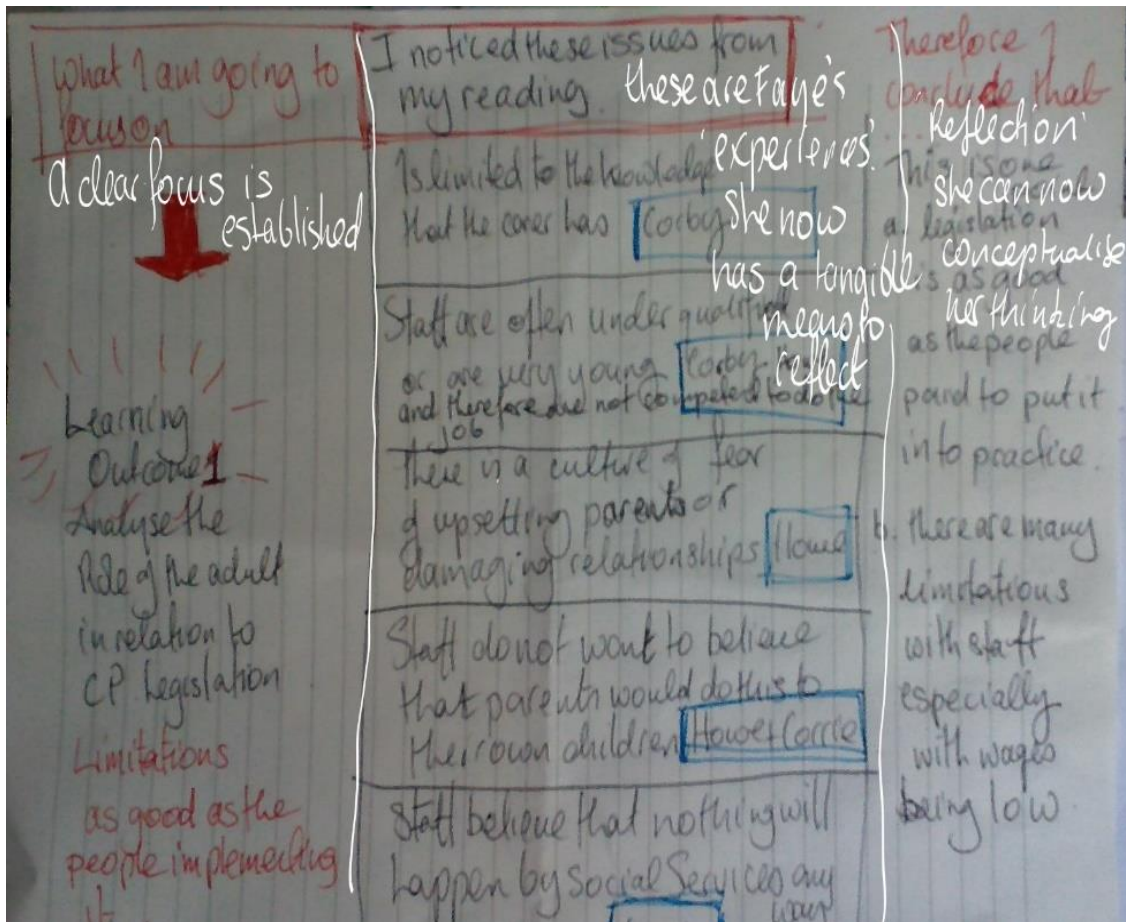
So, this entire operation took less than seven minutes to complete and Faye has tangible vehicle for the construction of a coherent paragraph for inclusion in her essay. Discussion with Faye indicated that when working independently she spent several hours just trying to construct a single paragraph, and, moreover, that she was likely to have described the content of the second column. This would have meant unfocussed descriptive work with little personal interpretation.

