

# **Valuing the learner in value added: a view of attributing success & failure?**

## **Learning and Skills Improvement Service (LSIS)**

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## Abstract

There is growing emphasis in further education regarding the impact of QCF qualifications. Along with other quantitative measures of performance, Further Education (FE) Lecturers are now being judged on the impact of their course(s) through the measure of value added (VA). This quantitative measure is used to determine the qualification effectiveness, but there is a need to understand how students' progress from secondary education to FE and how students strategize to attribute success or failure in lines with VA targets. This research aimed to clarify the following objectives; (1) To analyse why some students underachieve, achieve and overachieve in regards to value added, (2) to investigate what variables can be contributed to improving student attainment and overall course impact when measuring value added, (3) to use the identified positive variables to improve the chances of learners attaining their predicted value added and (4) to improve the understanding of academic staff in regards to which factors can improve the value added scores achieved.

The research methodology consisted of a qualitative-quantitative mixed research paradigm using a case study design implementing a purposive sampling method with students on a vocational Sport & Exercise Sciences (QCF) qualification ( $n = 19$ ). A pilot study was conducted ( $n = 5$ ) and then the main study took place over 3 academic semesters. At the end of each semester the students completed a structure questionnaire and then the results were transcribed using descriptive coding, initial coding and theoretical coding. Triangulation was made with quantitative data evidence from VA scores, predicted grades and obtained grades while reliability and trustworthiness was enhanced through dual researcher analysis of the qualitative evidence.

From the analysis of the information and data there were 3 key themes that were linked to how students' progress from secondary education to vocational education (transition) and these were; belief, strategies and effort. It was evident from the quantitative analysis that students had all underachieved in line with their VA predicted grades and some did not achieve their self-predicted grades. The qualitative themes had significance in the fact that there was an overall sense of unrealistic belief in the students and they were not able to quantify how effort is to be applied. It is also clear that students need to be taught how to use self-regulated learning strategies to direct effort into improving their success rates. When comparing the qualitative information to Wagner's Attributional Model of Achievement Motivation and Emotion (1985; 1986) it is encouraging to see that most attributions for not achieving VA predicted grades were classified as stable, internal causality and an internal locus of control meaning that the attributions could potential be converting to positive attributions if the correct strategizing skills were taught as part of vocational education. From the analysis of the quantitative and qualitative evidence 7 recommendations have been developed to assist teachers and students in the attainment of VA predicted grades.

**Key words:** *Value added, attribution, vocational education, Sport and Exercise Sciences, qualitative research, quantitative research and Wagner's Attributional Model of Achievement Motivation and Emotion.*

*“The department for Education spends over £6 billion each year on educating 16- to 18-year-olds. Increases in expenditure year-on-year have been matched by improvements in outputs, in particular learner achievements...but we cannot conclude that value for money is being delivered” (National Audit Office, 2011)*

## Aim

There is growing emphasis in further education regarding the impact of QCF qualifications. Along with other quantitative measures of performance, Further Education (FE) Lecturers are now being judged on the impact of their course(s) through the measure of value added. This quantitative measure is used to determine the qualification effectiveness, but although there is growing importance on this in FE, at the same time there has been a lack of guidance for educators in regards to maximising course impact to achieve expected value added results, but also it needs to be understood what impacts on value added.

## Objectives

The research objectives are as follows:

1. *To analyse why some students underachieve, achieve and overachieve in regards to value added*
2. *To investigate what variables can be contributed to improving student attainment and overall course impact when measuring value added*
3. *To use the identified positive variables to improve the chances of learners attaining their predicted value added*
4. *To improve the understanding of academic staff in regards to which factors can improve the value added scores achieved*

## Introduction

When trying to understand achievement in education it is necessary to place this research in the context of the economic view of the area and the issues that impact the population that may attend the college. The college is based in the North East of England; an area of the UK, which is viewed as an economically deprived area (Office for National Statistics, 2012a). This is a fact that has been well documented with Coffield & Borrill (1983) highlighting the issue of this area being in a decline due to huge job losses. In regards to current economic deprivation, 40% of the Wansbeck population of a working age claiming a key benefit, which is 25% higher than the national percentage; incapacity benefit is 19% compared to the national average of 7%; and Jobseekers allowance claims is 10%, 6% higher than the national average (Office for National Statistics, 2012a). Where Jobseekers allowance claims are concerned the largest population that claim this benefit are 16-49 (87%; 16-24 years equals 42%; 25-49 years equals 45% (Office for National Statistics, 2012b). Although there is deprivation

within the area it is essential that education can be used within the community redevelopment to enhance the future of those involved with the area.

*“The Measurement of value added entails comparison between characteristics and attainment of learners at entry and their achievement on exit” (Further Education Unit [FEU], 1993)*

## Literature review

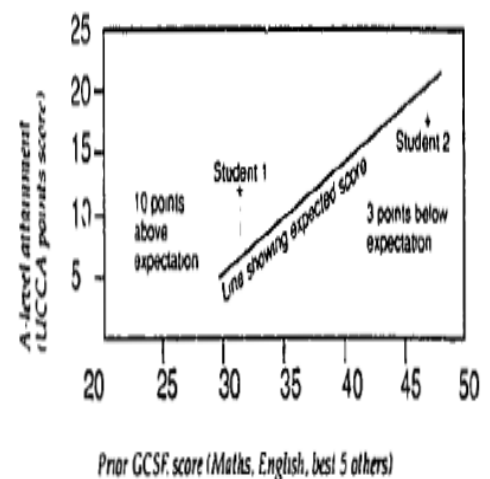
### What is value added?

When considering the term ‘*value added*’ there is a need for clarity of these words as the meaning of this term has been masked by other educational rhetoric and views of what educators deem this term reflects on education. For example some educational professionals base their view of this term on what extras are provided to the learners on their academic/vocational courses, yet this is technically defined as ‘*adding value*’. This could then be perceived as an economic and sociological rhetoric for increasing enjoyment, maximising motivation and personal development (e.g. behavioural) and hope this increases further attractiveness for potential learners looking at entry with the next cohort.

Some have viewed value added as the likelihood of education encouraging transferring to other educational courses. This is evidenced in research by Armstrong and McVicar (n.d). Both researchers looked at value added from the perspective of likeliness of Northern Ireland young people and level of qualification achieved. This may have reflected the perspective of V.A in the early 1990s but this does not reflect the current perspective that is reflected in the Learner Achievement Tracker and that of the Young People's learning agency as well as OFSTED.

However for the purpose of this research the term *value added* will adopt the definition as stated by the FEU (1998) which is the measurement of value added comparing the characteristics and attainment of learners at entry and then their achievement upon exit.

To try and increase clarity of the concept of value added the measurement involves a longitudinal analysis of individual student performances and a statistically significant correlation must be established between input and output data. The ranges of scores are plotted on a graph using a regression analysis and the national norm can be represented as a straight line on the graph. This then allows either the plotting of individual or group scores and can allow comparison to the national normative data for the vocational area in question.



## **How does value added link with political agenda's?**

Value added has a role in the current political view of education in quantifying the success of Further Education. Similar to secondary education that have educational league tables, value added is seen as a way of distinguishing the impact of FE establishments in attainment. Also there is interest in value added because colleges are being encouraged by external bodies to assist in developing quality assurance mechanisms (Further Education Unit [FEU], 1998) but also because there is the view that by monitoring and applying value added frameworks then it is believed this may enhance objectivity based guidance to students on entry and motivating students goal setting ability (FEU, 1998).

However of more concern is that although the student may appear central to the inclusion of value added then next potential uses seem to follow on from the educational sectors adoption of private sector frameworks which are due to the way that education is seen as a business and competition is encouraged. These potential uses are; internal assessment of achievements in colleges; identifying future actions; and finally making the educational establishments accountable for the use of public funding (FEU, 1998; Learning and Skills Council, 2006b). This view is also expressed in report by the National Audit Office (2011) where it is expressed that there is further work to be done in understanding how expenditure can most efficiently and effectively generate learner achievement and progression while they also express that there is £6 billion spent on educating 16-18 year olds and they cannot conclude there is value for money.

