A hybrid exploration of the impact of summative assessment on A-level students' motivation and depth of learning and the extent to which this is a reflection of the self

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Abstract

Research into what motivates students to learn has been longstanding. To further investigate, a theoretical framework relying on different theories of self was developed to help conceptualise motivation in the context of summative assessment. The aim of this study which focused on A-level students was to investigate how their motivation is related to their perception of summative assessment. The investigation addressed two main questions: “To what extent does post-16 A-level students' perception of summative assessment affect their motivation for learning?” and “To what extent do students’ narratives about summative assessment reflect the role of self in motivation?” Mixed methods were used for data collection and involved using an adaptation of AMS-HS 28, a motivation questionnaire and another questionnaire about perception of summative assessment generated for the purpose of this investigation. A total of 1016 students from 12 Secondary and Further Education settings participated in the questionnaire portion of the investigation. Additionally, 20 face-to-face interviews further explored how students’ perception related to their depth of learning. A main finding from the quantitative analyses was that students’ views about summative assessment are the best predictors of type of motivation adopted above and beyond the demographics and approach to learning variables. In relation to the qualitative analyses, it was found that despite students’ negative perception, summative assessment motivates them to learn. It was also found that summative assessment affects the type of approach students employ in their learning with the surface approach more likely very close to examination time. Further analyses

suggest that how students perceive the impact of summative assessment on their motivation for and depth of learning is dependent upon their sense of self. Implications for practice are fully discussed in the thesis. Future studies on the current topic are suggested to continue to explore not just what motivates A-level students to learn but the alternatives to summative assessment.

Table of Contents

Table of Figures

Table of Tables

Table of Appendices

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Chapter 1 Introduction

What are the causes of students' motivation to learn? The concept of motivation within the educational setting has been widely researched and is claimed to be related to outcomes such as curiosity, persistence, learning and performance (Vallerand *et al*., 1992). These outcomes appear to be important for education thus the huge interest in the research area is not unexpected. In an ideal world, classrooms should be packed with students who are highly motivated. These students are "enthusiastic, interested, involved, and curious; they try hard and persist; and they actively cope with challenges and setbacks" (Skinner and Belmont, 1993, p. 571). In the real world, however, the scenario is likely to be different with classrooms filled with students from diverse backgrounds who possess different levels of motivation. Some may just be there with no intent to join in the activities or when they do, "they just go through the motions" (Ryan and Deci, 2000b, p. 72). This may be because of these students' lack of engagement with the classroom activities, an issue which can be frustrating for the teachers and their students. However, research has shown that the terrain of motivating factors is a difficult one to tread successfully and even more difficult is the attempt to ascertain how these factors interact to affect the behaviour of an individual at a given time and in a given situation (Ohles, 1962; Harlen and Crick, 2003). Therefore, it can be argued that if it seems difficult to identify all the factors that interact to motivate an individual in a given situation, trying to do the same for a class full of learners, all with their unique characteristics, will probably be an uphill task. This is a problem.

One reason why identifying the factors which motivate individuals to behave in a certain way seems difficult may be the lack of agreement among researchers about how to define the concept. Kleinginna and Kleinginna (1981) noted, for example, that while some definitions focus on the internal mechanisms of motivation, others emphasise its functional processes. Ryan and Deci (2000a) have proposed the self-determination theory (SDT) which focuses on the inherent psychological needs of individuals which form the basis for their self-motivation. They have used it to explain different types of motivation that run along a continuum from a total lack of motivation (amotivation) through a full integration of the reasons for a particular behaviour (integrated regulation - extrinsic motivation) to intrinsic motivation. They defined intrinsic motivation as doing an activity for the sheer satisfaction that one gets from it rather than for some discrete outcome. They also defined extrinsic motivation as when an activity is performed in order to achieve some separable outcome. The integrated regulation form of extrinsic motivation shares a lot of qualities with intrinsic motivation, “being both autonomous and unconflicted” (Ryan and Deci, (p. 62). This begs the question whether there is a need to distinguish between the two types of motivation in the first place.

Similarly, Dweck (2000) has conducted extensive research on self-theories and their links to student motivation. Basically, she affirmed that people’s behaviours are influenced by the implicit theories they carry with them all the time which help them to make sense of each situation. An example would be people’s implicit theories about their intelligence which regulate the goals they pursue. As such, a student who believes that intelligence is malleable would be more inclined to persist on a

task longer than one who sees intelligence as a fixed quantity that individuals possess. However, it is not as simple as that because as proponents of the theory have claimed that these implicit theories can be influenced or changed.

SDT and self-theories, with their focus on students' motivation for learning, alongside the concept of "moments of contingency" put forward by Black and Wiliam (2009) which can also be linked to the motivation for learning, form the basis of the framework for analysis of the data collected in this investigation. Moments of contingency focus on the social, cognitive and psychological nature of the interactions within a classroom that affect learning. They refer to those instants in a classroom when the teacher considers the feedback from the students and incorporates that into his/her plan in order to achieve the learning goal. Overall, these theories are important, especially in an educational setting, in order to understand the implicit ways in which students make sense of themselves and their surroundings. They will be useful for understanding some of the factors that motivate students to learn.

Alongside motivation, another popular point of focus within the education setting is assessment, defined as the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences (Weimer, 2002). Formative assessment is one of the main tools which help to determine what progress has been made and where

improvement is needed. This provides feedback both for the student and the teacher. Another main form of assessment, summative, is largely for grading and certification. It is normally used to assess what has been learnt rather than used to determine how to improve learning. However, researchers have presented various arguments about whether there is any need to distinguish between these forms of assessment.

Moneta and Spada (2009) have noted how summative assessments have become the most stressful evaluative context in students' academic life. Moreover, the effect of summative assessment on students has been so bad that one student in Denscombe's (2000) study admitted to having attempted suicide on account of the stress and pressures of her impending GCSE examinations. Despite this type of evidence of the negative effects of summative assessment on motivation and depth of learning (Entwistle and Entwistle (1991); Newstead and Findlay (1997); Newstead (2003)), it is not all doom and gloom for summative assessment as some of its positive aspects have also been documented. Researchers such as Stobart (1995), Hayward and McNicholl, (2007), Seale *et al.* (2000), among others, have found a place for it in the educational system. It has been suggested that summative assessment gives teachers and students something to work towards. Elwood's (2012, p. 503) study also talked about how examinations were important in demonstrating how young people can successfully negotiate high-stakes situations as well as how they are designed to 'push you to the limit'.

Although a lot of research has been carried out on the effect of assessment on learning, far fewer studies have focused on its impact on the motivation for learning. Moreover, there is little research relating to its impact on A-level students (Harlen and Crick, 2002; Torrance and Coultas, 2004). This is despite the assertion by Elwood, (1999) that "the GCE A-level has possibly the greatest social consequences of all the qualifications taken in the UK" (p. 207). This suggests that there may be limited awareness and understanding of how these students view summative assessment and how this perception impacts on their motivation for learning.

Summative assessment has also been shown to have an impact on the approach to learning adopted by a student. The focus here is on the two main types which have been linked to summative assessment – (1) the surface approach which involves a shallow level of information processing and relies on rote learning. (2) The deep approach which involves a more complex level of processing and is often linked with the central argument of the topic at hand, for example when looking at a scientific problem (Marton and Säljö, 1976). There is evidence (Marton and Saljo 1976; Trigwell *et al.* 1999) to show that learners do benefit more from adopting the deep instead of the surface approach. They do achieve higher quality learning outcomes. Researchers such as Madaus (1991), Entwistle and Entwistle (1991), Newstead (2003) have commented on the undesirable effects of summative assessment on the approach adopted for learning with Newstead and Findlay (1997) pointing out that students were more likely to adopt a surface approach closer to examination time. However, there has also been a debate regarding whether it makes sense to uphold one approach to learning whilst putting another down or whether there is a place for

both approaches (Haggis, 2003; Dinsmore and Alexander, 2012). Much research in the areas described above has been carried out on various groups of learners such as primary, secondary and Higher Education but, one group, the A-level students, seems to be understudied. This is despite them being at a very important stage in their lives (adolescence) when important decisions about their future are likely to be made and therefore when they need a lot of support to help them along.

The discourse above suggests that the impact of summative assessment on students' motivation and depth of learning may lead them to not enjoy their experience of learning. Consequently, there is increasing concern that students may be losing out on an enjoyable experience of learning since there is little research to inform professional practice especially at A-level. Also contributing to the lack of positive experience of learning is pedagogy. Teachers have been criticised (Madaus, 1991; Isaacs, 2010) for teaching to the test, a practice bound to affect their students' depth and motivation for learning. Trigwell *et al's* (1999) study showed that teachers' approach to teaching affected their students' approach to learning. For example, they found that teachers who describe their teaching as "an information transmission/teacher-focused approach" (p. 66) are more likely to have students who adopt a surface approach to learning. However, the teachers themselves appear to be in a 'catch 22', no-win situation because whatever they do, students may be seen to be losing out. If they teach to the test, students may fail to enjoy learning; if their primary aim is for their students to enjoy learning which means changing how they teach, students may fail to achieve their grades.

This investigation was conceived following my many years of teaching A-level students (circa 23 years). In all that time what has not ceased to baffle me is how some students are very keen learners whereas others in the same setting seem to remain oblivious to the classroom activities. In my view, the perceived frequent summative assessment endured by this age group may have come at a price. Students seem to loathe it because they link it with all sorts of negative feelings such as the stress brought on by a perception of lack of control and lack of enjoyment of the subjects, all having an effect on their motivation for learning and mode of learning. In Ekwue (2010), it was argued that since many parents, teachers and governments invest time, effort and resources for the benefit of students, the only way that these investments can yield some dividend may be if the students' contributions to the enterprise are recognised. The best way any useful insight can be gained from this enterprise may be to access the students' perspectives so that the knowledge gained can be included as part of the process of learning. Elwood (2012) is in support of this thinking and argues that an initiative like that can become a valuable tool for educational institutions and policy makers in identifying and addressing key issues which affect progress as well as being hugely useful in generating "important changes to students' environment, learning and well-being" (p. 501). The way students perceive summative assessment has been identified as a factor that impacts not only on their motivation but also on their depth of learning, and I have had first-hand experience of observing students over the years when they complain about the unpleasantness of the incessant assessments for summative purposes. These factors have led to the decision to further research into these areas.

The upshot of my project during the Institution Focused Study (IFS) phase of this investigation revealed some surprising, yet interesting findings; the most salient being the fact that despite students' acknowledgement of their negative perception of summative assessment, a majority of them rated its effect on their motivation quite positively. The likely rational interpretation for this peculiar finding seemed to be that the high-stakes nature of A-level examinations rather than students' satisfaction with the process of assessment might be responsible.

This investigation becomes important, therefore, for its contribution to knowledge in this area. It is also an exciting opportunity to progress our understanding of what motivates A-level students. It is equally important that teachers who deal directly with students at this level are aware of the mountain of factors likely to interact in multifaceted ways to affect the meaning that these students make of their classroom experiences. This may lead to the design of pedagogical strategies to take account of most factors which influence these students' motivation for learning.

It was against this background that one of the aims of this research-based thesis (RBT) was to explore other motivational factors and to see whether, in the process of doing that, the surprising result from the IFS would be replicated. Since this initial project involved a small sample of female students engaged in 3 focus group discussions, a larger sample size involving both male and female participants in a hybrid research approach was adopted. The study also considered other relevant demographics such as ethnicity and school type. Ethnicity was focused on because

of the multicultural nature of many educational settings in the country. It is no longer unusual for classes to be made up of students from mixed cultural backgrounds due to families' migration from one part of the world to the other (Maehr and Meyer, 1997). As cultural factors are bound to affect people's self-beliefs, this makes the need for teachers' understanding of the cultural backgrounds of their students paramount if these students are to succeed in learning.

As for school type, research such as that carried out by Meece and Kurtz-Costes (2001) has shown that where an individual is educated makes a difference to the quality of experience gained from that setting. This knowledge makes it essential to find out the extent of the impact of school type on student motivation as well as its impact on their perception of summative assessment.

The main research questions to be addressed by this investigation are:

- To what extent does post-16 A-level students' perception of summative assessment affect their motivation for learning?
- To what extent do students' narratives about summative assessment reflect the role of self in motivation?

The aim of this introductory chapter has been to give an overview of the investigation by briefly outlining why it is being conducted and its importance in the field of knowledge. So far, I have highlighted the reason why motivation and summative assessment are important factors to review when considering students' experiences

of learning. I have also alluded to the fact that the totality of factors that motivate students to learn is embedded in a huge landscape which includes the self. If teachers and all those responsible for student learning are aware of the different ways that learning takes place for different individuals and prepare themselves for the challenges this awareness may present, they may be more equipped when organising the learning environment to take these factors into account. Having said that, it is also important to point out that an awareness of motivational factors may not be enough to make learning happen and that an empirical investigation may be needed to determine what works. For the rest of this thesis, there are six further chapters to outline:

Chapter 2 reviews the relevant literature in order to provide evidence for the relation between student perception of summative assessment and their motivation for learning and depth of learning. For example, it reviews the definitions and types of assessment and motivation as well as measurement of motivation; it also reviews various approaches to learning in relation to summative assessment and motivation. Finally, the review provides evidence for the role played by gender and certain demographics.

The theoretical framework as outlined above will be fully discussed in Chapter 3. It focuses on the important role played by the self in relation to the factors that encourage students to learn and argues that the self is at the heart of motivation. This investigation employs both the quantitative and qualitative methods. By

adopting this hybrid approach, I attempt to take full advantage of the triangulating merits of both approaches whilst offsetting the demerits of using each method by itself. More details about this approach are presented in Chapter 4.

In Chapters 5 and 6 the quantitative and qualitative results are presented respectively. The latter is specifically focused on the main themes that arose from analysing the interview data. For example, the theme of “doublethink” explains the unusual finding, already noted at IFS, that although students dislike summative assessment, it still has a positive effect on their learning. The other main theme, “ego-protective inhibiting behaviour (EPIB)”, explains the mechanism that some students may unconsciously develop which helps them to get through the stressful period of A-level.

Chapter 7 is where the whole thesis is brought together. It starts by highlighting the main findings of this investigation focusing on the contributions of this investigation. It also includes a discussion of the limitations and suggestions for future research. This chapter also focuses on the implications of the findings and the recommendations. It concludes with a section on final thoughts in which I present my reflection on the entire process of this Doctorate in Education (EdD) programme.

Chapter 2 Literature Review

2.1 Introduction

The aim of this review is to begin to gain some insight into the factors that motivate students to learn. As assessment has been linked to the motivation for learning (Seale *et al*, 2000; Greenwood, 2003; Harlen and Crick, 2002), the review will consider evidence for the role of summative assessment on students' motivation to learn. It will look at the evidence for the impact of summative assessment on students' depth of learning and will consider whether some social and cultural factors such as gender[1], ethnicity[2] and parental educational background affect the motivation for learning.

This review will aim to answer the following questions: What evidence is there that students' perception of summative assessment affects their motivation for and

[1] Owing to the ambiguous definitions of gender that exist in literature (Pryzgoda and Chrisler, 2000), the term as used in this investigation signifies the sex of the individual, their biological status of being boy/girl, male/female, rather than their culturally determined attitude and behaviour as male or female.

[2] Information originally gathered from the questionnaire in this investigation provided ethnicity information for some of the students. However, because the sample size within some groups was extremely small for any meaningful statistical computation, ethnicity was collapsed to two groups on race lines that is, White and non-White. This is purely for the sake of simplicity. Following the distinction made between race and ethnicity which was noted by Lin and Kelsey (2000), the use of ethnicity (what an individual identifies him/herself as in terms of their shared cultural heritage) in this investigation connotes race (a superficial classification based on having specific characteristics such as skin colour).

approach to learning? In other words, how clear cut is the relationship between the perception of summative assessment and motivation for learning? Is this perception moderated by characteristics of the individual such as gender, ethnicity, educational/social and cultural background?

To address these questions, I will start by outlining what we know about assessment, its different types, the differences between them and how assessment affects learning, including negative and positive effects. I will then briefly discuss motivation, its many definitions and the difficulties associated with defining and measuring the concept. The different types of motivation including amotivation will be outlined. Also to be outlined will be some theories/concepts – self-determination, entity/incremental theories and "moments of contingency" – which will form the basis of the analysis of the data obtained in this investigation. Finally, the evidence for how students' perception of summative assessment affects their motivation for learning will be considered. These discussions will be linked to A-level students and will question whether there is evidence of the impact of gender and other social and cultural characteristics on the motivation of this group to learn.

2.2 What is Assessment?

Assessment is one of the most important activities in any classroom as it provides a sort of progress report on the activities of both teachers and students. Weimer (2002) defines it as the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what

students know, understand, and can do with their knowledge as a result of their educational experiences. Rust (2002) defines it as making a judgement, identifying the strengths and weaknesses, the good and the bad, and the right and the wrong in some cases.

Two of the main formulations of assessment are formative and summative assessments. Formative assessment (FA) has been described variously as relating to “where pupils are in their learning in terms of specific content or skills” (Harlen and James, 1997 p. 370); “assessment which is mainly intended to help the student learn” (Rust, 2002 p. 1). According to Newstead (2003) the aim of formative assessment is fundamentally to help students by providing feedback on their performance which will help them develop and learn. Although these researchers focused on how formative assessment relates to students, Ramaprasad (1983) sees it as having some relevance to both the teacher and the student. It helps the teacher to reflect on the effectiveness of aspects of pedagogic content and specific teaching techniques. Formative assessment is about present understanding and skill development in order to establish which way to go. Knight (1995) sees its purpose as simply that of improvement of learning. However, these descriptions of formative assessment fail to consider the complex nature of the term which researchers such as Bennett (2011) & Wiliam (2011) have examined. A critical consideration of the concept by these researchers suggests that there is a lack of clarity in the definition of the term. They regard it as problematic to describe formative assessment in simplistic terms such as seeing it as either a test or a process, thereby ignoring that

it could be described as a test and a process since neither attribute can make the term effective without the other. In Bennett's words,

> 'Process' cannot somehow rescue unsuitable instrumentation, nor can instrumentation save an unsuitable process. A strong conceptualisation needs to give careful attention to each component, as well as to how the two components work together to provide useful feedback (p.7).

Unlike formative assessment, it has been proposed that summative assessment (SA) takes place at the end of episodes of teaching (units, courses, etcetera.) for the purpose of grading or certifying students (Black and Wiliam, 2003). According to Harlen and James (1997), it is concerned with progress towards the "big ideas" by which they meant the wider application towards which students should make progress rather than with the learning in specific contexts. "Big ideas" relate to how initial acquisition of knowledge lays the foundation which supports future learning activities and encourages lifelong learning. Its aim is to achieve a summary mark which captures a student's performance relative to that of other students (Newstead, 2003). However whether what is captured is real, in terms of what has actually been learnt, is debatable given that there are numerous factors that affect students' performance in these tests like anxiety, test familiarity and so on. It has also been claimed that summative assessment encompasses not just formal testing but also all aspects of coursework assignments or portfolio completion that contribute to final grading and pass or fail decisions (Torrance and Coultas, 2004).

There seems to be some conflict in relation to the purposes of both formative and summative assessment as noted by Newstead (2003), for example, whilst formative assessment encourages students to try out new things in order to learn from their

mistakes, summative assessment encourages them to make as few mistakes as possible in order to gain good grades. This would suggest that whilst summative assessment has an important role in the overall educational advancement of pupils, it does not make the same contribution to everyday teaching (Harlen and James, 1997). However, this suggestion can be countered by the argument that summative assessment can have a supportive function in learning (Bennett, 2011). In fact, it can be argued that it makes no sense to distinguish between FA and SA because of the "powerful interaction" between them (Biggs, 1998; p.106) – it is possible to use summative assessment for formative purposes on occasions, in the same way that formative assessment can sometimes be used in a summative way. An example would be when a test result exposes a student's lack of understanding or when it shows that a student has achieved mastery.

Whilst some researchers argue that formative and summative assessments are the same but vary in terms of purpose and function (Harlen and James, 1997), others like Trotter (2006) are of the opinion that they are fundamentally different phenomena with different assumptions and different methods. Trotter claims that summative assessment can be linked with the concept of high-stakes assessment where the result of summative assessment can affect the student's future in some way and the greater the impact, the higher the stake. Natriello (1987) in his review classified the full range of assessment purposes as certification, selection, direction and motivation while Crooks (1988) believed that the purpose of formative assessment is for 'classroom evaluation', that is to provide feedback for the improvement of learning. It seems, therefore, that there is no agreement in the

relationship between the two concepts as the distinction between them seems to be blurred. Consequently, Colley and Jarvis (2007), like Biggs above, advised that it is more helpful to understand that attributes of both forms of assessment are intertwined in learning situations,. Hence there is no need to place more emphasis on summative assessment or teachers' efforts with the formative assessment will not be recognised. Nonetheless, the impact of summative assessment on learning continues to be investigated. As the emphasis of this study is on SA, the rest of this review will now focus on that type of assessment.

2.2.1 Negative effects of summative assessment

There has been an increase in the use of assessment for summative purposes, in recent times, both in the USA and England which has led to the increasing concern that the use of these tests whose aim is for grading and certifying students may have a negative impact on their motivation for learning. Black and Wiliam (1998) noted the suggestion from international research evidence that summative assessment has increased and has a negative impact on the motivation for learning. Likewise, Elwood (2012) documented a House of Commons (2008) criticism of the UK as having the most assessed children in Europe. In addition, the effect of summative assessment on students has been so bad that one student in Denscombe's (2000, p. 365) study had attempted suicide on account of the stress and pressures of her impending GCSE examinations.

> Tracey: Just before my overdose, one thing that contributed to me taking it was school. I mean I had teachers all running round me, going 'You've got your mocks! You've got your mocks! If you don't get good grades you won't go

> to college'. And I just sat there thinking 'I won't get into college, I won't get into college'. And I just got really stressed really easily and that was one of the reasons, because of all the stress of exams and stuff.

(School 08, focus group 01, six females, all White, 23 April 1997, Tracey [female, White]).

Equally, Kniveton (1996) noted the case of an A-level student who committed suicide because she achieved less than she expected in her examinations. However, the speculation here is that there may be other unknown factors (such as those acknowledged by Assessment Reform Group (ARG), 2002) which, in combination with examination pressures, played a role in these two cases to lead to the tragic outcomes. ARG found a strong evidence for the negative impact of testing on pupils' motivation which varied in degree with the pupils' characteristics and with conditions of their learning. It found that tests resulted in reduced self-esteem of low achievers particularly when the stakes are high. Although the focus of this investigation is not on the impact of tests on ability levels, ARG's finding is remarkable in the way that it adds to the consequences of high-stakes testing.

Emphasising another area which can be affected by summative assessment, Newstead and Findlay (1997) acknowledged how examinations fail to reward desirable approaches to learning. They noted that summative assessment may encourage surface learning which depends on rote learning and is difficult to transfer to other contexts as opposed to deep learning which allows students to apply skills acquired in novel situations. This is supported by Madaus (1991) who also argued that preparation for high-stakes tests usually places too much importance on rote memorisation and cramming by students and drill-and-practice as a teaching

method. Similarly, Entwistle and Entwistle (1991) found that as examinations got nearer, the students in their sample lost the motivation for deep learning and instead focused just on learning for the purpose of passing the examination. Also, Newstead and Findlay (1997) found that deep approaches to learning declined rapidly and surface approaches increased as examinations drew nearer. In addition, Newstead (2003), focusing on the actual effects of summative assessment on students, concluded that it does a lot to encourage undesirable learning but very little to promote desirable learning. However, viewing deep and surface learning in this way ignores the depth of research which has gone into the area with the conclusion that it is unhelpful to create a dichotomy between the two types of learning. For example, Maclellan (2001) argued that if students perceive a need to understand the material in order to successfully negotiate the assessment task, they will engage in deep learning but if they perceive the assessment instrument to require rote learning of information, they will be unlikely to engage with the higher level objectives which may well have been intended by the programme of study. This point is further discussed in section 2.4 below.

Crooks also noted some of the undesirable effects of summative assessment which include:

> reduction of intrinsic motivation, debilitating evaluation anxiety, ability attributions for success and failure that undermine student effort, lowered self-efficacy for learning in the weaker students, reduced use and effectiveness of feedback to improve learning, and poorer social relationships among the students (1988, p. 468).

However, these effects may not relate to people equally as a result of individual differences and so generalisations must be made with caution. In addition, Crooks claimed that strong emphasis on the grading function of evaluation has also led to overuse of features normally associated with standardised testing, such as formal testing conditions, speeded tests with strict time limits, a restricted range of item types, and emphasis on the overall score rather than what can be learned about strengths and weaknesses.

The high-weight evidence from the Harlen and Crick's (2002) systematic review of the impact of summative assessment on students' motivation for learning found, among other things, that when the outcome of assessment is high stakes, it affects teachers' method of delivery which may impact on the self-esteem of students who are not inclined to learning when activities are highly structured, for instance. Harlen and Crick also found that students who do not like summative assessment display high levels of test anxiety, especially the girls. In addition they found that an education system that promotes evaluation ends up with students who are strongly orientated towards grades and social status. The exposure above of the negative effects of summative assessment on students' motivation for and their depth of learning justifies the focus of this research.

2.2.2 Positive effects of summative assessment

As bleak as the findings from some of the above research may seem, there is still a place for summative assessment in the educational system and its many positive aspects have also been documented. Some research (Hayward and McNicholl, 2007; Seale *et al*, 2000) has found a positive impact of summative assessment on the motivation for learning. Also Stobart (1995) has argued that 'assessment imminence' is a great spur to learning, to pulling ideas together, to thinking around and conceptually organising the disparate material taught throughout a course. Speaking of the positive influence of examinations on their learning, students in Elwood's (2012) study talked about how examinations were important in demonstrating how young people can navigate high-stakes situations effectively and also how these examinations were intended to 'push you to the limit' (p. 503). According to Madaus (1991), summative assessments, such as the A-level examinations, not only provide tangible incentives for students, they give their teachers a sense of purpose. They are generally accepted by society as they promote some measure of homogeneity in educational standards and practice. Therefore, assessment of knowledge through some standardised means should be encouraged although research should focus more on ways of reducing its negative effects on students' motivation for learning.

In sum, assessment, whether for summative or for formative purpose, ought to be seen as fundamental for information gathering on students' progress. Relying too much on one or the other makes the reality of student achievement in any classroom

unclear or unattainable. However, the emphasis in this investigation is on summative assessment and its impact on students' motivation and in this section its negative and positive effects have been discussed. So far a lot of mention has been made of the concept of motivation without actually defining what it is, its many theories and types as well as how it relates to summative assessment. The next section will address these points.

2.3 Definitions of motivation

Helping students to succeed is one of the objectives that most teachers aim to achieve. However, the journey towards this goal is not always straightforward and the teacher may have to grapple with the challenge of getting some students interested in learning. Student motivation has been and will always remain at the heart of teaching and learning (Maehr and Meyer, 1997). Therefore, understanding it will help illuminate students' differential attitudes to school work. Unfortunately, motivation is one of those concepts in psychology that is difficult to define. Even motivational psychologists are not agreed on how it should be defined (Kleinginna and Kleinginna, 1981). These researchers considered 102 definitions or criticisms of the concept from a variety of sources in order to highlight the terminological confusion. For example:

- John Dewey, 1886

"A desire when chosen becomes a motive." (p. 273)

- Theodore C. Ruch, 1962

"Motivation or drive is a neural process which impels the organism to some action or goal, the attainment of which results in drive reduction" (p. 274)

- Jozef Cohen, 1970

"Motivation is the inner thrust behind behaviour." (p. 276)

Contemporary definitions are as disparate as these long established explanations of this complex concept. For example, Pintrich and Schunk (2002) defined it as a force that energises, sustains, and directs behaviour toward a goal. The question is: where does this force come from? Is it internal or is it external to the individual? Secondly, is this force measurable? Similarly, Ryan and Deci (2000b, p. 69) describe the nature of motivation as concerning "energy, direction, persistence and equifinality – all aspects of activation and intention".

To further demonstrate the difficulty with generating a precise definition of motivation, Murphy and Alexander (2000) argued that researchers try to define motivation without noting any limitation, as though motivational constructs were things we are entirely conscious about and can simply access, and are therefore easily testable. If this argument is correct, it may be difficult then to accurately determine what motivates people and so it should follow that even the most carefully designed research instrument may not be able to correctly reveal the profoundly held, all-encompassing motives, needs or drives of individuals. This suggests that people's motives, needs or goals may not be explicit knowledge at all. In addition, it has been argued (Ryan and Deci, 2000a) that motivation is hardly a unitary

phenomenon and should not be seen as one. Despite this sense of mission impossible, research into motivation has continued to be of immense interest to researchers. This trend is most welcome in the field of education, where teachers are constantly searching for the factors that can motivate their students. Therefore, it can be argued that rather than less activity in this field of research, more should be encouraged as it is better to have access to a range of factors which influences students' motivation to learn than not at all. This way, researchers can gain a lot more insight into this aspect of human behaviour. Attention is now turned towards the many types and theories of motivation.

2.3.1 Types and theories of motivation

Individual motivation varies in quantity and style. The type or orientation of motivation people have determines the quality of the action they take. Self-determination theory (SDT) is a theory of human motivation. It is the process of deciding how to act on one's environments and developed from the early research into motivation such as the work done by Deci (1971). According to this theory, having choices and making decisions is intrinsically motivating, and people would not be content if all their needs were satisfied and they were denied the freedom to make choices. Self-determination theory assumes that people have three basic psychological needs: competence (to feel capable of performing certain tasks), autonomy (to feel a sense of self-directedness) and relatedness (to feel connected and accepted within a larger social network) (Deci and Ryan, 2000). Deci and Ryan also described three types of motivation – intrinsic, extrinsic and amotivation. Both

SDT and the three types of motivation are discussed further in Chapter 3. Briefly, intrinsic motivation represents being engaged in a task for the sake of it; extrinsic motivation is when behaviour is undertaken for external rewards and amotivation is a state of total lack of desire to engage in an activity either for an intrinsic or an extrinsic purpose.

Though intrinsic and extrinsic motivation may be presented as distinct from each other, they ought not to be seen as dichotomous. This view of a binary division between the two concepts stemmed from early research (Festinger, 1957; deCharms, 1968; Harlow *et al.,* 1950; Fester and Skinner, 1957; Morse, 1966) in the area as noted by Deci (1971). Their findings were inconsistent suggesting that external interventions could weaken or enhance intrinsic motivation although the evidence on which this conclusion was reached was not substantial. Deci carried out a series of laboratory and field experiments to investigate the effect of external rewards on intrinsic motivation. He found that the seeming contradiction in the findings of previous research could be reconciled by considering the nature of the rewards given. Monetary rewards, he claimed, undermined intrinsic motivation whereas verbal rewards such as praise enhanced it (the over justification effect). This is because

> when external rewards are given for an intrinsically motivated activity, the person perceives that the locus of control or the knowledge or feeling of personal causation shifts to an external source, leading him to become "a pawn" to the source of external rewards (1971, p.106).

However, these experiments are not without some criticisms. One of the experiments (Deci, 1971) involved a small sample of psychology students for whom non-participation in the investigation was not an option as they would be fulfilling a course requirement by taking part. This is a criticism because apart from the difficulty of extrapolating the results to a larger group, it is doubtful that the students could have consented to participate in the experiments had it not been made compulsory. This may be considered unethical. Years later, following Cameron and Pierce's (1994) contrasting finding from a meta-analysis which showed that external reward had no effect on intrinsic motivation, Deci, Koestner & Ryan (1999) conducted yet another meta-analysis of 128 studies and reviewed 4 previous meta-analyses of this literature. They still found evidence suggesting that in the main, tangible rewards weakened intrinsic motivation primarily because they inhibit an individual's ability to self-regulate. Nonetheless, Hidi & Harackiewicz (2000) argued that despite the compelling finding, it was too soon to conclude that all types of external rewards were detrimental to intrinsic motivation especially because the studies included in the meta analyses focused on the effects of external rewards on relatively short term and relatively simple activities. Perhaps if the design of the studies was longer term and involved more complex tasks, the enduring effect of external rewards on intrinsic motivation could have shone. The two types of motivation could exist side by side according to Hidi and Harackiewicz and even Ryan & Deci (2000a) also argued the pointlessness of dichotomising the two types of motivation positing that extrinsic reward may be important when there is a lack of initial interest in the topic/task. Unfortunately, the emphasis on intrinsic motivation as the better form of motivation has meant that extrinsic motivation was regarded as the

bad form and was detrimental to students' motivation. This has resulted in the reluctance to explore its usefulness as a motivator of academic performance. For A-level students, this means that rather than teachers focusing mainly on the ways to get students intrinsically motivated, they should equally be considering the positive aspects of the separate effects of both types of motivation.

Similarly, Ryan and Deci support the importance of understanding the different types of extrinsic motivation and what triggers them as they may become useful when intrinsic motivation fails. It seems, therefore that intrinsic motivation cannot supply all the relevant ingredients required for students to learn and sometimes what starts off as extrinsic can end up as intrinsic. This implies that it is likely that a student may not be intrinsically motivated all the time.

The difference between extrinsic and intrinsic motivation can also be compared to individual and situational interests discussed by Hidi and Harackiewicz (2000). Individual interest is thought to be relatively stable over time and is partially a function of individuals' preferences as well as features of the task. In comparison, situational interest focuses purely on the aspects of the learning environment and may be short term or long lasting. In both cases, in the absence of intrinsic motivation or individual interest, external motivation or situational interest might be developed into something more long lasting. However, Seale *et al.* (2000) argued that rather than focusing on which of the motivation types works best, thereby ignoring the complexity and dynamism of motivation, it may be easier to

acknowledge that different learning tasks may call for different types of motivation, depending on the circumstances in which the student is learning.

There are other theories of motivation of interest to this research study. Seifert (2004) noted four contemporary theories of academic motivation which seek to explain students' behaviours in academic settings. These are self-efficacy theory, attribution theory, self-worth theory and achievement goal theory. Other theories are behavioural–theories and cognitive theories which include self-determination theory previously outlined. Behavioural theories focus on changes in behaviour as a result of environmental experiences. Behaviour change relies mainly on the principles of reinforcement and punishment such that a student who receives a high grade or a constructive comment from a teacher is likely to maintain or improve in future. However, to view motivation as simply dependent on environmental experiences seems to be a very mechanistic way of looking at it and fails to recognise the importance of cognitive factors in the process. For example, belief in one's ability to accomplish a task may play a more significant role than mere rewarding of an individual's behaviour.

The cognitive theories of motivation counter the criticisms of the behavioural explanations as they focus on learners' beliefs, expectations and needs for order, predictability and understanding. One example of these theories is achievement motivation which focuses on an individual's need for achievement. Achievement motivation was first proposed by David McClelland and is defined as motivation in

situations in which an individual's competence is at issue (Nicholls, 1984). Also Rabideau (2005) defined it as the need for success or the attainment of excellence. He stressed that achievement motivation is based on reaching success and achieving all of our aspirations in life. McClelland's attention was focused on the differences in human action for which the main explanations were the causes of motivation. For example, students making choices and persisting with their tasks, leaders accepting or avoiding risky alternatives (Maehr and Meyer, 1997). It is believed that understanding achievement motivation means understanding the different goals that individuals bring to the achievement setting (Grant and Dweck, 2003).

Two of these goals are identified as performance and learning goals[3] (Ames and Archer, 1988). Although researchers are not agreed on the best definitions, the former is where the purpose is to validate one's ability or avoid demonstrating a lack of ability whereas in the latter the aim is to acquire new knowledge or skills. Of these two types of goals, performance goal based on outcomes as measures of ability was shown by Grant and Dweck, (2003) to produce a vulnerability to helplessness and debilitation after a setback or negative feedback. This was particularly evident in cases where current perceptions of ability were low. This means that when the goal is to confirm ability and individuals do not believe they can accomplish this, motivation and performance tend to suffer. This resonates with the principles of

[3] These goals have also been referred to as ego-involved/ability goals and mastery/task goals respectively.

self-theories discussed in Chapter 3 which focus on how these theories determine individuals' levels of motivation.

A distinction is also made between performance-approach goals and performance-avoidance goals. In the first instance the focus is on attaining competence relative to others. For example a positively motivated student may move towards good grades and teacher approval (Frymier, 1970). In the second instance the focus is on the avoidance of failure relative to others. A student may shy away from a task based on its perceived level of difficulty. He or she may focus on the minimum effort in the hope of achieving desired results. Likewise, a distinction between mastery-approach and mastery-avoidance goals has been made. Whereas mastery-approach refers to endeavouring to learn, mastery-avoidance refers to endeavouring to avoid learning failures (Senko *et al*. 2011). According to Rabideau (2005), task-involvement activity usually results in challenging attributions and increasing effort (typically in activities providing an opportunity to learn and develop competence) than in an ego-involvement activity. Some researchers such as Rogers (1998) have linked performance goals to extrinsic motivation and learning goals to intrinsic motivation. They noted how research has considered task or learning goals more motivationally superior to ego or ability goals because they lead to more effective study and learning practice.

