



Voices from the Margin

The learning experience of Mathematics by students who exhibit social, emotional and behavioural difficulties

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Abstract

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This Interpretative Phenomenological Analysis (IPA) explores the lived experience of students who present with Social Emotional Behavioural Difficulties (SEBD) during their Mathematics lesson at school. Hence, it attempts to give them a voice with regards to their learning experience in the subject. The aims of the research were to (i) explore how students presenting with SEBD experience learning in the Mathematics classroom; and (ii) suggest educational strategies and interventions that could help in offering students presenting with SEBD with a more engaging learning experience.

The participants of this study were four students exhibiting with SEBD aged between 12 and 13 years old. The data was collected over a period of 12 weeks. The main data sources included recorded video diaries and semi-structured interviews.

The main research findings indicate that the behaviour of students exhibiting with SEBD in the Mathematics classroom is linked to the curriculum, emotions, relationships, consequences and appraisals.

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SEBD, IPA, Mathematics, Experience, Learning, Voices, Behaviour.

Dedications

To my son, Zane,

My wife, Chanel,

My parents, Joseph and Maria,

My brothers, Michael and Joseph,

&

My nephews, Nathan, Isaac and Matthias.

For their love, support and encouragement.

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Chapter 1: Introduction

Chapter 1: Introduction

1.0 Introduction

In this research I use the methodological framework of Interpretative Phenomenological Analysis (IPA) to explore the lived experience of students who present with Social Emotional Behavioural Difficulties (SEBD) during their Mathematics lesson at school. Hence, giving them a voice with regards to their learning experience in the subject. Based on these findings, I will make suggestions with regards to what can make the learning experience of Mathematics more meaningful for students who exhibit with SEBD.

The thesis is designed as follows:

- A critical review of literature reflecting the theoretical underpinnings of the research;
- The motivation for the methodological framework adopted;
- Data collection procedures employed;
- An interpretation of the data acquired;
- A discussion of the data, relating to theory;
- Implications for practice and policy;
- The strengths and limitations of the research;
- The new contribution this research makes to the field and how this will be circulated across the educational community.

1.1 My positionality with the research

The part I played as the researcher is central to the current research and I feel that it is important to contextualize this with regards to my professional responsibilities and motivations that are strongly linked to the area of enquiry. I agree with Greenbank (2003) that although value-neutrality is an unachievable ideal, nevertheless I should make a fair effort of at least

attempting to be value-neutral by implementing a grounded approach and using rigorous methods such as triangulation. In fact, in chapter 3, I drew upon eight key points for evaluating the quality of my qualitative research as proposed by Tracy (2010) and how my research respects these indicators for quality research. Further to this, in my concluding chapter, I reflect on the strengths and limitations of my research. However, Greenbank (2003) also argues that what is significant is that the researchers adopt a reflexive approach that is clearly pronounced in their writing rather than attempting to be value-neutral. Hence, I clearly identified the reflexive and interpretative nature of the IPA methodology adopted in the methodological chapter and discussed any drawbacks with the approach used in the concluding chapter. In fact, the interpretative nature of the methodological framework adopted allowed me to be reflexive throughout my thesis particularly in the next section of this chapter, interpretative analysis of data, discussion and conclusion.

When I chose what research area to work on and the research methods to adopt, I was certainly motivated by my core ontological and epistemological positions. I will be adopting Sikes (2004) definitions of these terms. Firstly, that ontology deals with the basics of things. Thus, ontological norms about social reality will replicate whether a person regards social reality as external and independent or as socially constructed, personally experienced and the result of human thought as transferred through language. Secondly, that epistemology is the theory of knowledge. Thus, epistemology norms deal with the nature of knowledge, what institutes knowledge and what it is viable to know and understand and re-present. The aim of my research was to produce knowledge concerning the subjective experience of the research participants. Using an interpretative phenomenological approach, I sought to comprehend the sense of an account of experience by stepping outside of the account and reflecting upon its wider meaning (Willig, 2013). Also, as Larkin et al. (2008) state, my objective was to:

Position the initial “description” in relation to a wider social, cultural and perhaps even theoretical, context. This second-order account aims to provide a critical and conceptual commentary upon the participants’ personal “sense-making” activities. (p.104)