The Learner Achievement Tracker value-added (LAT VA) measure is produced by the Learning and Skills Council and gain advice from Ofsted to refine this measure. It is now claimed that the LAT VA has been subjected to rigorous scrutiny (outputs can be generated for all providers offering graded level 3 provision) and is the only universal measure of progress currently available to school sixth forms and colleges (Ofsted, 2009). However even from the consultation period offered on the LAT VA there were issues<sup>1</sup> raised (Ofsted, 2009).

## **Conceptual framework of attributions (Attribution Model of Achievement Motivation and Emotion)**

In Sport & Exercise there is an abundance of research in acknowledging how people attribute experiences and how these may impact upon future behaviour and is one of the most influential contemporary theories where implication of academic motivation is of concern (AWE, 2005). Bernard Wagner (1972, 1979 and 1985) developed the Attributional Model of Achievement Motivation and Emotion and reformulated this theory (1985 & 1986) to explain how individual perceptions of achievement can be used to explain and interpret future behaviour (McAuley & Blissmer, 2002).

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<sup>1</sup> There could be the potential of misleading data where learners entering level 3 provision with extreme high or low attainment in their GCSEs (pg. 6); If students entered with very high levels of prior attainment it may be more difficult to demonstrate high levels of value added due to predicted grades calculated from entry grades (pg. 7); There could be potential misinterpretation of the complex data, although it is not identified which parties in education could cause the misinterpretation of data (pg. 8).

<sup>2</sup> This refers to whether the cause of the achievement outcome is perceived by the individual resides within or outside of the respondent.

The original framework of the Attribution theory was based on 4 causal attributions which were ability, effort, task difficulty and luck (McAuley & Blissmer, 2002) however Wagner claimed that these causal attributions independently were largely unimportant and although they may slight have implications upon future behaviour he identified that it is important to understand the common dimensions that causal attributions can be attributed to. This led to the view that the most commonly identified dimensions were; locus of causality<sup>2</sup>, stability<sup>3</sup> and controllability of dimensions<sup>4</sup> (McAuley & Blissmer, 2002).

Attribution		Psychological result	
<b>Stability</b>	<i>Stable</i>	<i>Expectancy of future success</i>	<ul style="list-style-type: none"> <li>Increases expectations of success</li> </ul>
	<i>Unstable</i>		<ul style="list-style-type: none"> <li>Decreased expectations of success</li> </ul>
<b>Causality</b>	<i>Internal cause</i>	<i>Emotional influences</i>	<ul style="list-style-type: none"> <li>Increased positive (i.e. pride) or negative (i.e. shame) perception of self</li> </ul>
	<i>External cause</i>		<ul style="list-style-type: none"> <li>Decreased positive (i.e. pride) or negative (i.e. shame) perception of self</li> </ul>
<b>Control</b>	<i>In one's control</i>	<i>Emotional influences</i>	<ul style="list-style-type: none"> <li>Increased motivation</li> </ul>
	<i>Out of one's control</i>		<ul style="list-style-type: none"> <li>Decreased motivation</li> </ul>

Ultimately where this theory is concerned the individuals who are internally motivated attribute their success to ability or effort and take personal responsibility for their performance yet those who are attribute motivation externally may attribute their performance and success to uncontrolled factors such as the task difficulty (Shores, 2011). Also there is the assumption that success can be contributed to personal competence (aptitude and learned skills) and where failure is concerned; this can be overcome by exertion and application of effort (Shores, 2011).

So how do these areas of attribution and value added relate? As already discussed value added will continue to be used as a means of quantifying the achievement of students in further education. However what is not clear is the role of the student in obtaining an externally set target (value added), how this may differ from a student's own preferred target but also how the student enters the vocational qualification and how they progress through the qualification to reach their final outcome (grade achieved). It may be well understood that there are many factors that can impact upon students learning and attributions are the way in that students explain and attribute success or even failure.

However there is a need to consider a phenomenological approach in this instance because it is required to understand how students approach a course, progress and then to ultimately achieve their goal and then determine the implications of outcome goals over approaches such as process and performance goals. If as Coffield (2010) has already stated that students are not developing a deep understanding and do not take responsibility for their own learning then one could assume that this would have a greater bearing on setting outcome goals such as value added

<sup>2</sup> This refers to whether the cause of the achievement outcome is perceived by the individual resides within or outside of the respondent.

<sup>3</sup> This refers to the relative variability of the cause over time.

<sup>4</sup> This refers to whether the cause is perceived to be under the control of the individual or attributed to others.

rather than valuing the development of the students' knowledge and developing attributions that are controllable and will allow development especially for students wishing to enter higher education. Nevertheless the only way to understand what a student does as they approach a course is to allow them to process as naturally as possible and assess how they respond to outcome goals and how they naturally attribute their outcome whether this is positive or negative

## **Nature of study, study design and methodology**

### **Nature of inquiry**

To devise the study design and methodological approach for the research project, this was based on the objectivist concept of social science. The philosophical basis of the study is based on a *subjectivist* approach to social science. This is based on the fact that due to the nature of the research and seeking to understand the participant's creation of their social world, the principle concern becomes the understanding of how these participants create, modify and interpret the world they belong in (Cohen, Manion & Morrison, 2011). This leads to a; *nominalism* ontology, an *anti-positivism* epistemology and an *idiographic* methodological approach. The human nature approach of the *subjectivist* approach to social science is based on *voluntarism* as this is associated with the view that the participant will be; initiators of their own actions with free will; demonstrate creativity; and produce their own environments (Cohen et al, 2011).

### **Participants**

The participants were selected from 2 vocational qualifications; BTEC Level 3 Subsidiary Diploma in Sport & Exercise Sciences (QCF) ( $n = 13$ ) and the BTEC Level 3 Extended Diploma in Sport & Exercise Sciences (QCF) ( $n = 6$ ). The mean age of the participants was 19 years old ( $\bar{x} = 18$  yrs subsidiary;  $\bar{x} = 20$  yrs extended) while there was a disparity in the gender ratio (male  $n = 14$  and female  $n = 5$ ).

### **Study design**

The study design applied was primarily qualitative due to this approach allowing the ability to grasp the contexts, processes and explanation for a particular phenomenon (Stelter, Sparkes & Hunger, 2003) allowing understanding from the participants perspectives (Firestone, 1987). There is also a quantitative application to allow the qualitative phenomenon to be contrasted to statistical evidence collected and to determine the reliability of the qualitative evidence.

The sampling method employed within this study was non-probability sampling. This sampling method means that the sample population have been purposely chosen and the purposive sampling method has been adopted (Cohen et al, 2011). The rationale for this sampling method is due to the fact that the participants were readily available due to teaching of these individuals and although the sampling method is classified as non-probability sampling and could be perceived as bias. However random sampling was not feasible as the research is not trying to control