The next challenge is how to turn this thinking into a coherent paragraph. Again, this can be achieved by working in tutorial with the student using a grid again. A grid separates the component parts of her thinking, keeping her focus clear and well defined. It is important that this **IS** actually attempted within the tutorial. Students will frequently tell you that they will complete the work independently, but many do not have the skills to do so.

Below are two examples of how Faye attempted to construct her paragraph.

In column one Faye has opted to **start with the research that informs her thinking and interpretation**, having noted the authors on her plan together with their key arguments this is an easy task for her. So, in this case she starts off with a research-based argument. She then moves to using an example and progresses to contrasting one of the author's perspectives.

In column two Faye has experimented with starting her paragraph with her interpretation of her chosen texts thus she leads with her main point. She thereafter progresses to situating this within her academic reading.

The strength of either option is that having **interpreted her reading in a way that is meaningful to her** she is enabled to develop and situate her thinking within conceptual frameworks. Thus, moving her away from simply describing the key arguments of each theorist.

Figure 7 - Faye actively experiments with her knowledge
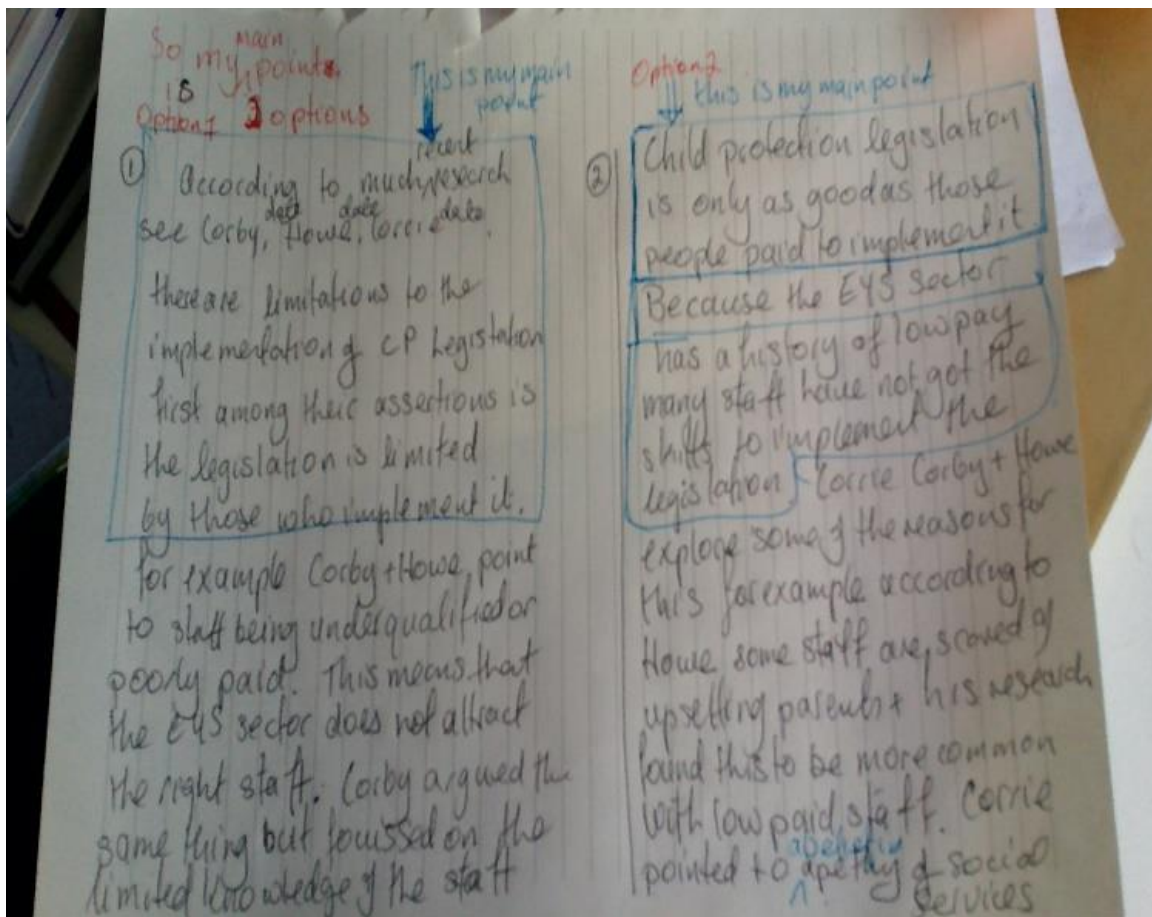
Including discussion with her teacher this took Faye 12 minutes to complete.