Thus, as an interpretative phenomenologist, I do believe that the description of the experience involved a certain amount of interpretation. In choosing an IPA approach I did bind myself to exploring, describing, interpreting, and positioning how my participants make sense of their experience. Hence, my own values are very evident across my research. According to Greenbank (2003), I need to adjust for such values in my research since I cannot be value-free in their application. Thus, as suggested by Williams (2000) including a biographical note and making a statement about my underlying values can be a useful practice to demonstrate reflexivity. Even though this may not result in eradicating or diminishing the weight of values (Walsh, 1999), it facilitates those engaging with my research to consider the values that are influencing my work and my interpretation of events (Gummesson, 1991). Thus, it is very important to point out that at the start of this research journey I was a Mathematics teacher, teaching the subject daily to students in a mainstream setting. Hence, students’ voices on their educational journey in Mathematics were analysed and interpreted through the lenses of a Mathematics teacher. Students in my classes were mixed in ability and some had individual educational needs (IEN), such as SEBD. During my teaching years, I always believed that as a teacher I was duty bound to offer all students a meaningful and engaging learning experience. Hence, I believe that the occurrence of certain disruptive behaviours can be reduced if the teaching in class is of a good quality. In fact, during my Master of Education, I engaged in research to explore how a change in pedagogy to one that was more hands on, such as Inquiry Based Learning (IBL), could influence the learning experience of students with SEBD (see Camenzuli & Buhagiar, 2013; Camenzuli, 2012). This further stimulated in me an interest to engage in further research into what students exhibiting with SEBD think about their educational experience in the subject and what could help them have a better educational experience. I was motivated to carry out this research by my passion to explore what students

exhibiting with SEBD think about their educational experience in Mathematics, and how I as a teacher can make their experience more meaningful. In this research, rather than exploring the effects of a strategy (a change in pedagogy) on the learning experience of students, I took a step backwards. I asked a simple question: What do students think about their learning of Mathematics? By answering this question, I will move onto giving suggestions on what could help students have a more meaningful learning experience in the subject.

Today whilst finalising this study, I am an Education Officer in Inclusive Education. My main duty and responsibility within the Ministry of Education and Employment is to monitor and support the inclusion of students, including those exhibiting SEBD, in the Maltese educational system. This role has made me even more aware of the difficulties one faces in the inclusion of these students in our system and the tensions they can cause at school management level. However, I still believe that with appropriate support to the teacher and by making the educational experience on offer more meaningful, these students can also have a noteworthy learning experience. I believe that students, by exhibiting deviant behaviours, are rejecting the educational experience on offer. Hence, as an educator working in the field of inclusion, I have a responsibility to support other educators to make schools more accessible to students who present with SEBD.

It is also fair to point out, with regards to my personal life, that my interest in the field of SEBD stems from the fact that two of my nephews have been diagnosed with SEBD. This kindled in me the need to research such a phenomenon and grasp a better understanding of the subject.

I also regard myself as a 'reflective practitioner' (see Zeichner & Liston, 1996), continually reflecting in and on-action (see Schön, 1983) to continually develop and learn from my own experiences. Thus, my daily reality led me to research this area and discover methods by which I, as an educator, can offer all students, particularly those exhibiting with SEBD with a more meaningful learning experience.

1.2 *My truth*: a reflection

I am aware that my interpretation of events has been influenced by the fact that I was a teacher whilst doing the research and analysing the data. Hence, I read my data from a teacher's perspective. However, I am also aware that my view is not the only view. It is not to be privileged over other truths other readers might have. It is not the truth, it is my interpretation of the data. Henceforth, it is *my truth* and not *the truth*.

My current work as an Education Officer did not facilitate my engagement with my research data. In fact, adopting a realist rather than a constructivist stance was a struggle. My job is to visit various classrooms and provide educators with strategies to support them in their daily practice. I am expected to be quite dogmatic in my approach as educators expect that I provide them with a clear way forward and to be clear on what is right and what is wrong. Thus, this has created some tensions for me in the writing of this thesis. I am aware that sometimes my language has a more definitive tone to it. My interpretation of the data has been influenced by my own culture and beliefs, my lived experience, my interest of SEBD, my past as a Mathematics teacher, and my current work practices. I know the school environment well, I know what happens in class and have formulated my own beliefs of what should happen. This can be helpful to understand certain situations as described by the students participating in the research, but can also be unhelpful. This is because, knowing the educational context so well, made it hard for me not to be judgemental. I paid attention not to slip to a judgmental tone during the writing of my thesis, but this was a difficult task. I could not transcend from my own positionality. I expect to see certain things in class and I have a sense whether certain practices in class are appropriate or not. For instance, it would have been easier for me to observe a surgeon doing surgery in an operating theatre. I would have been more descriptive rather than constructive, because I do not know the medical field. It would have been easier for me to be less judgemental, since it would have felt inappropriate for me, having no expertise

in the medical field, to judge a professional who has a specialisation in the field. However, it was hard not to be judgemental whilst discussing instances that I am well familiar with. Nevertheless, I am aware of this and I am also aware that it did shape my interpretation of data and it was impossible to eliminate. Nonetheless, through reflection and the use of reflective boxes I tried to diminish this as much as possible. Even though this may not have resulted in eliminating or reducing the values loaded in my research, it will make it easier for those reading the research to be aware of the values that are influencing my work and my interpretation of events.