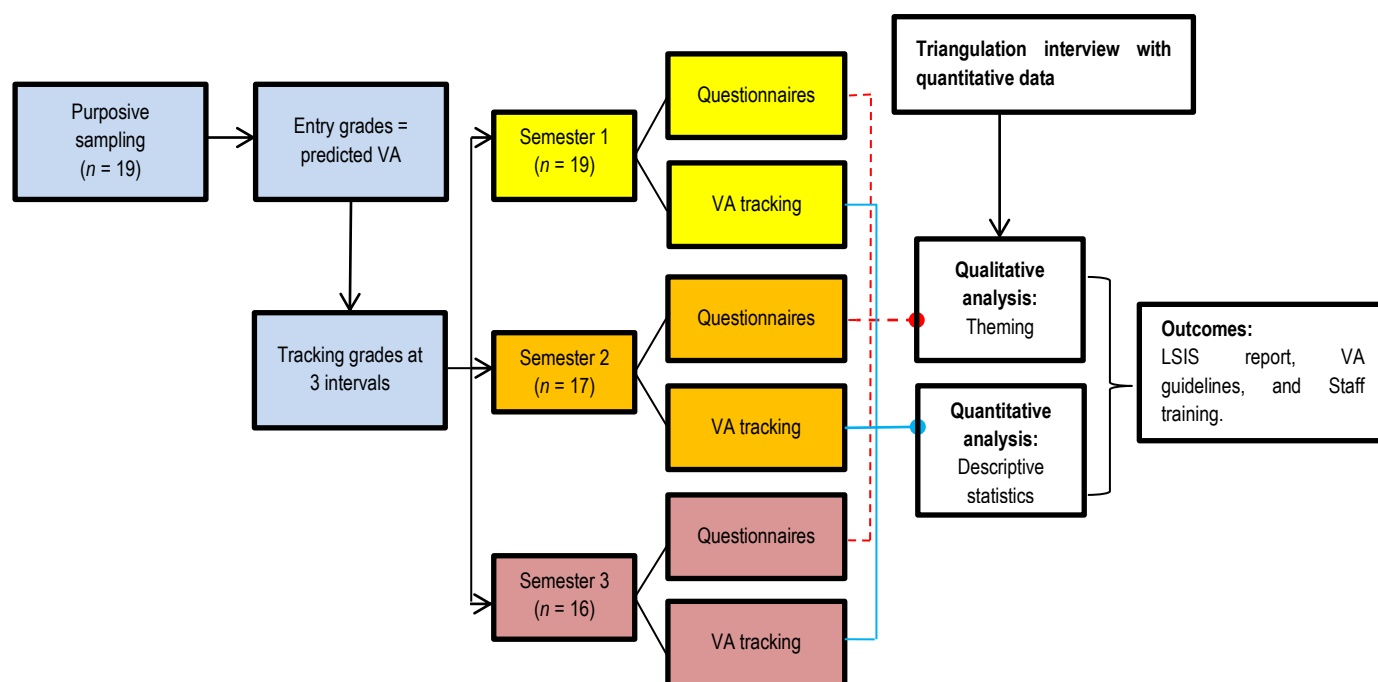


variables but discover them and random sampling could prevent discovery (Strauss & Corbin, 1998: 281). Also the sampling method was appropriate because the research was concerned with specifically analysing the impact on grades of the participants specifically in the field of Sport & Exercise Sciences at Further Education level. To further enhance information robustness and internal validity, triangulation is applied to the content analysis. By applying triangulation this enhances trustworthiness of information (Pitney & Parker, 2009) and this was undertaken by comparing the statistical evidence of value added with the coded and themed qualitative evidence.

## Methodology

**Pilot study:** The research process outlined below in the methodology schematic (Fig 1.1) consisted of a pilot student and a main study. The pilot study consisted of testing the questions devised and how the students would react to the view of interviews. The pilot sample ( $n = 5$ ) highlighted that the students struggled to answer the questions possibly due to wording of the questions and the environment they were placed into. This ensured that the environment was to be made more friendly and normal for the students and the interview was replaced with a written task using adjusted structured questions.

**Fig 1.1** Methodological approach to qualitative-quantitative data collection and report production



**Main study:** The methodology consisted of calculating all student value added scores and student predicted grades for the Sport & Exercise Science first year group (Table 1.1) and second year group (Table 1.2). The students were provided their value added targets and these were compared to their predicted grades prior to the first questionnaire stage. The rationale based on the target by Martinez & Rudden (2001) in that value added grades should be prepared and shared with the student when setting targets. Within semester 1 both groups attended a workshop in which they were provided with the following questions:

*How do you feel about value added?*  
*Do you feel that your value added target is achievable, please state why?*  
*What is the source of your motivation?*  
*What are the most important the factors that will determine whether you achieve the value added target?*  
*What strategies will you use to achieve your value added target?*  
*Do you feel that your end grade will be due to natural intelligence or hard work, please justify*

To produce a normal education environment the students ( $n = 19$ ) were separated into groups by course year ( $n = 6$  vs.  $n = 13$ ) and were provided the questionnaires. This allowed the students to feel comfortable in an environment that replicated what they were used to and this allowed the students to feel comfortable about asking questions if they were unclear. To ensure there was no misdirection and influencing of data collected, the researcher would only paraphrase the questions in a similar way that students have experienced in examination conditions in which questions can be rephrased if they have difficulty understanding. Once data was collected these were transferred into an electronic format and transcribed. Once transcripts were produced both researchers were provided a copy of both groups initial responses and coded these independently using descriptive coding.

This procedure was repeated in semester 2 and semester 3 and although the environment was maintained the questions were designed to progress from the previous questions. The questions used in semester 2 were;

*How satisfied are you with your progression from the first interview and towards the value added target*  
*You are/are not on track with your value added predicted grade, can you suggest why?*  
*What interventions will you use to maintain progression/to improve on current projected value added grade?*

The questions used for semester 3 were;

*How satisfied are you with your final grade?*  
*Can you explain why you achieved you're a) predicted value added grade b) overachieved on your value added grade c) underachieved compared . predicted value added grade?*  
*Considering that value added is about an end grade, do you feel this projects an accurate image of how much you have learnt during the course?*

## Qualitative data analysis

The first stage of qualitative analysis consisted of *descriptive coding* with the aim of identifying topics and not abbreviating content (Saldaña, 2010). The second stage of the qualitative analysis developed the descriptive codes and initial coding was applied as the researcher aim was to understand the phenomenon on how students ‘travelled’ through the academic year and this stage is part of the ground theory approach to qualitative research. *Initial coding* was applied to use the topics from descriptive coding to break further into discrete parts and allow comparing of similarities or differences (Saldaña, 2010). Finally to determine the relationship of codes from the previous coding stages *theoretical coding* was applied.

To ensure trustworthiness of qualitative data analysis there were two researchers involved with the coding and theming of data. Once descriptive coding was complete for all 3 semesters these codes were compared by both researchers to determine more rigorously the codes from the data. These codes were then agreed and then further analysed using grounded theory and then both researchers agreed on final themes and produced the proposed ‘*Theory of secondary-vocational education transition*’ (Fig 2.3). Triangulation will be applied by comparing to quantitative evidence collected and by triangulating the evidence then this enhances trustworthiness of information (Pitney & Parker, 2009), validity and reliability of the research (Golafshani, 2003).

## Results

**Table 1.1:** Value added and student predicted grades for Subsidiary Diploma students

Learner	SSPG <sup>5</sup>	Credits	VA	Deviation 1 ( $\pm$ ) <sup>6</sup>	Final grade	Deviation 2 ( $\pm$ ) <sup>7</sup>
Willis	P	420	M	-40	440	-20
Peter	M	460	M	0	420	-40
Ryan	P	420	M	-40	420	-40
Connor	P	440	D	-80	430	-70
Noah	P	420	M	-40	440	-40
Thomas	P	440	M	-20	420	-40
Skye	P	440	M	-20	420	-40
Isabelle	D	510	M	+1-40	Fail	-460
Finley	P	420	M	-40	420	-40
Chloe	D	520	M	+21-80	Fail	-460
Oscar	P	420	M	-40	420	-40
Matilda	P	420	M	-40	Fail	-460
Isaac	P	450	M	-10	420	-40

<sup>5</sup> SSPG refers to ‘Student self-predicted grade’.

<sup>6</sup> This deviation refers to the differences between the Student self-predicted grade and the V.A. predicted grade.

<sup>7</sup> This deviation refers to the difference between the achieved student qualification grade and the V.A. predicted grade.