On the other hand, learning goals with their focus on understanding and growth were shown to facilitate persistence and mastery-oriented behaviours in the face of

obstacles, even when perceptions of current ability might be low (Grant and Dweck, 2003). Individuals with performance goals will normally have preferences for tasks that are easy, will withdraw their effort in the face of failure and have a decreased enjoyment for the task they are engaged in. However, those with mastery goals have preferences for moderately challenging tasks, will persist in the face of failure and tend to have greater enjoyment for the task they are engaged in (Rabideau, 2005). Like both types of motivation, it is suggested that individuals can have both types of goals. Therefore, although these two types of goals are presented as different, they tend to go hand in hand. Increases in one type can lead to decreases in the other although, as Senko *et al.* (2011) posited, this may be easier said than done as both goals differ a lot in terms of content.

It is obvious from the foregoing that motivation plays an important part in the experiences that learners take away from the learning setting. How assessment in general, and summative assessment, in particular, play a part in motivating learners or indeed the interaction between motivation and assessment has been documented. Crooks (1988), for example, noted how too much emphasis is placed on the grading function of assessment with too little on its role in helping students to learn. He also noted how this emphasis has led to undesirable consequences for some students, reducing their intrinsic motivation whilst increasing their levels of evaluation anxiety.

2.4 Approaches to learning

Although much of the previous paragraphs have used deep and surface approaches in describing the findings from various literatures, this section focuses on the characteristics of the concepts. According to Prat-Sala and Redford (2010), students who adopt deep-level processing will always aim to make a link between their extant knowledge and any new information they are interested in learning[4]. On the other hand, when they adopt the surface learning approach, the aim is to extract superficial details from the material they are interested in learning. They use rote memory processing which enables them to recall verbatim the information they are required to learn. A third approach to studying is the strategic approach which is characterised by those students whose intention is to maximise efforts in order to obtain the highest possible grades (Moneta and Spada, 2009). The strategic (maximising effort) approach, originally identified by Entwistle and Ramsden (in Moneta and Spada) refers to:

> a dual focus on comprehension learning and operation learning that enables students to flexibly direct their cognitive efforts in specific contexts, and requires students to self-regulate, to monitor their progress and to manage their effort (2009, p. 664).

According to Prat-Sala and Redford (2010), students who adopt this approach are not just well organised, they have good time management and a positive attitude towards their studies. In addition, they are also attentive to signals from their

[4] To be interested in learning means to be engrossed in the learning activities because of the value attached to such activities and/or because of the positive feeling one experiences from involvement in the tasks. According to Eccles and Wigfield (2002), this interest can originate from the individual or it can arise from the situation.

lecturers regarding the likely examination topics and how marking will be done. The main difference between this and deep and surface approaches is that the identification of 'deep' and 'surface' approaches originated from research which analysed the meaning gained from reading text whereas the 'strategic' approach' originated from research that had more to do with everyday situations; therefore it more appropriately describes an approach to studying (Morgan, 1993 in Bradford, 2004). Hence the strategic approach comes across as the ideal approach to studying, giving the individual the control to manage their effort whilst monitoring their progress.

Moneta and Spada (2009) extended the work done by Entwistle (2001) and considered the relationship between motivation and studying i.e. whether people's general tendency to be either intrinsically or extrinsically motivated across situations and times affected their approaches to studying. In terms of the relationship between the type of motivation and approach to studying, they argued that because:

> intrinsic motivation views performance indicators such as grades as performance feedback (i.e. cues to personal progress and mastery) rather than as ego-involving rewards or punishments, it should foster flexible balance between interest focus and assessment focus and hence a strategic approach to studying (p. 665).

On the other hand, they also argued that since extrinsic motivation energises behaviour by laying emphasis on ego-involving expectations of success or failure, it is likely to diminish an individual's capacity to focus on a task. As a result, extrinsic motivation promotes the surface approach to studying.

One of the findings from Prat-Sala and Redford's (2010) study into the interplay between motivation, self-efficacy and approaches to studying recorded that surface approach correlated negatively with the intrinsic subscale of their research instrument. It also correlated positively with its extrinsic subscale, suggesting that students adopting the surface approach were likely to prefer non-challenging situations. Although this study found support for previous studies, its sample had a disproportionately larger number of females (140) when compared to the number of males (23) and so it is possible that this result may have been skewed due to a gender effect. Similarly, the sample consisted of only Psychology students within a Higher Education setting and it may be that recruiting other students may produce different outcomes, for example non- Psychology or A-level students.

In the study by Hardré *et al.* (2006) involving Taiwanese students, they found, among other things, that those with preference for deep thinking and complex questioning and those who feel more capable are more intrinsically motivated. These students put more effort into their education or learning. Hardré *et al*. made a link between these findings and learning goals since the desire to know and the desire to understand underpin deep processing of information which leads to the enjoyment of learning.

Taking all of the above into consideration, Dinsmore and Alexander (2012) questioned the assumption by some that deep processing promotes stronger learning outcomes while surface processing promotes weaker learning outcomes.

Their search for explanations focused on the exploration of four areas: conceptualisation, operationalization, situational factors and model specification of deep and surface processing. Their findings revealed a lot of inconsistencies and ambiguities leading them to wonder whether a best approach, surface or deep, for students actually exists. Consequently, they called for an examination of when, where, what and for who surface processing, deep processing or a combination of the two can be used to learn more effectively rather than focusing on which of them is more effective.

2.5 Summative assessment and motivation for learning

"Motivation determines and is determined by the process and outcomes of learning" (Little, 1994, p. 201). This implies that care must be taken in managing the learning process including the way learning is assessed. Some of the negative effects of summative assessment on students' learning are highlighted in section 2.2.1. According to Black and Wiliam (2003) the frequent experience of testing for summative purposes can have unwanted impact on students' motivation for learning. The reason for this may be that when there are so many assessments, the feedback may take a while, causing students to lose interest in the process of learning (Seale *et al.,* 2000). Endorsing the negative effect of testing on motivation, Neil argued that high-stakes testing narrows curriculum and dumbs down instruction. He also claimed that:

> it causes students to turn off, tune out, and often drop out; it induces schools to push students out; increases grade retention; propels teachers to leave; and inhibits needed improvements. In the end, high-stakes testing will hurt

> students—particularly those students who most desperately need better schools (2003, p. 45).

It has been claimed (Harlen and Crick, 2003) that summative assessment promotes extrinsic motivation. Seale *et al* (2000) also found that where students are more concerned with grades, they are judged to be too extrinsically motivated hence they are often labelled as "assessment driven". Seale *et al*. carried out a survey to investigate the influence of varied assessment programmes on students' motivation to learn in an undergraduate therapy course. They found that the range of assessments has a motivating effect on the students' learning. They also found that the following four key factors associated with assessments influence student motivation:

1. Perceived relevance of the assessment – whether the assessment related to skills needed on placement.
2. Assessment content – whether students like the content of the course.
3. Enthusiastic lecturers – whether course content is delivered in imaginative ways, and
4. Group influences – referring to 'group shifts' in motivation.

Seale *et al.'s* (2000) study employed an unvalidated questionnaire, the contents of which were based on the researcher's observations. The pilot sample, second year students, was different from the actual sample, third year students and so there could be some discrepancies in the results as the characteristics of these two groups might be different. Seale *et al.* might have introduced more variables into the comparison. In addition, it is doubtful what the researchers were trying to achieve by asking students to cast their minds backwards or forwards when answering some of

the questions. Either way, the results may not be trusted completely. In the first instance, recalling an experience after it has come and gone may be liable to some inaccuracies and asking people to anticipate their experience is not the same as actually living that experience.

2.6 Measures of Motivation

Previous sections have outlined definitions, types and theories of motivation. However, one of the significant questions raised by the focus on motivation for learning is whether or not motivation can be satisfactorily measured, and if not, what other sorts of evidence would be relevant (Torrance and Coultas, 2004)? In a review that examined the academic motivation of college and secondary school students Moen and Doyle (1978) noted that despite the importance of motivation in ensuring progress and satisfaction among students, few pencil-and-paper instruments measuring academic motivation had been developed. They also noted that not only was there little agreement among the researchers on how to develop such measures, but that the researchers utilized different strategies. Furthermore, only a few of these researchers referred to what others in the same field were doing, thereby calling the validity of such instruments into question.

Since Moen and Doyle's (1978) review, other scales for measuring levels of motivation amongst students have been developed such as the Academic Motivation Scale (AMS). This scale, based on the principles of self-determination theory, was originally developed in French by Vallerand *et al*. (1992) and was known as l'Échelle

de Motivation en Éducation (EME). They later translated it into English in an investigation to achieve cross-cultural validity. This is a 28-item inventory and contains 7 subscales which assess three types of intrinsic motivation (IM). They are IM to know, to accomplish and to experience stimulation and three types of extrinsic motivation (EM) which are external regulation, introjections and identified regulation, as well as amotivation. These subscales are described in detail in Chapter 3.

Researchers such as Brouse *et al.* (2010) and Hegarty (2010) have successfully used this scale in their investigations, confirming its psychometric properties (See section 4.8.1 of Chapter 4 for details of the AMS psychometric characteristics as presented in Vallerand *et al.*, 1992). In fact, Hegarty made a note of the fact that other measuring instruments such as Finney's (2004) Achievement Goal Questionnaire and Archer's (1994) Mastery, Performance and Alienation Goal Scale have failed to gain the recognition and validation that the Academic Motivation Scale had enjoyed in various studies. Hegarty also noted that the AMS has been widely used in the United States, Canada and Europe. The AMS is the only motivation scale that assesses all the subtypes identified by Ryan and Deci and the only one that assesses motivation at the post-16 level (Vallerand *et al*., 1992).

2.7 When teachers focus on examinations

As mentioned previously, a lot of research has been carried out on the effect of assessment on learners' motivation which has focused on its negative impact but few studies focused on post-16 A-level students. Moni *et al.,* (2002) investigated

Year 8 Australian students' perceptions of literacy assessment processes and practices. The data they collected included the students' previous experiences of assessment in primary school. This investigation highlighted the negative feelings experienced by the students on account of the frequency and volume of such assessments. Another weakness of frequent assessments is the danger that assessment becomes dominant throughout the course, rather than towards the end of it (Rodeiro and Nádas, 2012). Findings from Ekwue (2010) endorse these negative feelings which are exacerbated by the role teachers seem to play in the process. It appears, as alluded to by Madaus (1991) in relation to the effects of high stakes examinations on students that the aim of teaching is no longer to help students acquire the skills for lifelong learning but is increasingly aimed at helping them acquire mastery of examination techniques. ARG (2002) reported the constricting effect on the curriculum of external tests which places great emphasis on the subjects being tested to the detriment of creativity and personal social development. However, teachers should not take all the blame as made clear below.

Reardon *et al.* (2010) argued that high stakes examinations can prompt certain behaviours among schools and teachers. They noted the example of a school in Texas that employed the system of "educational triage" which allowed teachers to classify students as "safe cases", "hopeless cases" and "cases suitable for treatment" (p. 501). This system permitted teachers to channel specific resources where needed in an effort to ensure that their students succeeded. At A-level, teachers' measure of success appears to be also driven by summative assessment.

The second year AQA (A) Psychology specification is designed in such a way that the teacher may suffice by teaching the minimum, then supplement with some intensive coaching on examination techniques which enable his or her students to still achieve top grades. In so doing, the examinations may tend to prescribe the shape of the curriculum rather than the curriculum shaping the examinations, so much so that performance at these examinations tends to be perceived by all (students, teachers and parents) as the main point of education (Madaus, 1991). This trend is driven by the ever increasing pressure on schools and teachers for a good position in the league tables. The government's central control of the curriculum leaves teachers without the scope for introducing creativity in their styles of teaching (Isaacs, 2010).

In defining classroom motivation, Brophy (1983) focused on valuing the processes of learning along with the outcomes. She made the point that while most studies of motivation involved single brief encounters with the individuals studied, students attend school for nine months of a year for 12 years or more. So they may occasionally take satisfaction in being pushed to their limits, but they understandably do not want to be placed into this position routinely. Similarly, frequent assessment is not liked by students, although they realise it is a good way to find out how much they know.

Brophy (1983) proposed that in an ideal world and for students to be motivated to learn, they should not be distracted by anxiety, fear of failure and other things. They

should value learning in general and their current learning in particular. In other words, students need to be relaxed and task oriented and not tense and ego oriented, that is, oriented toward their performance with reference to externally formulated standards of excellence. Unfortunately, A-level students do not function in an ideal world and this is not the picture presented when they are faced with too many examinations and the stakes are high. To Brophy, motivation to learn is about the quality rather than the quantity of knowledge learnt. Students should focus on and value a task because the knowledge or skill that it teaches will be needed in their present or future lives outside of school or just because they like what is being taught rather than simply because of some other external reward.

Brophy's (1983) criticism of most research on motivation is that it typically involves studies of free choice behaviour in play situations. School is certainly not a play situation for A-level students. It involves compulsory activities which students are expected to actively participate in because of an eventual teacher/external assessment. Besides, academic motivation researchers often come from differing theoretical orientations which means that their conceptualisation of the construct would be different (Bong, 1996). One implication of these criticisms is that they ought to be taken into account when considering student motivation.

2.8 Students' perception of summative assessment

As noted previously, students' contributions to their learning are an important element of the process of learning. There is a need to understand how they feel

about the assessments they are subjected to and how this feeling may be affecting their motivation for learning. There is no doubt that a student's perception of a learning task determines willingness to participate. In this case, the way students perceive summative assessment will determine how much effort they put into ensuring success. Many students express negative experiences of summative assessments although Macdonald (2002) has argued that examination may not be the problem but students' perception of its role may be. Kniveton (1996) carried out a study to examine undergraduate students' perceptions of continuous assessment and examinations with specific attention to the influence of the age and gender variables. The methodological approach was quantitative and involved the use of a questionnaire which comprised closed (multiple choice) and open ended questions. The analysis of the data showed that students' reactions were affected by the gender and age factors (young = 19 – 23; mature = 23 – 50). It was found that mature males and younger female students saw continuous assessment[5] more positively than did younger males and mature female students and vice versa for examinations. When students were asked to say how much of their overall grade should be based on continuous assessment, the average percentage for the whole sample was 51.95 with a similar percentage for examination. Although Kniveton did not see this figure as an overwhelming support for continuous assessment, the undergraduates would have thought it fair to capture the merits of both modes of assessment and so a case can be made for their 50/50 preference. However, it is important to note some gender/age interaction in the fact that young and mature

[5] Continuous assessment is a system whereby the evaluation of students' learning is incorporated as part of the teaching and learning process. In this case it involves assessment by coursework.

females were closer to the mean of 50 with a mean of 48 and a mean of 50 respectively than young and mature males who registered a mean of 40 and a mean of 70 respectively.

In addition, Kniveton (1996) noted that despite its limitations, students were happy to have almost half their grades based on examinations. One reason for this might be because the students might also be aware of the disadvantages of continuous assessment. For example, where this type of assessment involved coursework, it might not always be certain how much effort the students put in nor would it be easy to establish how much external help they received. On the other hand, Struyven *et al.* (2002) noted, in their review, that examinations prevented students from studying and understanding their subjects. However, they found that new forms of assessment enabled, rather than polluted, the quality of their learning. So perhaps it might be that A-level students might prefer new assessment techniques other than examinations and coursework. Trotter (2006) conducted a study on students' perceptions of continuous assessment using some undergraduates on a BSc (Hons) programme at a UK university. This involved students submitting their tutorial/workshop files which were assessed three times within a semester. Ninety four percent of the students perceived that their learning had improved as a result of regular submission of assessed work hence motivating them to learn. One respondent commented that as a result of the regular submissions. "… we did find ourselves paying more attention to tutorials " (Trotter, 2006, p. 514). Although the study focused on undergraduate rather than A-level students and although the students' perceptions were accessed via a questionnaire and interviews with their

attendant issues, there may be some merit in considering the continuous assessment as an alternative to summative assessment.

Brown and Hirschfeld (2008) carried out a study involving secondary school students in New Zealand which considered the students' conceptions of assessment using a self-report inventory and scores from a standardised curriculum-based assessment of reading comprehension. They found, among other things, that assessment improves learning, that it makes students accountable, that it is negative if it is unfair and that it is liked if it is fun or beneficial. A similar study by Brown *et al.* (2009) showed that contrary to previous findings, the participants in their study associated assessment with test-like practices. In fact, it showed that students preferred summative to formative assessment supposedly because of summative assessment's high stakes consequences for the students. However, the study by Moni *et al.* (2002) on students' perceptions of literacy assessment process and practices highlighted the negative feelings felt by their participants on account of the frequency and number of such assessments. The results from these studies exemplify the inconsistent nature of research findings in this area.

Maclellan (2001) investigated staff and students' perceptions of assessment using a 40-item questionnaire and found that their views did not always coincide. For example, while the staff felt that the purpose of assessment was most frequently to evaluate teaching and motivate learning at 41% and 69% respectively, the students thought these happened sometimes (52%/65%). However, both agreed that

frequently the purpose was for grading/ranking – (83% - staff and 82% - students). Also, only 5% of the students agreed that assessment motivates learning frequently and for 25% of them assessment is never used for that purpose. This is in comparison to 9% of staff. This is evidence that students and staff perceive assessment practices differently. One criticism of this study is that it looked at assessment in general, without being specific with regard to the type (formative or summative), making it difficult to know what to take away from it.

Another study with emphasis on Higher Education was carried out by Macdonald (2002). This study described student and tutor perspectives on the final assessment of two Open University courses. She noted, among other things, that despite their difficulties, most of the undergraduate students in a post-examination interview were in favour of retaining an end-of-course examination. The popular reason for this positive perception towards examinations was motivation. The students might find it difficult to take their studies seriously without examinations. One student was reported as saying, “I think at the end of the day exams are important. It is possible to get through without having learnt a lot otherwise. You could copy down other people’s ideas and not take in much. But I hate exams” (p. 335). This love-hate relationship was also noted in the institution focused stage (IFS) of this investigation where, on the one hand, students hated the idea of having examinations but on the other hand they liked it because it gave them the push to study (Ekwue, 2010). The minority of students in Macdonald’s (2002) study who did not favour examinations based their decision on the stressful nature of examinations and believed they cause students to engage in maladaptive forms of learning. This is also in line with some

of Ekwue's findings. As can be deduced from the foregoing, none of the research cited focused on A-level students. This observation contributes to the justification for the focus of the current investigation on this age group.

2.9 Summative assessment and motivation among A-level students

Major reviews in this area by Harlen and Crick (2003) and Torrance and Coultas (2004) revealed the scantiness of relevant research. Whilst both reviews followed a systematic method, Harlen and Crick's approach was more robust than Torrance and Coultas' as they explicitly followed the step by step procedure for systematic review provided by the Evidence for Policy and Practice Information Centre (EPPI). Harlen and Crick found 19 relevant studies whereas Torrance and Coultas found no material that was directly related to their review question. Furthermore, Harlen and Crick focused their review on testing and motivation in general but Torrance and Coultas placed emphasis on effect of testing and motivation in post-16 learners.

One advantage of systematic review, according to its proponents, is that it produces unbiased and comprehensive accounts of the literature (Bryman, 2008) hence it is more likely to result in more reliable conclusions than the traditional narrative review. However, one criticism is that it follows the positivist approach which may fail to capture the practice of social scientists accurately. The original number of relevant studies found by Harlen and Crick (2003) in their review of the area was 183. This number was limited to 19, being the most relevant studies for answering their review

question - what is the evidence for the impact of summative assessment and testing on students' motivation for learning?

Harlen and Crick (2003) sought the views of some sixth formers about the findings of the review and found that summative assessment and testing caused the students to have lowered self-esteem. One interviewee commented on how working hard and getting a low grade can make one to get disaffected. It encouraged performance instead of learning goals which was reflected in another comment about the commonness of syllabus-obsessed teaching. All students agreed that testing was a good thing but stated that it lowered their motivation if it became too frequent. Commenting on the implications for practice arising from their review, Harlen and Crick reasoned that rather than indicating what should be avoided such as drill and practice for tests, teachers and schools should be presented with positive messages about summative assessment with the intension of getting rid of its negative impact on students' motivation for learning. The following idea related to good practice:

> Develop and implement a school-wide policy that includes assessment both for learning (formative) and *of* learning (summative) and ensure that the purpose of all assessment is clear to all involved, including parents and students (2003, p. 203).

But other ideas such as:

> Present assessment realistically, as a process which is inherently imprecise and reflexive, with results that have to be regarded as tentative and indicative rather than definitive (2003, p. 203).

may be difficult to relate to high stakes situations such as the A-level. The point is that as far as A-level students are concerned, the results they achieve at the end of

their programme are not seen from the point of view of ‘indicative’ or ‘tentative’, they are seen from the ‘definitive’ point of view. The results decide whether they are able to continue with their proposed academic/non-academic career.

2.10 A-level students – Adolescents

Investigations into the relationship between assessment/examinations and students’ motivation for learning have mainly focused on GCSE (Denscombe, 2000; Putwain, 2009; Smith, 2004) and Higher Education (Kniveton, 1996; Brouse *et al*., 2006; Entwistle, 2001). Their relevance to A-level may be limited but the fundamental message is still there, that students can perceive the assessment process negatively and that this perception can affect, not just the way they learn but also their motivation to learn. This investigation focuses on A-level students who are an anomalous group. These students are usually between sixteen and eighteen years and are still passing through a developmental stage known as adolescence which they started several years before at about age eleven. They are an atypical group because they are within a period of life described by G. Stanley Hall (1844-1924) as full of “storm and stress”. The later stage of this period is where A-level students are firmly located. It is a period of change when adolescents are making a transition into adulthood and therefore, a period when they need to make important decisions about their future including career decisions of which embarking on the A-level course plays a crucial role. It is also a critical time for identity formation.

Arnett (1999) accredited Stanley Hall with popularising the idea of the "storm and stress" of adolescence but noted that he was not the first in history to view this age group in a similar manner. Aristotle had stated that young people "are heated by Nature as drunken men by wine" (p. 317). Put simply, it is a more difficult time for an individual than any other time in their development because it is a time characterised by physical, intellectual, interpersonal, moral and spiritual changes. Arnett's discussion focused on conflict with parents, mood disruptions and risk behaviour aspects of difficulty during this stage and concluded that inasmuch as "storm and stress" of adolescence is a reality, it is not an inevitable characteristic of this stage of development and cultural differences as well as individual differences within cultures must be taken into account[6]. Blackwell *et al.* (2007) noted that not all adolescents succumb to the challenges caused by this stage of development. Although it is not the intention of this investigation to focus on the areas considered by Arnett, one can see how difficulties in these areas can impact on an adolescent's motivation for learning. The demands of a high-stakes examination, such as A-level, are tough enough and an adolescent needs all the support available to get through this difficult period of life. Therefore having distractions from focus on study may be worsening a difficult situation.

Putwain (2009) has also highlighted the debilitating effects of assessments and particularly examinations on Key Stage 4 students as they perceive them as

[6] Bandura (1997) also argued that contrary to the stereotype of "storm and stress" (p.177), most adolescents negotiate this period of life with little or no long-term problem.

stressful, anxiety-provoking and a huge source of worry. Whilst commenting on a study carried out by Aherne (2001) and those carried out by Connor (2001, 2003), Putwain admitted that part of the teachers' anxieties about the outcome of Scholastic Aptitude Tests (SATs) might have rubbed off on the pupils, having realised how important these results were to their teachers. This is very different at A-level where one may argue that the potential for teacher stress being vicariously acquired by students is not really an issue because students do not just take the perception of their teachers into account. Students know the important role that the A-level examinations play in terms of life opportunities. They are aware that A-level qualifications "are pre-requisites for moving on to further or higher education or the world of work" (Elwood, 2012 p. 499). Some of Putwain's findings showed that students perceived success or failure at GCSE as having a major impact on their future. This is contrary to one finding described by Ekwue (2010) where some students reported that whilst on the GCSE programme, they did not care about the consequences of their performance at the GCSE examinations. These students felt that the consequences of not doing well at GCSE were not as final as the consequences of not succeeding at A-level.

Mansfield and Wosnitza (2010) investigated the differences in achievement and social goals between early and late adolescents. Like their research, given that adolescence is a time of change requiring individuals to make significant decisions that will impact their later life, understanding what motivates them is essential to making sure that they achieve their full potential at school. Their investigation reflected that of Ekwue (2010) finding few studies focusing on students during late

adolescence, again resulting in limited understanding of the motivational factors within this age group. This is a further reason for the need for this investigation.

A demanding end to secondary education is not exclusive to British adolescents. Smith (2004) reported that frequency of examinations is a norm within the final two years of high school in New South Wales, Australia. She also reported year 12 students'[7] expression of concern over achievement and examination issues especially those relating to high volume of work and how to maintain their motivation. Her research suggests that the pressures of final-year studies may lead to an increased preoccupation with the negative effects of seeking to avoid failure. She also found evidence which suggests an increase in affective distress for students. This study bears some similarities to Ekwue (2010) in that they both targeted a similar group of students and reviewed the effect that high stakes examinations have on their motivation. Some of her findings showed that female students had higher stress and test anxiety scores than the males. The females also showed reduced confidence in their demonstration of academic self-efficacy. These findings raised two questions: to what extent do gender differences influence students' academic performance; "what is the nature of the motivational pathways to achievement that female and male students take in the pursuit of their studies?" (Smith, 2004, p. 81). These issues are being considered in this investigation. There is a difference between her design and the design of this research. She compared students who find the final year a challenging and positive experience with those who make a

[7] This is equivalent to students in their second year of A-level in Britain.

negative experience out of it because of their inability to match the demands of the year with the resources available to them. However, this research considers variables such as ethnicity, gender, educational background of parents and family income that seem important when considering the motivation of A-level students.

2.11 Factors which may affect students' motivation

2.11.1 The influence of gender

Boys and girls are not just different biologically but also in terms of how they are socialised by their families and society. Elwood (1999) considered gender-related differences in performance in examinations and noted, as in the current study, that there was a lack of literature that focused on the A-level examination. However, she noted that research involving pupils up to age 16 shows that girls are surpassing boys in terms of achievement in a range of subjects and that girls leave school better qualified than boys. Focusing on the impact of assessment techniques, Elwood found that whereas girls perform better at coursework, boys outperform them at A-level examinations which traditionally emphasise terminal examinations. This finding can be explained by Harlen and Crick (2003) who recorded findings about girls reporting more test anxiety than boys. It is possible that the higher level of test anxiety in girls inhibits their learning therefore causing their performance to be lower than that of the boys.

In terms of motivation, again gender differences have been found although findings are inconsistent. Hardré *et al*. (2006), in the study examining student characteristics that influence motivation for learning and achievement, found that gender differences favour females over males, that females have higher overall motivation and more positive and adaptive goal profiles than male students. Some researchers have found that girls are more likely to attribute their academic performance to internal factors such as hard work and boys do the opposite, attributing their performance to external factors such as luck (Burgner and Hewstone, 1993; Rusillo and Arias, 2004). However, other researchers such as Lightbody *et al.* (1996) have found the exact opposite. They investigated gender patterns of motivational aspects of academic performance and found that with the exception of gender differences in the enjoyment of subjects, gender differences in academic motivations are less marked than they were in the past. They believe that attributions are more likely to be related to age than to gender. One difference between Hardré *et al*. and Lightbody *et al's* studies is in the nature and size of their samples. The former involved 6539 non-Western high school students chosen from fourteen public high schools in Taiwan whereas the latter used 1068 pupils based in a large London comprehensive secondary school. Apart from this, the ten-year difference between these two studies could account for the variation in their findings. It could mean that the characteristics of one group might not be fairly compared to those of the other group due to the influence of passage of time.

Although a number of researchers have been studying how gender relates to motivation, Maehr and Meyer (1997) believe it needs to remain on the agenda. They

gave instances of research that showed how gender can affect one's sense of self, sense of self-efficacy and achievement (Eccles *et al*., 1982, 1983, 1993; Frey and Ruble, 1987; Roberts, 1991). They also identified some research showing that women have less confidence than men in achievement situations. Women also respond to evaluative feedback differently from men and girls' achievement in science and maths is lower than for boys. To what could these differences be attributed? One reason could relate to the socialisation view noted by Salili (1996) that males are socialised to be workers and females to be mothers. In terms of achievement motivation, Salili also noted a study which found that female college students in the USA had considerably higher fear of success in competitive achievement situations than their male counterparts. This was put down to the anxiety about the negative consequences of success, such as loss of femininity, which might lead to social rejection. However, Parker and Parker (1979, p. 290) have tried to explain the reasons behind gender differences by reviewing four bodies of evidence including "studies from non-Western societies, evidence provided by non-human primates, material from early human ontogeny, and specialised biological studies". They presented arguments that seemed to revoke the issue of gender differences as being driven by biology. They argued that there is no direct causal link between biology and sociocultural occurrences meaning that our biology is not our destiny. They also argued that:

> indications are clear that women will increasingly enter traditionally "masculine" occupations and that men will enter traditionally "feminine" ones. The division of labour will overlap further, and differences in the qualities of male and female labour will tend to disappear **(**p. 303).

Writing in a sociocultural climate that abhorred the suggestion of biological differences between males and females, Parker and Parker (1979) concluded that gender differences and male superiority, in particular, should be seen as a myth. Still, the fact remains that these differences exist and will continue to do so until a complete overlap suggested by them becomes a norm.

Meece *et al.* (2006) carried out a review whose aim was to examine the role of motivation in explaining gender differences in academic achievement and attainment. The review used four theories of achievement motivation usually used to explain gender differences in academic achievement which were attribution, expectancy-value, self-efficacy and achievement goal theories. They found differences, across all four constructs, which followed gender role stereotypes with boys reporting stronger ability and interest in mathematics whilst girls were stronger and had more interest in language arts and writing. They also found that such differences were moderated by ability, ethnicity, socioeconomic status and classroom context. Sources of gender differences included parental influences, schooling influences and other sociocultural influences reflecting the various sources of socialisation.

Rusillo and Arias (2004) found gender differences existing in various cognitive-motivational variables and in performance attained in school subjects of Language Arts and Mathematics. Girls demonstrated lower levels of extrinsic motivation, took more responsibility for their failures, used information processing strategies more

extensively, and gained better marks in Language Arts. However, no differences were found in academic self-concept, intrinsic motivation, success-related attributions and performance attained in Maths.

Kissau *et al.* (2010) conducted a study to investigate gender differences in motivation to learn Spanish and found some evidence to support the suggestion that adolescent males were less motivated to learn second languages than their female peers. One of the limitations of their study, which they acknowledged, was the use of students from a very diverse group in terms of their ages, learning styles or other factors that the study did not consider. These excluded factors might have played a greater role in the outcome of the study than simply the effect of the gender of the students. This again highlights the difficulty encountered when trying to investigate motivational factors; it is never possible to get the whole picture. Consequently, the credibility of their findings is called to question. The study by Kissau *et al*. highlighted the issue of pedagogy as a factor which influenced the motivation of male students in the learning of Spanish. The boys would prefer a less teacher-centred approach in delivering the course. Unfortunately, Kissau *et al.* did not make it clear which instructional approach the girls preferred.

Brouse *et al.* (2010) reported the research finding (Ryan and Deci, 2000) that females tended to have higher levels of motivation than males. In their study, they wanted to assess if the relationship between academic motivation and gender would be replicated in a sample of undergraduates in Western New York. They found significant differences on all scales of the Academic Motivation Scale (AMS) except

for the extrinsic external regulation scale, with females scoring higher than males on all measures of intrinsic motivation. In addition, females scored significantly higher than males on the overall measure of extrinsic motivation. Only in the amotivation scale did the males score greater than the females, suggesting that males are more likely than females to find academic endeavours less interesting. It is likely that the way learning is organised for these students does not favour the males. Perhaps if the learning tasks were designed to capture the interest of boys, the results would be different. Consequently, Brouse *et al.* called for an understanding of the factors which affect academic motivation of male and female students.

It is relatively easy to simply compare the differences between males and females; but without taking other moderating factors such as ethnicity, social and educational background into account, the exercise may be fruitless. Any examination of such differences should consider, for example, the cumulative impact of being a female and a minority or being a female and low income (Maehr and Meyer, 1997).

2.11.2 The influence of ethnicity and culture

Alongside gender, ethnicity and culture are additional variables which may have an effect on how a student perceives summative assessment and how this, in turn, affects their motivation for learning. The consideration of ethnicity and culture is due to the increasing cultural and economic integration of the world. It is no longer uncommon to find students from different parts of the world in a classroom as families are migrating from one part of the world to the other and taking their children

with them. As a result, schools are becoming increasingly multi-cultural. This has some advantages in that students can learn from each other about each other's culture, thereby enriching their knowledge of other cultures and getting rid of culturally motivated prejudices. On the other hand, it may have the disadvantage of increasing the teacher's task as each learner comes to the classroom armed with culturally specific tools because "learning involves application of one's own framework" (Sanchez, 2000, p. 37). Therefore, a deep understanding of the cultural habitus of students in a classroom is essential to the teacher's success in getting them to learn. Maehr and Meyer (1997) agreed with practitioners' acknowledgement that social and cultural variables are major factors in their understanding of motivation but unfortunately, they failed to find overwhelming evidence that researchers are listening.

As a result of the multicultural nature of educational contexts, researchers have paid attention to the lower achievement of minorities compared to whites. Johnson *et al.* (2001) carried out a study which considered the role of race and ethnicity in students' attachment and engagement in academic settings in which they noted some evidence claiming that there is a difference in the attitude of African/Hispanic Americans and White students with the former engaging less in school than the latter to avoid the appearance of "acting white". Although this claim has been hotly contested, the general consensus seems to be that minority groups try less at school than their White counterparts.

In assessing cultural differences in motivation, one must, therefore, consider the influence of types of cultures, for example, collectivism and individualism. Put very simply, collectivist cultures such as most non-Western societies put the group interest first before the individual's whereas in individualist cultures such as most societies in the West, it is the other way round, with group interest counting less than individual interest.[8] Therefore, motivation to achieve in a collectivist culture will be mainly fired by the need to make one's family proud (Salili, 1996). Fuligni (1997; 2001) provided consistent evidence from his investigations indicating that motivation of adolescents from immigrant families is the result of their desire to make their families proud. Similar to the above, Putwain (2009) commented on the perceived parental pressure and conditions of acceptance in his study of assessment and examination stress in Key Stage 4. He noted the distinction made by two Asian students regarding the views of families from traditional Asian backgrounds, and those from Western backgrounds about conditions of acceptance. Those with traditional views judged people on the basis of occupational status whereas those Asian families who had adopted Western views did not do that and were judged to have been influenced by British culture. This suggests that Asian students from families with "Western" backgrounds may be under less pressure to achieve than those from "traditional" Asian families as the former is not necessarily looking to

[8] However, Fiske (2002) argued that individualistic cultures are not the opposite of collectivist cultures and that rather than focusing on the categorization of cultures as individualistic or collectivist, which served its purpose in the past, psychologists must now "analyse culturally constituted institutions and practices to discover innumerable new, hitherto unsuspected psychological processes that shape culture and are shaped by it" (p. 87).

please others and/or be accepted by them. This view has also been confirmed by Salili (1996).

Lavery's (1999) study examined the academic motivation of students from four different ethnic groups who attend a New Zealand university and found some unexpected results. The students' scores on the AMS motivation scale failed to always tally with the assumed achievement levels for each of the ethnic groups. For example, the Chinese students, traditionally regarded as high achievers due to the great emphasis that their culture places on education, scored highest on the intrinsic motivation linked to positive educational outcomes, as expected. However, surprisingly, they also scored highest on the amotivation scale which is linked to negative educational outcomes. Another surprising result, according to Lavery, came from the students from the Pacific Islands. Ordinarily, these students were regarded as low achievers but they scored as high as the Chinese students on intrinsic motivation.

These surprise results led Lavery (1999) to question the validity of considering the types of motivation - amotivation, extrinsic motivation and intrinsic motivation as a continuum related to increasing positive educational outcomes. However, rather than this type of questioning, it may be more useful to think of the discrepancies in terms of individual differences among the students. It is likely that the students used in the study were atypical of the groups they represented - mingling and studying in the same institution as students from other ethnic groups might have led the

students to adjust some of their value system by assimilating aspects of their fellow students' value system in order to get along with them. This then may have affected the assumptions held about the levels of achievement of the different groups which may have given rise to the "surprise" results.