Chapter 2: Literature Review

Chapter 2: Literature Review

2.0 Introduction

It would be interesting to find out what students who exhibiting SEBD think about their learning experience in Mathematics. Also, in doing so, it would be beneficial to find out what educational strategies and interventions could help in offering students who present with SEBD with a more meaningful learning experience. Educators and researchers have very often tried to answer these questions in various ways, often focusing on inputs by adults. However, a more effective way to finding the truth about student learning is by giving them a voice and examining their discourse (Hoffman, 2009). As Gentilucci (2004) discerns:

Students are powerful determiners of the learning that occurs in their classrooms. Understanding why they learn well or poorly is predicated upon clearly understanding their perspectives on learning. (p. 133)

Using an Interpretative Phenomenological Analysis (IPA) methodological framework, this research aims at giving a voice to students exhibiting with SEBD with regards to their learning experience in Mathematics to explore such an experience. Thus, the study will attempt to listen to students' voices to understand how students learn best. According to Hoffman (2009) this is the best method of understanding how students learn in the most effective way.

Various studies show contrasting views by teachers and students with regards to their learning experience (Spera & Wentzel 2003; Wood, 2003; Garner, 1995). This statement is correct for all students, but is especially true with regards to students exhibiting with SEBD. This is because these students are more inclined to be in a struggle with the school's disciplinary system (Cefai & Cooper, 2010; Furlong et al., 2005). This difference in viewpoints highlights

the need to warrant these students with a voice (Gergen, 2001). What students presenting with SEBD think about their learning experience is valid and meaningful. This is because it provides an adequate and better construction of the situation as opposed to when students' voices are unheard, hence leading to a resolution of difficulties (Cefai & Cooper, 2010). Listening to what these students have to say is crucial to finding a way forward in supporting students presenting with SEBD (Davies & Ryan, 2014). Despite this, Davies and Ryan (2014, p.359) state that there are difficulties to developing a 'listening culture' for students presenting with SEBD in school. Furthermore, Michael and Fredrickson (2013) state that research evidences that even though there is an upward tendency in employing students' voices in educational research, the voices of young individuals presenting with SEBD are amongst the least heard. This is even though they can give a very valid contribution to what makes the curriculum meaningful and what constitutes of a good learning environment. The fact that traditionally children have been side-lined and disempowered might explain this lack of involvement (Hoffman, 2009). Very interestingly, Eder and Fingerson (2003) explain that the reason why students are disadvantaged and disempowered is because of their position in society as being "researched and never the researchers" (p. 34).

Nevertheless, during the early part of the 21st century, a more active engagement with student voice by teachers and professionals has been evident (Davies and Ryan, 2014). In fact, various studies have focused and reported the student voice. Davies and Ryan (2014) demonstrate that students who have exhibited behavioural challenges, often recall positive aspects of their educational experience. School and classroom size are mentioned by students presenting with SEBD, claiming that impersonal school environments are crucial factors leading to challenging, truanting and antisocial behaviour (Wise, 2005; Jahnukainen, 2001). Further supporting this argument, students' comments in Davies and Ryan's (2014) study shows that smaller, personalised educational provision appear to be beneficial to students presenting with SEBD. With regards to Curriculum, research shows that there is a connection between behaviour difficulties and failure to engage with the academic work (Epstein, Kinder & Burnsuck, 1989). Also, inappropriate curriculum can worsen

behavioural challenges (Hamill & Boyd, 2002; Porter, 2000; Fogell & Long, 1997). Some students do not misbehave because they dislike school, but because they do not like lessons and the way they are taught (Davies & Ryan, 2014). Leren (2006) states that learners today are more aware of their preferred learning style and consulting with them about their learning is important. The importance of offering a relevant curriculum to students is highlighted by Kauffman (1997). Furthermore, Kauffman (1997) shows that students adopt unacceptable behaviours to combat boredom and avoid stigma associated with limited academic success. With regards to teachers, the importance of teachers listening to them and understanding them as individuals is vital (Davies & Ryan, 2014). Middleton and Petitt (2010) and Davies and Ryan (2014) identify various characteristics that students value in their teachers. These are that of knowing them personally, dedicating time beyond class time to help them be successful and help them understand, energetic and enthusiastic, supportive, kind, polite, peaceful, patient and enjoy their job. Also, students interviewed by Wise (1999) mention teachers and teaching style as a huge factor influencing their learning experience. The relationship between the teacher and the student is very important for some students and can be the main barrier to teaching and learning (Turner, 2000). Relationships between teachers and students cannot be underestimated and this has been for long recognised as very important (Cole & Knowles, 2011; Rogers, 2005; Visser, Cole & Daniels, 2002; Laslett, 1977).