Case Study 3 – Self-assessment and self-regulation

Emma is a year two student studying at level five, on an Early Years Education programme of study. She has been uncertain academically throughout her education and is becoming increasingly distressed at the prospect of submitting a short literature review on a topic of her own choosing. She had undertaken much reading, far more than recommended by her supervisor, and she felt that she understood most of what she had read. Those journals that she did not understand she set aside and hoped to come back to them later because she did not know what to ask her supervisor about. Throughout her degree she has had much feedback that told her to consider;

1. the relevance of her critical literature to her assessed work;
2. to make sure that she fully understood the literature relating to the subject;
3. and, most challenging to look for themes throughout the literature.

Emma tells staff that she had real difficulty in '*pulling her reading together'* to create a well-considered literature review as the programme asks for. Emma also tells staff that she, '*doesn't know how to begin'*, or if the, *'literature is appropriate' and* although she felt that much of what she had read, *'was relevant I [she] could not be sure'*. She had several false starts but has not made effective progress, her strategy so far is to continue to read more and more academic journals, she knows that she is running out of time, she knows too that she is beginning to panic but does not know what to do. Emma has sought support but does not know what to ask for.

The teacher, therefore, has several objectives within the coaching tutorials, and needs to break down the component cognitive functions into easily accessible parts in order that Emma can evaluate her own thinking. To do this she must enable Emma to assess the extent to which she;

1. understands the key arguments of the read texts clearly and in some depth;
2. the premise under which these arguments are made;
3. the relevance of the texts to her intended research;
4. can discriminate and categorise themes in her research;
5. ascertain when she has sufficient literature to cover the task.

To help Emma the teacher constructed the grid illustrated on the next page in tutorial together with Emma, **each column on the grid represents a cognitive action** that Emma has to undertake to navigate her literature and construct a literature review. Importantly, this was constructed in the tutorial through questioning and discussion with the teacher.

Figure 8 – First attempt to organise Emma's thinking

Emma quickly begins to populate the grid with her thoughts.

Her attempts at the first column are superficial. The literature review relates to Inclusion in Early Years Education, but the only word in the first column is 'Inclusion' and the final column demonstrates an equally superficial level of engagement. This flags to the teacher that Emma is possibly not thinking deeply enough.

Emma has not noticed or self-assessed this herself, this tells the teacher that s/he needs to intervene and support her to think more deeply about her work.

Figure 9 – Emma demonstrates 'gaps' in her thinking

As the tutorial progresses Emma, although very enthusiastic, is actually completing fewer of the cognitive functions, this is evident because she has stopped completing the last column of her grid and did not complete the second row fully. This will tell her teacher that she does not understand how the literature refers to her own research project and in one case that she does not understand the key arguments that the author is making.

This reemphasises the need for self-assessment and this is where the use of a visual representation can be useful. It clearly demonstrates where attention needs to be focussed.

The value of the diagram is that it creates a means to capture the key elements of Emma's thinking, she and the teacher might well not give this the attention that it deserves. The teacher decides to engage Emma in a discussion relating to her understanding of the literature as she progresses, and this is captured on her grid. See figure 8, below.

Figure 10 - Teacher focusses Emma on capturing her understanding of the read texts.

Through careful discussion the teacher has focussed Emma's attention on deeper thinking.