Salili (1996) highlighted this effect of the context in which education takes place. He noted the highly competitive and authoritarian nature of the Hong Kong educational system, how teaching and learning activities are geared towards getting students ready for recurrent assessments and how students feel great pressure from their parents and teachers to achieve academic excellence. British schools in Hong Kong, on the other hand, are not as pressured and promote a more relaxed student working environment. A cross-cultural study, in which a part of the aim was to investigate the differences in achievement motivation among male and female British and Chinese high school students, Salili showed that the Chinese students had significantly higher need for Achievement (nAch) scores than their British counterparts. Need for achievement was measured using the Thematic Apperception Test (TAT). The TAT has been criticised for being culturally biased as to what constitutes achievement and although Salili tried to make it as culture-free as possible by removing any indication that may align it to a particular culture, the fact still remains that TAT does not fully account for individual differences. Some of the TAT statements may be more suited to drawing out better stories from the students depending on their age, gender and social background. Some individuals are more creative than others or are socialised to be so. All the same, Salili's study provided evidence to support cultural differences in students' motivation for learning such as

in the Chinese culture where educational achievement is regarded as important and necessary in acquiring a good job and better prospects for the future. Doing well is even more pertinent for high school students who need to secure a place in university in order to make real that dream of getting a good job.

The study by Hardré *et al.* (2006) investigated relationships between individual difference characteristics that influence motivation for learning and achievement using high school students in Taiwan. They found that a combination of individual differences and classroom environment perceptions can help explain school-related motivation of these high school students. They concluded, among other things, that it is the teachers rather than the peers who were more influential in motivating these students to learn. This implies that teachers should be aware of their classroom practices, knowing the impact that these may have on their students' motivation for learning. At the same time, Hardré *et al*. advised that teachers should keep an eye on the peer elements of the classroom environment and how these affect students' motivation. However, the findings and advice were specific to Taiwan and should be considered with caution.

Finally, Rogers (1998) carried out a study comparing Chinese students with British students in terms of their attributions for success and failure, goal orientations and self-esteem. Much as he found some clear similarities and differences between the students, Rogers found no defined motivational advantage for students in either culture when comparisons of separate measures were carried out. This led him to suggest that the specific dynamics which motivate students may be different in each

culture. He concluded that since a culture's educational system is a mirror of the attitudes and values held within that culture, it makes sense to try and understand that educational system through the eyes of the parent culture adding that "successful systems generate effects through culturally laden interpretations" (Rogers, 1998, p. 290). In other words, understanding what motivates students requires an appreciation of their interpretations of their learning environment. Rogers concluded that it is not enough to simply transport aspects of systems from one culture to another. Their interpretations need to also be transferred if the same effects are to be registered in the new home. Unfortunately, none of these cross-cultural studies considered the influence of students' perception of summative assessment on their motivation for learning nor did they make comparisons of students of different cultural or ethnic backgrounds in the UK.

2.11.3 The influence of school type, parental educational, economic and social backgrounds

It can be argued that parents will be more interested in their children's education if they (parents) are highly educated and financially stable. Meece and Kurtz-Costes (2001) highlighted the important influence of parental education and income on students' success in school. They cited some evidence (Duncan and Brooks-Gunn, 1997; NCES, 2000a; Darling-Hammond, 1997) which showed the negative effects that economic hardships could have on a child's achievements at school. For example, as parents with little qualifications are more likely to be on low income, schools attended by their children are likely to have fewer resources when compared

to schools attended by students from richer backgrounds. Also there was more chance of locating out-of-field[9] and less qualified teachers in low-income schools than otherwise. In addition to all of this, Meece and Kurtz-Costes argued, low-income families are more likely than affluent families to live in areas fraught with crimes and poor public services than elsewhere and so are unable to enrich their children's learning experiences. Furthermore, because immigrants and minority groups are more likely to be on low-income, it makes sense that Meece and Kurtz-Costes highlighted the difficulty of separating the effects of ethnicity from those of economic status. In support, Kormos and Kiddle (2013) have noted the strong links between socio-economic status and academic achievement and also the strong link between social background and the type of school a student attends. They have argued that students' immediate environment, which includes their family and friends and their socioeconomic context, influence their views about education and learning. Therefore a student who attends a less well maintained educational institution may not be as highly motivated to learn when compared to another student who attends a well-maintained educational setting. The above has not taken the influence of individual differences into account. There could be exceptions to the rule in the picture painted above which may make it possible for a student to excel in learning despite moderating factors which suggest otherwise.

[9] Out-of-field teachers are those who teach outside their area of specialty.

2.12 Conclusion/summary

This review has highlighted the lack of literature on post-16 A-level students' perception of summative assessment and its effect on their motivation for learning. Despite this lack of literature, evidence is provided which indicates that generally, learners perceive summative assessment negatively and that this perception impacts on their motivation and depth of learning. There is also evidence that students' perception can be moderated by factors such as gender and ethnicity among others. This review has shown how a false division seems to have been created between the various concepts of relevance – interest, goal, learning, assessment – suggesting that their specific aspects (individual, mastery, deep and formative) relate to intrinsic motivation whereas others (situational, performance, surface and summative) relate to extrinsic motivation. However, this seems to be an oversimplification of very complex relationships and there is no need to create a demarcation where it is not necessary, not even between intrinsic and extrinsic motivation. Of the theories of motivation considered, SDT and self-theories which centre on the individual's contribution in managing their motivation, seem the most helpful in responding to the research questions. In the next chapter, these will be discussed further. Their discussion will form the theoretical framework on which the analysis of the data generated for this investigation will be based.

Chapter 3 Theoretical Approach

3.1 Introduction

In this chapter three theoretical perspectives for understanding motivation are considered. Dweck's (2000) self-theories and Ryan and Deci's (1985) self-determination theory (SDT) are chosen because of their appropriateness to the study, their ease of application to the emergent issues from the data and their general explanatory power, especially with regards to the research questions. They both focus on the self, that is characteristics of individuals which direct or influence their behaviour and self has been identified in research as being an important element in motivation (Epstein, 1973). In addition to these perspectives, Black and Wiliam's (2009) concept, "moments of contingency", is also chosen as it refers to the critical points in the teaching process where the flow of instruction changes direction as a result of the interaction between teachers and learners, affecting progress being made. All three perspectives were chosen in the hope that they will help to consider, using different lenses, the tensions arising from the data.

The ideas from these sources are used to argue that what motivates, whether internal or external is linked to the self. How students perceive summative assessment and the resulting impact of this perception on their motivation for learning relate to the extent to which they are aware of themselves and their interaction within their environment. Roeser and Peck (2009, p. 1) describe awareness as an aspect of self that is, "the apparent basis of the human capacity for volitional living and learning". One needs to be self-aware in order to make

meaningful changes in one's life. Linked to A-level students, it is argued that in their situation, they need to be aware of what the course is about, what it leads to and the consequences of succeeding or not succeeding in it. However, being at a crucial and challenging stage of their lives and with everything else going on, some students may be able to negotiate the demanding nature of the course better than others based on their belief system and their experience of interacting with their environment. Ability to deal with this stage will also be moderated by variables such as gender, ethnicity, parental education and family income among others.

What follows is a discussion of the locus of motivation as well as the self and will include ideas drawn from the theoretical perspectives referred to above. The chapter will conclude with a section that outlines the model derived from the discussions.

3.2 Locus of motivation

Locus of motivation refers to whether or not individuals rely on internal or external factors as determinants of their behaviour. As noted in Chapter 1, it is not uncommon for experienced teachers to have come across students with varying levels of motivation - some very keen to learn, others learning with hesitation and yet others with no interest in learning at all. An important theory that sheds some light into this state of play is the self-determination theory. This theory has received widespread attention since it was first put forward by Deci (1971) and followed up by Ryan & Deci (1985). It proposes that people's motivation does not just vary in terms

of how much of it they have but also the type of motivation they have. The theory also proposes that the type or orientation of motivation people have determines the quality of the action they take. Self-determination theory (SDT) is a theory of human motivation. It is the process of deciding how to act on one's environment. This theory suggests that having choices and the freedom to make decisions, that is, the idea of being autonomous, is intrinsically motivating, and people would not be content if all their needs were satisfied and they were denied the freedom to make choices.

An autonomy-supportive classroom, therefore, is one which allows students to choose what they want to learn and how they want to learn it. However, it is questionable that such freedom will be of benefit to A-level students who must address the content of their various subjects' specifications in preparation for the all-important summative assessment at the end of their course. In this situation, a more controlled learning environment is advocated to keep students focused. Vansteenkiste *et al*., (2006) distinguished between two types of controlling contexts. These are externally controlling context involving the use of overtly coercive means which place learners under pressure to behave in a certain way and internally controlling context in which learners generate their own pressures through introjected regulations, for example. In fact, Black and Wiliam (2009) argued that it will be "fatal" for the teacher not to have some control of the learning environment, maintaining that whilst taking students' needs, and preferences on board, as far as possible, teachers must be responsible for ensuring that students are disciplined to operate as effective learners.

Lechuga and Lechuga (2012) noted that the need for autonomy involves experiencing oneself as the initiator of one‘s behaviour, rather than feeling that one is compelled to behave in a certain way by circumstances. So although autonomy is an important aspect of SDT, its exact place in the overall scheme of the A-level course may be debated. At what point, in their course, would A-level students be granted the autonomy to manage their own learning and what strategies will have to be in place for that to happen? The answer may lie in the suggestion noted by Vansteenkiste *et al*., (2006) to the effect that in autonomy-supportive contexts, teachers empathise with the learner’s perspective, giving him or her opportunities to take the lead in what is being studied and how it is being studied and also providing a meaningful justification if the path chosen is not sanctioned by the teachers. Equally teachers desist from adding pressures in order to motivate behaviour and provide timely and constructive feedback.

Apart from autonomy, two other SDT concepts are competence and relatedness. Competence refers to feeling capable of performing certain tasks and relatedness is when an individual feels connected and accepted within a larger social network (Deci and Ryan, 2000). According to Lechuga and Lechuga (2012), the idea of relatedness can go beyond ties to a specific academic environment to include interpersonal relationships with persons of similar ethnic, racial, socioeconomic backgrounds or indeed gender. All three concepts – autonomy, competence, relatedness – make up the basic psychological needs assumed by SDT to be possessed by individuals. Ryan and Deci’s explications suggest that motivation is located within these needs and for a healthy well-being, the three needs must be

satisfied otherwise the individual's well-being may be impoverished. Therefore, people's behaviour is classed as self-determined the more they achieve these basic needs.

In developing the self-determination theory, Deci (1971) distinguished between various types of motivation based on the different reasons or goals that bring about an action. They drew a distinction between two basic types of motivation – intrinsic and extrinsic. Intrinsic motivation is the desire to learn, where the relevance of the content is the main driving force. The individual engages in the action purely for personal satisfaction and because it is interesting; like when a student attends a lesson because he or she finds it fulfilling and interesting to learn about a topic. Ryan and Deci (2000b) suggested that humans are hard-wired to be self-motivated because right from birth, children, in their healthiest states, are active, inquisitive, curious and playful, even when no specific external rewards are available. Therefore, self-motivation can be seen as a natural process and the construct of intrinsic motivation describes this natural inclination toward learning about one's surroundings. However, in what seems like a contradiction to the above, Ryan and Deci also argue that there are many examples of both children and adults from differing social and cultural backgrounds who do not display this supposedly natural endowment. This suggests that there may be more to intrinsic motivation than meets the eye and that perhaps we may not all be hard-wired to the same degree. Or perhaps the realisation of this natural quality may be influenced by other factors such as the individual's environment.

SDT's views on motivation are a fundamental move away from the behaviourist approach which saw motivation as the product of responses to stimuli. Ryan and Deci considered motivation from the humanistic perspective and stressed the importance of allowing individuals to regulate their own behaviour. Since SDT was first conceived by Deci (1971) numerous investigations have been carried out upholding its fundamental principles.

According to Vallerand *et al.* (1992), there are subscales to intrinsic motivation as follow: intrinsic motivation to know (IM-to-know) has a huge tradition in educational research as it relates to numerous constructs, such as, exploration, curiosity, learning goals, intrinsic intellectuality as well as the intrinsic motivation to learn. IM-to-know is described as performing an activity for the gratification and satisfaction one experiences while learning new things. A-level students would be described as intrinsically motivated to know when they study for the sheer joy of learning.

The intrinsic motivation to accomplish (IM-to-accomplish) has been studied in developmental psychology as well as in educational psychology under concepts such as mastery motivation[10] Vallerand *et al.* (1992). Since the focus is not on the

[10] Morgan *et al.* (1990) defined mastery motivation as "a psychological force that stimulates an individual to attempt independently, in a focused and persistent manner, to solve a problem or master a skill or task which is at least moderately challenging for him or her" p. 319. Mastery motivation is related to mastery goal where individuals tend to persist in the face of failure and tend to have greater enjoyment for the task they are engaged in (Rabideau, 2005).

outcome but on the process of achieving, IM-to-accomplish is defined as engaging in a task or activity for the joy experienced when one endeavours to accomplish new things. A-level students who stretch themselves further than the demands of the task in order to gain some contentment while trying to surpass themselves, would fall into this category.

The intrinsic motivation to experience stimulation (IM-to-experience-stimulation) has been investigated when considering the dynamic and holistic sensation of flow[11] on peak experiences. It should relate to A-level students who attend lessons so as to experience the pleasure of engaging in a stimulating class discussion, or those who read a book for the cognitive pleasure that it triggers (Vallerand *et al*., 1992). These three types of intrinsic motivation are located within the right end of the motivation continuum (see Figure. 1).

Extrinsic motivation, on the other hand, is the desire to learn where the importance of the learned material is subsidiary to an external reward received for learning. Ryan and Deci's (2000a) SDT discussed the autonomous nature of extrinsic motivation; how it entails intentionality. For example, students can carry out extrinsically motivating tasks with "resentment, resistance and disinterest" (p. 55) like doing A-

[11] Flow, a theory of optimal experience, was proposed by Mihaly Csikszentmihalyi and is defined as "the state in which people are so intensely involved in an activity that nothing else seems to matter; the experience itself is so enjoyable that people will do it even at great cost, for the sheer sake of doing it" (cited in Liao, 2006).

levels because of parental insistence or doing them willingly, reflecting the internalisation[12] of the usefulness of their actions, that is, the realisation that A-levels are important to achieve future goals. In the first instance, there is an element of goading the individual to act; however, in the second instance, although the external control still exists, the individual is a willing participant.

To explain the autonomous nature of extrinsic motivation further, Ryan and Deci (2000a) also described its four regulatory components or types. They are external regulation, introjected regulation, identification regulation and integrated regulation. These differ only in the extent to which they allow the individual to display autonomy – self-determination or the individual's willingness to act. With external regulation (which is what most people are referring to when they talk about extrinsic motivation, Brouse *et al*. (2010)), the individual sees their behaviour as being totally manipulated by external forces such as rewards. Although introjected regulation is self-determined, the individual acts to protect their self-worth or self-esteem as the regulation has not yet become part of the self. According to Brouse *et al*., the individual's behaviour is not entirely self-determined, but rather a reflection of an attempt to avoid internal conflict. Identified regulation allows the individual to personally recognise the value of the behaviour and he/she agrees to be regulated by it. In this case, an A-level student might engage with the programme because of the recognition that the qualification is a valuable one to possess for one's future.

[12] Internalisation is the process of transferring the regulation of behaviour from outside to inside the individual (Eccles and Wigfield, 2002)

Finally, integrated regulation is a step up from identified regulation where the individual has not only internalised the behaviour but has assimilated it to the self. To rephrase, integrated regulation differs from intrinsic motivation only slightly because while it is still externally controlled and the individual performs the activity for external reasons, the individual fully approves of the activity (Fairchild *et al*., 2005). Ryan and Deci's (2000a) conclusion, therefore, is that the more students are externally regulated, the less interest they will show in school activities and the less value they may place in such activities. This is because, as they argued, extrinsically motivated behaviours are not as inherent as intrinsically motivated behaviours and need to be externally prompted to start with. The primary reason, they argued, why people are likely to be willing to engage in externally motivated behaviours is if these behaviours are valued by significant others to whom they feel (or would like to feel) connected, whether that is a family, a peer group, or a society. Basically, the different types of extrinsic motivation only differ in their degree of autonomy or self-determination which depends on the extent to which people have

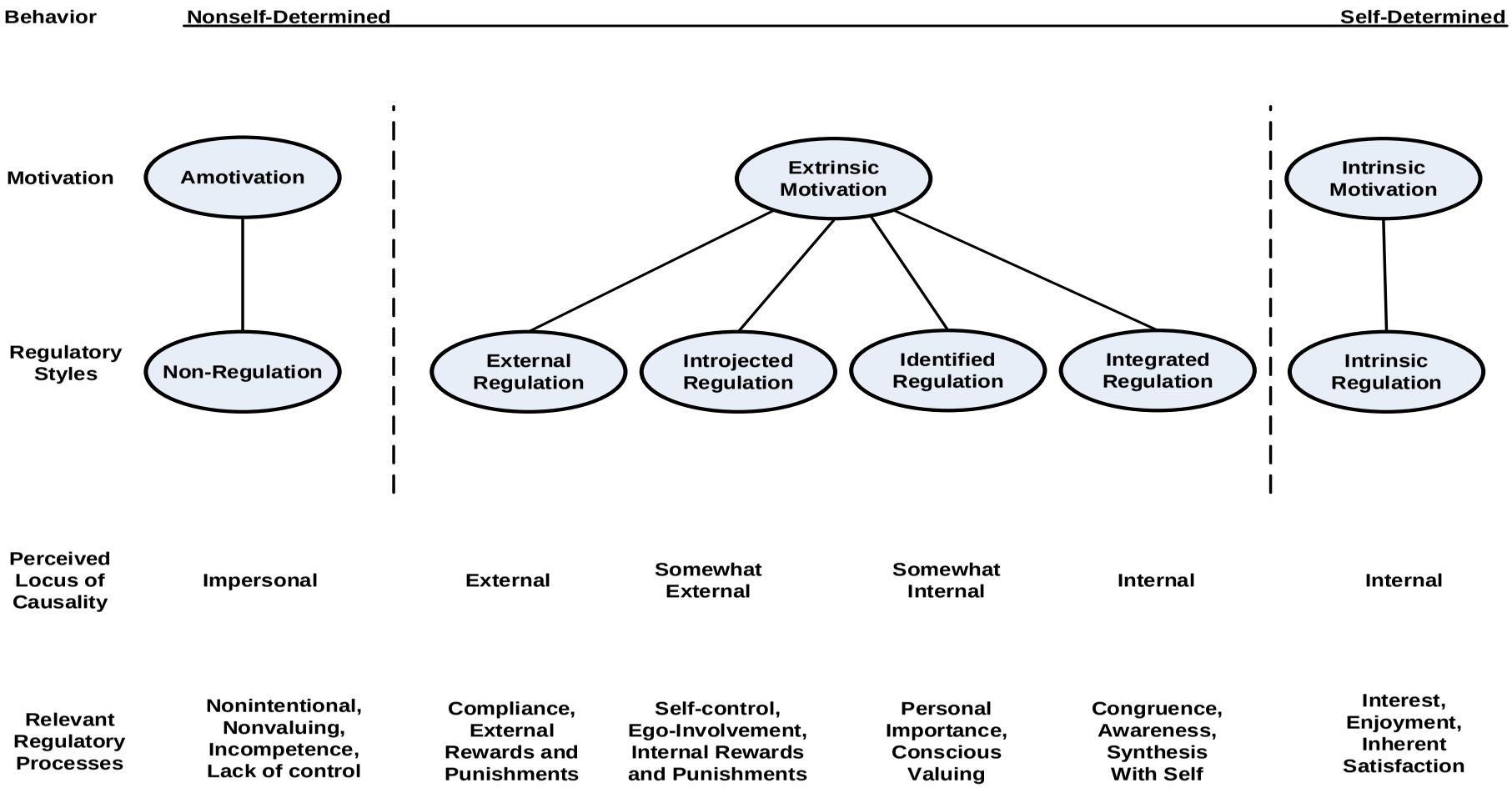


Figure 1: Self-determination continuum showing types of motivation with their regulatory, loci of causality and corresponding processes (Ryan and Deci, 2000b p. 72)

been successful in internalising the originally external regulation of the behaviour (Vansteenkiste *et al.*, 2006).

SDT's strong emphasis on where motivation is located, the self, can also be found in the implicit theories which individuals possess and which, according to Dweck (2000), help them to make sense of their world. She explained how some beliefs people hold portray a dynamic self and a dynamic world, capable of growth (incremental) and how other beliefs they hold represent a more static self and world with inherent, fixed qualities (entity). These beliefs, according to Dweck, are what people bring to a situation and which motivate them to behave in certain ways. Taking this into consideration, it appears that what motivates students is located within themselves and depends on what they take from their experiences and bring to the learning setting just like motivation within a classroom will depend on whether the basic psychological needs identified in SDT are satisfied. Students' previous experience of learning will determine whether, for example, they apply a performance goal or a mastery goal approach to their learning. However, Dweck insists that these beliefs which are fundamentally people's mind sets can be influenced or changed. A detailed description of Dweck's self-theories is given in section 3.3.

SDT is of interest in this study not just because of its exposé of the different types of motivation and how they can be achieved but also because of its potential to appeal to the various aspects of an individual that encourage engagement in a learning task

i.e. autonomy (need to internalise choices), competence (feeling of efficacy) and relatedness (the social environment of the classroom, nurturing a sense of belongingness). However, this assumes that all A-level students are willing to be so engaged and achieve highly whereas it has been suggested that SDT is domain-specific and feelings of autonomy vary depending on the situation and the task.

In addition to intrinsic and extrinsic motivation, Ryan and Deci (2000a) also identified a third type of motivation called amotivation which is the state of lacking an intention to act whether extrinsically or intrinsically. According to them, amotivation results from individuals not valuing an activity or not feeling capable of doing it or even not believing the activity will produce a desired result. The individual fails to see any relation between effort and outcome.

Therefore, Ryan and Deci (2000a) questioned the possibility of motivating students to carry out tasks in the learning environment without being coerced, in other words, without a form of external pressure since activities that take place within educational settings are not always intended to be intrinsically motivating. This is not to say that no student is intrinsically motivated in the classroom but that by their nature, some classroom activities may not be of interest to the students. The answer, according to SDT, is in the "internalisation and integration of values and behavioural regulations" (Ryan and Deci, 2000a p. 60). Because extrinsically motivated behaviours are not inherently interesting and because intrinsic motivation will tend to become weaker the older one gets, motivation to learn can be said to be located within individuals'

ability to internalise and integrate extrinsically motivated behaviours. In internalisation, the individual adopts the values, believes in them and is convinced about their intended effect but in integration the values are assimilated as they become part of the individual's self. At the same time, Ryan and Deci argued that rather than a unitary concept, motivation should be seen as a continuum where an individual's persistence on the task, his or her positive self-perception and quality of engagement increases as internalisation increases. So with internalisation, motivation ranges from total lack of willingness to act in a certain way (amotivation), to being passively involved, to being actively involved. In a way, the individual moves from being a passive spectator to being an active participant as they move from being completely uninterested to being actively involved in what is going on around them. This means that as long as a given learning task fits with a person's values and beliefs, extrinsic motivation can be internalised by him or her. Thus internalisation can be seen as a developmental process that allows individuals to move towards intrinsic motivation from their extrinsic motivation position the more self-determined their behaviour becomes. This shows that extrinsic motivation is not just about receiving rewards and may not entirely be as undesirable as literature may suggest.

Of the first two types of motivation, extrinsic motivation seems to be viewed as less effective, as just noted. Crooks, (1988) highlighted some research evidence which claimed that intrinsic motivation was more effective for learning, ensuring that students engage better in classroom activities and that they continue to be interested in working on difficult tasks; whereas students who work under the extrinsic

motivation conditions lose interest in attempting difficult tasks, preferring to attempt only easy ones. These findings are in contrast to the views expressed by Ryan & Deci (2000a) suggesting that motivation was better considered on a scale. Crooks also found that students in their extrinsic motivation group were more answer oriented, trying to take short cuts to produce desired answers, whereas students in the intrinsic motivation group tended to use deeper, more meaningful approaches to understanding the tasks. Similarly, Vansteenkiste *et al.*, (2006) have noted some advantages of autonomous (intrinsic) motivation when compared to controlled (extrinsic) motivation for learning including the suggestion that autonomous motivation enhanced more deep learning than shallow processing of information. These findings have links with the ideas of mastery and performance goal orientations proposed by Dweck (2000) which are discussed further on. How do these types of motivation manifest in the classroom?

Hidi and Harackiewicz (2000) argued that because external motivation is regarded as less important, teachers may fail to notice its efficacy in promoting learning. In support, Ryan and Deci (2000a) argued that although intrinsic motivation is more natural to individuals, it becomes less so as children grow up and are faced with more and more responsibilities in their environment. These responsibilities then become stumbling blocks restraining individuals' freedom to engage in their various environments with natural interest. In the classroom, for example, some students may be obliged to work on a mathematical concept when they would rather practise their writing skills.

3.3 The self

"By definition, intrinsically motivated behaviours, the prototype of self-determined actions, stem from the self" (Ryan and Deci, 2000 p. 74). This means that the self is at the heart of motivation. As a concept, however, researchers have struggled to define it adequately due to it being a hypothetical construct that no one can either see or touch. Sullivan (1953) in Epstein stated:

> When I talk about the self-system, I want it clearly understood that I am talking about a *dynamism* which comes to be enormously important in understanding interpersonal relations. This dynamism is an explanatory conception; it is not a thing, a region, or what not, such as superegos, egos, ids, and so on (1973 p. 167).

Although no one can see or touch the self, it is still very powerful in directing people's motives. Epstein (1973) also argued that it is essential for the functioning of the individual that the self-concept be maintained, for when this is threatened, the individual experiences anxiety which he tries to defend against. Where the individual fails, stress develops followed by an eventual disorganisation. Elsewhere, he noted how the subjective feeling of self tends to be taken for granted until it is absent and the individual reports an overwhelming feeling of terror, terror of one's inability to recognise oneself. This same sentiment was echoed by Dweck (2000) who argued that the ideas we have about ourselves (self-perception) have great motivational power; so much so that sometimes they become more important than life itself. An example is when one commits suicide because one cannot live with the experience that brought shame on oneself.

Even though the concept of shame is not the focus of this study, it has strong links with the concept of self. Scheff (1988, p. 398) claims that it is caused by "the perception of negative evaluations of the self". When shame is present, it leads to low self-esteem and self-doubt. For A-level students, low self-esteem and self-doubt can arise as a result of failure to achieve in the academic environment. Turner and Husman (2008) have also linked shame to motivation and stated that shame can interfere with motivation, supporting both Epstein (1973) and Dweck (2000) who highlighted the importance of self and its impact on the individual when the self seems to be absent.

Despite the lack of adequate definition, it is interesting to note that self-concept has been considered by early researchers, specifically phenomenologists to be the most central concept in the whole of psychology, as it provides the singular perspective on which the understanding of an individual's behaviour is based (Epstein, 1973). The theories of intelligence are related to the self to the extent that an individual's view of himself and his understanding of his ability and his experience of his interaction with his environment determine his belief about intelligence. SDT, discussed above, has been linked to the self, as has Black and Wiliam's (2009) concept of "moments of contingency".

Shavelson *et al*. (1976) defined self-concept in very broad terms as a person's perception of himself or herself formed through his or her experience with his or her environment. These perceptions, they continued, are influenced mainly by

environmental reinforcements and significant others. Similarly, Epstein (1973) defined it as developing out of experience and predominantly out of relationships with others in the social world such as parents, teachers and peers. So in the case of A-level students, the feedback gained from their teachers and their peers coupled with parental feedback as well as feedback from their other engagements in society help to shape their views of themselves. This is academic self-concept already discussed in Chapter 6 and described as individuals' knowledge and perceptions about themselves in achievement situations (Bong and Skaalvik, (2003). In this case it refers to A-level students' knowledge and perceptions about themselves relative to examinations. Another similar definition of self-concept comes from Bandura (1997) who refers to it as a complex view of oneself presumed to be formed through direct experience and evaluations adopted from significant others. Individuals' perceptions of themselves influence their behaviour and their behaviour, in turn, influences the way they see themselves. A connection can be made here with SDT's concept of relatedness – if A-level students feel connected with the significant others in their environment, it enhances their psychological well-being, helping them to think more positively about themselves and the course they are undertaking.

Self-theories represent another way of explaining motivation. Dweck (2000) proposed that people have meaning systems, their self-theories, which represent the beliefs that inform their worldview. This means that different people have different meaning systems that allow them to react differently to similar or same conditions. She proposed that a complete theory of motivation must take care of not just what

motivates people to initiate behaviour but also what determines the direction, character, and intensity of that behaviour even before an explicit outcome is experienced. This is important in order to understand how people develop beliefs about themselves and how these beliefs push them to behave in certain ways. She also noted that the goals people have lead them to initiate behaviour and at the same time influence the nature of that behaviour. These goals also influence what they think about and what they feel as they pursue and engage in this behaviour.

Dweck (2000) presented research which focused on how individuals' adaptive and maladaptive motivational patterns are influenced by, among other things, their self-theories. Specifically, she showed how students' self-theories about their intelligence determine the goals they pursue and how the theories and goals determine adaptive and maladaptive achievement patterns. In their earlier works, Dweck (1986, 1993) with her colleagues (Dweck and Leggett, 1988; Dweck *et al*., 1995a) distinguished between two assumptions that people hold about intelligence: entity theory which sees intelligence as a fixed quantity that individuals possess and which cannot be changed and incremental theory which sees intelligence as malleable and something that can be improved upon if individuals put in the hard work. So students with entity theory, for example, may be less likely to persist on a difficult task because of their belief that they possess a limited quantity of intelligence. In terms of adaptiveness, Dweck and her colleagues showed that incremental theorists were more likely than entity theorists to take on new challenges and to persist on a difficult task for as long as possible. In short, adopting an entity theory, they argued, can be quite limiting whereas incremental theory enables the

individual by energising them to take on new challenges. Therefore, it could be argued that how A-level students perceive the way they learn could relate to whether they are entity or incremental theorists. However, these are implicit theories which may influence rather than determine people's behaviour. Implicit theories are beliefs and assumptions that individuals hold which help them to make sense of particular occurrences in their world and sometimes people may not even be aware that they have these beliefs. Usually, there is no scientific basis for these beliefs and assumptions which may arise from informal observation of events in one's environment and sometimes individuals may not know they have them. However, according to Dweck, these beliefs and assumptions may serve as a foundation for the development of formal scientific theories.

In emphasising the importance of self theories, Dweck, Chiu & Hong, 1995a alongside their colleagues used a variety of measures in numerous studies to try and establish the implicit theories that people of all ages (preschool through college) may hold about the malleability of personal attributes such as intelligence and morality. One general criticism of their results is that they originated from laboratory settings where variables were likely to have been tightly controlled and so it is difficult to say whether the results would be the same outside of these controlled environments. Apart from that, the measures also involved the use of three-item questionnaires which even Dweck *et al*. (1995b), themselves, identified as problematic in that it could lead to low internal reliability. Secondly, although they acknowledged that implicit theories are conceptually domain specific, in some of their studies where the issues being addressed cut across domains, participants' entity versus incremental

theory of the person as a whole was measured. In these cases the evidence presented the participants as one type of theorists across the different contexts.

However, it is questionable whether individuals could be strictly entity or incremental theorists across these domains. It would have made more sense to suggest how individuals might vary across the various domains. Another question is that if Dweck and her colleagues have also claimed that implicit theories can be influenced or changed, why are individuals labelled as one (entity) or the other (incremental) when all that could be changed at the whim of the researcher? How is it possible that someone with entity worldview can be persuaded to hold an incremental worldview? Does this mean that people can have both theories? In their criticisms of the implicit theories, Harackiewsz and Elliot (2009) as well as Schunk (2009) raised these same questions as well as the issue relating to the reliability and validity of the 3-item questionnaire as a measure of type of implicit theory. In addition, many of the studies by Dweck and her team on theories of intelligence used only the highest and the lowest scores to create entity and incremental groups; meaning that a lot of people were not included. Nonetheless, numerous empirical studies have confirmed Dweck's proposition about people's beliefs about intelligence. For example, in exploring the mediational role of worry and practice time in explaining the relationship between implicit theories of ability and performance, Cury *et al*. (2008) found strong evidence to support the prediction that entity theory, relative to incremental theory, was associated with lower test scores. To answer their critics, Dweck *et al.* (1995b) acknowledged that they had tended to portray entity and incremental theories as mutually exclusive but then argued that "… the fact that two

beliefs are opposites does not prevent people from holding them". Thus they agreed that "…it is perfectly possible for an individual to hold both theories" p.323.

Although Black and Wiliam focused on formative assessment, the ideas they proposed in their paper, "Developing the Theory of Formative Assessment" are relevant in explaining students' motivation for learning. Their discussion centred on feeding back to students and how this can contribute to the learner's self-development. They define formative assessment in the following way:

> Practice in a classroom is formative to the extent that evidence about student achievement is elicited, interpreted, and used by teachers, learners, or their peers, to make decisions about the next steps in instruction that are likely to be better, or better founded, than the decisions they would have taken in the absence of the evidence that was elicited (2009, p. 9).

They also established that any theory must recognise the role of the three domains of teacher, the internal world of each student and the inter-subjective in mapping out the learning environment. Thus, due to the interactive nature of feedback within the classroom, it is possible that sometimes what is intended to be conveyed from the teacher to the student, from the student to teacher or from the student to a peer, fails to be interpreted correctly. This may change the dynamics of the environment and therefore the subsequent behaviours of all involved which may impact on the learner's self-efficacy, self-worth, self-determination and the whole self-concept in a negative or positive way. These interactions will affect whether or not students like a teacher enough to want to "do him proud" by persisting with a task, however difficult. They will affect whether students increase their level of confidence or they indulge in self-doubt, whether they consider the content of a lesson relevant or a waste of time.

The ideas expressed above are congruent with some of Dweck's (2000) explanations regarding the feedback students receive, how this can shape their beliefs about themselves and hence their motivation. These feedbacks can arise during "moments of contingency" described by Black and Wiliam (2009) as those critical points in the learning process when learning changes direction as a result of the constant toing and froing of feedbacks inherent in the learning environment. These critical points cannot be predetermined. They focus on aspects of classroom interactions that may encourage fluidity in how students learn and may be social, cognitive or psychological. Black and Wiliam claimed that these moments of contingency can be "synchronous or asynchronous" (p.10). Synchronous moments may happen in 'real-time' when the teacher makes some adjustments in the planned whole class or one-on-one teaching. Asynchronous moments, on the other hand, result from the feedback teachers give through, for instance, their grading practices, and observations made about students or insight drawn from previous lessons. "Moments of contingency" feed into students' positive self-esteem and promote incremental theories of learning. According to Kaufman and Dodge (2009), students with mastery goals are concerned with improving their skills and are likely to interpret feedback given during lessons as information for how to improve. However, Black and Wiliam also noted that some feedback can have damaging effect leading students to develop particular learning orientation such as the promotion of ego- or performance-oriented orientation rather than task-orientation. This distinction is comparable to Dweck's entity/incremental theories which also allow students to adopt the respective learning orientations.