The importance of empowering students to have a say on their educational experience is highlighted by Whitty and Wisby (2007) that state that schools must attempt to include the voices of all their students, including those with behavioural difficulties. Unfortunately, the voice of students who present with SEBD in many schools often remains unheard and these students remain the less empowered and listened to at school (Lewis & Burman, 2008; Cooper, 2006; Baker, 2005). Galton et al. (2012) has attributed this to the fact that teachers find it difficult to give further attention and time to students who disrupt them most. This study will attempt to give the opportunity to some of these students to reflect on their learning experience in Mathematics. With this regard, Cooper (1996) and Michael and Fredrickson (2013) argue that

students should be viewed as a font of knowledge and expertise. This is because they are in the best position to comment about their learning experience. Moreover, Leitch and Mitchell (2007) argue that students can give good feedback on their own learning process and how these could be enhanced to offer them with a better educational experience.

In fact, one of the key features of critical teacher research is that of studying students so they can be understood and be taught better (Kincheloe et al., 2011). In this sense, Freire argues that teachers discover themes from the developing knowledge of students and their socio-cultural backgrounds (Mayo, 2009). Given that teachers start to understand the ways students perceive themselves and their interaction with other people, this helps them to understand how students make sense of schooling and their lived worlds. Hence, the teachers can better know what and how students make meaning. This enables teachers and policy makers to develop pedagogies that involve the students' thoughts in ways that move them to learn what they do not know and to recognise what they want to know (A, Freire, 2000).

Thus, based on research findings that will seek to offer a better understanding of the students' learning experience of Mathematics, I will also aim at suggesting educational strategies and interventions that could offer a more engaging learning experience for students exhibiting with SEBD. In turn this will lead me to make suggestions on how policy can be changed or consolidated to benefit these students' engagement with the learning experience in Mathematics. If professionals listen to the views of all students, the chances are that legislation drafted will be more effective towards achieving greater social and educational inclusion for alienated students.

2.1 Defining SEBD

All classroom students are inclined to being disruptive or inattentive during lessons (Finn et al., 1995). Furthermore, these behaviours have an adverse effect on the students' learning experience (Seidman, 2005; Finn et al., 2003). Disruptive behaviour involves all the classroom, since it hinders the teachers and wastes lesson time. Students' disruptive behaviour is the major reason behind teachers' difficulty in educating students who present with SEBD (De Leeuw & De Boer, 2016). In fact, reports by The Office for Standards in Education, Children's Services and Skills state that an hour of teaching every day is wasted to bad behaviour (OFSTED, 2014). Moreover, inappropriate student behaviour can be frustrating and stressful to both the teacher and students in class (OFSTED, 2005). Dealing with difficult or 'challenging' behaviour in class can be a constant challenge for teachers (Montgomery, 2010). A worldwide study that was carried in twenty-three countries, reported that misbehaviour in school was one of the main factors that impedes teachers' success in class. The study concluded that on average thirteen percent of teacher time is spent on keeping order and correcting misbehaviour in the classroom (Organisation for Economic Co-operation and Development [OECD], 2009). Moreover, teachers or the school system perceive some students as going a step further from what is expected as 'normal' acts of misbehaviour. Very often these students are 'labelled' as SEBD. But what is understood by SEBD? What definition will this study give to students exhibiting SEBD?

There exists a tension in the literature in relation to the theory and practice of using the term SEBD. Indeed, Hamill and Boyd (2002, p.20) argue that due to the 'complexity and diversity' of SEBD, it is very difficult to define it. Mowat (2007) states that there is a lack of agreement in literature to what composes SEBD, and it is commonly argued that there is no need to define it (Head, 2005; Thomas, 2005; SEED, 2001; Hamill & Boyd, 2002). Mowat (2010) claims that the difference in the definition of SEBD is not only due to the unavoidable variation in perspective, but also due to the multifaceted nature of the difficult.

Macleod and Munn (2004), drawing upon literature, reason that *having* SEBD is mostly subjective and that it is “a socially constructed label which fulfils a social function” (p.171). Adding to the subjective nature of SEBD is the struggle experienced by teachers to differentiate between *naughtiness* and a student’s difficulty in *behaving properly* (Wilkin et al., 2006). Moreover, Macleod (2010, p.97) states that the use of the term SEBD “is fraught with difficulties” because its subjective nature makes it too ambiguous to have any real classification and overlays other labels. For instance, describing a student *as presenting with SEBD* does not give a clear suggestion of how the student might behave or what triggers such behaviour. In fact, O’Brien (2005) claims that SEBD is a generalist umbrella term including young people who exhibit both externalising and internalising behaviours; including those behaviours described as challenging and those young people who are described as at risk.