Note; in the first column Emma is beginning to be written in greater precision. Instead of writing Inclusion she is now beginning to find the key themes within the broader topic of Inclusion, for example race, learning disability, professional qualifications of staff.

Additionally, her outline of the main points (column 5) is becoming more detailed. She has not yet begun to clearly relate her literature to her chosen research. Again, the grid, or visual representation, enables both she and the tutor to see this.

This has taken 15 of 20 available minutes of tutorial time, the last five minutes creates the opportunity for both student and teacher to reflect on the work so far. The grid creates a focus for this reflection thus contributing to a shared thinking experience. In this case the focus was on;

1. Thinking in more detail to, the exact topic of the literature, not only the wider discipline, column 1

2. consideration of not just the author's arguments but the premise under which these have been made, column 5
3. And critically, how this research relates to Emma's work, column 6.

Emma left the tutorial uncertain that she could work on this independently but said that she would, '*give it a go*'. The absence of detail within the final column tells Emma clearly that this is where she needs to focus her attention.

At her second tutorial Emma returned and her attempts are recoded in the two photographs below;

Figure 11 – Emma begins to find themes in her research

The first most noticeable aspect of this work is that Emma has not yet attempted to relate her research to her own specific topic. This gives the teacher a clear steer where to focus their attention in this tutorial. Importantly, Emma knows this and asks for support in relation to this.

Secondly, and very positively, it is clear that Emma is beginning to pick out themes, a priority from the outset. She has used the first column of her grid to assist is this. She has improved her attempts from the first tutorial, thus demonstrating self-regulation. She is now demonstrating the capacity to pick out specific and more detailed aspects within the overarching research topic. Having listed these in the first column on her grid she can clearly see the underlying themes. This has led to a tally chart which she has included at the end of her grid.

Figure 12 – Moving forward

This was the second 'thinking grid' that Emma constructed for her tutorial, which includes the remaining articles that she had been reading.

Note: - it is significantly more detailed; the first column has moved from the simple word 'inclusion' to describing the specific themes within the overarching topic. This will allow Emma to isolate her themes as she did in Figure 9.

Column 4, 'main points' is very fully populated and indeed numbered and she has identified the premise under which the author has formed his arguments for the first time.

Emma was extremely pleased with her work and tells the teacher that she took just one hour completing her grids, and that she feels much more focussed.

Most importantly, she came to the tutorial and ask for support for a very precise learning need, which she can clearly see.

This also tells the teacher what Emma's learning need is but first they need to explore why Emma is struggling with this aspect of her work. This returned both Emma and teacher to the very beginning of the process. This is her main topic, *Inclusion, and reverse inclusion;* a key question is, 'is this precise enough?' It seems that it is not, and this is a frequent challenge to students' use of literature; their focus needs to be very well-defined, and their capacity to do so develops as they engage more effectively with their reading.

Through discussion and reviewing her existing literature, the teacher and student reviewed Emma's question until she was very clear about its focus, this allowed the tutorial to proceed focussed on this critical cognitive skill.

Figure 13 – Developing Learning

Emma needed some significant support in this part of her work as it was one of the first times that she had the opportunity to focus on this aspect of her writing.

Nonetheless, given a practical strategy she worked intensely and remained concentrated on the key matter that would improve her work. Emma's comments were elucidating

Figure 14 - Isolating themes

One of the final features of the tutorial was to enable Emma to develop themes within her writing. As with her first attempt to do this she has used the first column of her grid to pick out key language and words this led her to developing a tally chart and subsequently to listing her themes with the associated authors, interesting Emma chose to colour co-ordinate her approach to this.