**Table 1.2:** Value added and student predicted grades for Extended Diploma students

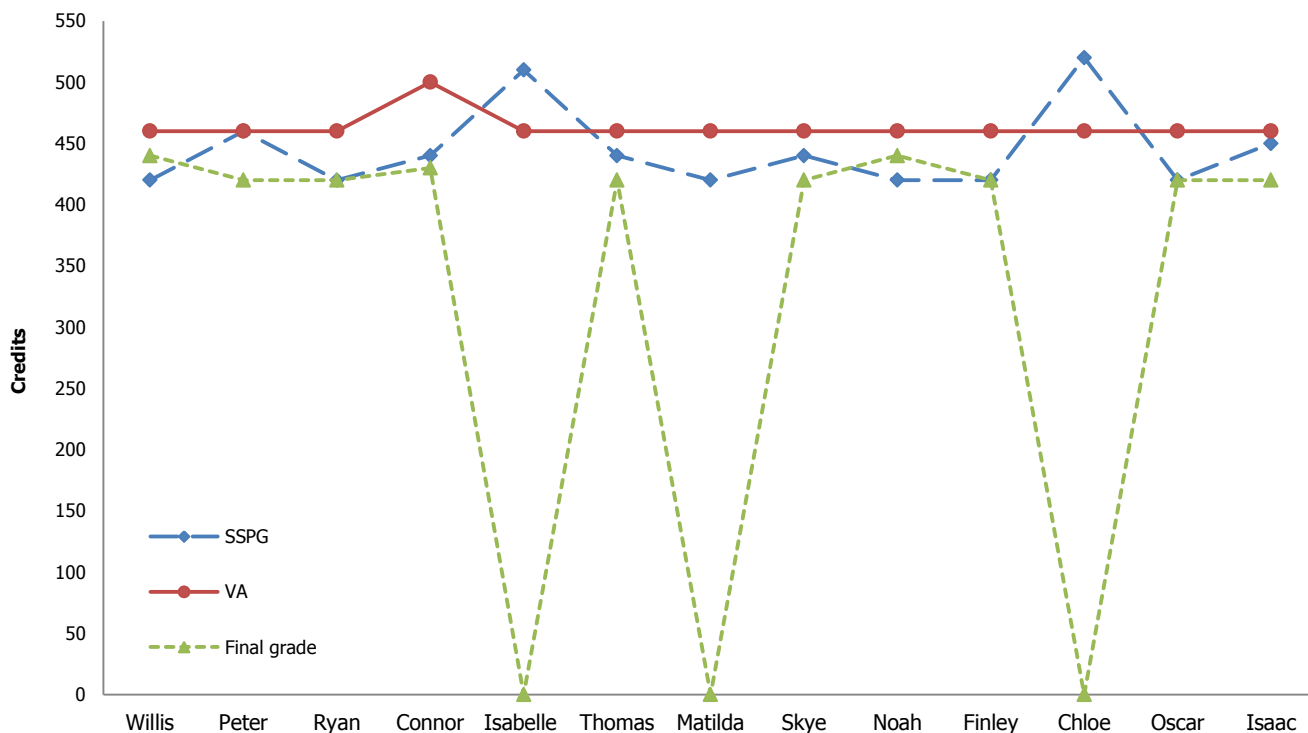
Learner	SSPG	Credits	VA	Deviation ( $\pm$ )	Final grade	Deviation ( $\pm$ )
Lucas	MMP	1350	MMP	0	1270	-70
Nathan	MMP	1370	DMM	-50	1340	-80
Amber	MMM	1380	DMM	-40	1290	-130
Seth	MMP	1340	MMP	0	1270	-70
Caleb	DMM	1440	MMP	+69	1270	-70
Dexter	MMP	1350	DMM	-70	1260	-160

**Note:** Where deviations are concerned these have been taken from the lowest range equivalent (bolded number). So for the subsidiary and extended diploma the following are applied:

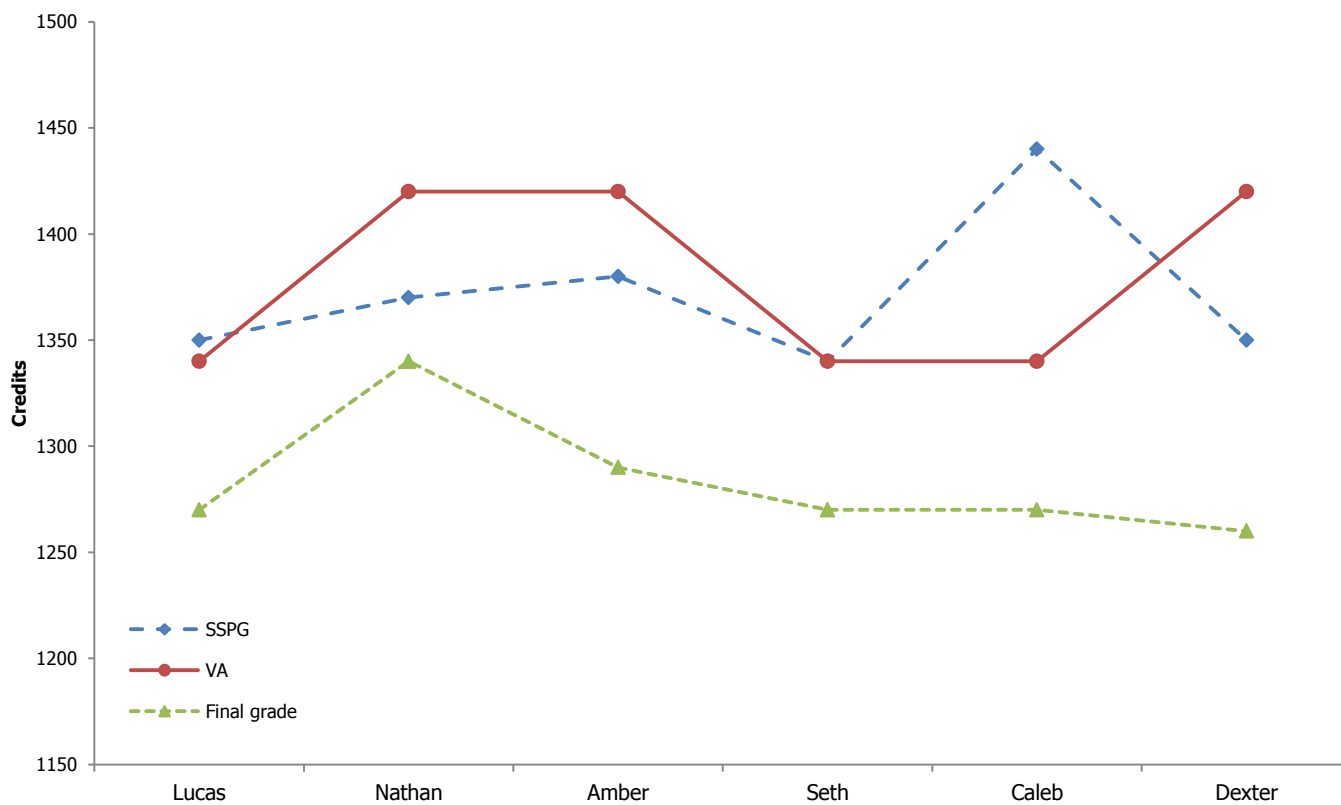
**Table 1.3:** Subsidiary/Extended grade classifications

Subsidiary grade scale		Extended grade scale			
Points range	Grade	Points range	Grade	Points range	Grade
420-455	P	<1300	PPP	1460-1499	DDM
460-499	M	1300-1339	MPP	1500-1529	DDD
500-519	D	1340-1379	MMP	1530-1559	DDD*
520+	D*	1380-1419	MMM	1560-1589	DD*D*
		1420-1459	DMM	>1590	D*D*D*