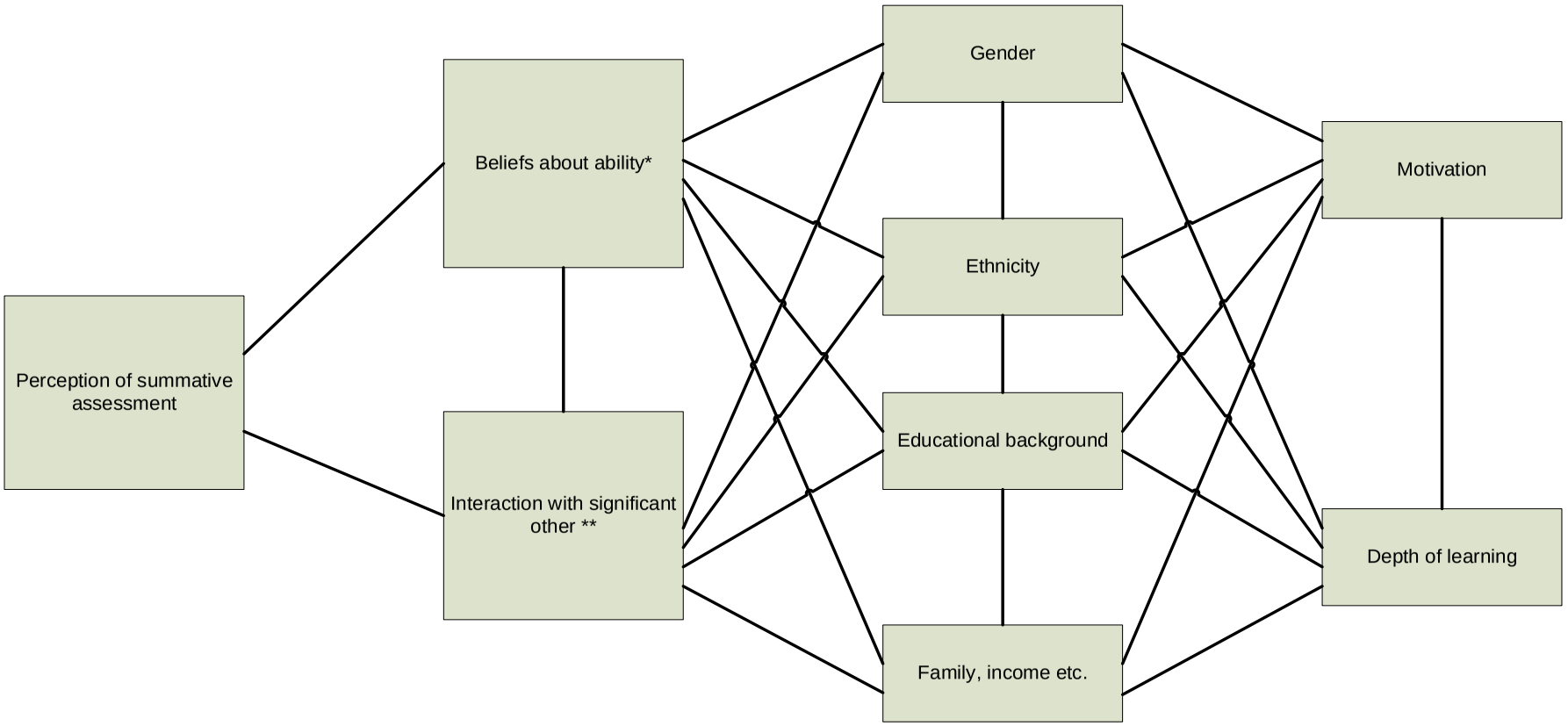
The foregoing paragraphs have focused on the ideas drawn from Ryan and Deci's SDT and Dweck's self-theories as well as Black and Wiliam's concept of "moments of contingency" as the theoretical approach. Issues arising from both the quantitative and qualitative results such as depth of learning, students' perception of summative assessment and gender issues will be examined from the point of view of the ideas described by these researchers. These theories are important for understanding individual differences in the factors that motivate A-level students to learn. The empirical links between these theories make them important as a means to further understanding of what motivates A-level students who, despite perceiving summative assessment as taking the fun out of learning, still believe it motivates them to learn (Ekwue, 2010). Considering the ideas from SDT (autonomy, competence and relatedness), Dweck's implicit theories of intelligence (entity and incremental beliefs) and Black and Wiliam's "Moments of contingency" (links to SDT's relatedness) in this investigation should show that these theories can be used in tandem to gain useful understanding of what motivates A-level students to learn. In the following section, the theoretical model is described.

3.4 The model

Following the discussion of the ideas from the three different perspectives in the sections above, the proposition is that students' perception of the impact of summative assessment on their motivation for and depth of learning is influenced by their beliefs in their ability and their experience of interacting with significant others. Thus according to Dweck's (2000) argument, students who possess an entity

attitude about their ability may be more likely to proclaim that summative assessment has a positive impact on their motivation if they believe they have a high amount of this trait. Once again this belief may be moderated by students' gender, ethnicity, parental educational background and family income among others.

Figure. 2 is an illustration of this model. It shows that how a student perceives the impact of summative assessment is subject to their beliefs about their ability and their understanding of their interactions with significant others. What motivates is firmly located within the self – self-determination. It also shows that the influence of these may be moderated by variables such as gender, ethnicity, parental education and family income among others. The interaction between all these variables seems to result in the type and intensity of motivation an individual has as well as the approach to learning he or she adopts. Beliefs about ability include SDT's sub-concepts of autonomy and competence as well as Dweck's theories of intelligence whereas interaction with significant others includes SDT's relatedness, Dweck's social contexts and Black and Wiliam's "moments of contingency". Moments of contingency have links with relatedness as it is the relationship, or the feeling of connectedness between teachers and learners that provide opportunities for the change in instructional direction discussed in a previous section. This model, therefore, has helped to shape my thinking of the data collected in this investigation.



* Based SDT's autonomy and competence as well as Dweck's theories of intelligence

** Based on SDT's relatedness, Dweck's social context and Black and Wiliam's Moment of Contingency

Figure 2: Model for the impact of students' perception of summative assessment on their motivation for and depth of learning

3.5 Research questions

Based on the ideas discussed in both the literature review and the theoretical framework, the following main and sub research questions will be addressed:

To what extent does post-16 A-level students' perception of summative assessment affect their motivation for learning?

How are the different types of motivation related to demographic variables (gender, ethnicity and school type)?

How do the variables associated with motivation inter-relate?

To what extent do students' narratives about summative assessment reflect the role of self in motivation?

To what extent does students' perception of summative assessment reflect the role of self in motivation?

What is the relationship between students' perception of summative assessment and their approach to learning?

Chapter 4 Methodology

4.1 Introduction

The aim of this chapter is to outline and discuss the research methods employed in this investigation. As stated in Chapter 2, although there is a lot of research on the impact of assessment on learning, only a little of this focuses on the impact of assessment on the motivation for learning and even less on the impact of summative assessment on post-16 A-level students' motivation for learning. In addition, there is a sparsity of literature on how these students' perception of summative assessment affects their depth of learning or how their perception is affected by factors such as gender, social/educational background and ethnicity. This has led to the formulation of the research questions already outlined. The data generated in the process of addressing these questions will be analysed using mixed methods. This approach encompasses the strengths of a variety of methods to produce a hybrid exploration. Although this approach may be criticised as being more of a set of methods than a research approach, Johnson and Onwuegbuzie (2004) have proposed that it should be recognised as a paradigm.

This chapter will therefore detail the following topics: mixed methods, rationale for choosing mixed methods, design, techniques for data collection, participants, research instruments, reliability and validity considerations, ethical considerations, procedure and data analysis.

4.2 Mixed methods

4.2.1 Description

This approach has also been referred to variously as mixed methodology, mixed research, multi-method, and triangulation. Prior to the idea of a mixed methods approach in education research, there was a long period when the quantitative approach was the only approach. This was followed by another period when it existed alongside qualitative approach. The period of paradigm wars ensued when each approach was fighting for supremacy until researchers began to see beyond their "either or" positions and the growth of interest in mixed methods approach began (Punch, 2009). The approach has been employed in this study because it provides a platform for narrowing the gap between qualitative and quantitative paradigms. This choice was partly informed by the work done by Denscombe who, having considered the input of other writers in the field, noted the defining characteristics of this approach. These include its use of:

- quantitative (QUAN) and qualitative (QUAL) methods within the same research project,
- a research design that clearly specifies the sequencing and priority that is given to the QUAN and QUAL elements of data collection and analysis,
- an explicit account of the manner in which the QUAN and QUAL aspects of the research relate to each other, with heightened emphasis on the manner in which triangulation is used, and
- pragmatism as the philosophical underpinning for the research

(2008, p. 272)

Johnson *et al.* described mixed methods as:

> an approach to knowledge (theory and practice) that attempts to consider multiple viewpoints, perspectives, positions, and standpoints (always including the standpoints of qualitative and quantitative research) (2007, p. 113).

As a new[13] research paradigm, the definition of mixed methods research is continually changing. Johnson *et al.* reviewed 19 definitions from various researchers with most of them taking mixed methods to mean a mix between quantitative and qualitative research. Only in one case did the researcher take the mixing to also include within research-paradigm-mixing. Taking this into consideration, they formulated the following general definition of mixed methods research:

> Mixed methods research is the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration (p.123).

They also offered the following definition of mixed methods research as a type of research:

> A mixed methods study would involve mixing within a single study; a mixed method programme would involve mixing within a programme of research and the mixing might occur across a closely related set of studies (2007, p. 123).

The mixed methods, as a research approach, came to be following the criticism by some, of the application of the positivistic ideas in the investigation of the social world. According to Smith (1983), Dilthey was among the first to challenge the positivist school of thought and argued about the futility of viewing the cultural sciences in the same way as the physical sciences. This is because the physical sciences dealt with inanimate objects which could be seen as existing outside us whereas the cultural sciences concerned the product of human minds and in effect

[13] New because it only became the topic of serious discussion as recently as the 1980s

would be difficult to disentangle from our minds. In the cultural sciences, investigators were the same as the subject matter they investigated, hence the difficulty of separating the researcher from what was being researched. As a result, it is difficult for the researcher to remain objective in the same way that might be possible for the physical sciences. Smith attempted to clarify the issue of the distinction between quantitative and qualitative approaches by posing the following three questions:

1. What is the relationship of the investigator to what is investigated?
2. What is the relationship between facts and values in the process of investigation?
3. What is the goal of investigation?

(1983, p. 6)

To address the first question, he argued that whether the researcher takes the realist or the idealist position will impact on how the process of research is conceived and executed. The realist will be using a scientific process because he or she believes that what is being investigated should be separated from the investigation process. Here, the subject is investigating the object. On the other hand, the idealist believes that the process of investigation cannot be separated from what is being investigated because of the active participation of the investigator in the procedure. In this case, the subject is investigating the subject. So whereas, to the realist, the investigation process is external, to the idealist, it is internal. Realism and idealism also take on different epistemological positions. According to Smith (1983), truth, to the realist, has its source in reality; a statement that is true matches an independently existing reality and one that is false does not. To the idealist, on the other hand, truth is negotiated and changes according to the prevailing circumstance. So Smith claims that what is true is what people can agree on at any given time and place.

On the relationship between facts and values in the process of investigation, Smith (1983) argued that although both quantitative and interpretive researchers claim to be objective, they are working with different definitions of it. From the realist-quantitative approach point of view, objectivity implies lack of bias in an investigation; the investigator ignores their "dispositions and surrounding situations" and draws conclusions without any reference to them. Most importantly, a specific procedure for fact finding is followed strictly which makes room for future replicability. The outcome of this approach and procedure, according to Smith, is considered public knowledge. However, from the idealist-interpretive point of view, objectivity is relative, depending, among other things, on the interests, values and dispositions of the investigator. This means that conclusions drawn by investigators about an issue may be different because of the variance in their views of the world. Therefore, Smith argued that objectivity is nothing more than social agreement and as explained earlier, "what is objectively so is what we agree is objectively so" (p. 10). Lincoln and Guba (1985) called this intersubjective agreement for once a group of investigators see things from the same perspective, they are more likely to draw similar conclusions from an investigation, therein lies their own objectivity. The important difference between facts and values is that in quantitative research facts and values are separate whereas in interpretive research it is extremely difficult to disentangle one from the other.

Finally, to answer the third question regarding the goal of investigation, once again, Smith (1983) highlighted the difference between the two approaches as it pertains to educational research and research in the social sciences. The quantitative approach

very much supports the scientific process which allows it to develop general laws that make prediction feasible. Conclusions are drawn from evidence based on empirical studies just like in the physical sciences. In contrast, the interpretive approach opposes universal laws because the social world is very complex and no amount of such laws will simplify its complexity. To this approach, therefore, the goal of investigation is the understanding of people's views of their own situations. This gives the investigators an insight into what makes these people behave the way they do. To be able to gain this insight means being able to understand their "language, art, gestures and politics" (1983, p. 12). Meaning is socially and historically dependent and to the interpretivist, it is important that investigators should assimilate this knowledge.

Reviewing these three questions, it is obvious that the styles of investigation adopted by the quantitative and interpretive approaches in the fields of education and social science are different. One refers to a subject-object investigation, the other to a subject-subject investigation. Also one sees the relationship between facts and values as separate, the other sees the link between the two as complexly interlocked. Finally, one considers the usefulness of universal laws in making predictions but to the other, laws are of little value whereas understanding is essential. Given these differences, Smith (1983) wondered about the issue of epistemology, in particular what should count as knowledge? Are ideas about what constitutes knowledge to be taken solely from one or the other or is integration more useful? If each approach is valid in its own terms, that is, fit for purpose, is it useful to compare one against the other? Smith did not think so and went on to conclude

that the assumption of the complementarity of quantitative and qualitative is unfounded since the intellectual and material mastery of their subject matters are not similar. Hammersley (2007) agreed that paradigms are “incommensurable” since each effectively offers a different conception of the world. This is taking a very purist stand.

Reichardt and Cook in Hanson *et al*. (2005) disagreed, suggesting that different philosophical paradigms and methods were compatible even though they were not inherently linked. They argued that quantitative procedures are not always objective, just like qualitative procedures are not always subjective, a view supported by Johnson and Onwuegbuzie (2004). Johnson and Onwuegbuzie pointed out what the purists seemed not to have noticed which is that it is a myth to be purist, especially given that the quantitative researcher, for example, during the course of research will have to make some choices. These may include decisions about what to study, how to study it, how to interpret the findings, what conclusions to draw, aspects of the data to emphasise or publish. Obviously, these decisions involve some subjectivity and quantitative purists will find it difficult to convince other researchers that the research process is completely value-free. Likewise the qualitative purist is not being completely subjective when he or she submits to some member checks and/or triangulation which ensure that the claims being put forward are not all reflecting their personal opinions.

Therefore given the argument above, there is no reason why both objective and subjective knowledge should not be acknowledged as although they have their individual uses, they can complement each other, if the opportunity calls. Some researchers, such as Johnson *et al.* (2004) have begun to call for the recognition of the mixed methods research as a paradigm on its own, alongside quantitative and qualitative paradigms, with its goal being to draw on the strengths and minimise the weaknesses of both. They argued that rather than researchers engaging in the paradigm debate about which approach is superior, they should be more pragmatic and go for the methods which give them the best chance of answering their research questions even if it means mixing and matching of designs. In other words, what is more important is the research problem rather than the methods of investigation. Tashakkori and Teddlie (2010) and Creswell (2003) are in support of researchers being free to use any method that is fit for purpose. They argue for a move away from the "false dichotomy" between qualitative and quantitative approaches whilst promoting the methodological eclecticism which the mixed methods approach provides.

4.2.2 Types of mixed designs/mixed methods research

Various types of mixed methods designs have been proposed by different researchers such as Creswell and Plano Clark (2007) who proposed four major types, each with its variants. The four major designs are the Triangulation, the Embedded, the Explanatory (also known as the Explanatory Sequential) and the Exploratory Designs. Briefly, the Triangulation Design is a one-phase design whose

purpose is to obtain separate but complementary data on the same topic. In the Embedded Design, one data set plays a supportive role for the other. The rationale is that one data set is not enough to answer all possible questions that may arise. This design, therefore, allows the researcher to embed a qualitative element within a quantitative design. Regarding the Explanatory Design, data are collected in two phases with the purpose that qualitative data help explain or build upon initial quantitative results. The Exploratory Design also involves a two-phase procedure with the intention that the outcome of the qualitative method will help inform the quantitative method.

Of these designs, the Explanatory Sequential Design seemed to come closest to addressing the research questions in this study and was employed. As stated above, this design involves gathering data in two phases. In this investigation, the quantitative data were gathered first to gain a general understanding of the research problem and was followed by the qualitative data which considered the students' views in more depth

4.3 Rationale for choosing the mixed methods.

The mixed methods approach was chosen because it provides the best opportunity to gain a better insight into the relation between students' perception of summative assessment and A-level students' motivation and approach to learning. It combines the strengths of both the quantitative and qualitative approaches (whilst offsetting their weaknesses) which would not otherwise be possible when using either one or

the other methodology. Having explicated the strengths of the quantitative approach (such as its ability to employ large and possibly representative samples) and the strengths of the qualitative approach (such as its sensitivity to meaning and to context), Punch (2009) concluded that qualitative methods can be strong in those areas where quantitative methods are weak and similarly, quantitative methods can be strong in those instances where the qualitative methods are weak. The reason for adopting the mixed methods approach was to allow for triangulation. The concept of triangulation has been defined as "the combination of methodologies in the study of the same phenomenon" (Jick, 1979, p. 602). This between-method approach means that if similar or same results are achieved using different methods, the researcher can report the accuracy of his/her findings with greater confidence. Apart from this advantage, Jick also outlined other advantages such as the fact that triangulation is capable of inspiring the formulation of inventive methods.

Another aspect of triangulation is the within-method approach and is essentially the use of multiple techniques from a paradigm, for example, within the qualitative approach, it is possible to employ the techniques of observation, in-depth and group interviews within one investigation. However, in terms of quality, the between method approach (employing quantitative and qualitative approaches) is considered superior in that the pros and cons which exist within one method may be compensated by the pros and cons which exist in another method. In contrast, the within-method approach is like recycling the different techniques of a particular paradigm without improving on its limitations or its strengths. Johnson *et al*. (2007) referred to many researchers such as Sieber, 1973; Rossman and Wilson, 1985; Greene, Caracelli

and Graham, 1985; Cook, 1985; Sechrest and Sidana, 1995; Collins, Onwuegbuzie and Sutton, 2006 who have all promoted the usefulness of using multiple methods within a single investigation.

As already suggested, the idea behind triangulation is that if findings from one method are backed up by findings from another method, then greater confidence can be held in the singular conclusion. If the findings do not marry, then the researcher will have gained more knowledge which he or she can use to adjust interpretations and conclusions being put forward (Johnson and Onwuegbuzie, 2004). The rationales identified by Johnson *et al.* for conducting mixed methods research also apply to this research:

> (a) Triangulation (i.e. seeking convergence and corroboration of results from different methods and designs studying the same phenomenon);
>
> (b) Complementarity (i.e. seeking elaboration, enhancement, illustration, and clarification of the results from one method with results from the other method);
>
> (c) Initiation (i.e. discovering paradoxes and contradictions that lead to a re-framing of the research question);
>
> (d) Development (i.e. using the findings from one method to help inform the other method); and
>
> (e) Expansion (i.e. seeking to expand the breath and range of research by using different methods for different inquiry components).
>
> (2007, p. 116)

4.3.1 Strengths and weaknesses of mixed methods research

Additional strengths of the mixed methods research highlighted by Johnson and Onwuegbuzie (2004) are that the approach can answer a broader and more complete range of research questions since the researcher is already using multiple methods. It can provide better insights and understanding that might not be spotted when using a single method. In addition, it can be used to increase the generalisabilty of the results. Finally, qualitative and quantitative approaches, when used in combination can produce a fuller knowledge which will inform theory and practice. In this case, combining the two approaches will help to achieve a more rounded evaluation of the motivational beliefs of the students towards their learning.

There are disadvantages of using the mixed methods and one of the main ones is that it can be more expensive and time consuming than a uniform method. The researcher has to learn how multiple methods work together in order to apply them appropriately. Besides these weaknesses, Denscombe (2008) pointed out some of the inconsistencies within the approach, although not as a criticism but as a way of highlighting the way in which the idea of 'research paradigm' might harbour some variations and inconsistencies. He referred to the way that some researchers use the approach to improve the accuracy of their data whereas others use it to present a fuller picture by combining information derived from complementary kinds of data sources. Denscombe also argued that all mixed methods researchers are not agreed on how quantitative and qualitative aspects of research should be used within a particular project. Should they be integrated, combined or should they be

used concurrently? In addition, he argued that there are some inconsistencies in the way mixed methods researchers interpret pragmatism, the philosophy underpinning the approach. To some it provides an opportunity for using the mixed methods as a third alternative but to others it is seen as an approach to be used when everything else fails, a danger that "anything goes" as long as it works. Unfortunately, this is very far from what pragmatism stands for as a philosophy. As a philosophy underpinning mixed methods, it provides an assumption about knowledge and enquiry which distinguishes the approach from purely quantitative approaches that are based on a philosophy of (post) positivism and from purely qualitative approaches that are based on a philosophy of interpretivism or constructivism (Denscombe, 2008). Finally, Denscombe warned against the danger of overemphasising the degree to which the mixed methods approach is a new way of doing research. This is because mixed methods research existed long before it became a topic for discussion. Denscombe cited the Hawthorne experiments dating back to the 1920s and 1930s as well as the Chicago School studies, of the same period, which all employed mixed methods.

4.3.2 The problem with converging results

The aim of triangulation is to be able to reach a convergence even though Jick (1979) is concerned about the issue of deciding whether results have or have not converged. This is because there is no clear objective way of putting the results together. Jick (p. 607) asked, "Should all the components of a multi-method be weighted equally?" If there is no objective way of differentiating between the

methods in order to judge their applicability, this is a significant limitation. How is one to judge whether the result from a qualitative approach is significant or not when, in studies involving the quantitative approach, the rule is very clear? Jick made an important point when he supposed that the concept of "significant differences" in qualitative analysis does not compare readily with "significant differences" derived from statistical tests in a quantitative analysis. If results do not converge, it is not necessarily a limitation as when they are divergent, this could lead to a new way of examining the data. In Jick's investigation of anxiety, for example, triangulation gave him the opportunity to come up with alternative and more complex explanations. Another limitation is the difficulty with replication especially using the qualitative approach. Studying human behaviour is not the same as studying inanimate objects. Therefore, replication in qualitative research will always remain a problem. This is acknowledged by Merriam (1995) who stated that human behaviour is never static and that measurements and observations can be wrong, time after time, particularly where human beings are involved. This means that, if this research finds that some or all the interviewees adopt a specific approach to learning, there is no guarantee that the result will be the same if the same students are interviewed again during their further education.

4.4 Design

The design of this investigation involved the use of questionnaire and interview techniques. The purpose of the questionnaire was to collect evidence for the impact of summative assessment on students' approach to and motivation for learning. The

design adopted for this research is the Explanatory Sequential Design, as explained in 4.2.2. An advantage of this design is that “the final report can be written in two phases, making it straightforward to write and providing a clear delineation for readers” (Creswell & Plano, 2007 p.74). However, one challenge for the researcher would be to decide whether or not to use the same individuals for both phases of the design.

4.5 Techniques for Data Collection

The questionnaire technique was adopted as a means of collecting the majority of the data for this investigation. Although this technique can be criticised for lack of in-depth information, it was considered the best technique in this instance because it enabled a broader sample to be reached in a shorter time than if any other technique was employed for the same sample size. Hence it was more time and cost effective. To counter the criticism of lack of in-depth information, the face to face in-depth interview method, using the interview guide approach, was also adopted and used on a subsample of twenty participants. The aim of this was to generate rich data to complement the questionnaire data. Initially the use of some focus groups to explore the students’ perception of summative assessment and its effect on their depth of learning was considered. The in-depth face to face interview was eventually chosen as the benefits of this technique would be most suited to achieving the objective.

One of these benefits was that the face to face interview would be more manageable in terms of setting it up. Regarding the responses, the face to face interview would

be more reliable especially during transcription when it would be obvious who was talking. In contrast, it might be more difficult to determine who said what when transcribing a focus group discussion, particularly if the researcher was unfamiliar with the group members' voices. Furthermore, Bryman (2008) argued that there are occasions when focus groups may be inappropriate due to their potential for causing participant discomfort. Some people are likely to be reluctant to talk about certain sensitive personal details when in a group setting. Therefore, when the researcher is faced with such situations, individual, face to face interviews may be more appropriate. But most importantly, this technique was chosen because it was the best way to know how students felt about summative assessment and how it affected their motivation and approach to learning. Each of these twenty participants was engaged in an in-depth face to face interview whose aim was to further probe the participants regarding their perception of summative assessment and the impact this has on their approach and their motivation for learning. Choosing this technique also facilitated follow up questioning. The outcome of this exercise was seen as a source of rich data, providing valuable insights into the topic in question.

Other advantages of the interview method are that it is very effective in giving a human face to research problems. It also provides a rewarding experience for both the participant and the researcher in that the participant gets to express him or herself in a way that may not be possible to do in a questionnaire. As for the interviewer, it is a satisfying experience to be able to tap into the way others feel about a problem or situation.

As part of the interview method, the interview guide approach was adopted. Using this approach, the topics were outlined and questions to be addressed were outlined in advance. This allowed me to decide the sequence and working of questions in the course of the interview. According to Cohen *et al.* (2007), one strength of this approach is that it increases the comprehensiveness of the data and makes data collection fairly systematic for each interviewee. In this case, it ensured that all respondents were asked the same questions in generally the same manner and order. However, a weakness of the approach is that important topics may be omitted. Another is that interviewer flexibility in sequencing and wording questions can result in substantially different responses, hence reducing comparability of responses (Cohen *et al*.). This limitation might not have been a problem in this investigation as safeguards were put in place to ensure that all interviewees had the same experience. This is also true for the questionnaires which clearly did not have differences in questioning.

A problem with interviews, in general, is that the responses generated may be subject to the researcher's biased interpretations. Also, in-depth interviews can be time consuming especially during the transcription phase. Equally, analysis of data can be quite complex requiring stages of generating units of meaning, classifying and categorising them and actually making some meaning of the data.

4.6 Participants

4.6.1 Participants (Questionnaire)

An opportunity sample of 1016 students was recruited from across ten schools and two Further Education (FE) colleges which offered A-level courses and which agreed to be involved in the investigation. A random technique for sample selection would have been more appropriate, not because it would guarantee representativeness of the sample but more for its lack of bias during selection. However, the opportunistic sample was opted for instead because when the initial enquiries were made, few schools indicated willingness to take part in the investigation. It appeared best practice to work with those prepared to be involved. Fortunately, the schools that agreed were varied in terms of whether they were state grammar, comprehensive, single or mixed or whether they were independent single or mixed. The decision to recruit from these types of schools was in order to gain a fairer representation of students from varying backgrounds. So the sample was a mix of students from varied social and ethnic backgrounds located in mainly urban and suburban settings in the south-east of England. The decision to recruit a minimum of 1000 students was made as this size was considered large enough to cope with any statistical demand that would be made on the sample. This sample size was also chosen to increase the external validity of the outcome. The participants consisted of 408 males and 608 females aged 17 to 18 years who were either in their first or second year of the A-level course. The number of students from the different types of educational settings is as follows:

Boys Comprehensive = 0

Boys Grammar = 36

Boys Independent = 0

FE College = 227 (107 males; 120 females)

Girls Comprehensive = 110

Girls Grammar = 40

Girls Independent = 58

Mixed Comprehensive = 346 (147 males; 199 females)

Mixed independent = 199 (118 males; 81 females)

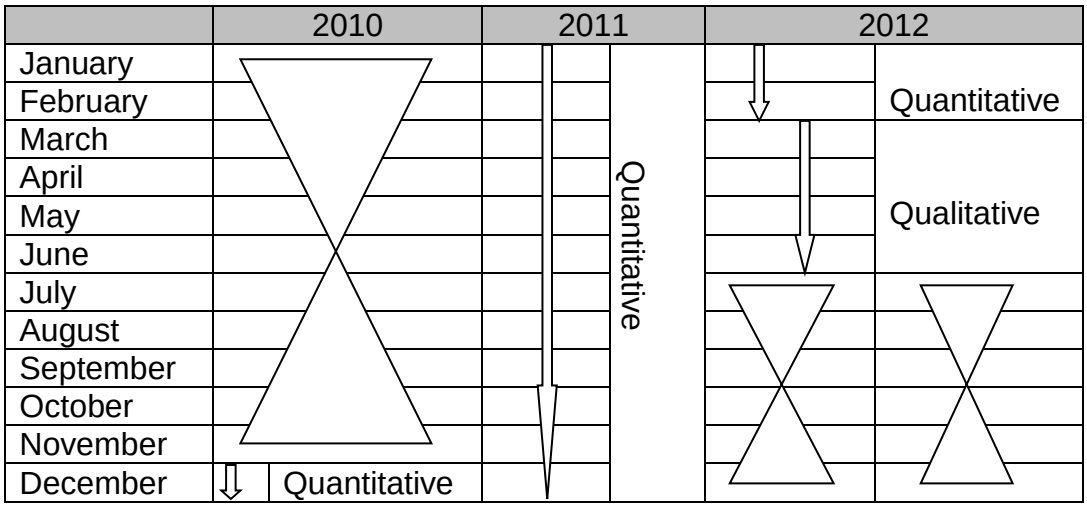
Altogether, 2825 questionnaires were distributed with an overall return rate of 35.9%. Table 4.1 below shows how many questionnaires were handed out in each school/FE college and the corresponding return rates. The 'unusable' column on this table refers to questionnaires which were so badly completed that they were excluded from the collection. For example, respondent 2661 only completed the first 12 questions of the Academic Motivation Scale (see 4.7.1 below). Unfortunately, in this case, it meant that the corresponding parental questionnaire, though fully completed, was also excluded from the analysis. Table 4.2 illustrates the time line for the collection of data.

Table 4.1: Distribution of questionnaires and return rates

School/FE college	Number of questionnaires out	Number of usable questionnaires	% return rate for usable questionnaires	Number of unusable questionnaires
A	250	36	3.9	1
B	150	58	38.7	0
C	200	40	20.0	0
D	350	60	17.1	3
E	200	28	14.0	8
F	200	55	27.5	5
G	25	16	64.0	0
H	250	211	84.4	0
J	200	110	55.0	5
K	450	76	16.8	3
L	250	199	79.6	1
M	300	127	42.3	14
Total	2825	1016	35.9	40

Each school or FE college's name was replaced with a letter to protect its identity.

Table 4.2: Timeline for data collection



4.6.2 Participants (Interview)

The face to face interviews involved twenty students, ten girls and ten boys who were chosen from the schools that agreed to take part. These student volunteers were from both white and non-white backgrounds and were either in their first or second year of the A-level course. Interviewing only twenty students was considered sufficient as their responses would serve to complement other qualitative responses already gained from the questionnaires.

The original plan for selection of the interview participants was through volunteering at the end of the questionnaire. However, this was not possible as a result of some gatekeeping issues outlined in sections 4.10.1 and 4.10.2. Consequently, an opportunistic approach was embarked on. In this case, some of the educational settings involved in completing the questionnaires were again approached. As it was

important to include equal numbers of boys and girls from a mix of ethnicities and social backgrounds, the teachers in each setting were informed of the characteristics of the students being sought after. On the agreed date and time, the appropriate students who were available and willing to take part in the interviews were invited to do so. Willingness to take part was considered very important for ethical reasons. However, this way of choosing the interview participants may be criticised on the grounds of representativeness. Those who took part might be atypical of the target population; they might be students confident to speak out in front of a stranger unlike the shy and reserved ones. That being said, the interviewees would not all be described as particularly self-assured and outgoing as there were some who were quite reticent.

4.7 Research instruments

4.7.1 The Academic Motivation Scale

The Academic Motivation Scale (AMS), a self-report questionnaire, was used to assess the different elements of motivation. As already mentioned in Chapter 2, this scale, based on the principles of self-determination theory, was originally developed in French by Vallerand *et al*. (1992) and was known as l'Échelle de Motivation en Éducation (EME). It was later translated into English in an investigation to achieve cross-cultural validity. This is a 28-item inventory and contains 7 subscales which assess three types of intrinsic motivation which are to know, to accomplish and to experience stimulation. It also contains three types of extrinsic motivation which are

external regulation, introjections and identified regulation, and amotivation. Sample items for each of the seven subscales include:

IM-to know = because I experience pleasure and satisfaction while learning new things

IM-to accomplish = for the pleasure that I experience when I am surpassing myself in one of my personal accomplishments

IM-to experience stimulation = for the "high" feeling that I experience while reading about various interesting subjects

EM-identified = because this will help me make a better choice regarding my career orientation

EM-introjected = to show myself that I am an intelligent person

EM-external regulation = because I need at least an A-level qualification in order to find a high-paying job later on

Amotivation = I can't see why I do A-level and frankly, I couldn't care less

For each statement on the 7-point scale respondents had to circle one number which corresponded to how they felt about it. For example, 1 was "not at all", 4 was "moderately" and 7 was "exactly". When combined, the scores from these subscales show how much a student is intrinsically or extrinsically motivated or how much he or she is amotivated toward his or her education. The High School version (AMS-HS 28) was adapted and used in this investigation. The modification involved minor changes such as replacing the wording "High School" with "A-level". A copy of the questionnaire is in Appendix A.

4.7.2 The “Perception” Questionnaire

The “perception” questionnaire (Appendix B) was designed in order to measure the extent of students’ negative or positive perception of summative assessment. It was also designed to measure their approach to learning i.e. whether deep or surface. In addition, the questionnaire was designed to measure the extent of students’ perception of the importance of A-level. Its content was influenced by the responses generated from the focus groups during the IFS stage of this investigation. Adapting an existing instrument is preferred to developing one from scratch (Robson, 2011) but the potential drawbacks were overcome by incorporating some ideas from Biggs *et al*. (2001) Revised Study Process Questionnaire (R-SPQ-2F) for the interview questions (Appendix C). The questionnaire has 24 items with responses fitting into the following 4 categories: negative view of assessment, positive view of assessment, mode of learning (deep/surface) and importance of A-level qualification. Like the AMS-HS 28, sample items for each of the four subscales include:

- **Negative view of assessment** = Exams suck the fun out of learning.
- **Positive view of assessment** = The whole point of exams is that they make me work.
- **Surface learning** = A-level exams make me study for the grades not for the knowledge.
- **Deep learning** = The scare of getting a bad mark makes me study to understand rather than simply memorising the material to be learnt.

- **Importance of A-level** = There's not much I can do nowadays, job wise, without an A-level qualification.

The questionnaire was designed along a 7-point scale to make it consistent with the AMS-HS 28 questionnaire and therefore easier for the students to complete. The word 'examination' was used in place of 'summative assessment', again, to make it easier for the students to understand (This followed the pilot of the questionnaire. See section 4.10.1). The higher a student scored on each of the subscales, the more he or she will be described as having that characteristic. At the end of this questionnaire was one statement that requested the students to rate the impact of examinations on their motivation for learning on a scale of 1-10. A high rating indicated a positive impact and a low rating indicated a negative impact. Then there was another item requesting an explanation of this rating. The purpose of this was to gain a better understanding of the students' feelings regarding the extent of the effect of examinations on their motivation for learning. A sample of the students' explanations of their ratings can be found in Appendix J. Following these two statements were some demographic questions for the participants which would help to categorise their responses on both questionnaires

4.7.3 The Parental Questionnaire

This focused mainly on demographic information such as level of education and income (Appendix I). This information would also be useful in categorising the responses from the participants. As with the students' questionnaire, this too was anonymously completed with the coding on it serving to match each one with the

corresponding student and to aid with analysis. Despite the assurance of confidentiality and anonymity, there was a very low return rate – see section 4.10 below.

4.7.4 The Interview Questions

The interview questions were formulated with the research questions in mind and some of the questions were adapted from Biggs *et al*. (2001) Revised Study Process Questionnaire (R-SPQ-2F) (See Appendix C). In all, there were twelve questions, mostly open ended in order to generate qualitative responses. The initial questions served as icebreakers to get the participants relaxed to encourage them to start talking without restraint. The full list of questions can be found within the sample transcripts (Appendix H) but examples of the initial questions and main questions are presented below as 1 and 2 then 3 and 4 respectively:

1. What subjects do you study?
2. Why have you chosen those subjects?
3. Tell me about how you learn best.
4. How important is it that you understand a topic?

4.8 Reliability and Validity Considerations

Section 4.2 briefly discussed the differences between quantitative and qualitative research approaches. Here is another brief discussion regarding how the concepts of reliability and validity are construed by researchers following the quantitative and

qualitative approaches. The terms reliability and validity relate to both the quantitative and qualitative approaches although they are now more associated with the quantitative approach whereas their parallel, trustworthiness, is reserved for the qualitative approach. Many positivists believe that reliability and validity can be applied more effectively to quantitative rather than to qualitative data. Shenton (2004) has referred to how some researchers have tried to address the issues of validity and reliability in their investigation and how others like Lincoln and Guba (1985) have chosen different terminology to address the same concerns.