Having identified several themes related to inclusion, as described in Figure 12 above Emma self-assessed that she had spread her search terms too far. In that within a 3000-word essay it was impossible to do justice to four or five themes. Critically, she self-assessed that she could only effectively include three key themes, this necessitated some further self-reflection on the precise nature of her study and those themes that she felt were most important to her topic. Emma's final reflection was particularly interesting, *'until you can see it, you cannot tell where you are with it.'*

Appendix L (i) - Institutional Framework of Reflective Questions - Differential Outcomes

Institutional Framework of Reflective Questions - Differential Outcomes		
College	**Programme Leaders**	**Lecturers**
Over-arching Reflective Questions		
1. *What is our strategic approach to review and address DO? How do we know that this is effective?* 2. *What methods does the college use to identity students who might be vulnerable to DO? Do we go beyond statistically well-represented aspects of student vulnerability?* 3. *To what degree of accuracy can we describe the extent of DO at the college?* 4. *To what degree do we engage with the student body, both individually and as a group, relating to DO generally?* 5. *Do we have a mechanism to understand the degree to which students are satisfied with their assessment outcomes? If yes, how does the college address dissatisfaction? If No, how does the college understand student satisfaction with their outcomes?* 6. *To what degree do we engage with staff, at all levels, to more fully understand DO? How is this learning captured and acted upon?*	1. *Do we have a collective understanding of DO within the department? How does this contribute to the institutional understanding of DO?* 2. *What methods does the programme of study use to identity students who might be vulnerable to DO? E.g. programme specific synoptic activities, whole team evaluation of student engagement?* 3. *To what degree of accuracy can we describe the extent of DO within the programme area?* 4. *To what degree do we engage with the student body, both individually and as a group, relating to DO generally?* 5. *What are the opportunities that I create for individual students to raise concerns about their level of attainment with me, as programme leader? How effective are these?* 6. *What opportunities are there to consider student performance and learning need that exceed the expectations of Board of Examiners and Boards of Awards and Progression?*	1. *What is my understanding of DO and what it means for my student groups? How this might manifest itself within my classroom?* 2. *Do I know which of my students **are likely** to be vulnerable to DO?* 3. *Do I know which students **are** vulnerable to DO? How do I know this?* 4. *How would I know if a student is not reaching their full potential and are vulnerable to DO?* 5. *What are the opportunities that I create for students to raise concerns about their level of attainment with me?* 6. *What are the outcomes of my reflection?*

Reflected in annual self-evaluation document	Captured in annual programme and departmental reviews	Captured in annual self-evaluation
Forward Planning	*Forward Planning*	*Forward Planning*
1. How are we systematically collating evidence relating to DO?	1. How am I systematically collating evidence relating to DO?	1. How am I systematically collating evidence relating to DO?
2. How are we disseminating this evidence to programme teams?	2. How am I disseminating this evidence to college management and programme teams?	2. To what extent do I engage with the programme team to understand DO more fully?
3. How are we supporting programme teams to act on this information?	3. How am I supporting programme teams to act on this information?	3. How might I contribute to the programme team discourse relating to DO?
4. To what extent do we engage with the wider HE community to understand DO more fully?	4. How is the programme team supported to meet students' unmet learning needs?	
5. How might we contribute to the discourse relating to DO?	5. To what extent do we engage with the wider College community to understand DO more fully?	

Reflected in annual self-evaluation document	Captured in annual programme and departmental reviews	Captured in annual self-evaluation
Pedagogical Practice Related Questions		
1. How do we identity the nature of students' unmet learning needs and how this might contribute to DO? How do we plan to meet these?	1. How do we identity the nature of students' unmet learning needs specific to this programme and how this might contribute to DO? How do we plan to meet these learning needs?	1. How often do I reflect on my own teaching and pedagogical approach in relation to DO?
2. What are the formal mechanisms to embed our consideration of unmet in the College's Quality Assurance and Enhancement Framework and policy structure?	2. How does the curriculum design create explicit opportunities to develop those skills and behaviours that are necessary to engage successfully in study in this programme area? What are the opportunities for staff to explicitly understand and deliver these skills and behaviours?	2. Does my teaching consider the learning needs of all my students? How do I know that it does? 3.