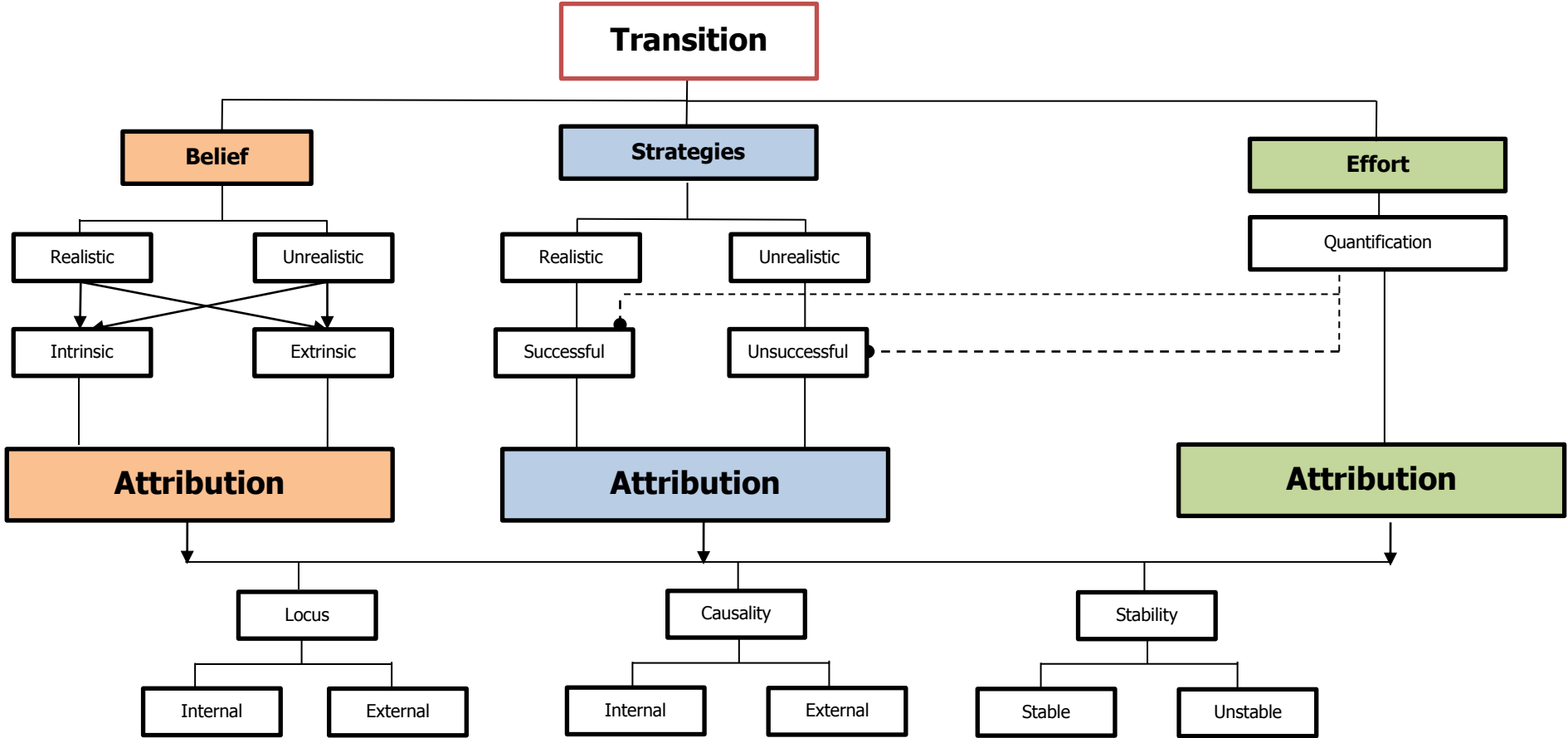
**Fig 2.1:** Subsidiary Diploma SSPG and final grades compared to value added



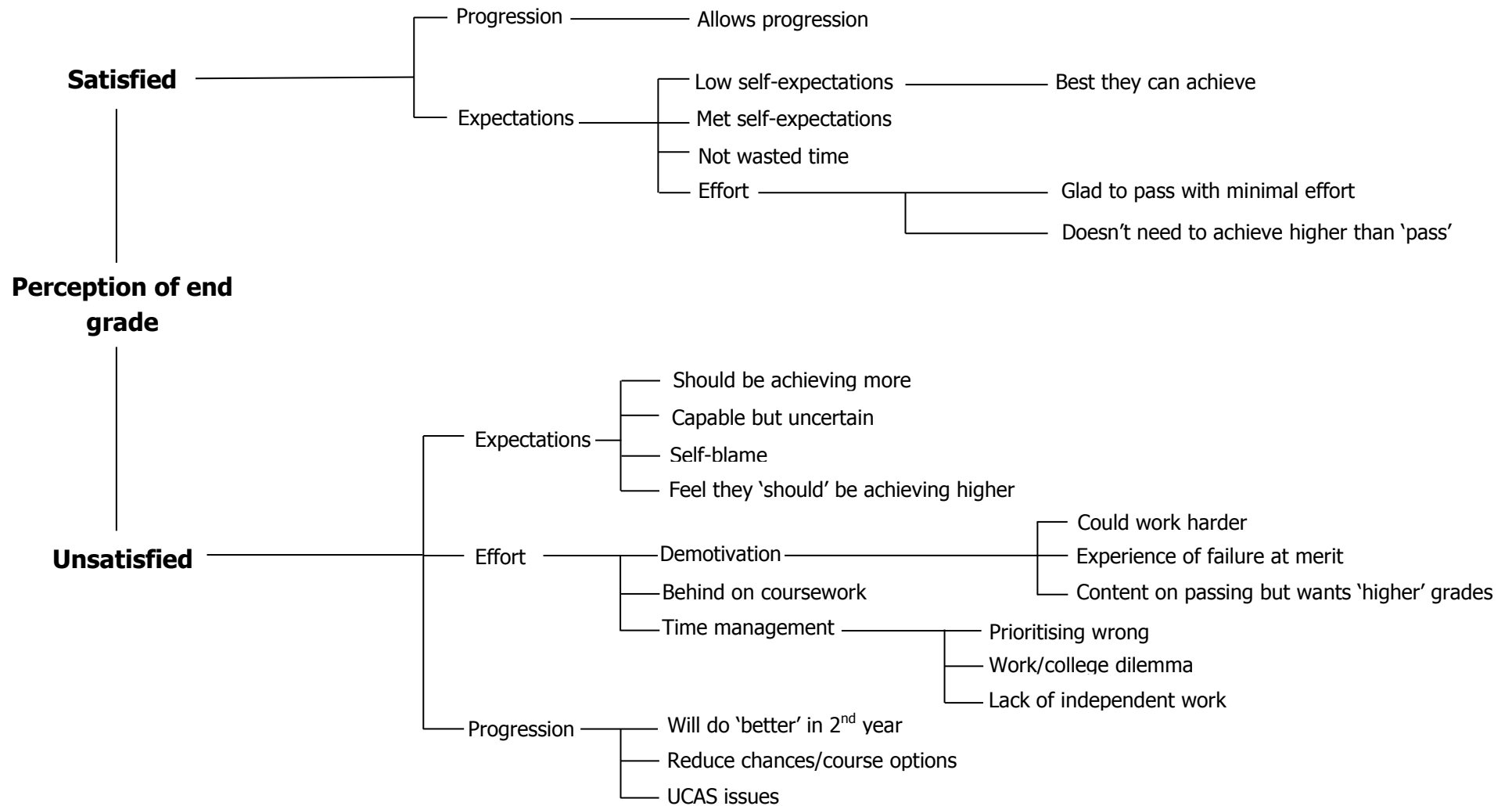
**Fig 2.2:** Extended Diploma SSPG and final grades compared to value added



**Fig 2.3** Theory of secondary-vocational education transition



**Fig 2.4** Taxonomic tree diagram of how students perceive their end grade



## Discussion

The potential issue with value added is expressed by Martinez & Rudden (2001) in which they state; “*Students need information about value added...to understand and take ownership of targets and monitor their own progress*”. For this to be a possibility then what needs to be considered is the view in which students perceive control of their transition from school to vocational education; what are their beliefs in regards to their ability are they realistic in their view; do they adopt strategies that are appropriate to the value added target to achieve and do they place emphasis on actual application of effort. All of this applies to the term *ownership*, it has been highlighted as a critical aspect of value added but it is important to understand if students accept their outcome (final grade) as a product of their control, effort and ultimately who do they hold responsible for their grade, is it themselves (internal cause) or do they project blame (external cause).

The evidence gathered has been used to propose a potential transition theory (Fig 2.3) to state how a student enters vocational education and using their experiences at secondary education progress through a process of transition and how these experiences contribute to success or failure at vocational level. From the questionnaire evidence gathered there are 3 key themes which were evidenced; (1) belief, (2) strategies and (3) effort. As seen in Fig 2.3 these themes are intertwined and are not stand alone entities but aspects proposed as part of transition that much all be experienced by the student but controllable by the student to enhance satisfaction and progression. However for ease all 3 themes will be separated to explain but will identify the links with the other themes where applicable.