Lincoln and Guba (1985) have chosen the following terms: credibility, transferability, dependability and confirmability to replace the following quantitative terms: internal validity, external validity, reliability and objectivity respectively. Whether reliability and validity or trustworthiness, the ultimate aim is to demonstrate rigour in the investigation. Whilst Lincoln and Guba think that reliability and validity are not appropriate terms for maintaining rigour in qualitative research, Morse *et al.* (2002) presented the opposite argument that the concepts of validity and reliability are still applicable to qualitative research. They suggested that though the new criteria for demonstrating qualitative rigour are used by many, they are less likely to be acknowledged as manifestations of rigour. They are concerned that going down the "trustworthiness" route and abandoning reliability and validity might give the impression that qualitative research might be unreliable, invalid, lacking rigour and unscientific. They questioned the veracity of using audit trails, member checks and memos as evidence of rigour and argued that researchers involved in this approach

should rather look for strategies for verifying their existence during the process of conducting the research (in order to bring the process of ensuring rigour in line with the practice used by mainstream science). According to them, the process of ensuring trustworthiness which happens at the end of the study may result in not being able to identify serious threats to reliability and validity of the study until it is too late to put them right. As this investigation has adopted a mixed methods approach, it makes sense to consider how rigour is achieved from both the quantitative and qualitative perspectives. Therefore, reliability and validity will be considered alongside credibility, transferability, dependability and confirmability. Section 4.8.1 discusses reliability and validity for the AMS scale, the Perception and Parental questionnaires while section 4.8.2 discusses the trustworthiness of the interview data.

4.8.1 Reliability and Validity of the AMS scale and the Perception Questionnaires.

A cross-cultural validation exercise for the English version of the AMS scale was carried out by Vallerand *et al.* (1992). The results provided support for the factorial validity and reliability of the AMS, allowing them to support its use in educational research on motivation. The results showed that the scale had satisfactory levels of internal consistency with a mean alpha value of .81 and that it had a temporal stability over a one-month period with a mean test-retest correlation of .79. Additionally, the results of a confirmatory factor analysis (LISREL) firmly established

the seven-factor structure of the AMS. Furthermore, gender differences obtained with the EME were reproduced using the AMS. These findings showed that the authors were not just successful in translating the original scale from French to English but were also able to match the EME results, maintaining its psychometric properties. These preliminary findings were confirmed in the authors' follow up research (Vallerand *et al.,* 1993) which also confirmed the concurrent and construct validity of the AMS providing adequate support for the psychometric adequacy of the AMS. Together, the findings of both studies by these researchers provided support for the reliability and validity of the AMS. However, Fairchild *et al*., (2005) in their investigation, not only evaluated the extant validity evidence for the scale, as presented by researchers such as Vallerand *et al.* (1992, 1993) and Cokley *et al.* (2001) but also reported their own findings of the validity investigation of the same scale. In summary, they found some inconsistencies in the findings of these investigations.

The ideal situation would be to complete a validation and reliability exercise for the perception questionnaire similar to the description reported above for the AMS questionnaire. This has not been achieved due to time restraint and has been reported as a limitation in section 7.4.1 of Chapter 7.

4.8.2 Trustworthiness and the Interview Data

4.8.2.1 Credibility

Well-established methods of gathering information were employed in this investigation and although participants were not randomly selected, they were typical of the target population. According to Shenton (2004), where similar results emerge from different settings, this can contribute towards the strength of the credibility of such findings. He called this way of providing credibility site triangulation. There was not a single educational setting used in this study that did not provide evidence for students' negative perception of summative assessment. Therefore, it can be said that receiving the similar results from the participants in the various educational settings added to the credibility of the findings.

Comments by my work colleagues during the planning of the investigation, comments by my colleagues following my presentations at the BERA conferences, discussions with both my supervisors at different stages of the investigation have challenged certain assumptions that I made and helped to strengthen some of my arguments. Member checks were achieved by randomly selecting three interview participants to validate the content of their transcripts. These transcripts provided enough detail to give an insight into the area being investigated. Also, ensuring that participants were willing to take part in the investigation rather than being coerced meant data could be trusted as participants would be likely to be more frank in their responses.

4.8.2.2 Transferability

According to Lincoln and Guba (1985), transferability decision by the researcher is only possible if he or she knows about the "sending" and "receiving" contexts. Since this may not be possible, the responsibility for transferability lies more with the reader in the "receiving" context than with the investigator in the "sending" context so long as the investigator provides "sufficient descriptive data to make such similarity judgement possible" (p. 298), a view equally acknowledged by Shenton (2004). Sufficient details about the context of this investigation have been provided to enable other researchers decide whether this context is similar to theirs and so whether the findings and conclusions from this investigation can be extended to their context. Like Gross (cited in Shenton, 2004), there may be other A-level settings where students' perception of summative assessment resembles what has been found in this investigation. Therefore, the outcome of this investigation should serve as a baseline understanding with which the findings of other subsequent studies may be compared.

4.8.2.3 Dependability

Some qualitative researchers believe that reality is constructed and not frozen in time. This means that different researchers considering the same data may present different interpretations of reality. According to Merriam (1995, p. 54) "... the researcher offers his or her interpretation of someone else's interpretation of reality". Since there can be no validity without reliability, Lincoln and Guba (1985) argued that a demonstration of the former is sufficient to establish the latter. Having said that,

they made a case for a more direct way of demonstrating dependability such as reporting the procedures within the study in detail so that a future researcher is enabled to repeat the work and possibly gain similar results. This investigation has provided detailed information about the processes involved in conducting it. The interview questions, for example, were written and read out to each interviewee in the same sequence. This was an important strategy because according to Cohen *et al.* (2007) when the wordings of questions are changed, they weaken reliability because the questions are no longer the same for each participant.

4.8.2.4 Confirmability

Confirmability parallels objectivity within the positivist paradigm. It refers to the need for the researcher to ensure that findings from the investigation have emerged from the data and not the result of researcher bias. However, researcher bias is inevitable and so there is no way of telling that the conclusions drawn from this investigation will not be seen differently by another researcher. This is not necessarily a limitation as a different interpretation to a given set of data may introduce another (fresh) way of examining the data other than the original way in which it has been thought about. Here again, the idea of triangulation is relevant where similar interpretations provide increased confidence whereas dissimilar interpretations may promote further research in the area.

4.9 Ethical considerations

All participants who took part in this investigation gave up their time to do so, especially those involved in the face to face interviews who might also have been exposed to unwanted power imbalance. Power relations between the researcher and the researched could be an issue in investigations like this one (Ekwue, 2010). When considering the direction of this power, one must acknowledge that it could lie in the hands of the interviewer or the interviewee. The participants have the knowledge that the researcher needs; could they be completely honest with their opinions in the presence of the researcher? On the other hand, the researcher knows more about the investigation being undertaken; could his or her determination to maintain a professional distance not affect the participants' behaviour? In this investigation, it is possible that the students' knowledge of me as a teacher, therefore an authority figure, may have influenced them to respond in a more socially desirable manner.

For this reason, it was very important that each interviewee was made aware that I was not looking for a specific answer as there was no right or wrong answer. As a result, it was explained to each interviewee that an honest account about how they learn was the main purpose of the interview. In addition, care was taken to ensure that they did not suffer any harm as a result of their involvement in the study. To do this, students were given the freedom to consent to the study rather than being coerced into it. This was achieved by explaining the general aim of the investigation to them and by assuring them of the confidentiality of any information they provided

as well as the anonymity of their identities (see the Information Sheet in Appendix D). Their right to withdraw from the interview, at any time, was equally made very clear to them. The security of the data collected was also made clear to them as only the researcher would make use of them. Finally, and most importantly, the participants were not deceived as to the exact aim of the investigation. In addition, a written ethical approval was sought and received from King's College London and this can be found in Appendix E.

4.10 Procedure

4.10.1 Questionnaire

Following the acquisition and design of the research instruments, a pilot study was conducted using 13 female students and their parents. A hundred percent return rate was achieved for the students compared to 62% for the parents. This exercise resulted in minor adjustment to the "perception" questionnaire mainly in terms of its layout. Prior to the above, a recruitment e-mail/letter (Appendix F) was sent to the heads of fourteen potential schools asking for their willingness to participate in the study. The e-mails were followed up by telephone calls three weeks later. Unfortunately, there were no positive returns from this strategy and a plan B – networking – was initiated involving my friends and in some cases, my friends' friends. Cohen *et al*. (2007) noted that gatekeepers, those who control access, play a significant role in research and they did play a significant part in this investigation, steering its course. Cohen *et al.* also noted that gatekeepers may wish to avoid,

contain, spread or control risk and therefore may bar access or make access conditional. In this case, they did all that – in one setting, for example, I had arranged with the gatekeeper to administer the questionnaires by myself but I was surprised that the task was already completed before my arrival and all the parental questionnaires were returned intact. The message left with the completed student questionnaires was that "Mr X was not comfortable with sending the parental document home". In another setting, a second gatekeeper allowed me access but on the condition that only the students would be involved because of the "many demands we make on parents".

Questionnaires were administered by teachers in most of the schools and Further Education colleges. In each case, the head of Sixth Form was approached and after the investigation was described, he or she was asked if they were prepared to administer the questionnaires. After the Information sheet was read out by the questionnaire administrator, the students were requested to complete two Likert-style questionnaires, one designed to assess the extent to which their academic motivation was intrinsically motivated and the other to measure their perception of summative assessment and its effect on their motivation for learning. Each participant was handed a questionnaire which was numbered and clipped to an envelope containing a parental questionnaire bearing the same number for identification purposes only. This would enable eventual matching of data. The envelope which was addressed for the researcher's attention also contained an information sheet for the parents (see Appendix G) and was to be returned to KCL on completion.

When the questionnaires were piloted, they took between ten and fifteen minutes to complete and I recommended this time to my teacher helpers as the amount of time it would also take their students to complete the task. It was important not to make the questionnaire items too lengthy so as to maintain the students' interest in completing them. Students were requested to circle the number that best corresponded with how they felt about each statement (1= Does not correspond at all, 2-3 = Corresponds a little, 4 = Corresponds moderately, 5-6 = Corresponds a lot and 7 = Corresponds exactly).

Collection of data was a very slow process (see Table 4.2) as the schools preferred to administer the questionnaires themselves, using their own staff when it was most convenient for them. This was accepted as it would have meant taking time off work each time to go to the participating school/college. However, it made the issue of returns a big problem. Some teachers were not diligent in requesting the return of questionnaires and some did not care about ensuring that all parts of the questionnaires were completed. For example, one school returned 36 out of 250 (3.9%) and another returned 28 out of 200 (14%) as shown in Table 4.1.

Given how difficult it was to get the questionnaires back from the students, it was anticipated that the return rate for the parental questionnaires was going to be poor but what was not anticipated was that it was going to be very poor. Only 151 out of 2825 (5.3%) were returned despite providing stamped, addressed return envelopes, a strategy which was dropped after a while due to the rising cost. Given this very

low return rate, findings will only be indicative and may warrant a future area of research.

4.10.2 Interviews

Given the difficulties experienced trying to convince certain gatekeepers to be involved, it was anticipated that it would be harder asking to interview some of their students. Realities in the field meant that participants for the interviews were not recruited as originally outlined in the research plan. The strategy had to be revised. Instead of allowing the participants to volunteer after the completion of the questionnaire, I went back to request my contacts to nominate a number of willing participants. Had the questionnaires not been completed anonymously, there were clearly some explanations given by students, following their rating of the extent of the impact of examinations on their motivation for learning that would have been interesting to pursue further. Nonetheless, my contact in each setting was requested to nominate 2 females and two males, possibly from a mixture of ethnic backgrounds and ability levels. This was so that a fairly representative sample was included. The original plan was to interview 9 male participants, 3 from FE, another 3 from mixed comprehensive and the final 3 from mixed independent.

Likewise, the plan was to interview 11 female participants (2 from FE, 2 from mixed independent, 2 from mixed comprehensive, 2 from single comprehensive, and 3 from single independent). In reality, 20 students, 10 males and 10 females, were

interviewed from two mixed comprehensives, one FE and one independent girls' school. For each gender, there were 5 white and 5 non-white participants. The interviews were conducted in an airy and quiet location, free of any distraction, in each case.

Despite the difficulties referred to at the beginning of the paragraph above, participation in each interview was voluntary as each interviewee was offered an opportunity to decline their involvement. Before it started, the purpose of the interview was explained. The participants were told that I had a list of questions which I would be grateful if they would answer. I also told them that I would appreciate it if they spoke freely and without any concern about being wrong or right as that was not relevant in this case and that I was simply interested in their personal opinion regarding the questions they would be asked. They were assured of the confidentiality of their responses which I did in order to increase the level of honesty in their responses.

Each interview length was kept between 15 and 20 minutes to take the attention span of this group of students into account. Also, because they were interviewed while at school or college, it was important to limit disruption of their learning time. In reality, the duration ranged from 8:44 to 18:22 averaging at 13:16 (girls – 14:14 and boys – 11:66). The interviews were recorded using an audiotape and transcribed for later analysis.

4.11 Data Analysis

4.11.1 Quantitative

The Statistical Package for the Social Sciences (SPSS) version 22 was employed in the analysis of the quantitative data derived from the Academic Motivation Scale (AMS) and the perception questionnaires purposely designed for this study. The data were subjected to multiple regression analysis. Different types of multiple regression exist of which stepwise (or statistical) and hierarchical (or sequential) are examples. These two differ mainly in the method by which the predictor variables are entered in the analysis. In stepwise regression, variables are entered one at a time. The interest of the researcher who uses this method is in identifying the best predictors that are most effective in significantly improving the ability of the model to predict the outcome. When a predictor is identified, the computer retains the variable in the model and searches for the next best predictor (Field, 2009). Variables that cannot make meaningful contributions are removed from the model.

In hierarchical regression, however, variables are entered in an order prescribed by the researcher. This approach is usually theory-based. The researcher's focus is on testing theoretical assumptions as well as examining the effect of several predictor variables in a sequential way (Petrocelli, 2003). This technique was chosen instead of stepwise because of its usefulness as a measure of the contributions of independent variables over and above those previously entered in the model. It was important to determine which of the predictor variables had more influence in

determining the extent of the effect of students' perception of summative assessment on their motivation for learning.

In conducting this analysis, the demographic variables were entered first based on the findings of researchers like Hardré *et al*. (2006), Lightbody *et al.* (1996) and Maehr and Meyer, (1997) who have shown that these factors can have an influence on the type of motivation adopted by students. In addition and according to Petrocelli (2003), demographic variables are typically a good choice for the first block entry. This may be because participants do not have control over their belonging to these categories. For instance, A-level students do not have any control over their gender assignment nor do they choose their race/ethnicity. These variables, therefore, had to be controlled by putting them in the first block just to ensure that they do not explain away the whole relationship between a student's view of summative assessment and their type of motivation or approach to learning. This block entry was followed by a second block involving the mode of learning variables. Research, as explained in the literature review, has shown some connection between approach to learning and type of motivation. Unlike the demographic variables, students may be deemed to have some control over the approach to learning that they adopt. This level of control may be dependent on the interaction of some or all the variables discussed in the model in Chapter 3. The final block contained the main variables of interest in this investigation – the negative and positive view variables. Again, as explained in the literature review, there is evidence to support the influence of students' view of summative assessment on their motivation for learning. To be certain that the results were due to the order of

entry, blocks two and three were swapped in further regressions in order to assess the effects of entering the blocks in a reverse order. Likewise, another regression was run which excluded the gender variable to assess the actual impact of this variable.

4.11.2 Qualitative

Even though qualitative data have many advantages, taking on qualitative data analysis can be labour intensive especially as it involves wading through a large amount of rich prose and choosing suitable analytic paths unlike quantitative data (Bryman, 2008). Bryman acknowledged thematic analysis as one of the most common approaches to qualitative analysis even though, according to him, it is not an identifiable approach meaning that it has no "identifiable heritage" (p. 554) unlike other techniques for analysing qualitative data.

Although effort was made to transcribe the interviews verbatim, I was aware of Kvale's (1996) notion that transcripts are not exact representations of some original reality as the transition is made from oral to written language. Rather, they are interpretative constructions useful to serve intended purposes. According to Kvale, transcriptions are frozen in time. They fail to recreate the social interaction characteristic of the lived face-to-face conversation between the respondent and the interviewer. "The focus of the analysis moves from what has been said, goes beyond the immediately given, to what could have been said" (p. 184). Nevertheless, transcriptions of the interviews were carried out because it was the

best way to begin to make sense of the data. Three of these transcripts, one from each of the three types of schools easily accessible to me, were randomly selected and presented to the respondents for validation. During this process, the respondents were told they could edit the transcripts if they wished. None of them took the opportunity and they accepted the transcripts as true records of the interviews.

The transcripts were initially coded such that each meaningful segment was given a label. This consists of initial and focused coding. These labels were coded again to yield categories and subcategories. The categories produced themes which formed the basis of the discussion in Chapter 6. Ideally, a qualitative analysis such as this would require more than one researcher to agree on the categories and interpretations given to the interview responses. As a lone researcher, this was difficult to accomplish. I did try the test-retest technique of assessing reliability of categories (Gorden, 1992). This involved coding once, putting the material aside and coding again after a time lapse without looking at the original attempt. A limitation of this approach is that it is difficult to achieve total objectivity because answers from the first attempt may still be recalled. A sample of the raw data can be found in Appendix H.

Chapter 5 Results (Quantitative)

5.1 Introduction

The focus of this investigation is the consideration of factors which affect A-level students' motivation to learn and whether these factors are moderated by gender, ethnicity, school type[14], mode of learning and students' views of summative assessment. As explained in Chapter 4, the High School version (AMS-HS 28) of the Academic Motivation Scale (AMS), a self-report questionnaire, was adapted and administered to the students in this investigation. To reiterate, the 28-item inventory contains 7 subscales which assess three types of intrinsic motivation – to know, to accomplish and to experience stimulation and three types of extrinsic motivation – external regulation, introjections and identified regulation. It also assesses amotivation. The statements were scored on a 7-point Likert-type scale with 1 representing low endorsement and 7 representing high endorsement. When summed, the scores from these subscales show how much a student is intrinsically or extrinsically motivated or how much he or she is amotivated toward his or her education. Thus the highest possible score on either intrinsic or extrinsic motivation is 84 whereas the highest possible for amotivation is 28. Likewise, the lowest possible score for either intrinsic or extrinsic motivation is 12 whereas the lowest possible for amotivation is 4. The interrelationships within the sub-categories of the AMS are also discussed in this chapter.

[14] Here type of school is meant to reflect parental social and economic standing but not strictly so. It is possible for students from high income earning households to be educated in state comprehensive schools and for those from low income earning families to be educated in state grammar or independent schools

As reported in Chapter 4, the “Perception” questionnaire was designed in order to measure the extent of students’ negative or positive perception of summative assessment and its impact on their motivation for learning. It was also designed to measure their approach to learning, that is, deep or surface. In addition, the questionnaire measured the extent of students’ perception of the importance of A-level. The questionnaire has 24 items with responses fitting into the following 4 categories: negative view of assessment, positive view of assessment, mode of learning (deep/surface) and importance of an A-level qualification. The higher the score on any of the categories, the more of that characteristic the student would be described as possessing. The highest possible score on students’ negative perception, positive perception and their perception of the importance of A-level qualification is 42 whereas the lowest possible score is 6.

The quantitative data which arose from the two questionnaires described above were subjected to a theory-driven hierarchical multiple regression analyses using demographics, mode of learning and assessment views as predictors of types of motivation. The aim was to evaluate the relative contributions of each set of independent variables (demographics, mode of learning and assessment view) on types of motivation taking into account the impact of other independent variables. See section 4.11.1, Chapter 4 for details. The findings from these sources are presented below and will help to answer the following general research question: to what extent does post-16 A-level students’ perception of summative assessment affect their motivation for learning? They will also help to answer the following specific questions:

1. How are the different types of motivation related to demographic variables (gender, ethnicity and school type)?
2. How do the variables associated with motivation relate to each other?

5.2 Statistical Findings

This section reviews the findings of the hierarchical multiple regressions performed in order to examine the level of contributions of gender, ethnicity, school type, surface learning, deep learning, negative and positive views of summative assessment variables towards the different types of motivation. These reviews will follow in subsection 5.2.1 through to subsection 5.2.1.3 after a general description of the interrelationships between all the variables displayed in Table 5.1.

A Pearson's correlation analysis was conducted on all the relevant variables to produce Table 5.1. Although there are significant relationships, most of these are small in magnitude so the analysis only concentrates on correlations at the .01 level of significance. Even at this level of significance, only very few of the relationships were moderate or high in strength following Evans[15] (1996) guidance on the strength of correlation coefficients. Looking at the table of correlations below, all variables apart from gender[16] had significant relationships with intrinsic motivation; with positive view, student ratings, deep learning and ethnicity showing positive

[15] According to Evans (1996), .00 - .19 (very weak); .20 - .39 (weak); .40 - .59 (moderate); .60 - .79 (strong); .80 - 1.0 (very strong).

[16] Gender is a dichotomous variable where Male = 1 and Female = 2. Please see the definition of gender in Chapter 2, section 2.1.

correlations whereas negative view, surface learning and school type all showed negative correlations. The figures associated with these relationships seem to suggest that non-Whites,[17] in this sample, may be more intrinsically motivated than Whites (r= .150, p< .01) and that students educated in state comprehensive or FE[18] settings may be less intrinsically motivated than those educated in state grammar or independent schools (r= .116, p< .01). It may be possible to generalise these findings to the rest of the population given that the proportions of White and non-White students in the various educational settings, in this sample, are very similar to their proportions in the wider population. In fact, of the number that went to Comprehensive or Further Education, 81% were Whites whereas 19% were non-Whites. In contrast, of the number that went to State Grammar and Independent schools, 82% were Whites whereas 18% were non-Whites. It is worth noting that the proportions of Whites and non-Whites in each setting compare favourably with their proportions in the wider population at 87% and 13% respectively.

The figures in the table also seem to suggest that the higher one's endorsement of surface approaches to learning, the lower the scores were on intrinsic motivation (r= -.083, p< .01) but this correlation, though significant, is very weak. In addition, the figures seem to suggest that the higher one's

[17] Ethnicity is a dichotomous variable where White = 1 and non-White = 2. Please see the definition of ethnicity in Chapter 2, section 2.1.

[18] School type is also a dichotomous variable where State Grammar/Independent = 1 and Comprehensive/Further Education = 2.

Table 5.1: Correlations between types of motivation and demographic, type of learning and view of assessment variables

	Intrinsic motivation	Extrinsic motivation	Amotivation	Negative view	Positive view	Student rating of exams	Surface learning	Deep learning	Gender	Ethnicity	School Type
Intrinsic motivation	1										
Extrinsic motivation	.500**	1									
Amotivation	-.286**	-.241**	1								
Negative view	-.104**	.112**	.296**	1							
Positive view	.375**	.514**	-.286**	-.065*	1						
Student rating of exams	.197**	.247**	-.334**	-.345**	.486**	1					
Surface learning	-.083**	.187**	.189**	.620**	.079*	-.163**	1				
Deep learning	.291**	.348**	-.065*	.292**	.424**	.137**	.307**	1			
Gender	-.014	.051	-.027	.148**	.030	.021	.079*	.141**	1		
Ethnicity	.150**	.209**	-.039	-.057	.180**	.123**	-.065*	.089**	.019	1	
School Type	-.116**	.075*	.095**	-.030	-.037	-.010	-.099**	-.027	.087**	.036	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

endorsement of positive views towards summative assessment, the higher the scores were on intrinsic motivation (r= .375, p< .01). Finally, the figures appear to suggest that the higher the rating of students of the impact of summative assessment on their motivation to learn, the higher their scores on intrinsic motivation (r= .197, p< .01) but again, this is a very weak correlation.

As with intrinsic motivation all variables apart from gender had significant relationships with extrinsic motivation suggesting, for example, that students' views of summative assessment and their different ways of learning have links with being extrinsically motivated. The correlation figures in the table suggest that non-Whites, in this sample, may be more extrinsically motivated than Whites (r= .209, p< .01). So, taking the result of intrinsic motivation into consideration, it can be argued that non-Whites may be generally more motivated than White A-level students. Also, taking the intrinsic result into account and considering that the figure for school type suggests that state comprehensive/FE students may be less intrinsically motivated, it can be argued that state grammar and independent school students may be intrinsically motivated generally (r= .116, p< .01). The correlation coefficient for surface learning confirms the direction of relationship found with intrinsic motivation (r= -.083, p< .01) which suggests that students who adopt a surface approach to learning are more likely to be extrinsically motivated. This is consistent with findings from other research (Moneta and Spada, 2009; Prat-Sala and Redford, 2010). The positive correlation of deep learning with both intrinsic and extrinsic motivation could mean that higher values on the deep learning variable are associated with higher

values on the intrinsic and extrinsic motivation variables (r= .291, p< .01; r= .348, p< .01). This suggests that this approach to learning may be adopted by a person with either type of motivation. Again the coefficient for student rating suggests that the higher the rating (suggesting positive impact of summative assessment on motivation) the higher the scores on extrinsic motivation were. It must be remembered that these results are simply correlations and no causal effects can be inferred. Besides, many of the correlation coefficients are quite weak and so no decisive claims can be made.

There was no statistically significant correlation between amotivation and ethnicity; nor was there one between it and gender but school type appears to suggest that state comprehensive/FE students are more likely to be amotivated. The figures in the table suggest that the higher one's endorsement of surface approaches to learning (r= .189, p< .01), the higher the scores were on amotivation. The negative relationship between deep learning and amotivation was only significant at the 5% level of significance. Also, as expected, negative view correlated positively with amotivation (r= .295, p< .01) whereas there was an inverse relationship between amotivation and positive view (r= -.285, p< .01). Furthermore, there was an inverse relationship between students' ratings and amotivation (r= -.334, p< .01) which means that the higher the rating (suggesting higher motivation) the less amotivated one would be.

In addition to the relationships found between the types of motivation and the variables of interest, Table 5.1 also displays other interrelations between these variables. For example, it shows that deep learning has a significant positive relationship with both negative ($r = .292$, $p < .01$) and positive ($r = .424$, $p < .01$) views, suggesting that students who engage the deep approach to learning may be as likely to show a negative view towards summative assessment as they may be to show a positive view towards it. Also the positive relationship between deep and surface learning ($r = .307$, $p < .01$) seems to indicate the possibility that a student may adopt both types of approaches to learning. This supports the argument by many researchers (Dinsmore and Alexander, (2012); Haggis, (2003); Case and Marshall, (2004)) regarding the polarisation of approaches to learning. Similarly, the moderately strong significant positive relationship between intrinsic and extrinsic motivation ($r = .500$, $p < .01$) appears to suggest that the students in this sample can be both intrinsically or extrinsically motivated. This is a significant finding and an examination of the correlational analysis involving all the motivation subscales (see Appendix N) revealed that the relationships are stronger between all intrinsic motivation and extrinsic subscales of Identification and Introjection with the strongest correlation coefficient of ($r = .627$, $p < .01$) being recorded between the intrinsic motivation subscale (to accomplish) and extrinsic motivation subscale (introjected). This supports Ryan and Deci's explanation (see Figure. 1, Chapter 3) of the link between the more internalised aspects of extrinsic motivation with intrinsic motivation.

This finding also provides support for Seale *et al's* (2000) argument that acknowledging that different learning tasks may call for different types of motivation might be better than focusing on which type of motivation works best. It also supports Husman and Lens' (1999, p. 113) claim that "a student's total motivation is most often a combination of intrinsic and extrinsic motivation." Altogether, these findings challenge the assumptions that underpin much of the extant literature that students are either extrinsically or intrinsically motivated.

Ethnicity was found to have a significant positive relationship with positive view, students' ratings and deep learning but a significant negative relationship with surface learning. This could be suggesting that non-Whites may be more likely than Whites to have a positive attitude towards summative assessment and therefore rate its impact on their motivation highly. They may be more likely to adopt a deep approach to learning. Finally, school type correlated significantly negatively with surface learning, suggesting that A-level students in state comprehensive or FE could be more likely to employ the surface learning approach when studying than those educated at state grammar or independent schools. As before, these variables are weakly correlated and no conclusive claims can be drawn.

5.2.1 Demographics, mode of learning and assessment views as predictors of types of motivation.

The main aim of this investigation is to consider factors which affect students' motivation for learning such as gender, ethnicity, school type, approach to learning and view of summative assessment. These are the independent variables. Therefore, the three types of motivation - intrinsic, extrinsic and amotivation are treated as the main and only outcome variables. This section details the results of the hierarchical multiple regression which was conducted using the independent variables mentioned above as predictors of types of motivation since this investigation is questioning whether students' views of assessment would predict their motivation over and above the demographics and mode of learning variables.

Three regressions were performed using one type of motivation as the dependent variable each time (see subsections 5.2.1.1 – 5.2.1.3 below). The model summary in each case contains three models. The first block in each model contains demographic variables for the reason that participants have no control over whether they are male or female. In the second block, as explained in section 4.11.1 of Chapter 4, participants are deemed to have some control over their preferred approach to learning. In the third block are the views of assessment variables as they are the primary independent variables of interest in this investigation. They are thought to be the most important predictors of student motivation as research (e.g. Newstead and Findlay, 1997; Maddaus, 1991) has shown that summative assessment causes a lot of stress which may lead some students to develop

negative views towards it or may cause others to view it positively. For a more detailed justification of this choice of regression analysis, see section 4.11.1 in Chapter 4.

5.2.1.1 Demographics, mode of learning and assessment views as predictors of intrinsic motivation.

As shown in the model summary (Table 5.2), the demographic variables in block 1 explained 3.7% of the variance in intrinsic motivation. This percentage of variance explained rose to 14.7% following the addition of the mode of learning variables – surface and deep learning – in block two. This is a reasonably big increase. A further improvement in the model's capacity for predicting intrinsic motivation was achieved by the inclusion of positive view and negative view in the third model. In combination, all the predictor variables in the model explained 21.1% of the variability in intrinsic motivation. This was found to be significant ($F(7, 1000) = 38.180$, $p < 0.001$). Therefore, we can infer that the model significantly increases the ability to predict the dependent variable which is intrinsic motivation.

Considering the individual contribution of each variable, model 1 in Table 5.2 shows that out of the demographic variables, only ethnicity ($\beta = .155$, $p < .001$) and school type ($\beta = -.121$, $p < .001$) are significant predictors of intrinsic motivation. This trend continues in model 2. The additional set of variables in this model shows that surface learning ($\beta = -.190$, $p < .001$) and deep learning ($\beta = .341$, $p < .001$) are also significant predictors of intrinsic motivation.

Table 5.2: Results of the hierarchical regression analysis for Intrinsic Motivation

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.193	.037	.037***					
	(Constant)				48.359	2.316		20.879	.000
	Gender				-.191	.866	-.007	-.221	.825
	Ethnicity				5.013	1.003	.155	5.000	.000
	School Type				-3.512	.905	-.121	-3.882	.000
Step 2		.383	.147	.110***					
	(Constant)				38.868	3.063		12.691	.000
	Gender				-1.075	.825	-.039	-1.303	.193
	Ethnicity				3.653	.953	.113	3.835	.000
	School Type				-3.660	.857	-.126	-4.270	.000
	Surface learning				-.725	.118	-.190	-6.119	.000
	Deep learning				1.658	.151	.341	10.967	.000
Step 3		.459	.211	.064***					
	(Constant)				30.586	3.191		9.586	.000
	Gender				-.728	.799	-.026	-.911	.363
	Ethnicity				2.378	.928	.074	2.562	.011
	School Type				-3.369	.826	-.116	-4.079	.000
	Surface learning				-.541	.140	-.142	-3.855	.000
	Deep learning				1.135	.163	.233	6.952	.000
	Negative view				-.116	.070	-.062	-1.663	.097
	Positive view				.596	.072	.267	8.260	.000

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

The final model 3 shows that ethnicity, deep learning and positive view are significant predictors of intrinsic motivation. It suggests that in this sample, high

intrinsic motivation is better predicted by being a non-White than a White A-level student. It also suggests that being educated in a state grammar or independent school is a better predictor of intrinsic motivation than being taught in a state comprehensive or further education setting. Furthermore, this model shows that a deep approach to learning predicts intrinsic motivation better than a surface approach.

Gender and negative view are not significant predictors of intrinsic motivation for this sample. The standardised beta value for positive view is .267. This means that an increase in the positive view score by 1 standard deviation (6.1) is likely to increase the intrinsic motivation score by .27 SD units when all other variables in the model are held constant. Therefore we can argue that, in this investigation, positive view predicts intrinsic motivation over and above the demographics and approach to learning variables[19].

5.2.1.2 Demographics, mode of learning and assessment views as predictors of extrinsic motivation.

With extrinsic motivation as the outcome variable, the model summary (Table 5.3) shows that demographic variables in block 1 only accounted for 5% of the variance

[19] Similar results as described are replicated in a further regression in which gender is removed from the model and the learning variables are entered before the assessment views variables (Appendix M). Here, as before, all the predictor variables in the model explained 21.% of the variability in intrinsic motivation and was significant, $F(6, 1001) = 44.41$, $p < 0.001$

Table 5.3: Results of the hierarchical regression analysis for Extrinsic Motivation

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.224	.050	.050***					
	(Constant)				49.284	1.930		25.536	.000
	Gender				.977	.721	.042	1.355	.176
	Ethnicity				5.599	.835	.206	6.702	.000
	School Type				1.570	.754	.064	2.082	.038
Step 2		.414	.171	.121***					
	(Constant)				28.606	2.532		11.297	.000
	Gender				-.268	.682	-.011	-.392	.695
	Ethnicity				5.083	.788	.187	6.453	.000
	School Type				2.183	.709	.089	3.080	.002
	Surface learning				.377	.098	.117	3.848	.000
	Deep learning				1.220	.125	.299	9.758	.000
Step 3		.570	.325	.154***					
	(Constant)				15.539	2.475		6.278	.000
	Gender				-.104	.620	-.004	-.167	.867
	Ethnicity				3.421	.720	.126	4.750	.000
	School Type				2.498	.641	.102	3.898	.000
	Surface learning				.331	.109	.103	3.034	.002
	Deep learning				.412	.127	.101	3.251	.001
	Negative view				.092	.054	.059	1.710	.088
	Positive view				.841	.056	.448	15.015	.000

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

in extrinsic motivation. The addition of the approach to learning variables in block 2 increased this percentage to 17.1, accounting for a significant R^2 change of 12.1%. In block 3, the percentage explaining the variability in extrinsic motivation was further extended to 32.5 with the inclusion of the view of assessment variables which

accounted for another significant R^2 change of 15.4%. The entire model was significant ($F(7, 1000) = 68.879$, $p < .001$).

A closer look at the individual contributions of the variables (model 1, Table 5.3) shows that, as with intrinsic motivation, ethnicity ($\beta = .206$, $p < .001$) and school type ($\beta = .064$, $p < .05$) are significant predictors of extrinsic motivation. Gender is not a significant predictor of extrinsic motivation in this model. In the second model, again, as with intrinsic motivation, the trend continues. Also in this model, the additional variables, surface learning ($\beta = .117$, $p < .001$) and deep learning ($\beta = .299$, $p < .001$) were positively correlated with extrinsic motivation suggesting that higher levels of both variables are associated with higher levels of the outcome variable. Once again, gender is not a significant predictor of extrinsic motivation. Model 3 shows that as all the variables, apart from gender and negative view, increase so does extrinsic motivation. This seems to suggest, once again, that being non-White as well as being educated in state comprehensive or FE settings are better predictors of extrinsic motivation than being White or being educated in state grammar or independent schools. Gender and negative view did not make any significant contribution to this model. The standardised beta value for positive view is .448 and means that an increase of the positive view score by 1 standard deviation (6.1) is likely to increase the extrinsic motivation score by .45 SD units when all other variables in the model are held constant. It can be argued that for this sample, positive view appears to predict extrinsic motivation over and above the demographic and mode of learning variables.

5.2.1.3 Demographics, mode of learning and assessment views as predictors of amotivation.

Similar to intrinsic and extrinsic motivation, demographic variables – gender, ethnicity and school type were entered as predictors in the first block (See Table 5.4). The model was found to be statistically significant ($F(3,1004) = 4.045$, $p < .01$). This model explained 1.2% of the variance in amotivation. In block 2, following the addition of mode of learning, the percentage of variance explained by the model rose to 6.7. This was equally significant ($F(5,1002) = 14.382$, $p < .001$) and accounted for a significant R^2 change of 5.5%.. The model summary shows that the combined variables in block 3 accounted for 17.8% of the variance in amotivation. The R^2 change in block 3 came to 11.1% and the entire model was significant ($(F7, 1000) = 30.951$, $p < .001$.

Looking at the contributions of the individual variables in model 1, Table 5.4, it can be seen that school type ($\beta = .099$, $p < .05$) is the only significant predictor of amotivation. The same is true in model 2 although there is a slight increase in the beta value for school type ($\beta = .119$, $p < .001$). Also in this model, surface learning ($\beta = .242$, $p < .001$) and deep learning ($\beta = -.129$, $p < .001$) are significant predictors of amotivation. In model 3 the statistically significant variables include gender, school type, surface learning and assessment views. It shows that adopting a surface learning approach, viewing summative assessment negatively and attending a state comprehensive school or further education college have links with lacking the motivation to learn.