Macleod (2010) and Lloyd (2003) also maintain that the different related terms and the ever-increasing numbers of related medical syndromes and conditions being identified with the term is another factor creating this lack of common consensus and vagueness of SEBD. Such labels are the following, all of which have a degree of intersection with SEBD: *disaffected, disengaged, disruptive, delinquent, challenging, troubled and troubling* and disorders including ADHD, Oppositional Defiant (ODD) and Conduct Disorder (CD). However, Cooper (1996) claims that even though the process of identifying a student as exhibiting SEBD might be subjective, it is not random and most definitions of SEBD consider individual, family, social, environmental and the broader structural factors such as schools. Hence, SEBD is not constant in nature, but can manifest itself in various forms according to the environment (Mowat, 2008; Macleod & Munn, 2004). Indeed, some educators suggest that SEBD is a social construct created by schools and their discourse (see Graham, 2006). In contrast, Araujo (2005) states that behavioural problems appear at home and are carried to school. Thus, Araujo (2005) argues that the role of the school is to find strategies/interventions in supporting and dealing with students who present with SEBD. Moreover, Macleod (2004) argues that despite the overlapping and often contrasting definitions of SEBD, three categories of labels can be classifiable. First, describing a student as disruptive

or withdrawn can be an individual judgement. Second, for a student to be described as presenting with SEBD, we would expect more than one person to have expressed concern and some form of formal assessment to have been conducted. However, there exists no standard test of SEBD and the methods of assessment will be different in nature. Third, there are labels that signify a *disorder*, related to a medical condition that has a set of diagnostic criteria and recognised analytic tests. It is the second group described by Macleod (2004) that is of interest to me.

Despite the contrasting definitions of SEBD, this is a term that is used very often in schools in Malta to relate to students who are exhibiting behaviours that are of concern to the educators at school. In fact, Armstrong (2014) refers to Social, Emotional Behavioural Difficulties as the behaviour of children and young people that causes adults concern. As my working definition of SEBD, I will be embracing Cefai's (2010) description of SEBD. This definition describes the occurrence SEBD in young children as behaviours and expressions of emotion "that are experienced by adults and students as disruptive and/or disturbing, and which interfere with the students' learning, social functioning and development and/or that of their peers" (p. 117). The process of how the students presenting with SEBD were selected to take part in this study will be clearly described in the methodology section (see section 3.3.2).

2.1.1 SEBD and Foucault

Thomson (2010) argues that very often it is assumed that the students who are exhibiting challenging behaviour are fragile and the ones who are doing wrong. They are attributed with the word 'need', and are regarded to need support and understanding by the system. The needs of who are being referred to here?

Foucault (1991) argues that society's response to wrongdoing has changed over time. Distressingly painful approaches of dealing with misconduct have

been replaced by 'nicer' strategies of regulation. Foucault (1991) in his book *Discipline and Punish* starts off with an example of how, Damiens, has his limb cut from his body as punishment in pre-revolution France. This contrasts heavily with the types of punishments that have come to succeed it and are in place today, that are deemed to have "more respect, more humanity" (Foucault, 1991, p.16). However, Foucault (1991) heavily criticises these forms of punishment since they are more insidious. Thomas (2010) argues that these new techniques rely on the concepts of knowledge of the new social sciences, built on various forms of understanding of the person doing wrong. This is not bad; however, the problem is that these techniques are dependent on experimental, imperfect theories that were treated as though they were scientifically proven. Hence, in short, what has occurred over time, according to Foucault's analysis, is that a shift from simple judgement and punishment of someone's condemned act to a many-sided and groundless judgment about his or her *soul*.

I believe that SEBD is an excellent example of this change from punishment to judgement and 'help' to meet the 'need' of the students. A transition between naughty-therefore-impose punishments, to disturbed-therefore-meet-needs by supporting (Thomas, 2010). A new epistemology has emerged within schools where if students misbehave, rather than questioning the school's system of operation, educators are encouraged to examine the students' background and motivations. Therefore, allowing the school to evade serious consideration of its own practices and procedures in place.

Hence, Thomas (2010) argues that we must recognise the possibility that the roots of misbehaviour lies less in the student's emotions or their *disadvantage* and lies more in the character of the school which we ask them to attend for lengthy periods of their existence. This theme moves us on to the next section. Are our schools truly inclusive with regards to students exhibiting with SEBD or is the 'problem' being shifted onto the students by 'labelling' them as SEBD?

2.1.2 Students with SEBD – The biggest threat to inclusion?

I will start my argument by comparing the educational response between students exhibiting with SEBD and students identified with a cognitive impairment such as dyslexia. Jull (2008) argues that the latter are most likely to get a systematic analysis of their curricular and pedagogical needs, resulting in a modified and individual educational programme (IEP). However, students exhibiting with SEBD, who exhibit behavioural problems, risks being excluded from schooling for purely displaying the behaviours that outline their individual educational needs (IEN). Related to this, Mowat (2010) states that there exists a common consensus amongst literature that teachers are in favour of inclusion. Inclusion is regarded as beneficial to the whole school system promoting diversity and understanding at school and beyond. Also, through the practice of inclusion, teachers enhance their professionalism and they become more reflexive to the benefit of all students. However, with regards to the inclusion of students presenting with SEBD several reservations are expressed that are grounded on various elements. These elements include: the additional burdens placed upon the classroom teacher (Horne and Timmons, 2007), the quality of support and role of the classroom assistants (OFSTED, 2006), awareness and the skill of the teacher to deal with students exhibiting with SEBD (Pirrie et al., 2006), the challenges encountered for different agencies to work together (Lloyd et al., 2001).