### Theme 1: Belief

What was evident from the initial questionnaires was that many students expressed unrealistic expectations at the beginning of their vocational course. These expectations were deemed unrealistic based on grades students were setting but also the lack of strategies they were going to apply to achieving these grades and also the way in which they quantified how much effort they would place into achieving their targets. Having these unrealistic views could have a negative bearing on their end grades and how they attribute their end grade and their perceptions. The rationale for unrealistic target setting is not based on students having the ability to achieve their set goals but from the fact that as they progressed throughout the academic year they were falling further behind in the obtaining their targets. For example Chloe also expressed a great deal of self-belief as expressed in this statement;

*“I feel that the value-added is comfortable target. I could easily achieve this great if I put my mind to it.”* **Chloe**

However what is concerning in this instance is that this student has not only set a high self-predicted target (distinction) but they also failed to complete the course and this was also evidenced in Isabelle who also had a high self-belief but failed to complete the course (See Fig 2.1). It is unclear whether the students had a disillusioned self-belief or it may be that they underestimated the amount of effort required for this target to be fulfilled or they may have had implemented unrealistic strategies. Although there were no failures in the Extended Diploma programme there were other examples of students ‘feeling’ that their VA grades weren’t sufficient and then have went onto



obtaining lower grades than both their self-expected grades and VA grade. For example, Caleb, a student that achieved a pass in their subsidiary diploma but was predicted a MMP grade suggests that their VA still does not match their ability belief;

*“This grade isn't good enough for what I want to do. I don't feel it reflects on what I want to get and is what I should be getting. I also feel this isn't pushing me enough.”* **Caleb**

Although it is clear that the students failed to achieve their targets as identified in Table 1.1 & 1.2, this will be covered in the strategy and effort section. Instead what was unclear is why when the students produced their own self assessed predicted grade, and then were confronted with the VA predicted grade none of the students re-evaluated their own perspective goals but instead agreed with the VA added target. For example Connor who self-predicted a pass grade but then agreed that their VA grade of distinction was achievable;

*“I feel that my value added score is to my ability. In high school I found BTECs easier as we got far more assistance and I felt we were being walked through the qualification. I like being given a grade from an external assessor because tells me where and work on that.”* **Connor**

This was evidenced in another 12 students that did not acknowledge either why they are setting lower targets than they believe they can achieve or why they automatically agreed that they could all achieve their value added. Some students although setting targets at pass level even acknowledged that the value added even though higher than their own self predicted target could use value added as a form of motivation to even surpass their value added target;

*“I think it's good as it gives you something to aim for and to try even getting higher than value added. Schools also said external targets for BTEC work; however school gives you the work handed right to you.”* **Skye**

These examples highlight that the students are being persuaded by the value added and the elusiveness of the words that express greater achievement (merit and distinction) and it would appear that students do not acknowledge that these words are symbolic with students that work effectively and to a higher standard with higher cognitive and contextualisation ability where assessment evidence is concerned. The extract above is startling when you consider the statistics behind the student's belief they can do better (see footer)<sup>8</sup>.

What is being suggested here is that the students are instantly aiming for a grade that originally they have not predicted but agree with a higher set target and don't understand the complexities of 'just' upgrading their assignment quality to achieve a higher grade. One plausible conclusion that could be linked to this is the student's

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<sup>8</sup> For this student they have set their self-assessed target at pass level which equals a minimum of 420 credits. However to gain their VA target of merit they need to increase their grade by a minimum of 40 credits which means converting 4 pass grades into 4 merit grades. However to surpass this VA target the student would then need to ensure that their original view of passing all 6 units at pass level then must become either 4 distinctions and 2 passes (distinction grade) or 5 distinctions and 1 pass (distinction\* grade).

previous experiences of vocational education. Some students have the opportunity of completing diplomas in secondary education

*“Schools also said external targets for BTEC work; however school gives you the work handed right to you.”* **Skye**

*“In high school I found that it was easier, because we were assisted a lot from our teachers.”* **Oscar**

*“In GCSE I got distinction\* in BTEC Sport, however we were basically told the answers.”* **Isabelle**

Although these extracts are of the opinions and experiences of the students, if they feel they have not have needed to work for their grade then they will not understand the complexities of achieving the various grades available. Also it has been highlighted that research with 10<sup>th</sup> grade secondary students has raised issues in which they do not believe secondary school prepares them for scientific-technology society (Fonseca & Conboy, 2006). Also students need to be aware that if they are achieving merit or distinction grades at diploma in school these are equivalencies to GCSE standard and they are now on a vocational course which is the equivalent to A-Level so should understand that merit at A-Level standard will not be the same as obtaining merit at GCSE level.

## Theme 2: Strategies

This is an essential aspect of education in which students apply specific strategies to attain their desired grades. What was apparent from the evidence collated was that strategies were classified as either realistic or unrealistic and then the outcome is either classified as being successful or unsuccessful. What is obvious is that if a student uses a realistic strategy then they should have a successful outcome however from the evidence collected this was an area of concern with the students and all students were implementing unrealistic strategies and this was also linked to their quantification of ‘effort’.

The main issue was the way the students thought about gaining their VA targets and not strategizing correctly. For Seth he had identified that he will use time management to gain his self-predicted grade of DMM and surpass his VA target of MMP;

*“I’m going to have a good time management and get my assignments in on time and keep a plan on what needs done.”*

**Seth**

However at the 2<sup>nd</sup> interview Seth was not on track with gaining their targets and he suggested;

*“I will keep track by asking my teacher on what I need to do and what I need to do to upgrade my work. I will also try to be more mature about my work and make sure my behaviour is improved. Also I need to make sure I am not distracted so easily and get on with my work set.”* **Seth**

However by the final interview Seth obtained his final grade of PPP. This is concerning considering that he mentioned that time management would be used. However although this is a potential strategy he mentioned in the final interview;

*“I am satisfied however I believe I could have done better if I had been more motivated to get a higher grade...I underachieved because at the start of the year I lost my motivation to do the work and wasn’t committed to the course, this was due to personal problems...this is an accurate image of my workload [referring to end grade] as I was happy to hand it in [assignments] at a lower grade instead of the higher grade, this is due to my lack of motivation.”* **Seth**

So although the student may have identified a relevant strategy the key element could be how they implemented, did they even actually implement it and how much effort as placed into their work quality. Another student from the Extended Diploma also demonstrated a lack of using learning strategies. Lucas acknowledged that at the 2<sup>nd</sup> interview that they were unhappy about progression and would also use time management;

*“Not very satisfied as this is my own fault as I have failed to complete and handed some assignments. I have had work and training but these are real excuses I believe I have just been lazy... I have failed to complete and hand in the work I owe on the deadline date and failure to complete the referrals which has been handed back to me...I shall set a goal of finishing any work and hand in these in as soon as possible. To do this I should use time management to effectively do my work between college and work.”* **Lucas**

Where students were required to discuss learning strategies there was a lack of understanding evidenced in the answers provided. When assessing for reoccurring strategy themes the following were highlighted by the students based on the number of times these ‘buzzwords’ were used;

**Table 2.1** Initial strategies and rectification strategies

Rank	Initial strategizing	f	Rank	Rectification strategizing	f
1 <sup>st</sup>	Working the LRC (40%)	(08)	1 <sup>st</sup>	Effort (32%)	(08)
2 <sup>nd</sup>	Working at home (25%)	(05)	2 <sup>nd</sup>	Upgrading or resubmitting work (28%)	(07)
3 <sup>rd</sup>	Time management (20%)	(04)	3 <sup>rd</sup>	Working at home (16%)	(04)
4 <sup>th</sup>	Upgrading or resubmitting work (10%)	(02)	4 <sup>th</sup>	Working the LRC (12%)	(03)
5 <sup>th</sup>	Effort (5%)	(01)	5 <sup>th</sup>	Time management (8%)	(02)
6 <sup>th</sup>	Extra classes (0%)	(00)	6 <sup>th</sup>	Extra classes (4%)	(01)

What is evident at the first interviewing stage is that there is no realistic strategizing by the students. Instead they have suggested ways in which they assume will assist with success. The 1<sup>st</sup> two ‘strategies’ are actually environments they are suggesting; however it is not clear how they work in these areas. For example what do the students actually do while in the LRC or working at home, do they implement strategies in these environments and do these place effort effectively to be successful? So from the onset it is clear that the students do not have self-regulated leaning strategies skills. However, even though they don’t have appropriate skills to impact their learning they still have the belief of achieving good grades. What is more concerning is that the students still don’t implement any self-regulated leaning strategies throughout the academic year and don’t know how to rectify strategies that can influence grades obtained.

At the second interview phase all student were off target for their own self-predicted and VA targets and they all knew they needed to strategize more effectively yet as seen in Table 2.1 the key strategy emphasised by the students was ‘effort’ or ‘working harder’. However it did not appear that the students could not quantify what they mean by ‘effort’ or ‘working harder’ because they could place more effort into their work but still fail or not achieve their desired grade. These terms act as buzzwords with the students as they may have experienced other environments when they have been told to work harder so they acknowledge that they need more effort but don’t know what this actually means. For example, Noah when explaining how they will strategize to improve their grade as they were not on target emphasises the need to either increase effort or work harder 3 times yet does not state how this effort will be directed and in which context. This only emphasises that students know that working hard improves chances of gaining higher grades but don’t know how to work hard with an improvement in end product.