Table 5.4: Results of the hierarchical regression analysis for Amotivation

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.109	.012	.012**					
	(Constant)				6.476	.728		8.899	.000
	Gender				-.299	.272	-.035	-1.101	.271
	Ethnicity				-.419	.315	-.042	-1.332	.183
	School Type				.895	.284	.099	3.147	.002
Step 2		.259[b]	.067	.055***					
	(Constant)				4.552	.993		4.582	.000
	Gender				-.327	.268	-.038	-1.223	.221
	Ethnicity				-.152	.309	-.015	-.492	.623
	School Type				1.072	.278	.119	3.857	.000
	Surface learning				.287	.038	.242	7.477	.000
	Deep learning				-.195	.049	-.129	-3.978	.000
Step 3		.422[c]	.178	.111***					
	(Constant)				6.388	1.010		6.325	.000
	Gender				-.576	.253	-.067	-2.277	.023
	Ethnicity				.287	.294	.029	.977	.329
	School Type				.943	.261	.105	3.607	.000
	Surface learning				.096	.044	.081	2.170	.030
	Deep learning				-.071	.052	-.047	-1.372	.170
	Negative view				.149	.022	.257	6.751	.000
	Positive view				-.177	.023	-.255	-7.747	.000

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

In this model, ethnicity and deep learning did not make a statistically significant contribution to the outcome variable. But the model does show that there is a negative relationship between the positive view, deep learning variables and amotivation. This means that having a positive view as well as adopting a deep

approach to learning, contributes less toward amotivation. The model also shows a significant negative relationship between gender and amotivation suggesting that for this sample, being male seems to predict the likelihood of being amotivated better than being female. However, what is surprising is that this significance was only recorded in the third model following the addition of the assessment view variables. This seems to suggest that some interaction must be taking place between gender and both negative and positive views. The standardised beta value for negative view is .257 and means that a one standard deviation (7.3) increase in the negative view score leads to a .26 SD units increase the amotivation score when all other variables in the model are held constant. Overall, the results in Table 5.4 show that the best predictor of amotivation after demographic and mode of learning variables have been controlled is negative view.

In all three regressions that were conducted, removing the gender variable or swapping the order of the summative assessment views and mode of learning variables during further regressions made little difference to the overall outcome of the models. See Appendices K, L and M.

5.3 Summary of the quantitative findings in relation to the research questions

In reporting the findings of the data from the two questionnaires, Academic Motivation Scale and Perception, it has been possible to provide evidence which shows that, for this sample, as far as the demographic variables go, ethnicity and school type rather than gender seem to predict the type of motivation attributed to A-

level students especially with regards to intrinsic and extrinsic motivation. More specifically, the evidence appears to show that being non-White predicts intrinsic and extrinsic motivation better than being White. It also appears to show that school type is negatively associated with intrinsic motivation but positively associated with extrinsic motivation. This could mean that attending state comprehensive or FE is not associated with high intrinsic motivation whereas it is associated with high extrinsic motivation. Gender only made a surprising and statistically significant contribution towards amotivation, suggesting that being male could predict amotivation better than being female. The available evidence for this sample shows that having a positive view of summative assessment makes the most contribution in predicting intrinsic and extrinsic motivation. This could be interpreted as meaning that having a positive view is as important for predicting intrinsic motivation as it is for predicting extrinsic motivation. In terms of amotivation the variable with the highest level of contribution is having a negative view of summative assessment.

Although there is collinearity between the following predictor variables: positive and negative views; deep and surface learning, this is not high enough to present a problem in this investigation. According to Field (2009), collinearity exists when there is a strong correlation between two or more predictors in a regression model. However, he argued that collinearity can cause a problem only when it is very high (r = .80 or r = .90). The highest correlation coefficient in this study is .620 between surface learning and negative view therefore, collinearity is unlikely to be a problem.

Finally and overall, it seems that students' views about summative assessment were the best predictors of their levels of the different types of motivation above and beyond their gender, ethnicity, school type and their approaches to learning. In addition, a significant positive correlation was found between positive view and deep learning. This suggests that students who view summative assessment positively may also adopt a deep approach to learning. To further examine the results of this investigation, the qualitative data which were collected via interviews and students' explanations of their ratings of the extent of the impact of examinations on their level of motivation were also analysed and their findings are presented in Chapter 6.

Chapter 6 Qualitative Analysis

6.1 Introduction

In addition to the quantitative data, qualitative data were collected in two separate ways. The first was via a question, at the end of the questionnaire, which requested each student to provide a reason for his /her rating of the impact of examinations on his/her motivation for learning. The thinking was that explaining their ratings in words would provide a better insight into their feelings about the impact of summative assessment on their motivation for learning than just writing down the figures. This technique of generating data resulted in a large and rich collection of students' reasons for their negative and positive perceptions of the impact of summative assessment on their motivation for learning. Altogether, 710 of the 1001 students who provided their ratings also explained them. During the second phase, data were gathered via individual interviews involving ten female and ten male students. Again, it was felt that speaking directly to the students would help to get more details from them by probing for clarity, where possible, especially with regards to what their experiences were like in terms of the deep and surface approaches to learning. The anticipation was that insight into the way they learn could provide ideas for how to plan effective teaching for this group of students.

As noted in Chapter 1, it is not surprising that motivation is one of the most researched concepts in the field of education although there is little of this activity that is focused on A-level students. However, the main problem lies with being able to identify all the factors that affect students' motivation in every situation. The

inference from the discussion in Chapter 3 is that the factors that motivate students and those that determine their mode of learning should be seen as a combination of their beliefs in their ability and their experience of interacting with significant others. This investigation has focused on this model as well as on SDT and self-theories in order to make sense of the data collected and in doing so consider the themes that emerged. This chapter examines these themes by exploring the interview data as well as data gathered from students' explanations of their ratings of the impact of summative assessment on their motivation for learning. Where appropriate, the discussion will be accompanied by relevant illustrative quotations from either the students' explanations of their ratings or the interview data.

In the following sections 6.1 to 6.5, consideration of how summative assessment could be linked to an individual's self-concept is analysed by looking at doublethink (saying one thing and its opposite at the same time), EPIB (a self-serving coping mechanism), mode of learning (whether deep or surface), pedagogy (teachers' methods or techniques of lesson delivery) and social learning (interactions within the education setting that aid learning). These were the main themes that arose from coding the interview data as well as data generated from students' explanations for their ratings of summative assessment. Following consideration of these themes, there is, in section 6.7, a presentation of students' thoughts on the question of alternatives to summative assessment. Section 6.8 concludes that the self is at the core of motivation and also affects the adoption of a specific mode of learning.

6.2 Doublethink

One finding that stood out from this analysis was that students mainly perceived summative assessment as having a negative effect on their motivation. However, despite this negative perception, they also acknowledged its positive impact on their motivation for learning. This is labelled “doublethink”. The concept of doublethink was originally proposed by George Orwell in his fictional classic, “Nineteen Eighty Four” and was described as a process of simultaneously holding two opposing ideas and believing in them. The person engaged in “doublethink” accepts two mutually contradicting views as correct. However, this does not mean that the students in this study think or say one thing but mean the other (it may not be deliberately intended to deceive or confuse), they experience both emotions in tandem and are unaware of any conflict or contradiction. El-Sawad *et al.* (2004) found support for the existence of doublethink in their investigation of the prevalence and function of contradiction in accounts of organisational life and argued that it is a means of containing contradiction without acknowledging the contradiction or experiencing the discomfort that may arise from such contradictions. In this investigation, doublethink describes how, despite the majority of students’ negative comments regarding the impact of examinations on their motivation for learning, they still regarded examinations as contributing positively to their motivation. According to El-Sawad *et al*., the two truths co-exist, none is truer than the other and the ability to co-exist is “through the act of doublethink” (p. 1198). Indeed, doublethink demonstrates students’ struggle to make sense of their situation as the question may be asked, how can something that is viewed so negatively be good for you?

> They [*examinations*] are stressful and come with a lot of pressure but they do motivate you to study in order to get a good grade (F041-6).

This quotation shows that despite students' negative feelings towards summative assessment, it still motivates them to learn.

Within doublethink lie several sub-themes reflecting why summative assessment may be viewed negatively and why it may be viewed positively. Some of these include lack of control over what is learnt, external pressure, expectation, lack of enjoyment of learning, fear of failure, frequency of examinations, pointlessness of examinations and future prospects/career, all of which can be related to the self in one way or another.

One main reason for students' negative view of summative assessment, as evident in the findings, is the lack of control over their learning brought on by too much emphasis by the establishment on what is learnt, how it is learnt and the time frame to learn it in. For most students the consequence is the lack of enjoyment of what is being learnt.

> Exams take the fun out of the subject. They make you associate interesting knowledge with the pressure of exams (F042-4).

> Yea they do [*take the fun out of learning*] … because you're only ever working for the exam so like in History if there's something I find particularly interesting, I can't just explore it further because you have to be on target all the time for the exam (Helen).

With reference to the time factor, two students had this to say:

> I struggle to find time to read around my subject too much. The time I have is spent focusing on learning specifically for exams as these are what count (F2543-8).

> Exams do suck the fun out of learning because if something comes up in class you want to explore and you're interested in, and it's not on the syllabus, you can't do it because you don't have the time (Zoe).

These four quotations which show that control is linked to students' enjoyment of their learning also relate to Ryan and Deci's concept of autonomy found within their self-determination theory (SDT). This suggests that an aspect of an individual's basic psychological needs may be met when the individual experiences the freedom of choosing his or her own behaviour. Ability to choose one's course of action is empowering. The individual's behaviour becomes more self-determined leading to intrinsic motivation and an aspect of extrinsic motivation in which behaviour is engaged in out of choice or because it is valued as being important (integrated regulation). In the scenes painted by the four quotations, not being able to choose what they learn and how to learn it may lead students to develop a non-self-determined extrinsic motivation where the individual engages in behaviour purely as a consequence of some external pressure to do so or indeed amotivation. It is argued in the framework, Chapter 3, that the difficulty of handing over all autonomy to students reflects the inflexible nature of the A-level course. Black and Wiliam (2009) have emphasised that whilst according the students some control, it is the teacher's responsibility to ensure that students are disciplined to operate as effective learners. This is realised where the teacher is in control of the learning environment.

Some students attributed their lack of enjoyment of learning to not being naturally clever, a situation that is made worse by having to deal with the demands of external examinations:

> I am not a naturally clever person and having to adhere to the techniques of how to answer A-level exam questions adds to the amount I have to learn (M283-6).

This student gave a rating of 6 but there are two ways that his statement can be interpreted. On the one hand, he seems to come across as the sort of student that Dweck (2000) might label as an entity theorist because of his belief in fixed ability. Dweck suggests that venturing into a challenging educational setting with a belief like that may lead students to develop doubts about themselves, anxiety and lowering of levels of achievement. Because this student appears to have put a ceiling to what he perceives he is capable of achieving means that he may be selective in the type of educational tasks he takes on as he may always be conscious of his assumed limited endowment. On the other hand, this student might also be described as having the characteristics of an incremental theorist. Having recognised the extent of his "natural cleverness", he is making the necessary effort to increase it and he finds that having to deal with exam techniques is an additional pressure. However, like the mode of learning discussed in section 6.4, it may be that categorising individuals as entity or incremental theorists is not appropriate as there may be a lot of people in the middle and whether they are entity or incremental depends on the prevailing situation. With reference to the model on which this analysis is based, it is easy to recognise the way that this student's perception of himself as not being a "naturally clever person" may interact with his other personal

characteristics and his relationships with those around him to affect his level of motivation and approach to learning.

Other issues which emerged from students' negative reactions to summative assessment relate to the pressures arising from both internal and external expectations to do well which may develop into fear of failure. For example:

> They put too much pressure on you to do well and if you fail, you begin to think that you're stupid especially if you put a lot of time and effort into it (F1651-2).

> Exams motivate me because of the fear of failing and getting a terrible job later on in life – without A-levels, unless you get lucky, you will have a bad future due to the current economic climate (M2027-8).

> Too many exams can cause stress and demotivation, achieving the opposite of their desired effect. I am only motivated for exams by the fear of failing (F180-7).

The above quotations seem to demonstrate that some students who are motivated by examinations may do so mainly due to the consequences of not succeeding in them and therefore not meeting all their perceived expectations. It may mean no desirable jobs and therefore a gloomy future, as alluded to in the second quotation. The consequences of failure, according to Dweck (2000), may affect the individual's self-concept. Demoralisation, which is a legitimate reaction to failure especially if one believes that one has put in a lot of effort, may lead to a lack of motivation to work hard next time, making things worse.

The findings of this study effectively seems to demonstrate that one major reason why students perceive summative assessment negatively may be if there is a lack of interest in the study material, bearing in mind that not all topics within their chosen subjects are interesting to students. Another may be if the method of delivery is inadequate as exemplified in the following three quotations:

> If I find something interesting I would get into it and I'd enjoy revising it more than a subject that I don't find interesting (Mary).

> If the topic is interesting, I'd put my time to study it even beyond what's necessary. There's no point in studying a course you don't enjoy. You won't get anything from it. If you don't enjoy it, you get stressed out and stuff (Paul).

> Maybe if it [a topic] is taught in an interesting way rather than just something right out of the textbook but maybe if it's made more interactive that might make it better (Laura).

In the second example, Paul refers to the futility of studying a topic that is of little interest to the individual and Laura talks about the necessity of employing the right teaching method (The issue of lesson delivery is further dealt with under "Pedagogy" below). These two concerns seem to make summative assessment less attractive to many students and means that they may find it more difficult than other students to get through examinations.

Dweck (2000) considered individuals' reactions to failure and depending on the pattern adopted by the student, failure can be motivating or it can limit the individual's chances of future successes. She used the "helpless" pattern to describe the view of failure that once it occurs, the situation is out of control and

nothing can be done. The “mastery-oriented” pattern was used to refer to the hardy response to failure which allowed students to remain focused on achieving mastery irrespective of their current difficulties. As already discussed the helpless response to failure carries negative consequences for the self and weakens students’ ability to use their minds effectively. It is a less adaptive way of dealing with the hurdles preventing one from reaching one’s goals. According to Dweck, helpless and mastery-oriented students have different goals in achievement situations. This means that A-level students who have previous experiences of failure may be inclined towards performance goals. Failure in achievement settings is problematic when it is seen as a measure of the individual:

> Getting a bad mark in an exam makes me feel stupid and I worry about if I should really be doing the course (F1909-6).

But not when an individual interprets it in a positive way:

> If I do well in exam I’ll be happy and working harder. If I fail, I’ll know that I need to improve myself and working harder to get better next time (M1451-8).

In the first instance the student sees failure as a measure of the individual and an indictment to the self whereas in the second, the student seems more comfortable with a “failure” situation, seeing it as an opportunity to make an improvement. This is one more case underlining the ideas discussed in the framework about how perception of summative assessment is linked to a person’s worldview. In terms of motivation, the first student is less likely to have a positive attitude than the second although this logic is not supported by the fact that despite the first student’s negative view, she still gave a rating of 6. However, this rating alongside the

corresponding explanation represents another example of the concept of doublethink.

So why do some students perceive summative assessment negatively and others positively? The answer, according to Dweck (2000) may be because achievement situations may not mean entirely the same things to different students – whereas for some, achievement situations are about testing their ability, for others they provide opportunities for them to learn and improve on their skills. The former may be related to entity theorists whereas the latter may be linked to incremental theorists. In the same way, those A-level students who perceive summative assessment negatively may be after establishing their level of ability and placing emphasis on performance goals as opposed to learning goals. Therefore, if achievement situations mean different things to different students, it follows that their perception of summative assessment and its effect on their motivation and depth of learning will also vary.

Many students acknowledged that they only work for examinations and that sometimes where these are not as important, motivation lacks. For these students, therefore, the only reason that examination is motivating may be because:

> It provides a goal and a finite point to which I work towards (M2674-8).
>
> They push me to learn and understand the material better so I work harder (M2667-8).
>
> It is very useful as it helps me strive to understand and reach my goals (M2530-9).

Still for many other students, examinations are seen as a necessary evil (hence the doublethink) as shown in the following example:

> [Exams are] bad for the purposes of understanding but practically speaking, [they are] unavoidable as a means of evaluating people for universities and jobs (M2710-4).

6.3 Ego-protective inhibiting behaviour (EPIB)

Epstein (1973) maintained that there is a need to uphold and enhance the self as threat to the organisation of self-concept produces anxiety and people are usually motivated to avoid anxiety. In his presidential address to the American Psychological Association in 1949, Hilgard spoke of defence mechanism and noted that anything which reduces fear or anxiety will reinforce the behaviour leading to this reduction. This brings me to the subject of what I have chosen to label "ego-protective inhibiting behaviour (EPIB)", a theme which emerged as I explored students' experiences of learning. EPIB was described by Boekaerts (2010) as a mechanism used by students to avoid the demoralising feeling arising from losing face as a result of failure. In this case, it is a face-saving mechanism that allows some A-level students to carry on with the challenges of their course as normal, believing or convincing themselves that they cared little about the end result.

Hilgard (1949) noted two characteristics of defence mechanisms. On the one hand, they serve as defences against anxiety and in this sense they allow the individual to act in ways that ensure the reduction of that anxiety. On the other hand, they serve to boost the person's self-esteem through self-deception in which the individual fails

to acknowledge any self-knowledge of the deception. It is like being in denial of the real truth. In a way, EPIB is self-deception which, according to Hilgard, arises as a result of an ultimate need to maintain or restore self-esteem by avoiding anything that is belittling to the self. The individual becomes afraid of loss of status as well as loss of security of the self.

> … I don't really mind so much about passing my exams; yeah I need it for going off to uni but as long as I understand it [*the topic*], I can use it to blab my way through the exam and get the grade that I want (Sara).

In this statement, although Sara claims not to care a lot about passing her exams, she still talks about getting the grade she wants by possibly bluffing her way through the exam. Being interested in getting her grades may suggest that she actually cares about passing her exams. Like Sara, Paul's statement below may also suggest that he cares about his grades and recognises the important role that his examination result may play in his future even though he seems to give the impression that he does not.

> For some people, like me, I wouldn't care really about the result. I care about what I've got from the course and about how I can develop or go further into that field and even though the results may play a key part in my future, I still have to keep that balance (Paul).

As a protective measure, EPIB is acceptable if students end up achieving what they set out to achieve in their programme. It becomes a problem when students start believing what they say, like actually believing that they do not care about the outcome of their academic venture. If they do, their learning experience may be less rewarding. Hilgard (1949) explained that learning situations can create anxiety or fear which can be motivating. He also claimed that to understand how defence

mechanisms work we must understand the individual's image of himself, the concept of the self. EPIB, as explained here, can be likened to a defence mechanism which helps to reduce the anxiety or fear of a possible failure at A-level. It could be argued that Sara, Paul and others like them may be feeling the need to defend or protect how they are perceived by others in order to restore their self-esteem and maintain their self-respect. Drawing on the Freudian theory of defence mechanism, all this could be happening at an unconscious level (Epstein, 1973). If they fail to do well at the course, they will have the get out clause "I don't really mind so much about passing my exams" to protect them. If they do well, they still have it to protect themselves as in "yes, I passed it but I don't really care about it". Either way, the damage to the self is not shattering.

6.4 Mode of learning: what does learning mean?

Part of the aim of this research was to explore how students learn, especially with respect to the deep and surface approaches to learning. One may be curious about what percentage of students interviewed said their mode of learning was definitely surface or definitely deep. The truth of the matter is that of the twenty interview participants, as many as seven thought they were either deep or surface learners, meaning they always employed either of the two. The other thirteen believed they either employed a bit of both approaches or they employed more of one than the other, citing the nature of the material to be learnt, whether it is interesting and meaningful or whether it will be examined, as a determinant of which approach to employ. In other words, from the students' point of view, there is a place for deep

and surface approaches to learning. This agrees with Haggis (2003) who has argued that categorising learners as either deep or surface is denying that they are people with agency and that a number of factors may be responsible for their choice of approach. Furthermore, Case and Marshall (2004, p. 606) equally noted that a "bipolar description of approaches to learning may not capture some of the nuances and subtleties in students' learning experiences".

> If it means something and provokes some interest then that could attract deep learning (Nicholas).
>
> … things that I don't take a massive interest into I just learn on the surface because I don't have to remember it (Nicola).
>
> If it [topic] is going to be examined, it is more surface because you're learning for exams rather than learning because you want to learn (Jack).

Interestingly most students said they were more inclined to do surface learning because teachers were always rushing to cover the syllabus in time for the examinations leaving little room for deep learning hence enjoyment of the learning.

As discussed in Chapter 3, the feedback received by students in the learning environment can shape their beliefs about themselves and therefore their motivation to adopt an approach to learning (Dweck, 2000). According to Black and Wiliam (2009), these feedbacks can arise during "moments of contingency" when learning changes direction due to the various unscheduled interactions that take place in the learning environment. Feedback which enhances self-concept is more likely to lead to deep instead of surface learning. Moreover, students with mastery goals are likely to interpret feedback given during lessons as information for how to improve as they are usually concerned with improving their skills (Kaufman and Dodge, 2009). On

the other hand, feedback which is damaging to self-concept can lead students to develop performance goals (Black and Wiliam). This distinction is related to Dweck's incremental and entity theories which also allow students to adopt the deep and surface approaches to learning respectively. Incremental theorists will be more likely to devote more time and effort to their approach to learning and are more likely to persist when they hit an obstacle than entity theorists. They see obstacles as challenges to be overcome rather than as threats.

> [When learning, it is important to] push yourself to a boundary which you are uncomfortable with as well as progressing from there." [And yes, examinations do put one under pressure but] "… it is pressure that you need to say ok I need to sort my life out (Tony).

Tony can be described as possessing the characteristics of an incremental theorist who is more likely to adopt mastery goals in learning because pushing himself beyond his comfort zone and progressing from there implies persisting on a task in the face of an obstacle and hoping to learn from the experience. This idea of pushing oneself is also a hallmark of the deep approach to learning which Tony seems to adopt. He is one of the seven mentioned above that are specific about the type of approach they adopt when learning.

Dweck argued that students with an entity approach to learning were less likely to exert themselves in the face of difficulty.

> When I was doing German because I wasn't very good at it and I thought what's the point in me trying because even if I tried, I still wasn't going to pass it (Mary).

> Last year, I did not enjoy Maths, I struggled with it so I didn't put much effort into it (Tim).

Mary had decided she was not good at German (negative mind set) and was not going to succeed at it and therefore there was no need to keep trying. Likewise, Tim stopped trying in Maths because he found it difficult.

Another finding from this investigation relates to the contribution of distance to examination time to the approach to learning adopted by the student. It shows that students adopted a more shallow approach closer to examination time than any other time.

> … about a week before the exam, I realised that I did want to do well. So it was just a case of cramming and obviously that didn't stay… I like to be a deep learner but probably with the lack of time I'm probably more of a surface learner but I think everyone is (Zoe).
>
> [I am a] surface learner because a couple of days before the exams that's when I spend the whole day studying (David).

Exploring the way students learn questioned their perceptions of learning. One interesting finding here suggests that some students' ideas about the meaning and the process of learning may be different from its conventional meaning, that is, learning as defined by educationists and researchers. Sara described herself as having "very strange ways of learning" and Tim said, "I am set in my ways in how I try to learn – I just try and focus so I can get everything down and then I always look back on it". The puzzle here lies with what "strange ways" and "set in my ways" mean. Could strange ways mean Sara's ways may be different from conventional ways of learning and what are these conventional ways of learning? Similarly, does

being set in one's ways of learning mean that Tim may be unlikely to adapt to his teachers' innovative ways of lesson delivery? Either way, these statements seem to reflect the individuals' self-awareness of who they really are and how they function. The "strange ways" of learning which may be unlike everyone else's, may be unique to Sara and she is comfortable with them. However, it is possible that what Sara perceives as strange may, in fact, be similar or the same as most people's normal ways. "Set in my ways" equally implies uniqueness of the self. Having different mind sets means that different people react differently to identical situations (Dweck, 2000). In fact, this is one reason why "focusing on the uniquely contextualised perceptions of every student as an individual makes the idea of adjusting the environment in a way that will affect all students problematic" (Haggis, 2003; p. 94). Therefore, Sara, Tim and many more like them may not be motivated to the same levels or take the same approach to learning when engaged in the same tasks in the classroom because of their individual differences.

As noted in the literature review, Dinsmore and Alexander (2012) found some inconsistencies and ambiguities in their review area which led them to question the assumption by some that one type of processing was more effective than the other in promoting learning. The findings here seem to support the same line of thinking. Most students claimed to employ both approaches, suggesting that each can be effective given the right situation. It might be more useful to recognise the place of both forms of learning rather than focusing on which is more effective.

6.5 Pedagogy

The teacher's method of teaching, mentioned briefly under "Doublethink", as well as his or her relationship with the students is a factor frequently raised by the students in this sample as having a negative or positive link to their motivation for learning. The following example by Harriet illustrates this:

> … if I have a bad relationship with a teacher, I just think they don't really deserve my work (ha ha). All the teachers I have now, I feel like I'm quite good friends with them, we joke about things, the lessons are vibrant unlike before when we had different teachers, some of them I don't want to do work for (Harriet).

Harriet's response is typical of those given by participants in this investigation. This is hardly surprising given that the role of teachers in promoting or not promoting learning is well documented in educational research such as Madaus, (1991) and Kissau *et. al,* (2010). In particular, students in this investigation focused on how teachers' emphasis on examinations as well as their methods of lesson delivery affected their motivation in a bad way. They talked about how teachers these days focus on techniques that yield results in the short term rather than focusing on those that provide long term usefulness:

> The teachers, at the beginning, try to make the topics interactive but then half way through, they're like for the exam, you need this, this and this and they tell you what you need for all of that. So if it's levelled 1, 2, 3, 4, 5, they say for level 5 you need this, this and this. Whereas if the teachers teach it in a fun way, they can tell you what you need for a level then teach it you in a more fun way but because exams are the focus, they end up saying you need this for the exams so you try to surface-learn everything to pass the exam for the grades you need than deeply (Karen).

Apart from the role of teachers in producing short term results, students also talked about how the approach taken by teachers can increase motivation. For example:

> I think it depends partly on the teacher's approach, if they decide to make the classes more interactive it could increase them [*motivation*] because you're not just sitting there listening to the teacher talk the whole time ... (Laura).

The issues raised here have links with SDT's concept of autonomy discussed above. They also link with relatedness which SDT describes as representing the social environment of the classroom where a sense of belongingness can be nurtured, allowing a student to decide whether a teacher deserves to be worked for, as in Harriet's case above. This point is taken up again in the next section.

Although it is not within the scope of this investigation to comment on the teachers' approach to doing their job, researchers such as Isaacs (2010) have noted how examinations have changed not just the curriculum but also the way teachers teach. However, teachers' hands appear to be tied and therefore they cannot be blamed for the way things are and the government's central control of the curriculum gives teachers very little, if any, "wriggle room" for introducing creativity in their styles of teaching.

Taking the suggestions of Vansteenkiste *et al*., (2006) and Lechuga and Lechuga (2012) into account, it is possible to provide learners with a semblance of autonomy. Teachers might provide autonomy-supportive classrooms which allow students to choose, with teachers' supervision, what they want to learn and how they want to learn it. Relatedness can also be achieved by providing timely and constructive feedback and ensuring no additional pressures aimed at de-motivating behaviour.

This type of learning environment may encourage a sense of belongingness as students are bound to make a connection with those who understand their situation.

6.6 Social learning

When students feel connected with the significant others in their environment, it enhances their psychological well-being, helping them to think more positively about themselves and the course they are pursuing. Ryan and Deci (2000) suggested that students are more willing to learn when they feel respected and cared for by the teacher or when they feel a sense of relatedness with the teacher. An illustration of this is shown in Helen's thoughts about being predicted a lower grade despite scoring highly previously. She was hurt by the fact that even though she had achieved highly in a previous assessment her teachers did not have enough confidence in her ability to predict a higher grade for her. She decided to stop working because she was let down by the people she trusted, the sense of relatedness had been broken. Helen could have continued to indulge in self-doubt and self-pity, a move that would be detrimental to her self-worth. However, it is interesting to see that rather than let her teachers' action weigh her down and mar her chance to succeed, she changed her evaluation of the situation to a more positive one:

> I was predicted a B in French when I got 95% last year and that really demotivated me because I felt like the teachers didn't have any confidence in me. That made me to stop working in French but then I realised that I needed to prove them wrong, like do it for myself (Helen).

Self-theories have been chosen as the appropriate means to explore the issues raised in the data collected for this investigation because they do not deal with an individual in isolation but in relation to his/her interactions with others in his/her social environment. The educational setting is one social environment that is constantly buzzing with various interactions between people. This research focuses on self-concept and specifically on academic self-concept which, according to Bong and Skaalvik, (2003), refers to individuals' knowledge and perceptions about themselves in achievement situations; in this case, A-level students' knowledge and perceptions about themselves relative to examinations. As argued by Byrne (1986), children's perceptions about themselves within the school environment play a key role in their level of academic achievement. In the Helen example above, she changed her mind about not working because she wanted to prove her teachers wrong and may be by doing this she might win back their confidence in her. So, although she also wanted to "do it for myself", the outcome of her change of mind might extend to how she was viewed by others. Hence self-concept is not just about the individual, it is about the relationship between the individual and his/her social world, making it a 'product of interpersonal influences'. According to Hilgard (1949), apart from these interpersonal influences which may include the roles of teacher and of student, of teacher and parents, of student and a fellow student, "there are the individualizing influences of heredity, of birth accidents, of childhood experiences" (p. 379). Therefore, apart from the interpersonal influences on the individual, there are also the inherent factors. Both sets of influences combine to produce standards and personal models that are internalised by the individual which then form their concept of self.

SDT's concept of relatedness emphasised the value of collaborative learning in which students learn from both their teachers and their peers. As described under "Pedagogy", relatedness represents the social environment of the classroom which nurtures a sense of belongingness among the students. Some students in this investigation value the opportunity provided by some teachers which allowed them to connect with their peers in an informal way within a formal learning setting.

> I think I learn best with group work because in Psychology my teachers, more than in the other subjects, they use a range of ways of teaching us because sometimes, it sounds childish but they bring out the plays, I know it's something that little kids do but here even though we're like 16 and 17, we play with the dough. If we are dealing with a study, we have to describe and teach it to other students. So it's all about working in a group but sometimes I prefer to learn from what the teacher says (Karen).

Although the type of set up described by Karen may not always be ideal because of possible unchecked negative feedback, it can allow positive feedback to be given and received. It can also foster positive interactions that feed into students' self-concept like when Bob says:

> I think I am a good student because I ask a lot of questions and … by asking those questions I introduce what other students might not have known (Bob).

Introducing "what other students might not have known" is an opportunity for Bob to show off his skills to other students and enhance his self-esteem in the process. Again, if unchecked by the teacher, some students who are not as focused as their classmates may be lost in the sea of happenings within the social environment of the classroom and …

> Unless you have a true passion for something you're just sort of going to school in order to follow the crowd and to get through ... because nowadays you're so focused on your later life (Zoe).

Black and Wiliam's (2009) "moments of contingency" work really well in the social environment of a classroom. It is during situations like this that messages are exchanged which have the potential to enhance a student's perception of himself or herself and the teacher should be alert to seize such opportunities.

6.7 Is there an alternative?

Given the extent of the negative views provided by students, it seemed logical to explore their views on the alternatives to summative assessment. Several suggestions were made such as limiting the frequency of examinations and replacing them with something that will put back enjoyment in learning, like coursework, especially for those who do not do well in examinations. Louise's view reflected other students':

> **Interviewer**: So if not exams, what else?
> **Louise**: Coursework or assignments. It's not always the same thing as exams. Some people work best if it's coursework. I do because I'm dyslexic so I find coursework easier than sitting exams.

Some students acknowledged the importance of examinations as the only objective way to assess knowledge despite their negative effects, just like the students in Elwood's (2012) study:

> [*Exams are*] bad for the purposes of understanding but practically speaking, unavoidable as a means of evaluating people for universities and jobs. (M2710-4).

> They take a lot of time to prepare for and learn the material but ultimately they are really the only measure that can be done (F2610-6).

6.8 Summary of the qualitative findings in relation to the research questions

In summary, these research findings have shown that the way summative assessment is perceived is linked to the self, that students who are positive about their capabilities can go past the negative aspects of summative assessment and the way they see themselves influences their attitude to learning. Those who are self-aware and confident in their abilities will put in the effort required even in the face of difficulties. The self is seen to be at the centre of their motivation towards learning. In doublethink, for example, it is clear that when students simultaneously say two things that contradict each other, the objective is not to deliberately confuse or deceive but their behaviour simply portrays the extent of the tension they feel, albeit unconcsiouly, having to reconcile the paradox that summative assessment is often unwelcome but is actually potentially beneficial. This investigation has also shown that EPIB which works like a defence mechanism, an unconscious act, helps students to maintain a positive self-concept by distorting the painful reality of the negative effects of summative assessment.

In addition, the findings of this investigation have also shown that learners are likely to show a preference for an approach to learning. However, the preferred approach is not stable across all learning tasks but is rather subject to variation depending on a number of inherent and external factors. Finally, this investigation has highlighted the important contributions of pedagogy and the social nature of learning in relation to students' sense of autonomy and relatedness.

Chapter 7 Discussion & Conclusion

7.1 Introduction

This study set out to explore the factors which affect A-level students' motivation for learning. Although the impact of summative assessment on students' motivation is a key area of research, very little of it has focused on A-level students. As mentioned in Chapter 1, I have been teaching A-level students for nearly a quarter of a century. In all these years, I have come across students from all walks of life, some very keen and others not so keen to partake in the learning events. I have also watched them complain about the many summative assessments they have to undertake in the course of their programme and how this affects their motivation to learn. This aroused my interest in the area and prompted me to investigate the factors which motivate these students to learn. Using a hybrid method of investigation, qualitative and quantitative, I requested some A-level students in London and greater London schools and Further Education settings to complete some questionnaires while others were involved in a face-to-face interview.

The study became necessary in order to enhance the body of knowledge in the area of the impact of summative assessment on A-level students' motivation to learn where there is very little research and to possibly generate ideas about how to make these students' learning experiences more rewarding. This final chapter reviews the main findings of this investigation in relation to the literature review and the theoretical framework. In section 7.2, the first research question is addressed. Although aspects of the discussion under this section make references to the role of

the self in motivation and therefore address aspects of the second research question, the second question is fully addressed in 7.3. In sections 7.4 and 7.5 the contributions to knowledge from this research and their implications are respectively outlined. These are followed in 7.6 by the study's limitations and some suggestions for future research in section 7.7. Finally, there will be the general conclusion in section 7.8 and final thoughts in section 7.9 where I reflect on the Doctorate in Education journey.

7.2 The extent of students' perception of SA on their motivation for learning

The first question which this investigation set out to address was:

To what extent does post-16 A-level students' perception of summative assessment affect their motivation for learning?

- How are the different types of motivation related to demographic variables (gender, ethnicity and school type)?
- How do the variables associated with motivation inter-relate?

Several important findings emerge from the analyses of the quantitative data which address this research question. For instance, the analyses confirm the complex and multi-faceted nature of the factors that motivate A-level students to learn. They suggest that the interactions between these factors could make it difficult to try to isolate the extent of the impact of a particular factor at a given time and place. Therefore, what motivates is not as straight forward as or limited to the factors

considered in the literature review such as having a particular type of motivation, engaging a particular approach to learning, being an entity or incremental theorist, being male or female, having a positive or negative view of summative assessment and so on. That being said, findings from the quantitative analysis appear to suggest that students' views about summative assessment are the best predictors of type of motivation adopted above and beyond the demographics and approach to learning variables. The results also suggest that gender is not a significant predictor of intrinsic and extrinsic motivation although it seems to predict amotivation once other variables in the model have been accounted for.

This gender result is somewhat unexpected and is dissimilar to some previous findings which suggest that females generally show more self-determined motivational profile than males. It is dissimilar to research carried out by Hardré *et al*. (2006), Kissau *et al.* (2010), Salili (1996), and Brouse *et al.* (2010) which found females to be more highly motivated than males while Maehr and Meyer (1997) found they were less so. Meece *et al.* (2006) found that differences between male and female follow gender role stereotypes. Finally, Rusillo and Arias (2004) found no difference between male and female for intrinsic motivation but girls showed lower levels of extrinsic motivation than boys.