Thus, it comes as no surprise that Jull (2008) states that disruptive behaviours in class present the school with an exceptional challenge. SEBD among students embodies a distinctive difficulty within the educational domain. It is the only educational difficulty that is linked with a similar level of anxiety, anger, frustration, guilt and blame (Cooper, 2006). Students classified as exhibiting SEBD are at a bigger threat of disruptive and disorderly behaviours such as defiance, over activity, aggression and bullying (Cooper and Cefai, 2013). This problematic is leading students presenting with SEBD to risk exclusion from the education system (Jull, 2008). De Leeuw and De Boer (2016) in their study

to explore the approaches teachers use in their daily practice for improving or promoting the social participation of students exhibiting with SEBD in the mainstream classroom concluded that there is the need for better practices in promoting the social participation of students who present with SEBD in inclusive classes. In fact, students who present with SEBD are particularly likely to experience difficulties in their social participation in the regular classroom (Schwab et al., 2015; Falkmer et al., 2012). Also, Students with SEBD have less friendships (Avramidis, 2013), experience more loneliness (Bossaert et al., 2012) and are less accepted when compared to their typically developing peers (Schwab et al., 2015). Also, it seems that students recognised as exhibiting with SEBD are at a high risk of being bullied. Also, they are likely to experience an increase of social, emotional and behavioural difficulties when they are involved in bullying as victims, perpetrators, or both (Hajdukova et al., 2016). Students are unlikely to make direct appeals for help themselves, but often the 'deviant' behaviour is a sign of distress (Jones, 2010).

The disruptive nature of SEBD interrupts academic achievement, hinders social interaction and undermines positive, safe school environments not only for the student exhibiting the behaviour, but also for those around him. This is different from observable behaviours of other special educational needs such as difficulties related to Specific Learning Difficulties (SpLD). Dyson et al. (2004), sums this up by sharing the following views of a class teacher on the subject:

The biggest threat to the inclusion agenda has always in my view been children with EBD. They consume a disproportionate amount of time and effort in all areas of the school. (p. 82)

Warnock (2005) argues that inclusion is about meeting the child's learning needs at the place he attends to be educated. She adds that inclusion is often not critiqued since it has a 'feel good' factor about it, however she argues that the needs of some children are not being met. For instance, Fullan (2003) argues that secondary schools are unvarying institutions where the

management of change is slow and complex, thus very often the needs of students are not adequately met. Allan and Brown (2011) argue that for true inclusion for all students to take place in mainstream schooling, this must be accompanied by radical changes in the system.

Moreover, Rose (2003), highlights the needs to bridge the gap between philosophies promoting an equitable society and problems that hinder inclusion. Furthermore, Winzer (2005) states that the gap between reality and rhetoric is often enormous. Even though oppositional behaviour very often provides crucial information regarding the students' educational experience these often go unnoticed (Maag, 2004). For instance, drawing upon my previous example by Jull (2008), if a student identified with dyslexia experiences a tantrum, because of frustration or refusal of the educational programme drawn for him/her, the student will get re-assessment and a redesign of the IEP. However, a student with SEBD will most probably be exposed to the risk of exclusion (Van Acker & Talbott, 1999).

2.2 Students presenting with SEBD: My perspective

It has been discussed that labelling a student as having SEBD can carry with it various difficulties and in some cases, complicate the students' life at school further. Thus, I might problematize the whole concept of SEBD and I might regard SEBD as an assumption and as something that does not exist. Nevertheless, having been a teacher myself this approach would be like burying one's head in the sand. SEBD is a concept that is used daily in an educational context by various educators and for this study I will be using the term as described in section 2.1 and clearly describing how the students chosen to take part in this study were selected in the methodology section (see section 3.3.2). I will be adopting a constructivist perspective that considers behavioural problems as a result of interaction of the student with the school environment. Hence, moving away from the inflexible, categorizing definition of behaviour to a 'biopsychosocial' perspective of SEBD (see Cooper, 2010; Olsen & Cooper, 2004; Norwich, 1990). This is because I believe that all the

possible scenarios of SEBD, not just the biological aspects, need to be taken into consideration (see Cooper, 2005).

2.2.1 Biological-based theoretical frameworks

Maslow (1970) argues that all humans have a set of biological 'needs'. These needs are presented in a hierarchal model (see figure 1), stating that the lower level needs (such as the need for clean air, food, and warmth) must be met before needs further up the hierarchy (such as the need to put one's talent to good use in the world and achieve success). The lower levels of Maslow's (1970) hierarchy of needs (physiological and safety) deal with survival and only when these are addressed can the individual start to interact with others (affiliation, belongingness and love). Once individuals can interact with others and build relationships, then individuals can start to enhance their image by behaving by means that boost social approval (self-esteem). Milheim (2012) describes this level as the need for individuals to be valued and esteemed by others. Only once self-esteem is established can the individual become pro-social in an independent way (self-actualisation). According to Medcalf et al. (2013), Maslow thought that the single reason for people not to reach the stage of self-actualisation is because of limitations posed by society.