*“To work and study hard, and try to hit pass and merit first time, put a lot more effort into my work, and try to hit pass and merit first time. Making sure by the end of the year I have hit pass and merit in my assignments. By doing this I am going to start using the LRC a lot more and going on BlackBoard more, put more effort from outside college.”* **Noah**

Also there was evidence that when trying to justify the effort placed into their studies and to protect their ego and self-efficacy, students seemed content with end grades even when they have failed to obtain self-predicted or VA grades. For example Lucas who obtained a final grade of PPP originally stated that MMP was a realistic target but then settled for PPP;

*“I feel my value added is a good realistic grade [MMP], this was also my predicted grade so believe this grade is achievable for me...I am satisfied although I wanted to achieve more. The grade I received is all I expected to gain before starting this course”* **Lucas**

However what could be viewed is that this protection of their ego I based on previous academic experiences in which students have protected their ego when they know they have not worked enough on obtaining their desired grade. Fonseca & Conboy (2006) have acknowledged that previous academic preparation may be beyond the reach of current teachers and current teachers cannot be expected to alter or influence the previous student experiences. However there is evidence to suggest that the previous environment and experiences do impact the transition period and Fonseca & Conboy (2006) classified that the previous influences can be influenced by the students previous perception of preparation (positive or negative) and then from a social-cognitive evaluation of previous preparation. The latter is assumed by Fonseca & Conboy (2006) to assist with the conceptualisation of failure by causing internalisation comments from teachers (e.g. complaining about lack of preparation or reliable lack of academic effort) and student employ these as convenient, ego protecting excuses for failure.

As expressed by Shore (2011) the proposed theory acknowledges effort as 3 key themes of success or failure based on transition. What this theory now proposes is that it is no longer a case that we state whether students place effort (*or do not place effort*) but also in how the student quantifies their effort. What this means is that when a student

considers the term effort as a means of success or failure, how do they present and justify how they will place effort. From this research it appears that students do not know the difference between applying effort and not applying effort. All that is known is that students know they need to apply effort but need to be able to quantify this and direct it through effective strategies.

## **Theme 3: Effort**

Effort has been identified as an important aspect of learning and this was an important theme that is present in this proposed theory. Shore (2011) analysing the pre-service teachers' perceptions of student attributions and mathematics performance found that although many of the participants believe that success was due to natural ability (60%) there was a greater view that effort was significantly associated with success (70%) and failure (76%). While 60% of respondents agreed that success in mathematics was strongly influenced by ability, 70% agreed that success could be attributed to effort. This is encouraging in that, although they see ability as an important factor in success, effort appears to be an even stronger factor in their view. Thus, they don't seem to hold strongly to the myth of success in mathematics being attributed to innate ability. This was evinced in the views of the students in this research as many believe that effort will have a greater influence on their final outcome compared to natural ability.

A potential reason why there are issues with belief, strategies and effort as expressed in Fig 2.2 could be based on the motivational qualities of each. Students as expressed in Fig 2.2 can have realistic or unrealistic beliefs and strategies and these will depend on the goal setting ability of the student. A student's beliefs will directly impact their goal setting as it impacts how realistic they set goals based on their transitional experiences and success but also how much effort they have had to use to gain these views (i.e. have they had much success without really having to place much effort in, this could cause a delusional impact on goal setting etc.). Also where strategies are expressed students have set to implement strategies that coincide with their belief and goal setting but will also have a direct bearing on how they have learnt to strategize before educational transition. Again strategies will be perceived as realistic if they coincide with achieving goals and are used effectively but unrealistic strategies will be due to unrealistic goal setting.

What needs to be considered throughout this process is motivation which provides direct and intensity towards achieving success (put in definition reference). Covington (2000) provides some light into the situation of the impact of motivation. In Fig 2.2 there is a key theme of 'effort' and the term quantification is used. The rationale for this term is based on how the students quantify or perceive and explain how much effort they implement. This has a direct bearing upon a successful or unsuccessful implementation of a learning strategy and Covington (2000) believes this is due to the motivational property of academic goal setting. To clarify this what Fig 2.2 suggests is that when academic goals are set at the beginning of the academic year then there needs to be a motivational quality attached to these goals. This has a direct bearing on the 3 key themes of transition expressed in Fig 2.2 (belief, strategies and effort) where the student will leave secondary education and bring with them their experiences and

self-belief. The students will set goals based on how they perceive their ability and belief in what they can achieve, they then set strategies to achieve these goals but if they cannot understand how they apply effort then the previous themes could be perceived to be doomed to failure against the set value added targets. So this could be expressed as;

$$\text{Goal setting} = (\text{belief} + \text{strategy}) \times \text{effort} = \text{outcome grade}$$

So a successful outcome could be viewed as:

$$\text{Effective goal setting} = (\text{realistic belief} + \text{realistic strategy}) \times \text{motivating effort} = \text{successful outcome}$$

While an unsuccessful outcome could be viewed as:

$$\text{Ineffective goal setting} = (\text{unrealistic belief} + \text{unrealistic strategy}) \times \text{demotivating effort} = \text{unsuccessful outcome}$$

This motivating factor could be seen in the fact that no students questioned the differences in their own self-predicted grade and that set for value added. So these 3 key themes will be related to transition and effort could be the most important variable considering that students can set goals, express these goals to others, may have the ability to achieve these goals, set relevant strategies that could in fact allow the achievement of these grades but still do not achieve targets that are above the baseline pass grade. This is expressed by Covington (2000) who acknowledges that the variable of motivation can help explain why students do not constructively act on goals so even if a student wants to achieve good grades they do not really work for them thus lacking a motivating property of the original goals set.

*"I believe I underachieved compared to my predicted value added target due to my own motivation...I did not feel that I needed to achieve higher than pass. I only wish to finish the course so that I feel that I have gained some qualification...I found it hard to complete merit questions and it would be too difficult to achieve a grade which makes no difference to myself"* **Finley**

## Attributing grades and why Value added was not achieved

Although previously mentioned there are 3 key themes with sub sections within each theme but what is of interest is how students attributed their end grade but also how they perceived their end grades. Firstly students were requested to express their perception of their end grade considering that they set self-predicted grades which could be different to VA grades. As seen in Fig 2.4 there were more student unsatisfied with their end grades compared to those that were satisfied ( $n = 9$  vs.  $n = 7$ ).

However to try and link the attributions to the key themes of transition they have been applied to Wagner's Attributional Model of Motivation of Achievement Motivation and Emotion (1985; 1986) as seen in Table 3.1. What needs to be acknowledged is that it is key to understand whether the reasons for why students did not achieve their VA grades is in the students control (demonstrating an internal locus of control) or if they are not in control (demonstrating an external locus of control). The students attributions have been linked to the 3 key themes; belief, strategies and effort and classified how the students have expressed their opinions to determine the stability, causality and controllability of each reason.

**Table 3.1** Attribution for underachieving on value added predicted grades

Attributions		Stability		Causality		Controllability	
		Stable	Unstable	Internal	External	Internal locus	External locus
<b>Belief</b>	School spoon fed students		x		x		x
	More concerned with handing work in than aiming for specific grades	x		x		x	
	Did not get same support as school		x		x		x
	Course harder than anticipated		x		x		x
	V.A. too high to achieve		x		x		x
<b>Strategies</b>	Not completing work at home	x		x		x	
	Time management skills not used correctly	x		x		x	
	Didn't use resources provided		x	x		x	
	Lack of time (upgrading)	x		x		x	
	Too many assignments	x			x		x
<b>Effort</b>	Motivational (commitment) issues	x		x		x	
	Trying to catch up on previous work not submitted	x			x		x
	Not having the right attitude when doing assignments		x	x		x	
	Lack of effort	x		x		x	
	Personal issues		x	x	x	x	
	Work too difficult	x			x		x
	Not achieving grades at first attempt	x		x		x	
	Distracted by class mates		x	x	x		x

**Belief:** What is evident from belief based attributions is that the students are not in control of many of their attributions. The fact that students demonstrated initial unrealistic beliefs also could be a contributor to reducing chances of successful study. This has been highlighted also by Fraser & Killen (2003) who identified that first year university students had unrealistic expectations that reduced successful study. So considering that some students expressed reasons for not obtaining their VA based on their experiences in secondary education impacting their achievement then this cycle of transition could continue into higher education as expressed by Fraser & Killen (2003) so it is clear that students need to be aware that when transiting between education levels they need to adopt and obtain an internal locus of control so they know that they are responsible for their end grade, and not their previous experiences.