Cultural and situational factors may account for the divergence with the findings of these researchers. Hadré *et al's* (2006) sample was made up of Taiwanese students and Brouse *et al.* (2010) as well as Kissau *et al.* (2010) used a sample of US students. Salili's (1996) study involved a wider age range of students (13 to 55-

year olds) than this one which only included 16 to 18-year olds. Her sample was mainly middle class compared with the participants in this sample that came from unspecified social and economic backgrounds. In addition to these factors, design and methodological issues may have been responsible for the difference in findings. Like this study, Kissau *et al's* study, employed a mixed method approach although their sample size was much reduced, only 60 compared with 1016 in this study. Brouse *et al.'s* design was cross-sectional compared with the mixed method approach in this study. There is a possibility that the contextual arrangements in all these studies contrast significantly with those in the current study, thus confirming the conception that what motivates could be related to the uniqueness of individuals and their situations. On the whole, the "no difference" in gender finding in this study adds to the overall inconsistent findings of studies into gender differences in motivation.

Unlike gender, ethnicity, also thought to be a part of the self, contributed significantly towards intrinsic and extrinsic motivation but not amotivation. It seems to suggest that being a non-White (Black and Asian) student predicts higher intrinsic and extrinsic motivation than does being a White student. It can be speculated that because non-White students are more likely to come from less privileged backgrounds due to the migrant nature of some of their families, they may be more likely to work harder, with support from their families, in order to elevate their social standing in their new environment, a move that may also improve their self-image. The same logic may be presented for some White students whose families may have migrated from their various countries and may be facing some hardships in their host

country. However, it can also be argued that not all migrant families, White and non-White, are less privileged. This highlights the complex nature of what motivates.

The argument linking non-White students to social disadvantage is supported by Bempechat, (2006) who reported how all ethnic minority children in her sample perceived their parents as providing, among other things, motivational support by emphasising the importance of education for future economic survival. In this sense, this type of parental support may influence the children to view the goings-on in school more favourably. The children become obliged to their families. This explanation can also account for the finding that ethnicity is correlated significantly positively with students' positive views of examinations, and with their ratings of the impact of examinations on their motivation as well as with deep learning. In these cases, the indication is that non-White students may have higher levels of positive attitude towards summative assessment than do White students. It could also suggest that being non-White may have links with higher ratings of the impact of summative assessment on students' motivation than being White. In the same vein, being non-White relates with higher levels of a deep approach to learning suggesting that non-White students may be more likely than Whites to engage in a deep approach to learning. However, considering the unequal sample sizes of the various ethnicities in this study as well as the fact the effect size of the statistical findings are not substantial, caution must be exercised when interpreting these findings as they might not be transferable to the larger population within each ethnicity.

With regards to school type, findings suggest that it may have an impact on type of motivation. It appears to suggest that A-level students who are schooled in state comprehensive and further education settings may be more likely to be extrinsically motivated and/or amotivated than those taught in state grammar or independent school environments. According to the hierarchical multiple regression output, school type is a significant predictor for intrinsic motivation, extrinsic motivation and amotivation thus presenting students who go to state grammar or independent schools as generally more intrinsically motivated whereas those students who attend state comprehensive schools or Further Education are presented as being more likely to be extrinsically motivated or amotivated. When compared to the results on ethnicity, a potentially conflicting picture is painted. It has already been suggested in the preceding paragraph that ethnic minority students may be more motivated than their white counterparts but they may also be more likely to come from a disadvantaged background and therefore, may be more likely to be educated in a state comprehensive or FE setting than the white students (Bempechat, 2006). It is difficult to explain this conflict, but it might be related to the possibility that not all students from ethnic minority backgrounds attend poorly maintained educational settings and not all White students are educated in better funded educational institutions. This point is mentioned again later. So before making any meaningful sense of this result, due consideration needs to be given to the conflicting data. It is also worth noting that ethnic minority students are not equally distributed within the sample schools and FE although this fact reflects the proportion of this group within society. The reference to the proportion of this sample in the wider population has already been presented in Chapter 5.

The school type related data may be linked to the social class/economic status of parents and was predictable because in Britain, middle class parents are more likely to have their children educated in state grammar or independent schools than those from lower classes. According to Meece and Kurtz-Costes (2001), educational settings where parents going through economic hardships educate their children are usually less well-resourced in comparison to those where children from more affluent homes are educated. As detailed, in Chapter 5, in this investigation, type of school has been used to reflect parental social and economic standing, but this may not be an entirely reliable categorisation due to the possibility that some students from high income households may be educated in state comprehensive schools or FE colleges whereas those from families with low income power may be educated in state grammar or independent schools.

The argument about the possibility that White and non-White students may be equally affected by problems caused by immigration has already been presented and it seems that rather than ethnicity, socioeconomic standing may be responsible for the difference between Whites and non-Whites on motivational levels although this may not be the full picture. According to Fuligni (1997; 2001), immigrant families are supportive of achievement and as a result, students from such families invest great energy into their academic endeavour and may work to please their parents and significant others thus enhancing their self-esteem. The energy invested may be akin to effort beliefs which Dweck (2000) claims make a difference in students' academic attainment. However, according to Dweck, these effort beliefs work differently for entity and incremental theorists. To the entity theorist, expending effort

is confirmation that intelligence is fixed otherwise one would not need to try too hard to achieve results. On the other hand, for the incremental theorist, the harder one works the more one achieves. So could it be that minority students are incremental theorists? It is difficult to answer yes or no because one can present an argument for either of the responses. On the one hand, perhaps the support and forcefulness of their significant others help them to develop an incremental approach to learning. This is another example of how what motivates is linked to the self, even those who may have little faith in their ability may still maximise effort because of how their success may affect their significant others. Significant others do seem to play an important role in maintaining one's sense of self. On the other hand, the attention by their families may be interpreted negatively and rather than yielding a positive outcome, students may see the attention as interfering with their sense of autonomy.

The quantitative analysis also suggests that a student's approach to learning may have a link with his/her type of motivation with intrinsic and extrinsic motivation contributing towards deep learning while extrinsic motivation and amotivation contribute towards surface learning. Both surface and deep learning appeared to be significant predictors of intrinsic and extrinsic motivation with surface learning having a negative correlation with intrinsic motivation. Surface learning also significantly predicts amotivation. This seems to suggest that both types of learning may be related to student motivation. It also seems to suggest that the more a student engages in surface learning the more likely he/she is to be amotivated.

Finally, results of the students' ratings of the effect of summative assessment on their motivation for learning show no significant gender or school type differences but they are positively related to intrinsic and extrinsic motivation, positive view, surface and deep learning. They also have a negative link to amotivation and negative view. These interrelationships show how challenging it can be to try to isolate factors which motivate students to learn. As with the result obtained during the Institution Focused Study (IFS), students rated the impact of summative assessment on their motivation for learning highly despite their seeming unhappiness with how it made them feel. Like doublethink, this seems to show that students may be oblivious to the contradictions in their views of the impact of summative assessment on their motivation to learn.

7.2.1 On doublethink

As already explained, the themes drawn from an in-depth consideration of students' narratives include doublethink, ego-protective inhibiting behaviour (EPIB), pedagogy, meaning of learning and social learning. The analysis of these themes seems to support the view that what motivates students to learn is linked to the self. The analysis also suggests that although students do show a preference for an approach to learning, as is the case with types of motivation, this approach is unstable and may be affected by internal and external factors such as how interesting students find a task or how close they are to examination time. If this assumption is true, it can be argued that Dweck's ideas about entity and incremental theories may also be unstable since they have been linked to the approach to learning adopted by

individuals. This study has shown that although all of the students interviewed agreed that deep learning was important, not all of them acknowledged its use in their learning. Therefore, although students may perceive the deep approach as the "best approach" to learning (possibly influenced by what others say), factors such as time or interest may prevent them from applying that best approach to their studies. In addition, the analysis highlights the important contributions of pedagogy – what is taught, how, when and why it is taught – on students' motivation and how the provision of autonomy-supportive learning environments impacts students' motivation in a positive way. Finally, the analysis also highlights the social nature of learning in relation to students' sense of autonomy and relatedness and how what motivates students to learn is a product of interpersonal influences. In the paragraphs and sub-sections that follow, these findings are discussed in detail.

The concept of doublethink suggests that most students who use it have negative views about summative assessment at the same time as they acknowledge that summative assessment motivates them to learn. One conclusion, during the IFS stage of this investigation, when a similar result was found, was that the reason for it might be due to the high-stakes consequences of the A-level qualification for the students and not because the students enjoyed the process of learning (Ekwue, 2010). The same may be true here due to the many ways in which the students disclosed their negative views about how summative assessment affects their motivation. However, the concept of doublethink as explained by El-Sawad *et al*. (2004) throws more light into how this works. These are two opposing ideas but doublethink allows them to coexist and although the process may be thought of as

unconscious, in a way it can be intentional as individuals try to eliminate the cognitive dissonance arising from the two contradicting views they hold about the influence of summative assessment on their motivation. One reason students gave for why they view summative assessment negatively is that it takes away their sense of control over their learning. Another reason is a lack of enjoyment of their experience of learning at this level. The link between these two reasons is obvious. If students perceive that they have no power to decide what they learn and how they learn it, it is most unlikely that they will be motivated to learn or enjoy learning it. Lack of control has links with Ryan and Deci's (2000) SDT's concept of autonomy which stresses its importance for the psychological well-being of students in a learning environment. Where this is denied, the consequence is a reduction in the individual's self-esteem and may lead to a lack of interest in whatever else is going on which means a lack of motivation. According to them being autonomous is intrinsically motivating. An example here is that of a student in Ekwue (2010) who said she enjoyed studying different topics of interest on her own but instantly hated the same topics if they featured as part of the curriculum simply because of the knowledge that they might be examined at some point:

> Philosophy, I'm really interested in it and I do it at school but on my own and I really enjoy it. However, if I do in school and I know I have to be examined, I hate it. That makes me not to want to study it until I have to (p. 45).

This can be quite frustrating and demoralising as has also been demonstrated by students' narratives in this investigation. Thus, this example highlights the extent of the negative impact of some students' perceived lack of autonomy on their motivation to learn. It seems to show that teachers' behaviours can influence

students' views of assessment which in turn affect their motivation and their depth of learning. The above is linked with pedagogy, suggesting that the way some teachers present the learning material as well as the way they relate to their students may contribute to students' perception of summative assessment. Although pedagogy is not of direct interest in this investigation, a number of the students cited the relationship between them and their teachers as being responsible for their attitude towards their learning.

The doublethink finding was corroborated in the quantitative data which showed a significant relationship between students' negative views and their positive views, thus suggesting that students could have both views at the same time. It could be speculated that students may be using doublethink as a coping mechanism for if they are powerless in changing the system that causes damage to their self-concept, locating a positive aspect of that system could help them to make the most of a bad situation. Therefore, negativity here may not necessarily mean that taking examinations is not vital for progress but that examinations can be described as a necessary evil. With respect to the model described in Chapter 3, the explanation is that students' acknowledgement of summative assessment as a necessary evil may possibly be based on their beliefs about their ability which may be informed by the feedback they receive via their interactions with their significant others. This feedback may then combine with the students' specific characteristics to determine their motivation and/or depth of learning thus confirming that what motivates may be linked to the self.

7.2.2 On EPIB

Likewise, with EPIB, the speculation is that students set out on a face-saving venture. When one does not care about something, it makes sense for one not to make any effort towards achieving the same thing one does not care about. However, to possess a nonchalant attitude towards something and still be seen to be making great effort towards it leaves the only sensible interpretation that one may be trying to protect oneself from some possible unpleasant consequence. The “EPIB” idea has been described as having some similarity with defence mechanism which allows students to manage the tension brought on by the negative effects of summative assessment. Students who use EPIB may do so to maintain a positive sense of themselves. Alicke and Sedikides (2009) describe self-protection as a form of damage control that becomes operational when there is a threat of a possible decline in an aspect of the self. Their entire definition is as follows:

> Self-protection … comprises an assortment of avoidance tendencies, and involves retreating from threatening situations, making excuses designed to deflect negative self-implications, misremembering unfavourable information about the self, avoiding situations that threaten failure, and evaluating other people and groups unfavourably to maintain relatively positive self-views (p. 23).

So is self-protection self-deception? Alicke and Sedikides think it is. They see it as a self-serving tendency but one which the individual may be hardly aware is taking place. In fact, they suggest that rather than being a total unconscious act in the way that Freud proposed, people may be vaguely aware of their self-deception but refuse to acknowledge it (So like doublethink, EPIB operates at a somewhat unconscious level). In other words, its occurrence may be taking place at a preconscious level.

Again, in relation to the model presented in Chapter 3, giving the impression of not caring about the consequence of summative assessment may stem from either the feedback received from students' interactions with their significant others or their beliefs in their level of ability or a combination of both which in turn interacts with the students' characteristics to affect the type and intensity of motivation or depth of learning.

In reality, EPIB seems like a tactic that prevents some students from acknowledging the consequences of potentially not doing well at the A-level course which can be very anxiety-provoking or one that helps them to deal with the enormity of the stress of the course. From the point of view of self-protection, one is inclined to borrow Alicke and Sedikides' (2009, p. 14) phrase and also describe EPIB as "a form of damage control" device, one that helps to avoid further spillage once an aspect of the self has been endangered. Although not caring about the outcome of assessments was admitted by very few students it is questionable how many more students were in this position and what the impact was on their motivation for learning.

7.2.3 The meaning and forms of learning

When exploring the students' narratives about their approaches to learning through the interview data, some interesting revelations were made suggesting that the meaning of learning might not be the same for all in the educational setting. In

Chapter 5, Sara was recorded as saying, “I have very strange ways of learning” and Tim was also recorded as saying, “I am set in my ways in how I try to learn” but what did they actually mean by that? It is difficult to know precisely what these students mean by “strange” and “set” ways of learning but it has been speculated in Chapter 6 that they could simply be expressing their uniqueness in a situation where people would normally adapt to changes aimed at helping them to learn. Therefore, the “strange” and “set” ways may simply be these students’ perception of learning and may be the result of their different self-theories which have an impact on their motivation for learning.

Similarly, when asked which of the approaches to learning they regularly employed, some students responded “half and half” while others responded “a bit of both”. Aside from speculating that learning may be conceived differently by individuals, what do these phrases really mean? These responses are similar to the significant positive relationship found between deep and surface learning variables from the quantitative analysis. Therefore, if the two approaches are fundamentally opposed to each other, these responses may be deemed irrelevant but they seem not to be. Researchers such as Dinsmore and Alexander (2012), Case and Marshall (2004) and Haggis (2003) have argued over the wisdom in identifying one type of learning as being better than the other when a student used to the deep learning approach may have a reason to surface-learn sometimes and a student generally inclined towards surface learning may employ a deep approach to learning sometimes. As already acknowledged, it might be easier to recognise the place of both forms of learning rather than focusing on which is more effective. The determinant of whether

to do one rather than the other may depend on time, level of difficulty, relevance and interest or enjoyment of the topic.

In this study, both quantitative and qualitative analyses provide evidence which seems to suggest that deep and surface learning relate to motivation. It can be argued from the quantitative analysis that deep and surface learning may predict motivation and from the qualitative analysis that students can employ both approaches depending on the material to be learnt and/or proximity to examinations. This finding is similar to that of Newstead and Findlay (1997) and that of Entwistle and Entwistle (1991) who found that deep approaches to learning declined rapidly and surface approaches increased as examinations drew closer.

7.3 The role of the self in motivation

A second question that this investigation addressed was:

What is the role of self in students' narratives about motivation and assessment?

- To what extent does students' perception of summative assessment reflect the role of self in motivation?
- What is the relationship between students' perception of summative assessment and their approach to learning?

An argument has been presented in Chapter 3 about how the self is at the heart of motivation. To reiterate, it is a concept which, according to Epstein (1973) is essential for the functioning of the individual and which can cause a great deal of

anxiety to the individual when it is threatened. When this happens, the individual is motivated to act in a way that seems to normalise the self's level of functioning. Evidence from this study appears to support this view of the principal role of the self in motivation in the way that some students claimed that summative assessment made them feel. The use of EPIB has been discussed above and as argued, students who use it may be protecting their self-esteem and/or trying to maintain their self-respect. Therefore if they do not succeed at A-level, "I don't really care about passing my exams" helps them to deal with the de-stabilised self. If they do succeed, then "I don't really care about it but I passed" takes position. Either way, nothing is lost, all is well – the self is still intact. Similarly, students may use doublethink to cope with the reality that the A-level qualification is vital in their lives. It improves their self-esteem and by extension, their motivation.

Embedded within doublethink are the positive and negative reasons students presented for their ratings of their views about the impact of summative assessment on their motivation for learning. One of the main reasons students gave for their negative views of summative assessment is that it stops them from enjoying their learning. It is evident how important it is that learning is enjoyed especially in relation to maintaining one's self-esteem, however, in support of Dweck's (2000) argument, there are lots of things in life that are tedious but which we simply have to do. Some tasks that A-level students have to tackle during their course may be inherently uninteresting and require going through a "painful process" to accomplish. This, according to Dweck, is when students need to move away from their comfort zones and learn how to apply themselves. When students are in a situation that

necessitates moving away from their comfort zones, it is like shifting the equilibrium of the self temporarily and then to re-establish it once the challenge is accomplished. So for A-level students, a good result at the end of their stressful period of studying, preparing and sitting for examination could re-establish their self-esteem. However, when the end result is not what is expected, this is explained with reference to the concept of EPIB.

Dweck, in collaboration with her colleagues (1986, 1988, 1993, 1995, 2000) has carried out extensive research that has drawn upon self-theories and has made evidence-based contributions in the area of perception of the nature of intelligence by identifying some individuals as holding an entity theory whereas others hold an incremental theory of their intelligence. She believes that when students are working away from their comfort zone and are persisting on the task, they are working from their incremental theory mode. However, when they are operating in the entity theory framework, that is, when they are expected to display defensive behaviour like EPIB and doublethink to help them maintain their self-worth. However, like types of motivation, it may be that categorising individuals as entity or incremental theorists may not be appropriate as there may be people in the middle and whether one is classed as entity or incremental may be dependent on the context. Although Dweck *et al*., (1995b) have acknowledged the criticism that it is possible for individuals to hold both entity and incremental theories, they have argued that one of the theories would be dominant.

The issue of autonomy, as defined by SDT, was also raised within doublethink where students told of how they were not in control of their learning and how this affected their motivation and their learning. Within the classroom environment one can also identify another component of SDT, relatedness. This includes all the interrelationships that abound in that setting including teacher-student and student-student. It also includes the interactions between these relationships which may have a powerful influence on the way the students view themselves and which may, in turn, affect their motivation. Feeling connected with others improves individuals' psychological well-being. An example is Karen, discussed in section 6.5 who was describing the benefit of working with others in a group situation. So in the course of interacting with her peers, some exchanges often take place which may add to the way Karen sees and values herself that could impact on her view of summative assessment and motivation. In other words, these interactions may affect whether or not students "like" a teacher enough to want to "do him proud" by persisting on a task, however difficult. They may affect whether students increase their level of confidence or they indulge in self-doubt; whether they consider the content of a lesson relevant or a waste of time. This is what the model proposed in Chapter 3 is all about; everything seems to be linked to the self. This highlights the importance of "moments of contingency" proposed by Black and Wiliam (2009) which encourages a teacher to always be alert in order to capture the opportunity, when it arises, to present the type of feedback that energises the students' self-worth.

To summarise, as far as this study is concerned, the results seem to show that how an A-level student views summative assessment predicts the type of motivation they display above and beyond the demographics and approach to learning variables.

They seem to show that gender is not a significant predictor of motivation but that ethnicity, type of school, type of learning and view of summative assessment can influence the motivation for learning. The results also appear to suggest that factors which motivate students to learn may combine with each other, as proposed by the model, to have an effect on their behaviour and that isolating these factors may not be a straight-forward endeavour. In other words, it may not just be about gender, ethnicity, type of school, type of learning or students' views of examinations; it may also be about how these factors and many more unknown factors combine to affect motivation behaviour in different conditions. Furthermore, the results also seem to suggest that students' agreement to the positive effect of summative assessment on their motivation may have more to do with the consequence of the A-level qualification on their future life than with their satisfaction with the process of assessment. Lastly, the results seem to suggest that the self may have an important role to play when considering the impact of summative assessment on the motivation of students to learn; that a student's experience of learning may be influenced by his/her self-theories, as was revealed in doublethink and EPIB.

7.4 Contributions

One important and original contribution that this investigation has made in this field of knowledge is the questioning of the established assumption of a dichotomy between extrinsic and intrinsic motivation. This investigation found a significant positive relationship between intrinsic and extrinsic motivation suggesting that a student can possess both types of motivation. This finding raises a serious question

about what motivation is and whether it matters what type a student possesses. It seems that these constructs may not be mutually exclusive as some literature may lead us to believe and therefore it could be argued that such binary divisions may have outlived their usefulness. The results presented in the literature reviewed were derived from experimental set ups. Perhaps in real life, the story may be different and it could be that both types of motivation affect behaviour in a positive way (Lepper and Henderlong, 2000).

Likewise this investigation has highlighted research which has questioned whether it is useful to promote one approach to learning (deep/surface) as the best whilst playing down on the merits of the other when the reality is that each approach can work successfully given the right conditions. This study's data provide examples which suggest that students can adopt both surface and deep approaches to learning. This prompts one to question why research in the field has not shifted to focus mainly on these possibilities rather than still treating these approaches as separate. It could be that most research has not been designed in a manner that would enable the issues to be exposed. Put differently, one can also argue that it is thanks to investigations like the current one, with its focus on A-level, that new areas for development are discovered. Although these findings relate to A-level students where there is little research, it is possible for the knowledge gained from studying this group of students to be transferred to other student groups.

Another main contribution relates to the concepts of doublethink and EPIB which students engage in to deal with the negative effects of summative assessment on their learning. The literature search revealed no previous studies that identified these two concepts and used them to describe the impact of summative assessment on A-level students' motivation for learning. For instance, doublethink has existed in other research (such as Macdonald (2002) in his work on the assessment of OU courses discussed in Chapter 2) although not identified and described using the concept. The concept, as previously discussed, denotes a mechanism that may be employed by students to cope with two conflicting thoughts – "Exams lessen my motivation" versus "Exams motivate me to study". By claiming that summative assessment motivates them to learn despite the many negative views associated with it, these students seem to acknowledge it as a necessary evil. This finding confirms the surprising Institution Focused Study (IFS) result and shows that that result was not a fluke. EPIB, on the other hand, represents what seems like a defence mechanism, a face-saving device to prevent the self from being damaged by a potential negative consequence of summative assessment. Therefore, some students may claim that they do not care about examinations but still work towards them. This is a demonstration of how motivation is linked to the self.

One of the suggestions for future directions at the end of the IFS study was to explore gender differences in students' views of summative assessment. The current investigation provides evidence to show that students' views may not be gender-specific – differences between boys and girls in their perception of summative assessment were not statistically significant, as was speculated when

analysing the IFS results. The findings also showed no meaningful gender differences in motivational types and approaches to learning. However, ethnicity and school type were found to have an effect on motivation and depth of learning. Further evidence showed that students' views of summative assessment more than the demographic and approaches to learning variables were the best predictors of type of motivation displayed by a student. This provides another support for the view that what motivates students to learn may be dependent upon the self. Students' views appear to be a reflection of all the factors that have an influence on their view of the world. All these findings have implications for practice.

7.5 Implications for practice

To survive in the current climate where students perceive A-level qualifications as important for their future, it seems that students have to withhold the enjoyment of learning in order to achieve their goals. This is a very harsh statement to make knowing how frustrating it must be for some learners when they feel that they do not have the freedom to explore a topic of interest to the extent that they would be happy with simply because "that is not in the specification" or "we haven't got the time to look at it in depth". If the students' claims are true, then not being able to choose what they learn and how to learn may mean, for the students, that that part of their self is being threatened or manipulated. They are being denied the freedom, the autonomy to be self-determined which, according to Ryan and Deci (2000a), will be detrimental to their psychological well-being. However, it can be argued that students have a great deal of 'free time' with which they could explore some of their

academic interests if they desired. They spend approximately one third of their day at school. So the perception of lack of control may relate more to how they spend their time in or out of school.

This research has presented an argument considering the different types of motivation and which seems to be more conducive to learning. Nonetheless, in recognition of the outcome of this investigation, it seems logical to consider whether the type of motivation A-level students possess really matters as long as they are not amotivated especially as some research findings have suggested that extrinsic motivation can serve a useful purpose in students' learning. Studies have shown that whether students are intrinsically or extrinsically motivated, they achieve results albeit for different reasons, either because of some internal gain or some external rewards but a boost to the individual's self-esteem all the same. Therefore, teachers' objective in the classroom should be about continually seeking ways of managing the classroom environment in the hope that their students will not be amotivated. They need to focus on what works for a given set of students working on a given task in a given situation bearing in mind that what motivates students to learn is unstable across different situations.

Likewise, this investigation has documented the argument by some researchers, notably Dinsmore and Alexander (2012), which questioned the usefulness of describing a best approach to learning – whether deep or surface – being mindful that a student can employ both approaches depending on what is being learnt and

the context in which it is being learnt. It seems, as Dinsmore and Alexander noted, that both motivation and approach to learning are beset with problems of conceptualisation and operationalisation, among others. The implication is that until researchers, policy makers and everyone involved in the education of students, specifically A-level students, agree on the definition of these constructs and are able to measure them accurately, it may still be difficult for them to determine what motivates students or how they learn. To this end, when thinking about how A-level students learn, it is important that those responsible for their education take cognisance of the fact that both deep and surface learning yield results and that students can adopt the most appropriate approach for the task in hand.

With doublethink, where students see summative assessment as a necessary evil and with EPIB too, it may be that teachers need to be more sympathetic to students' situations, remembering that these students have a lot of other stresses going on during this stage of their lives other than the stress of examinations. As shown in Ryan and Deci's (2000a) self-determination theory, when students know that they can relate to their significant others, including their teachers, their self-esteem is boosted leading to a positive attitude towards their academic work. Students have this psychological need to feel that their teachers and others understand their situation. This was evidenced in the pilot stage of this investigation when a student commented on how happy she was that somebody had noticed how stressful the A-level programme was and was doing something about it. Perhaps it may help if teachers try not to unduly add to the already difficult situation by being sensitive in their management of the workload they create for their students. They could also

take care when planning their lessons to incorporate elements which have the potential to engage students' interests so as to optimise A-level students' motivation for learning.

Where ethnicity and school type are concerned, this study found that they seem to have an effect on students' views of summative assessment. This has implications for curriculum planners who may need to include topics which have the potential to draw on the experiences of students from all ethnic and social backgrounds so as to enrich the learning experiences of the students. As Maehr and Meyer (1997) have recognised, it is no longer uncommon for classrooms to be filled with students from various cultural and social backgrounds all carrying their implicit self-theories with them. Additionally, during presentation, teachers may need to behave in a way that allows for an integration of all the experiences that students bring with them to the learning setting so that everyone may feel welcome in the "strange" classroom environment. However, the knowledge that male and female A-level students equally view summative assessment negatively may have the advantage of making the teacher's job lighter as he/she can concentrate on creating a positive experience of learning for all students instead of spending time planning for differentiation in a mixed-gender classroom.

7.6 Limitations

Like all investigations, this too has a number of limitations. They are identified and discussed under design, participants and data collection subsections below.

7.6.1 Design

Restricting the exploration of factors which motivate students to learn to variables such as gender, ethnicity, school type, depth of learning and assessment views is a limitation because other variables not considered such as the teacher's role, students' personalities, the ethos of the learning environment, could also have an effect on their motivation for learning. It is difficult for any researcher to exhaust the list of factors which motivate A-level students in a given time and place, but the contribution made here will, hopefully, encourage other researchers to keep this research area alive.

Researcher effects could be an issue in this investigation, for example, there could have been a variation in specific interactions during the interviews caused by factors such as race and gender. I am not aware that this was a problem in this research but I am only drawing attention to the fact that it might have been and aspects of my identity – age, gender, appearance, status, among others – might have affected the quality of the students' responses.

The authenticity of the Perception questionnaire, one of the self-report instruments, may be questioned as it was developed solely for this investigation and had not been

used before. This means that its psychometrical properties are unknown although it was piloted before use. The finding of this study that suggests that students can have both positive and negative views at the same time makes one wonder whether this questionnaire was an effective measure of the variables. However, this limitation is balanced by the fact that a similar result was reported with the IFS which only involved the focus group as a technique for collecting data.

During the interview, a number of responses given by students regarding their experiences of learning were questioned for their real meanings. It is possible that another researcher with expertise in interviewing would elicit different responses from the students. This is a limitation but one which can be rectified if this research were to be replicated. As a novice researcher, I accept that this is one of those situations where the wisdom of hindsight would have been useful. The above also highlights the potential issues of wording questions. Perhaps if the questions had been worded differently, they might have yielded different results. One question, in particular, is focused on, that is, “Again one finding from the work I’ve done already suggests that exams suck the fun out of learning. What do you think about that?” Although this question originated from students’ responses from the IFS findings, I now realise that it could be perceived as a leading question and might have put words in the respondents’ mouths.

A final design limitation relates to the use of self-report as a means of gathering data. There is no way of verifying the accuracy of individual responses and social

desirability responses may be difficult to detect thereby introducing another source of error. The main benefit of self-report is that it gives the researcher a direct access to the participants' views. In this research, I have been able to hear directly from my respondents and have had the opportunity to question some of their answers.

7.6.2 Participants (Recruitment)

Twenty interviews were conducted and though students were not chosen using a specific systematic means, it is likely that they may be different in some ways from typical A-level students and so the views expressed by these interview participants may not be representative. On the other hand, given that the views of these 20 participants were echoed by more than one thousand other students also involved in this research, the "unrepresentative" limitation may no longer be relevant as the sample size was considered large enough for the findings to be extrapolated to the target population. It is also the nature of research involving human participants that there will always be individual differences. So any anxiety over the possibility of different views should be proportionate to anticipated variations which are elucidated during the process of qualitative research.

Although the sample size for student responses was large enough for statistical calculation purposes, the small input from parents (N = 153) meant that the impact of the educational background and family income variables in this investigation could not be assessed and may have reduced the generalisability of this result. However,

in future research, this limitation needs to be considered and adequate steps taken to improve the response rate for postal questionnaires. Bryman (2008) has suggested the provision of financial incentives. Nonetheless, implementing this suggestion will depend on the funds available for the research.

7.6.3 Data collection/Recruitment

Ideally, a stratified method of sampling would have been perfect for this investigation to ensure generalisation of the findings. However, the targeted educational institutions were not all willing to participate in the study. It was therefore most realistic to involve a sample of volunteers with its attendant problems such as the issue of representativeness. An offshoot of this problem which might have happened, stratified sampling or not, is the possibility that teachers who administered the research questionnaires might not have followed the instructions accurately despite the clear briefing. Apart from the interviews which were conducted by the author, the questionnaires were administered by teachers in the various institutions as that was the only condition under which the questionnaires were accepted. An investigation like the current one requires funding so that a more solid arrangement for sampling within the target population can be executed.

The qualitative data which was generated could be interpreted differently by another researcher. This is a legitimate criticism of the interpretation of qualitative data because since the exercise is often subjective, different researchers are bound to

interpret the same text differently. However, as Kvale (1996) has argued, rather than worry that different researchers see things differently, what should matter is that each clearly conveys the evidence and arguments that go with their interpretation so that this interpretation can be substantiated by other researchers. In the analysis of the qualitative data, effort has been made to support the interpretation with convincing documentation and arguments, thereby ensuring rigour.

7.7 Future directions

Doublethink and EPIB are important findings in this study. They reveal the measures that can be taken by students in order to protect their self-worth when dealing with the tensions arising from their perception of summative assessment. These concepts are worth pursuing in future research to determine the extent to which they may be endemic within the A-level student community. This type of research may further determine if any intervention is worthy of pre-planning for.

This study also suggests that rather than a specific mode of learning, students engage both deep and surface approaches although the dominant approach at any given time may depend on numerous factors of which student interest and the nature of the material to be learnt are examples. It will be interesting to carry out a further investigation into this area by employing a “think aloud” method to look into students’ depth of learning. The think-aloud protocol, as it is popularly known, is a verbal reporting technique that involves “ongoing thinking processes” (van Someren et al., 1994 p. 1). Although designed specifically for problem-solving, students could be

observed whilst they are engaged in a variety of learning tasks and encouraged to articulate their thoughts as they try to accomplish these tasks. This would provide the observers the much needed insight into when and why students switch from one mode of learning to the other.

Another finding from this study suggests that ethnicity may play a significant part in predicting motivational levels of students although the strength of this significance is not high. Therefore, further studies may be conducted addressing the issue of ethnicity especially as British schools are becoming more and more multicultural. Insight into what differentiates students from various ethnic groups could greatly improve the teaching and learning experiences of all concerned.

If there are entity and incremental theorists, as Dweck (2000) proposed, the speculation is that the way students view themselves can be challenged via intervention programmes which target their implicit self-theories. Research into the form and shape of such intervention programmes will be a valuable tool for those responsible for the education of A-level students.

Although Dweck's (2000) implicit theories have made enormous contributions towards understanding students' motivation, they may not be relevant to all types of students such as those with learning disabilities (LD). Being labelled LD already sends a message that one is not like others. Therefore, it may be difficult to get students in these categories to think differently about their ability. Baird *et al*. (2009)

agree and argue that for some children with learning disability labels, the interpretation may be that of possessing a "limited intelligential potential" (p. 887). They carried out a study which confirmed that LD students were more likely than non-LD students to be entity theorists, or performance learners. This result is not surprising given the reasoning just presented. Therefore, future research based on some intervention programmes whose aim is to raise students' views about their level of intelligence could help to improve their academic motivation. Blackwell *et al.* (2007) have evidence that interventions like this do make a positive impact. There is no doubt that including teachers and parents in the exercise will also be helpful.

7.8 Conclusion

Once again, this investigation set out to explore the factors that motivate A-level students to learn and especially whether their perception of summative assessment is a relevant influence. The different parts of this report have highlighted the point that motivational factors are vast, complexly interconnected and that designing research to capture all the possible factors might be a herculean task. However, design difficulties should not prevent further investigations into the area from taking place. Factors which motivate students to learn must continue to remain on the agenda (and the contributions of this research should not be overlooked) until researchers find a way to work out how these variables interact with each other and in what proportion to affect motivational behaviour in a specific time and place. Doing this can enable knowledge gained at each stage of research to enrich the process of learning. But until then, it is fair to say that as far as the causes of

motivation to learn go, one size does not fit all. As for the extent of the impact of summative assessment on students, perhaps a change in the current system that allows students to be assessed frequently at A-level may bring some relief to the students. It may provide more time for skills development with the hope of transferring these skills beyond the confines of educational establishments.

The investigation also set out to see the extent of the role of the self in students' motivation to learn. The consensus reached, considering the findings of this research, is that the self appears to be central to motivation. Students have different perceptions of summative assessment influenced by their varied experiences of learning and of their interactions with their significant others. As an influence on motivation, these perceptions seem to be affected by a myriad of factors operating in a complex network of interactions. Researchers, educationists and all those concerned with the motivation of students should be mindful of this so that through research, strategies may be put in place which may improve the quality of teaching and learning.

So, although I have tried to consider some factors which may affect A-level students' motivation for learning, there is a vast number of other unknown factors which I have not referred to. To compound the issue, it is impossible to assess the impact of these unknown variables as motivational factors are "superunknowns". They cannot be anticipated and are simply unaccountable by their nature (St. Clair, 2005). I started off by wondering what made some of the students I have taught over the

years very keen to learn and some others less so. Now I am a little more in the know and it has made me a better teacher – it seems to have a lot to do with individuals and their self-theories. Lastly, although some of the findings in this investigation conflict with some of the main ideas discussed in the literature, it is seen to be an advantage rather than a disadvantage. In challenging the status quo, herein rests the original contribution of this thesis.

7.9 Final thoughts

I have always imagined what it would be like to engage in an extended investigation of an area of interest. Now I know and I am happy for it because I have learnt a lot in the process. Professionally, I have learnt to listen more to my students' needs without necessarily detracting from the main aim of helping them to achieve good grades. I have learnt how important it is for them to feel that they have some control in what they learn and how they learn it as well as how important it is for them to feel a sense of belongingness within the classroom community. In addition, I have learnt how significant it is to catch that "moment of contingency" and to be cautious of my formal and informal feedback that could damage a student's self-concept if not properly presented. However, the challenge that lies ahead is in disseminating the same knowledge; getting my colleagues to understand that there is more to teaching than plain transmission of information; learning should also involve the consideration of students' psychological needs. Every teacher should know about and understand how self-theories work and how influential they are in students' learning experiences. Teachers should know and understand the principles behind self-determination

theory (SDT) and that giving some autonomy to the students does not equate to loss of control on the part of the teacher. Teachers should watch out for the “moments of contingency”, grab them and use them to their advantage and that of their students. They should also know that learning is not all about achieving grades.