Appendix L (ii)

Differential Outcomes - A Programme Improvement Reflective Framework – exploring expectations tacit and overt
A half day workshop divided into two subsections

2 groups, First Group of Programme Leaders to reflect and answer questions in section one, simultaneously the second group - programme teaching teams work together to explore the questions in section two.
90 minutes,
break 20 minutes.
Then Programme Leaders meet with their teams to discuss their findings compare and contrast ideas. Develop a medium-term plan to address any mattes of concern or ways to enable staff to make their tacit expectations clearer to students

Programme leaders together to discuss and explore their responses to the following questions

Outcome – clearer and shared understanding of the tacit expectations that are placed on students with a view to;

1. *a better shared understanding amongst staff of what our tacit expectations are, and how this might influence student' learning,*
2. *creating greater capacity for staff to identifying unmet learning need*
3. *greater clarity and cohesive communication with students,*
4. *more precise and effective pedagogic interventions.*

Programme Leaders	*Programme Teams*
1. *Do I understand the tacit expectations of my programme/s of study? For example, capacity to hypothesise, tolerate competing theories, self-assessment and self-regulation?*	1. *Do I understand both the explicit and tacit expectations of the modules that I deliver? For example, effective independent reading skills, divergent thinking skills, the capacity to tolerate competing and contradictory theory, the development of own voice/argument.*
2. *Is this an explicit and shared understanding amongst all staff associated with the programmes?*	2. *How do I share these expectations with students?*
3. *What are the ways in which the tacit expectations of HE are communicated to students? How do I know if these are effectively understood by students?*	3. *What mechanisms do I use and how do I know that these are understood?*
4. *Do I understand how tacit expectations influence students' learning and concomitantly their outcomes?*	4. *How might I work with colleagues in other departments to share and develop practice?*
5. *How might I work with colleagues in other departments to share and develop practice?*	

How are we going to;
1. Act on these expectations to make our tacit expectations understood by students?
2. What activities will students participate in to enable greater understanding of our tacit expectations?
3. *How will this influence my teaching/programme management?*

Appendix L (iii)

Teacher Reflection – to be included in the wider reflective-teacher strategy.

Reflective Questions relating to Knowledge Acquisition

What are they key strategies that I use to enable students to acquire knowledge relating to my modules?

To what degree do I reflect on the effectiveness of these?

To what extent do I involve students in the evaluation of these?

Key questions to ask yourself relating reading academic texts

How effective is reading as a knowledge acquisition strategy - for all students?

What barriers might they experience?

What strategies might I use to improve students' engagement with text?

Some matters that you might want to consider.

To what extent are students reading for extant knowledge? What might the impact of this be? Why might students adopt this strategy?

To what degree have students understood the central tenet of the author/s' argument?

To what degree can students make links between their reading and their assessment tasks? What barriers might they encounter? How does this influence my teaching?

To what degree can students challenge the author/s' argument effectively?

Are students synthesising their newly acquired knowledge with their pre-existing knowledge effectively? What barriers are the experiencing? How will you overcome these?

What strategies are students using to evaluate their reading? Are these effective?

What changes might I make to my practice in light of my reflections?

Assessment - Feeding back to students

Do I know how all students perceive my feedback? How do I know?

Do students use and/or understand my feedback? How do I know?

When I feedback to students am I pro-actively considering their vulnerability to DO? How might this influence my approach to feedback?

Developing students' self-assessment and self-regulation skills

Do I understand the importance of student self-regulation?

Do I understand the connection between student self-assessment and self-regulation?

What explicit strategies do I use to facilitate students' self-assessment?

How might I communicate these effectively to students, particularly students who are unconfident?

How might I support students to positively engage with accurate and detailed self-assessment and self-regulation?

What changes might I make to my feedback in light of my reflections?