**Strategies:** What is evident from strategy based attributions is that this is an area that can be positively influenced due to the attributional characteristics of the reasons for not achieving VA grades. Majority of the attributions are stable, along with an internal controllability and an internal locus of control. This means that although it is has already been stated that strategies are not inherited in students progression from secondary education the students have acknowledged that they have not strategized effectively but acknowledge this is

internal or their fault rather than an external source such as teacher fault. Strategizing has been highlighted in other studies such as Thang et al (2001) who highlighted that this attribution as the 4<sup>th</sup> main reason for attributing failure.

There were some attributions based on number of assignments. However what needs to be clear is the way that vocational education differs from academic education. The latter the students will progress through education and then complete examinations at set times through the year. With vocational education students are exposed to more frequent work based on formative assessment compared to summative assessment concerned primarily with academic education. Not only is formative assessment acknowledged as one of the most powerful ways to enhance student motivation and achievement (Clark, 2001) yet this was not evidenced in the students' perceived motivation levels or the fact that value added was not achieved. What could be viewed here is that due to the lack of motivation by the students and lack of strategizing they have progressed from an educational system where they prepare for examinations to an education system in which they are assessed throughout the year and they don't have the skills to adapt to this transition.

**Effort:** From the reasons suggested for not achieving VA targets there were many that were linked with effort. The fact students identified lack of effort is not unusual considering that effort along with ability are two frequently used causes of success or failure at learning task(s) (Harlen & Crick, 2003). The difference seen here when compared to the term effort by Thang et al (2011) is the contextualisation of the term effort. Thang et al (2011) classified effort as unstable and controllable attribution but as the students have acknowledged not just effort but they did not apply enough they have acknowledge a '*lack of effort*' so this has not become a stable and controllable attribution. Previous student perceptions of factors impacting failure has been highlighted in research by Fonseca & Conboy (2006). Both researchers highlighted that the main reasons for academic failure in science were; quality of teaching ( $M = 4.55$ ;  $sd = .68$ ), previous student preparation ( $M = 4.53$ ;  $sd = .71$ ), difficulty of academic content ( $M = 3.83$ ;  $sd = .97$ ), physical condition of school ( $M = 3.62$ ;  $sd = .97$ ), school organisation ( $M = 3.56$ ;  $sd = .95$ ) and conflicting outside interests ( $M = 3.31$ ;  $sd = 1.07$ ).

As seen in the attributions for not achieving VA targets students have identified similar attributions but the key element is based on whether the student perceive these are internal or external issues. Where motivational and lack of effort is concerned then it could be perceived that if students had strategized effectively then these could have been viewed as success attributions (i.e. I was motivated to succeed or my effort made a difference). This has been evidenced in research by Thang et al (2011) who found that motivation and effort were attributions used by English (as second language) students to endorse success. It could be proposed that since many of the attributions are controlled by the students then by teaching self-regulated learning strategies then these attributions could be positively influenced and increase chances of success. There is a key attributional issue highlighted which was work too difficult and this was expressed by several students and the fact that students started to believe that resubmission of upgrading work was a strategy is concerning. If students are not gaining their ideal grade at first attempt then they are learning that they can submit work of a poor standard and then upgrade or resubmit to increase their overall grade. It also demonstrates that students are not sure of how to complete work to a specific



standard at first attempt and this could have further implication where they may find that in further educational studies (i.e. Higher education) or in the work place that resubmissions are not plausible and by learning this way believe they can submit inferior work.

*“I have not put in enough effort into my work...I have been more bothered about getting it done [assignments], rather than doing the work [to a good standard] then having plenty of time to do upgrades [resubmission]”* **Noah**

*“I feel I used to rush my work to get it finished as I didn't fully understand merit on some assignments, whereas in school you are spoon fed”* **Skye**

*“As previously described my intention is to have all my work at a pass grade before I worry over upgrading to merit, when the time comes I will attempt to reach the value added target however it is not a current concern of mine.”* **Finley**

As work is being expressed as too difficult the students are expressing an external causality and external locus of control. This translate as the student not taking responsibility for learning and possibly have not learnt skills to overcome difficult situations and instead just suggest work is too difficult. However within vocational education formative assessment is a key element of assessment. This lends itself to effective self-regulated learning strategies because the theoretical ideal of formative assessment is to develop student's capacity to gather evidence of their own learning, interpret this learning and then implement the next steps (Clark, 2011). When the 'next steps' are highlighted by Clark (2011) this is where strategies should be implement and with effective self-regulated learning strategies then students could influence their outcome.

This attribution has also been highlighted by Fonseca & Conboy (2006) in which failure was attributed to difficulty of academic content. However a key factor which acknowledging hard work is that when tasks are difficult and students overcome these then this will lead to an internal locus and result in high pride so students need to understand that even when tasks are difficult they need to know how to overcome these and they will gain positive emotions and hopefully academic drive by completing these. On the other hand it needs to be expressed that if the students wish for easier work this will only lead to lower positive emotions such as less pride and an external locus will be develop so they will determine the success was based on the task rather than how they overcame a difficult task (Weiner, 2010).

Also although this is not measured or highlighted in this research what needs to be acknowledged is why students may blame work as being hard rather than adopt to the difficulty of the work and Fonseca & Conboy (2006) could provide some clarity in that they have classified that the previous influences can be influenced by the students previous perception of preparation (positive or negative) and then from a social-cognitive evaluation of previous preparation. The latter is assumed by Fonseca & Conboy (2006) to assist with the conceptualisation of failure by causing internalisation comments from teachers (e.g. complaining about lack of preparation or reliable lack of academic effort) and student employ these as convenient, ego protecting excuses for failure. So in essence students are trying to protect their egos and by blaming work thus adopting an external locus and externalisation of control then they protect their ego and self-belief.

## Conclusion

From the findings of the project it is clear that students are entering with unrealistic beliefs but also have not developed self-regulated learning strategies that will increase chances of success in vocational education. This could be due to the fact that in secondary education they are only learning skills to make them better at taking tests and poorer at learning (Coffield, 2010). It is encouraging to see that in most cases students are adopting internal locus of control and causality and this means the students acknowledge they are able to change but need to develop skills that will assist this development. With this in mind there are 7 recommendations provided based on the evidence gathered but there is still a need for quantitative analysis of attributions and will these be positively impact success levels if they become part of the academic curriculum.

## Recommendations

1. Pre-screening in vocational education needs to consist of assessment of academic belief. There needs to emphasis on student progression as well as appropriate target setting and links to value added.
2. Another element of pre-screening will be for the students to be assessed on how they attribute their success and failure in relation to Wagner (1985; 1986) Attributional Model of Achievement Motivation and Emotion to determine how the students will attribute their work quality and grades. This can be assessed using the Multidimensional Multi-attributonal Causality Scale (MMCS).
3. Students need to be desensitised to the operative verbs used in vocational diplomas (*pass, merit and distinction*) so they are aware of the grades they are associated with when compared to academic A-Level routes. This means students will need to become aware of how difficult and quality of work that will be required to achieve their desired grades.
4. Students need to be empowered and taught to develop a stable, internal locus of causality along with internal self-control of their own grade and work quality.
5. Students need to be taught how to implement self-regulated learning. Along with this the self-regulated learning needs to be contextualised so they see how it applies to them personally and this needs to be a core learning skill incorporated into the students' academic timetable. Also students are to learn how to use effective goal setting to ensure that self-regulated learning skills are used appropriately and students maintain appropriate motivation and effort through the academic year.
6. Students need to understand that teachers in FE are not responsible for previous secondary education experiences but are there to assist students to be successful and assist the development of their self-regulated learning and will empower students with knowledge and skills but they are to use effort constructively along with self-regulated learning skills to set appropriate targets and regulate their own progression.
7. Teachers need be trained to understand the causal attributions that students used to justify their final outcomes. This will allow teachers to apply these in classroom situation to ensure students can increase their grades and hopefully increase chances of obtaining VA targets.

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