Embarking on this programme has been a very personal thing for me and although the journey has been a long and challenging one, I have enjoyed being on it. The research process has been very enlightening. I embarked on it out of curiosity and I am glad that that curiosity has not killed this cat. My motto, “I’ve started so I’ll finish”, which I took on when I realised how many balls I had spinning in the air, was very helpful in maintaining my will to carry on. I am pleased that I am now at this point and hope that other researchers will be stimulated to pursue further research in this area.

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Appendix A

ACADEMIC MOTIVATION SCALE (AMS-HS 28)

HIGH SCHOOL VERSION

Adapted from AMS - College version
Robert J. Vallerand, Luc G. Pelletier, Marc R. Blais, Nathalie M. Brière, Caroline B. Senécal, Évelyne F. Vallières, 1992-1993

Educational and Psychological Measurement, vols. 52 and 53

WHY DO YOU DO TO A-LEVEL?

Using the scale below, indicate to what extent each of the following items presently corresponds to one of the reasons why you go to school.

Does not correspond at all		Corresponds a little		Corresponds moderately		Corresponds a lot		Corresponds exactly
1	2	3		4	5	6		7

WHY DO YOU GO TO SCHOOL ?

---

1. Because I need at least an A-level degree in order to find a high-paying job later on.	1	2	3	4	5	6	7
2. Because I experience pleasure and satisfaction while learning new things.	1	2	3	4	5	6	7
3. Because I think that an A-level education will help me better prepare for the career I have chosen.	1	2	3	4	5	6	7
4. Because I really like doing A-level.	1	2	3	4	5	6	7
5. Honestly, I don't know; I really feel that I am wasting my time doing A-level.	1	2	3	4	5	6	7

6. For the pleasure I experience while surpassing myself in my studies.	1	2	3	4	5	6	7
7. To prove to myself that I am capable of completing my A-level degree.	1	2	3	4	5	6	7
8. In order to obtain a more prestigious job later on.	1	2	3	4	5	6	7
9. For the pleasure I experience when I discover new things never seen before.	1	2	3	4	5	6	7
10. Because eventually it will enable me to enter the job market in a field that I like.	1	2	3	4	5	6	7
11. Because for me, A-level is fun.	1	2	3	4	5	6	7
12. I once had good reasons for doing A-level; however, now I wonder whether I should continue.	1	2	3	4	5	6	7
13. For the pleasure that I experience while I am surpassing myself in one of my personal accomplishments.	1	2	3	4	5	6	7
14. Because of the fact that when I succeed at A-level I feel important.	1	2	3	4	5	6	7
15. Because I want to have "the good life" later on.	1	2	3	4	5	6	7
16. For the pleasure that I experience in broadening my knowledge about subjects which appeal to me.	1	2	3	4	5	6	7
17. Because this will help me make a better choice regarding my career orientation.	1	2	3	4	5	6	7
18. For the pleasure that I experience when I am taken by discussions with interesting teachers.	1	2	3	4	5	6	7
19. I can't see why I do A-level and frankly, I couldn't care less.	1	2	3	4	5	6	7
20. For the satisfaction I feel when I am in the process of accomplishing difficult academic activities.	1	2	3	4	5	6	7
21. To show myself that I am an intelligent person.	1	2	3	4	5	6	7
22. In order to have a better salary later on.	1	2	3	4	5	6	7
23. Because my studies allow me to continue to learn about							

many things that interest me.	1	2	3	4	5	6	7
24. Because I believe that my A-level education will improve my competence as a worker.	1	2	3	4	5	6	7
25. For the "high" feeling that I experience while reading about various interesting subjects.	1	2	3	4	5	6	7
26. I don't know; I can't understand what I am doing in school.	1	2	3	4	5	6	7
27. Because A-level allows me to experience a personal satisfaction in my quest for excellence in my studies.	1	2	3	4	5	6	7
28. Because I want to show myself that I can succeed in my studies.	1	2	3	4	5	6	7

Appendix B

A-level Students' Perception of Examinations

Using the scale below, indicate to what extent each of the following items presently corresponds to your perception of A-level examination.

Does not correspond at all	Corresponds a little	Corresponds moderately	Corresponds a lot	Corresponds exactly
1	2 3	4	5 6	7

1.	Exams suck the fun out of learning	1	2	3	4	5	6	7
2.	I do a lot of cramming when I study especially close to exams	1	2	3	4	5	6	7
3.	I do A-level to go to university, get a good job and be successful	1	2	3	4	5	6	7
4.	Studying to understand is ideal but not achievable due to lack of time	1	2	3	4	5	6	7
5.	I do A-level because society expects me to	1	2	3	4	5	6	7
6.	Knowing that I want to be successful makes me work hard at my subjects	1	2	3	4	5	6	7
7.	Exams motivate me because I know they will affect my future	1	2	3	4	5	6	7
8.	It is bad that my furure will be decided by my performance at the A-level exams	1	2	3	4	5	6	7
9.	Having too many tests discourages me from learning	1	2	3	4	5	6	7
10.	Exams give me the push to study	1	2	3	4	5	6	7
11.	There's not much I can do nowadays, job Wise, without A-level qualification	1	2	3	4	5	6	7
12.	Exams restrict me to a certain way of thinking	1	2	3	4	5	6	7
13.	Exams put me under a lot of pressure	1	2	3	4	5	6	7
14.	The whole point of exam is that they make me work	1	2	3	4	5	6	7
15.	If I work hard for my exams, I have less to worry about later	1	2	3	4	5	6	7
16.	I always try to understand what I'm studying	1	2	3	4	5	6	7
17.	I find exams quite intimidating	1	2	3	4	5	6	7
18.	Exams lose their usefulness when they are taken too often	1	2	3	4	5	6	7
19.	Frequent exams build me up for the real thing	1	2	3	4	5	6	7
20.	Performance at A-level has a knock on effect on the rest of my life	1	2	3	4	5	6	7
21.	Not getting my A-levels will make people look down on me	1	2	3	4	5	6	7
22.	A-level exams make me study for the grades not for the knowledge	1	2	3	4	5	6	7

23. The scare of getting a bad mark makes me study to understand rather than simply memorizing the material to be learnt	1	2	3	4	5	6	7
24. If I have an A-level qualification I will be better off than somebody who doesn't	1	2	3	4	5	6	7

Finally, on a scale of 1 – 10 (**1** being **very negative** and **10** being **very positive**) how would you rate the impact of examinations on your motivation for learning?

Please explain your rating:

_____

_____

_____

_____

_____

Ethnicity	
White Please **circle**	British Irish Other White background
Mixed Please circle	White & Black Caribbean White & Black African White & Asian Other mixed background
Asian or Asian British Please circle	Indian Pakistani Bangladeshi Other Asian background
Black or Black British Please circle	Caribbean African Other Black background
Chinese or Chinese British **Please circle**	Chinese Other Chinese background
Any other ethnic background (please complete)	
Nationality (please complete)	

Gender (please circle): **Male**

Female

Course (please circle): **AS**

A2

Thank you for your time

Appendix C

Revised Study Process Questionnaire (R-SPQ-2F)

This questionnaire has a number of questions about your attitudes towards your studies and your usual way of studying.

There is no *right* way of studying. It depends on what suits your own style and the course you are studying. It is accordingly important that you answer each question as honestly as you can. If you think your answer to a question would depend on the subject being studied, give the answer that would apply to the subject(s) most important to you.

Please fill in the appropriate circle alongside the question number on the “General Purpose Survey/Answer Sheet”. The letters alongside each number stand for the following response.

A — this item is *never* or *only rarely* true of me

B — this item is *sometimes* true of me

C — this item is true of me about *half the time*

D — this item is *frequently* true of me

E — this item is *always* or *almost always* true of me

Please choose the *one* most appropriate response to each question. Fill the oval on the Answer Sheet that best fits your immediate reaction. Do not spend a long time on each item: your first reaction is probably the best one. Please answer each item.

Do not worry about projecting a good image. Your answers are CONFIDENTIAL.

Thank you for your cooperation.

1. I find that at times studying gives me a feeling of deep personal satisfaction.

2. I find that I have to do enough work on a topic so that I can form my own conclusions before I am satisfied.

3. My aim is to pass the course while doing as little work as possible.

4. I only study seriously what’s given out in class or in the course outlines.

5. I feel that virtually any topic can be highly interesting once I get into it.

6. I find most new topics interesting and often spend extra time trying to obtain more information about them.

7. I do not find my course very interesting so I keep my work to the minimum.

8. I learn some things by rote, going over and over them until I know them by heart even if I do not understand them.

9. I find that studying academic topics can at times be as exciting as a good novel or movie.

10. I test myself on important topics until I understand them completely.

11. I find I can get by in most assessments by memorising key sections rather than trying to understand them.

12. I generally restrict my study to what is specifically set as I think it is unnecessary to do anything extra.

13. I work hard at my studies because I find the material interesting.

14. I spend a lot of my free time finding out more about interesting topics which have been discussed in different classes.

15. I find it is not helpful to study topics in depth. It confuses and wastes time, when all you need is a passing acquaintance with topics.

16. I believe that lecturers shouldn't expect students to spend significant amounts of time studying material everyone knows won't be examined.

17. I come to most classes with questions in mind that I want answering.

18. I make a point of looking at most of the suggested readings that go with the lectures.

19. I see no point in learning material which is not likely to be in the examination.

20. I find the best way to pass examinations is to try to remember answers to likely questions.

Appendix D

INFORMATION SHEET FOR PARTICIPANTS

REC Reference Number: **{REP(EM)/10/11-15}**

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

What motivates students? Investigating social and cultural differences in A-level students' perception of examinations and its impact on their motivation for learning.

We would like to invite you to participate in this postgraduate research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

- The general aim of this research is to investigate the impact of A-level students' perception of examinations on their motivation for learning. Its findings may provide some insight into what motivates students to learn.
- We are interested in recruiting A-level students to take part in the investigation.
- If you would like to take part, you will be asked to complete 2 questionnaires which will take a maximum of 10 minutes of your time. We will also request that you take an additional questionnaire to your parents for them to fill out.
- At the end of the questionnaire, if you are interested in participating in a further interview on this topic, you will be invited to leave your name and contact information on a separate sheet which will not be linked to your questionnaire
- Submission of a completed questionnaire implies consent to participate
- There will not be any risk to you, whether psychological or physical, as a result of taking part in this investigation
- Any information you provide will be used solely for this research and your contribution will not be identified or linked back to you as an individual. Furthermore, information about you will not be shared with anyone else at the school. Only group information will be reported.
- A decision to withdraw at any time, or a decision not to take part, will not affect the standard of education you receive
- As participation is anonymous, it will not be possible for us to return your data once you have returned your questionnaire.
- Name and contact details of the researcher: Mrs U Ekwue, Department of Education & Professional Studies, School of Social Science & Public Policy, King's College London, Franklin-Wilkins Building (Waterloo Bride Wing), Waterloo Road, London SE1 9NH
  020 7848 3133

It is up to you to decide whether to take part or not. If you decide to take part you are still free to withdraw at any time and without giving a reason.

If this study has harmed you in any way you can contact King's College London using the details below for further advice and information: Dr Jill Hohenstein or Dr Jeremy Hodgen, Department of Education &

Professional Studies, School of Social Science & Public Policy, King's College London, Franklin-Wilkins Building (Waterloo Bride Wing), Waterloo Road, London SE1 9NH 020 7848 3133

Appendix E - Ethical Approval

Uchechukwu Ekwue

Department of Education & Professional Studies

12th April 2011

Dear Uchechukwu,

REP(EM)/10/11-15 'What motivates students? Investigating gender and other socio-cultural differences in A-level students' perception of summative assessment and its impact on their motivation for learning.'

I am pleased to inform you that the above application has been reviewed by the E&M Research Ethics Panel that FULL APPROVAL is now granted.

Please ensure that you follow all relevant guidance as laid out in the King's College London *Guidelines on Good Practice in Academic Research* (http://www.kcl.ac.uk/college/policyzone/attachments/good_practice_May_08_FINAL.pdf).

For your information ethical approval is granted until 11th April 2013. If you need approval beyond this point you will need to apply for an extension to approval at least two weeks prior to this explaining why the extension is needed, (please note however that a full re-application will not be necessary unless the protocol has changed). You should also note that if your approval is for one year, you will not be sent a reminder when it is due to lapse.

If you do not start the project within three months of this letter please contact the Research Ethics Office. Should you need to modify the project or request an extension to approval you will need approval for this and should follow the guidance relating to modifying approved applications: http://www.kcl.ac.uk/research/ethics/applicants/modifications.html

Any unforeseen ethical problems arising during the course of the project should be reported to the approving committee/panel. In the event of an untoward event or an adverse reaction a full report must be made to the Chairman of the approving committee/review panel within one week of the incident.

Please would you also note that we may, for the purposes of audit, contact you from time to time to ascertain the status of your research.

If you have any query about any aspect of this ethical approval, please contact your panel/committee administrator in the first instance (http://www.kcl.ac.uk/research/ethics/contacts.html). We wish you every success with this work.

Yours sincerely

_____

Daniel Butcher

Research Ethics Administrator

Appendix F

Recruitment e-mail to Headteachers

From: Ekwue, Uchechukwu
Sent: 16 December 2010 09:13
To: secretary@****.****.sch.uk
Subject: Summative assessment and students' motivation (FAO: Headteacher)

Dear Headteacher,

My name is Uche Ekwue, a Doctorate in Education (EdD) student in the Department of Education and Professional Studies, King's College London. For my doctoral thesis, I am investigating the relation between A-level students' perception of summative assessment and motivation for learning. Participants will be requested to complete a questionnaire which will take up about 10 minutes of their time. With this questionnaire, I will provide a questionnaire that students can give to their parents together with a stamped return envelope, which will help to obtain more important information about the students' background. Responses will be anonymous and participation will not cause any harm to the individuals. The school will also not be identified in the report.

I will be very grateful if you can let me know whether your school will be interested in taking part in this study.

Yours sincerely,

Uche Ekwue

Appendix G

INFORMATION SHEET FOR PARENTS

REC Reference Number: [REP(EM)/10/11-15]

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

What motivates students? Investigating gender and other social and cultural factors in A-level students' perception of summative assessment and its impact on their motivation for learning.

We would like to invite you to participate in this postgraduate research project. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

- The general aim of this research is to investigate the impact of A-level students' perception of examinations on their motivation for learning. Its findings may provide some insight into what motivates students to learn.
- We are interested in recruiting parents of A-level students to take part in the investigation.
- If you would like to take part, you will be asked to complete a questionnaire which will take about 5 minutes of your time.
- Submission of a completed questionnaire implies consent to participate
- There will not be any risk to you, whether psychological or physical, as a result of taking part in this investigation
- Any information you provide will be used solely for this research and your contribution will not be identified or linked back to you as an individual. Furthermore, information about you will not be shared with anyone else. Only group information will be reported.
- Please return your completed questionnaire using the stamped and addressed envelope provided
- As participation is anonymous, it will not be possible for us to return your data once you have returned your questionnaire.
- Name and contact details of the researcher: Mrs U Ekwue, Department of Education & Professional Studies, School of Social Science & Public Policy, King's College London, Franklin-Wilkins Building (Waterloo Bride Wing), Waterloo Road, London SE1 9NH

020 7848 3133

It is up to you to decide whether to take part or not.

If this study has harmed you in any way you can contact King's College London using the details below for further advice and information: Dr Jill Hohenstein or Dr Jeremy Hodgen, Department of Education & Professional Studies, School of Social Science & Public Policy, King's College London, Franklin-Wilkins Building (Waterloo Bride Wing), Waterloo Road, London SE1 9NH 020 7848 3133

Appendix H

Sample Transcripts

Sara

1. What subjects do you study?
   I take Psychology, Art and Textiles

2. Why have you chosen those subjects?
   Psychology, because I find it really fascinating and I really enjoy learning it. Art because it is my passion and is what I want to do as a career and Textile because it helps with my career choices, going into film.
3. What do you enjoy studying the most?
   It's very difficult to say actually because I like all my subjects. Probably Art because I get to show my personality in my work more than the other subjects. Textile is a lot more you have to think about the production side like mass production whereas Art is purely what I like and how you're getting the meaning behind the piece. So when you say Art shows your personality, what exactly do you mean? ***Well, like my painting is what I love doing and your painting technique is very much down to your personality. So if you are bold and lively then your painting will be quite bold and lively.***
4. Tell me about how you learn best.
   I don't really know, I have very strange ways of learning. If I'm writing things down whilst being taught it, I'll probably remember it most. If I've got notes then I can go and write it out. It's when there are questions that haven't got answers to that I'm not very good at learning from (ha ha). Can you give me an example of such a question? ***Erhm, I don't know. There's one in Textiles where they asked about Health and Safety and you can go one way or you can go the other so it is very sort of ambiguous and I usually go the way that is not right (ha ha)***
5. One finding from the work I have done so far suggests that learning for most students is about passing exams and not about the understanding of the material.

- What do you think about that?

  I think it's quite true. For me it is a bit different because I don't have that many exams. I've got Psychology and Textiles but Art is very practical and I don't really mind so much about passing my exams; yeah I need it for going off to uni but as long as I understand it, I can use it to blab my way through the exam and get the grade that I want. It's much easier for me to understand; why is that? ***I'm not really sure. Probably the way my mind works. If I don't understand something, there's no way I am going to be able to answer a question on it.*** So for you understanding

is very important? ***Yeah, I have to understand it to be able to answer the questions on it.***

6. Two approaches to learning have been proposed. One is surface learning and is often short term memorising. The other, deep learning is more long term learning and comes from understanding and internalise something. It is more "real" in that deep learning is less likely to be forgotten.

- Tell me what your experience of learning has been like in that regard.
  It's probably half and half. There will be things that need deep learning and others that need surface learning that I don't really need to know in the long term. Like key models in Psychology you need to know but then the others, (not quite sure how to phrase), but the other things I do surface because they don't need as much understanding as such. So are you able to give me an example of the sort of thing you would surface learn and one you would deep learn? ***May be a study that's not as important, you don't need to know the details, you just learn the findings of it rather than the details.*** Are you talking about Psychology? ***Yeah, or even in Textiles, some studies you just learn the basics of it, not the whole in-depth approach*** So what aspect of Psychology or Textile would you try to deep learn? ***May be the underpinning points or Textile like the history of it and the production methods. Psychology would be models and the different approaches.***
- And so would you describe yourself as a surface mainly or a deep learner mainly?
  I think it depends on what I'm learning (ha ha). So the subject does make a difference? ***Yeah. Certain things I will remember like I've learned ages ago that I wouldn't have thought was that important but that I hold on to. I think it depends on what you are learning.***
- Does it also matter whether the topic will be examined or not?
  I don't think so, well not for me anyway because I know I have learnt things that I haven't had to use in exams and I still remember them and it's just because I found them interesting rather than because I needed to know them

7. What determines how hard you work on a topic?

   How much I want the grade, like if I've got an exam then I know that it's got certain topics I need to know then I will learn that one. So it is whether it is going to be examined that determines how hard you work on it? ***Yeah but I think if it is interesting it helps to motivate you to learn it but I don't think it is the main reason, I know I would definitely not want to specifically revise or learn Textiles if I was given the choice.***

8. How important is it that you understand a topic?
   I think it's quite important but for textiles, not so much the theory because I am interested in the main practical and want to carry on the practical whereas I will never really going to use the theory as such
9. Tell me about a time when you felt really motivated to learn

- What was it like?
  Motivated to learn? Maybe when we started a new topic or started a new subject because you are starting off something completely new and a whole new experience. I think that was quite interesting. So what was the feeling like? ***Exciting, nervous, not knowing whether I'm going to like it, will I be good at it or not.*** How did that help? ***I think it helped because you wanted to be good at it. You wanted to show you understood it and to prove to yourself you would be able to carry on with the subject ... topic really***

10. Tell me about a time when you did not feel motivated to learn

- And again, what was it like?
  Quite boring, I wanted to be asleep (ha ha), I didn't think I found it necessary. Any specific example? ***Textiles theory exams I don't find them necessary and going to theory lessons I don't find necessary. I think I would be able to learn it without being taught it because it's basically learning from the textbook.*** Is it the method of teaching it that you do not find motivating or the actual content of it? ***I think it's because I'm looking at behind it whereas I'm more interested in the practical side of it ... it's not even really how you apply the theory as such because in Art, you're doing the theory lessons but you've just got an extra one to write an essay. I know my Textile theory is just leading up to an exam. It's not exactly anything that is going to give me an outcome that I'll be proud of as such, may be a grade but I'm never really going to be proud of my Textile theory grade***

11. Now can you *t*ell me something you have not already told me about the way you learn and/or your experience of learning.
    Well I know when I revise, I have to read through everything and then write notes because once I've read it, I can write it down how I understand it. Then I have to go over again and check it. I basically make loads of notes and flow charts. Flow charts help me to understand things because if I can see a sequence to them and what leads to the next, I'll know how to write it in a paragraph or in a sentence.

12. Again one finding from the work I've done already suggests that exams suck the fun out of learning. What do you think about that? ***I think that's very true.*** In what way? ***I think having constant exams takes the fun out of it because you never really get to enjoy the subject because you know you have to keep learning and revising just to get to that point to get a grade, get a mark, show you are doing well, whereas you could be really enjoying the subject not doing as well as you could be but you still enjoy it and when you get to the point where you say to yourself you really enjoyed it, you are happy rather than just oh yes, I need to learn this ...*** So exams suck the fun out of learning? ***Yeah***. And if not exams then what? ***I'm not sure you need to get rid of exams completely. I think A-levels are better than GCSEs because in GCSE we had to be tested nearly every week to make sure we knew what we were doing whereas***

now it is not as much. We have essays to write and homework but I still think we get to enjoy it more because it is our 3 subjects or our 4 subjects that we have chosen to do so we know that we enjoy the subjects whereas GCSE like the core sciences we had to do it, we didn't have a choice not to. Would you still be interested in learning if there wasn't any exam? ***I think so. I think it will motivate quite a lot of people because you know you are not going to be tested and so you enjoy it***. Would you say you enjoy learning for the sake of it and not because of the exam? ***Yeah, I think so, I like learning new things. If something interests me, I will learn it regardless of whether I need to be tested on it. Quite often I look into stuff I find interesting even though I don't need to. I think that's just me really, I've always been that way.***

13. One final question, do you think you are a good student? ***I think I am an average student, neither good nor bad***. What makes you think that? ***I do my work generally on time and to a good standard but I know there are days when I can't just be bothered and tend to switch off.*** So what will make you switch off? ***I think I always try to work hard and do my best which counts for a good working attitude, but it doesn't always meet the grade or what is expected or needed of me. This probably goes back to not enjoying the topic or subject I'm studying.***

Tony

Questions:

1. What subjects do you study? ***I study Applied ICT, History and Psychology.*** Psychology? I teach Psychology. Are you enjoying studying it? ***Yeah, I do.***

2. Why have you chosen these subjects?
   I chose Psychology because I want to go into law in future and I thought it will be good as it deals with the mind of people and how people react. History and ICT I chose because they have a general sort of appeal to them. I enjoyed them at school and they are the subjects I aspire to carry on with. Ok, good.

3. What do you enjoy studying the most? ***I enjoy History the most.*** Why is that? ***I think it is a general sort of learning about other cultures and how society evolved. I mean, specifically now we are doing 21st century History. It is quite broad but it is very specific in terms of the areas we are covering in how minds change.*** Ok***.***

4. Tell me about how you learn best. ***By taking notes within the lessons, as well as recording the teachers explanations so I can then take it home and then revise later on as well as writing my own notes, formulating essays and just keeping records so that when I do have exams they can help out in future.*** So that helps you? ***Yeah***.

5. Now, one finding from the work I have done so far suggests that learning for most students is about passing exams and not about the understanding of the material.

- What do you think about that? ***I disagree with that. I believe that it carries both sides because you need to understand what you're learning because perhaps you might come across it again in future. I think in order for you to answer questions fully within the exams, you need to have background information. Take History, for instance, without your knowledge and ability to conceptualise evidence you are not able to answer questions in the exams. I believe it is a bit of both to be honest, and you need to understand actually to pass exams.*** Ok. That's good.

6. The next question is that two approaches to learning have been proposed. One is surface learning and is often short term memorising. The other, deep learning is more long term learning and comes from understanding and internalise something. It is more "real" in that deep learning is less likely to be forgotten.

- Tell me what your experience of learning has been like in that regard. ***I think my experience of learning has been mostly deep learning because everything I've learnt, I go further in-depth with every material I've been given. I try to relate it to real life situation so I try a balance of both. I***

think surface learning is specifically when I get to exams but I predominantly do the more deep learning. So you said surface learning is when you come to exams, what do you mean by that? ***Because I already know the knowledge by then, I make short notes of factors that may fall into place for the exam as a sort of memory aid to take me quickly to where I want to go, just like the key points really.***

- Would you describe yourself as a surface or a deep learner? ***I am a deep learner.***
- Does the subject make a difference? ***I think it does make a difference.*** Ok. In what way? ***I think with Psychology and History, they team quite well with each other. The topic we are doing in History, Nazi Germany, you need to understand the nature of Hitler, how his mind worked which is quite key in Psychology as well. I believe that with that I can relate to other subjects as well***. Is there any of your subjects you think you apply surface learning to***? ICT, I think, because majority of the knowledge is within the computer anyway.***
- Does it also matter whether the topic will be examined or not? ***No, I don't believe that. I think that if you, even if you are …(inaudible) to learn the whole topic and not just what is in the specification I think it just helps out in future. … (Inaudible) cover those topics after exams or in the university. It would help if you had the time to do it and sometimes just revising the topic can be quite restrained in what you get from the whole area, so I do believe that having an exam does make a difference.***

7. What determines how hard you work on a topic? ***I think the general interest.*** General interest? ***If I'm personally interested in the topic as well as if I have support from the teachers and my peers then I see myself progressing further whereas if I think that the general consensus is not like, they will like to learn it but if they are not generally interested within it then I believe I will just learn it, I won't take further in-depth analysis of it.***

- And would it also depend on whether that topic is going to be examined? ***No.*** No? ***I will just cover it regardless.*** So the interest is all that matters? ***Yeah***.

8. So how important is it that you understand a topic? ***I think it's very important. Erhm, regardless of whether there is an exam, I think in order for you to progress further within the subject, I think you must know everything relating to it. Even if you just know the basics of it and then you can develop it later on. I believe that overall, you should be able to know everything, regardless.***

9. Tell me about a time when you felt really motivated to learn***. I think all the time really.*** All the time? Wow! You must be a model student. ***I think it's just my general sort of life. When you learn, you need to take something from it as well and apply it at home to sort of revise***

- So what does it feel like to be that motivated all the time? ***It feels quite good because when it comes to the exams, essays or controlled tests I feel***

motivated because I've done prior knowledge prior to the exam. I feel confident with the material that's been given as well as how I perform in the exam.

10. Is it possible to tell me about a time when you did not feel motivated to learn
- ***I think sometimes at home, with home situations but other than that, I think even sometimes in college, depending on how the day pans out – if the lessons gone well then I will feel motivated. But I think, yes, if I miss a lesson, I don't feel motivated. I don't feel that I've done something related to that day, i.e. that I've learnt enough within it although I might have done prior knowledge at home but erhm, yeah.***

11. Tell me something you have not already told me about the way you learn and/or your experience of learning. ***No. I've told you everything.*** Cross your heart? ***Cross my heart (ha ha).***
12. Once again from the work I've done so far, some people said that exams suck the fun out of learning. Do you feel the same way? ***No. I disagree with that.*** Why? ***I think regardless of whether you have an exam or not, you should still participate in the learning because after all though you might not feel the work you've covered will be useful, perhaps in 10 – 20 years' time, it might relate to certain life situations. Also, I think without exams you would not have the motivation to push yourself to a boundary which you are uncomfortable with as well as progressing from that. I think that although sometimes it brings some pressure, it is pressure that you need to say ok I need to sort my life out.*** Ok. Excellent.

13. One final question, do you think you are a good student? ***I think that I am and I hope I am (ha ha).***

- Why do you think that? ***I participate in the majority of lessons, I try to contribute meaningfully and help others out within the lesson if they're struggling. At times I help teachers in preparing lessons and I just like to be a general all round good student within the school as well as outside the community as well so that's why.***

Well, thank you and I hope it goes well for you in the future.

Appendix I

Questionnaire for Parents of A-level Students

Background	**Father**	**Mother**
What is your highest level of qualification? Please **circle**	No formal qualification GCSE A-level Degree Other:	No formal qualification GCSE A-level Degree Other:
What is your occupation? Please **complete**		
What is your household income bracket? Please **circle**	[< £25,000.00] [£26,000.00 - £35,000.00], [£36,000.00 - £45,000.00], [£46,000.00 - £55,000.00], [£56,000.00 - £65,000.00], [£66,000.00 - £75,000.00], [£76,000.00 - £85,000.00], [£86,000.00 - £95,000.00], [£96,000.00 - £105,000.00] [> £106,000.00]	
How important do you regard the A-level qualification for your child's future? Please **circle**	Very important Important Unimportant Very unimportant	Very important Important Unimportant Very unimportant
Does your daughter or son know that you feel this way about the A-level qualification? Please **circle**	Yes No	Yes No
On a scale of 1 - 10 (1 = very little, 10 = a lot) how much pressure do you think your attitude puts on her/him? Please **complete**		
Ethnicity	**Father**	**Mother**
White Please **circle**	British Irish Other White background	British Irish Other White background

Mixed Please **circle**	White & Black Caribbean White & Black African White & Asian Other mixed background	White & Black Caribbean White & Black African White & Asian Other mixed background
Asian or Asian British Please **circle**	Indian Pakistani Bangladeshi Other Asian background	Indian Pakistani Bangladeshi Other Asian background
Black or Black British Please **circle**	Caribbean African Other Black background	Caribbean African Other Black background
Chinese or Chinese British Please **circle**	Chinese Other Chinese background	Chinese Other Chinese background
Any other ethnic background (please **complete**)		
Nationality (please **complete**)		

Thank you.

Please return in the stamped addressed envelope provided.

Appendix J

Explanations for summative assessment perception ratings

ID	SCH. TYPE	A-level	RAT-ING	M/F	REASON
005	3	2	6		Because I only revise and learn the work because of examinations, to get the grades. If I didn't have exams, I wouldn't learn the information.
013	3	2	5		I find exams cause a lot of unnecessary stress and pressure when adolescents are at their most vulnerable. Also the examination system is very limited to examining those who think in particular ways, and does not provide well for those with dyslexia or dyspraxia and those who think in limited and less creative ways
014	3	2	6		Because they make me study but they stress me out so much that I want to give up.
022	3	2	2		My motivation is non-existent as I'm stressed about other things/external factors. Just over a month until my exams begin and I haven't started revising yet because of exams is really affecting me.
016	3	2	8		Because I want to do well in my exams so that I get good marks and go to the university I want to. I would not work as hard without this motivation.
018	3	2	4		Because I am not motivated for exams as they make me worry. (4) I am more motivated to learn and enjoy (19)
019	3	2	4		I don't do as much work as exams approach as I do during the rest of the year even though I know I should, so it doesn't motivate me to learn.

068	3	2	9		Although they are stressful and bring much pressure, they still motivate me to learn the information so that I do well and get the satisfaction of achieving my targets.

Appendix K

Results of the hierarchical regression analysis for Intrinsic Motivation when gender is removed and assessment views are entered before the learning variables.

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.193	.037	.037***					
	(Constant)				48.086	1.959		24.547	.000
	Ethnicity				5.009	1.002	.155	4.999	.000
	School Type				-3.529	.901	-.121	-3.918	.000
Step 2		.407	.165	.128***					
	(Constant)				32.297	3.025		10.677	.000
	Ethnicity				2.806	.951	.087	2.952	.003
	School Type				-3.154	.841	-.108	-3.751	.000
	Negative view				-.148	.054	-.079	-2.735	.006
	Positive view				.784	.066	.350	11.918	.000
Step 3		.459	.210	.045***					
	(Constant)				29.885	3.096		9.652	.000
	Ethnicity				2.368	.928	.073	2.551	.011
	School Type				-3.438	.823	-.118	-4.180	.000
	Negative view				-.122	.069	-.066	-1.768	.077
	Positive view				.597	.072	.267	8.266	.000
	Surface learning				-.538	.140	-.141	-3.835	.000
	Deep learning				1.120	.162	.230	6.896	.000

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Appendix L

Results of the hierarchical regression analysis for Extrinsic Motivation when gender is removed and assessment views are entered before the learning variables.

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.220	.048	.048***					
	(Constant)				50.678	1.634		31.018	.000
	Ethnicity				5.617	.836	.207	6.721	.000
	School Type				1.658	.751	.068	2.206	.028
Step 2		.557	.310	.262***					
	(Constant)				18.944	2.307		8.213	.000
	Ethnicity				3.358	.725	.124	4.632	.000
	School Type				2.296	.641	.094	3.580	.000
	Negative view				.243	.041	.155	5.891	.000
	Positive view				.948	.050	.505	18.905	.000
Step 3		.570	.325	.015***					
	(Constant)				15.439	2.401		6.431	.000
	Ethnicity				3.419	.720	.126	4.751	.000
	School Type				2.488	.638	.102	3.901	.000
	Negative view				.091	.054	.058	1.702	.089
	Positive view				.841	.056	.448	15.023	.000
	Surface learning				.331	.109	.103	3.040	.002
	Deep learning				.410	.126	.100	3.252	.001

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Appendix M

Results of the hierarchical regression analysis for Amotivation when gender is removed and assessment views are entered before the learning variables.

		R	R^2	R^2 Change	*b*	SE *b*	*β*	*t*	Sig.
Step 1		.104	.011	.011**					
	(Constant)				6.049	.616		9.822	.000
	Ethnicity				-.425	.315	-.042	-1.349	.178
	School Type				.868	.283	.096	3.063	.002
Step 2		.410	.168	.157***					
	(Constant)				5.950	.936		6.354	.000
	Ethnicity				.222	.294	.022	.754	.451
	School Type				.835	.260	.093	3.206	.001
	Negative view				.163	.017	.282	9.773	.000
	Positive view				-.186	.020	-.268	-9.141	.000
Step 3		.417	.174	.006*					
	(Constant)				5.833	.982		5.940	.000
	Ethnicity				.279	.294	.028	.948	.344
	School Type				.889	.261	.099	3.407	.001
	Negative view				.143	.022	.248	6.535	.000
	Positive view				-.177	.023	-.255	-7.718	.000
	Surface learning				.099	.045	.083	2.218	.027
	Deep learning				-.082	.052	-.055	-1.599	.110

Note: Statistical significance: *$p < .05$; **$p < .01$; ***$p < .001$

Appendix N: Relations between types of motivation/motivation subscales and demographic, type of learning and view of assessment variables

Correlations

	Intrinsic motivation - TK	Intrinsic motivaton - TA	Intrinsic motivation - TES	Intrinsic motivation	Extrinsic motivation - ID	Extrinsic motivation - INT	Extrinsic motivation - EXR	Extrinsic motivation	Amotivation	Negative view	Positive view	Surface learning	Deep learning	Ethnicity	School Type	Gender
Intrinsic motivation - TK	1															
Intrinsic motivaton -TA	.745**	1														
Intrinsic motivation - TES	.797**	.742**	1													
Intrinsic motivation	.922**	.905**	.924**	1												
Extrinsic motivation - ID	.485**	.381**	.367**	.448**	1											
Extrinsic motivation - INT	.451**	.627**	.427**	.547**	.403**	1										
Extrinsic motivation - EXR	.204**	.223**	.116**	.197**	.648**	.377**	1									
Extrinsic motivation	.472**	.523**	.381**	.500**	.822**	.768**	.826**	1								
Amotivation	-.330**	-.202**	-.256**	-.286**	-.368**	-.070*	-.178**	-.241**	1							
Negative view	-.111**	-.057	-.118**	-.104**	.003	.128**	.125**	.112**	.296**	1						
Positive view	.364**	.352**	.317**	.375**	.500**	.350**	.407**	.514**	-.286**	-.065*	1					
Surface learning	-.083**	-.047	-.097**	-.083**	.063*	.147**	.232**	.187**	.189**	.620**	.079*	1				
Deep learning	.279**	.295**	.227**	.291**	.273**	.312**	.248**	.348**	-.065*	.292**	.424**	.307**	1			
Ethnicity	.171**	.136**	.108**	.150**	.179**	.175**	.151**	.209**	-.039	-.057	.180**	-.065*	.089**	1		
School Type	-.127**	-.071*	-.120**	-.116**	.019	.102**	.050	.075*	.095**	-.030	-.037	-.099**	-.027	.036	1	
Gender	-.001	-.005	-.033	-.014	.056	.079*	-.014	.051	-.027	.148**	.030	.079*	.141**	.019	.087**	1

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).