The implication of this model for children and young people labelled with SEBD is that if needs of a level are not met, the individual will not reach the levels above it. For instance, an individual may not be able to engage in pro-social behaviours with the persons around him until security issues are met. Also, DeLuccia-Reinstein (2011) claim that the environment encountered by students in their everyday life has an impact on their behaviour and attitude. Environments can have a positive or a negative impact on student's observable behaviour. The opportunities students have to see themselves as proficient and having some control to impact in the world they live in will influence their ability to dream of the future. The connection between competence and values is important for self-esteem. If a student feels able and

confident, the higher they can reach towards self-actualisation on Maslow's hierarchy.

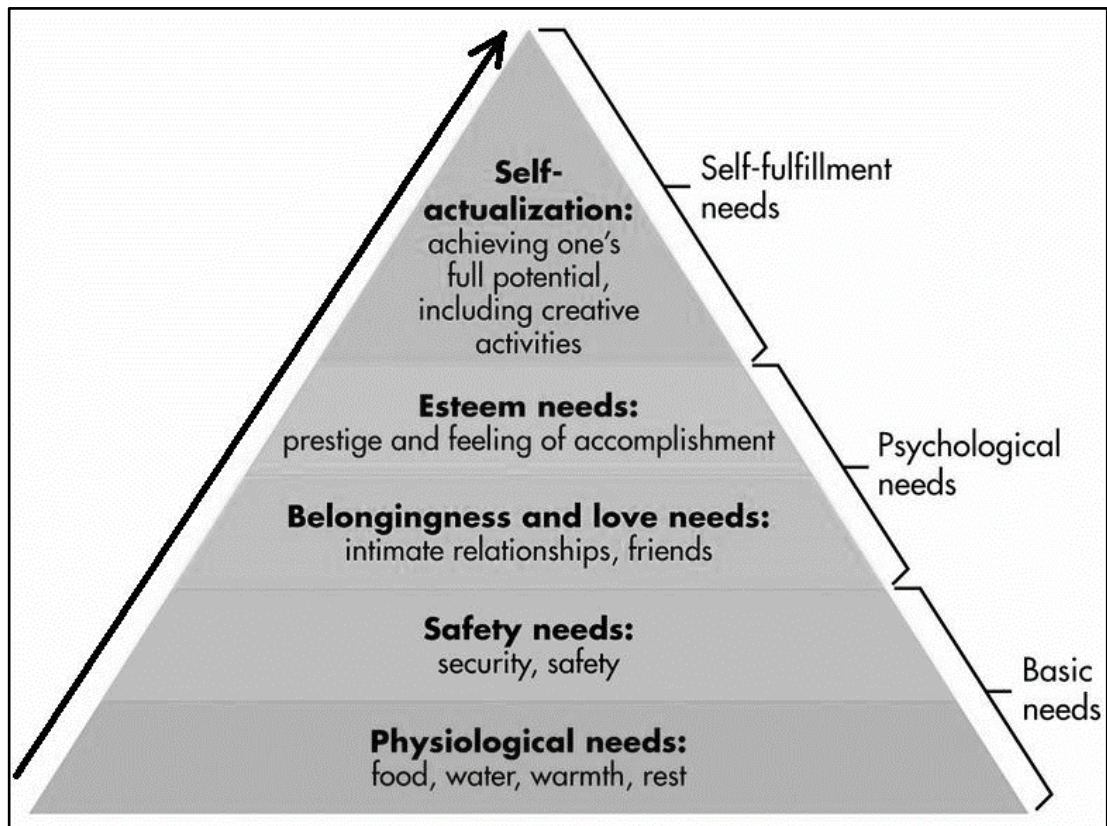


Figure 1.1: Illustration of Maslow's Hierarchy of needs.

Similarly, we have other biological models such as Pringle's (1975) typology of children's needs and Glasser's (1993) 'control theory'. For this study I will not go into the detail of each of the different biological models, but will assert a common implication from them. That is for positive student engagement to take place at school, the school and teachers need to understand and cater for these 'needs'. Cooper (2005) argues that a mutual component in all the three biological frameworks is the human paradox that for independent and pro-social behaviours to take place, needs related to insecurity and dependency need to have been effectively met, that is the young person needs to have had an experience of feeling secure and able to depend on others to meet his/her psychosocial needs. Consequently, according to Cooper's (2005) view, SEBD can often be located as a result of unmet security needs. Thus, the challenging behaviour associated with SEBD can be viewed as a cry for help as a result of unmet emotional needs. Hence, conversely, it follows that

when the basic needs are met, the individual is in a better position to behave in a more acceptable manner.

2.2.2 Interactional models: Biology and the environment

Two main biological factors can influence in the development of SEBD (see Cooper, 2010). The first set deals with pathology and individual differences, often of a neurological and genetic nature. The second set deals with humans needs. In this section I will discuss how these various factors can interact with the environment.

The term *biopsychosocial* is used to describe how biological factors, psychological factors and socio-cultural factors interacts and influence one another (see Cooper, 2010; Olsen & Cooper, 2004; Norwich, 1990). Deriving from this standpoint, biological variances (which can also be genetic) take the form of risk factors that when interacting with a set of environmental circumstances, trigger certain manifestation of challenging behaviours. In the absence of the necessary environmental conditions, the challenging behaviour does not appear or is minimised drastically. This model can be used to explain a wide range of SEBDs, including internalised behaviours such as anxiety, depression and conduct disorder.

For instance, Timmi and Taylor (2004) argue that even though immaturity is biological, the way it interacts with society is cultural. Thus, the way in which the biological element in an individual influences his/her behaviour is often directly related to environmental experiences (Cooper, 2005). Challenging behaviours can be interpreted as *adaptive* and *survival skills* for the students to cope “with the school as a social institution” (Ogden, 2001, p.77). Maag (2004) argues that students who either refuse or are incapable of modifying their behaviour to fit the school system tend to be labelled as SEBD. In the Western world many factors have had an adverse effect on the mental health of children. These include the loss of extended family and a busy family life. What is regarded as ‘deviant’ in class may not be regarded as so in a different

context outside of the classroom. One must also take into consideration that in some cultural contexts, such behaviours are needed for the students' survival outside of the school building. For example, in certain contexts, such as a dangerous neighbourhood, a child might develop a hyper vigilant behaviour. This behaviour is a response to his/her reality, since it is required for his/her existence in a context. However, this might cause problems at school.

Hence, for these students it is important to ensure the setting within the classroom minimise their inclination towards problematic behaviours. This can be done by changes to the curriculum and pedagogy (see Camenzuli & Buhagiar, 2014; Camenzuli, 2012). Such changes can feature alterations in the school environmental structures (physical and social) and engaging the students with a meaningful teaching and learning opportunities. Moreover, adequate intervention and prevention is required when supporting students presenting with SEBD. This model highlights the fact that with a stimulating educational environment, all students, including those exhibiting with SEBD can have a more engaging learning experience. Hence, my interest in the research being proposed stems from the fact that I believe that with a better understanding, the learning experience of all students including those students perceived as having SEBD can be enhanced. Thus, certain behaviours can be better understood and a proper response given to the student for him/her to have a better learning experience.

2.3 Schooling, Policy and SEBD in Malta

2.3.1 An Overview

The local educational system is modelled on the UK one (Grima & Farrugia, 2006). It spreads over five levels (i.e., pre-primary, primary [Year 1 to Year 6], secondary [Year 7 to Year 11], post-secondary and tertiary) and three sectors (i.e., State, Church and Private). Schooling is compulsory in Malta from the age of 5 to 16 and education tends to be offered in mixed gender classes for

all State schools and Private schools. Most of Church schools are gender segregated at primary and secondary levels. The European Agency for Special Needs and Inclusive Education [EASNIE] (2014) who conducted an external audit of special needs and inclusive education stated that overall the education system in Malta is highly structured characterised by selection, competition and banding/streaming. Some of the features used to describe the local educational scenario were traditional teaching methods, strict discipline and high stakes examinations. Hence, EASNIE (2014) concluded that many stakeholders still think that homogeneous groups provide the best learning setup.

Although pre-primary is not compulsory, 95.5% of 4-year-olds attend kindergarten classes which is 9% higher than the European average (Ministry of Education, Culture, Youth and Sports, 2009). Moreover, the number of Maltese students who continue studying beyond compulsory education is continually increasing. There has been in fact a decrease in the number of early school leavers from 39.2% in 2005 (National Statistics Office [NSO], 2009) to 19.6% in 2017 (Schraad-Tischler et al., 2017) with a commitment to reduce this figure to 10% by 2020 (Ministry for Education and Employment [MEDE], 2014a).

2.3.2 The Church School Sector

The Secretariat for Catholic Education, within the Archbishop's Curia, is responsible for Church schools in Malta. In 1991 the Vatican and the Maltese government signed a new agreement that governs Church schools in Malta (see <http://thechurchinmalta.org/files/2009/09/agreement-on-church-schools.pdf>). This settlement stipulates that Church schools offer free education, even though they can still ask for donations from parents, in exchange for government funding to cover teachers' wages.

In 2013, the Church sector accounted for 28.4% of students attending primary and secondary schools (NSO, 2015). In line with the reform in the state sector

to smoothen the transition from primary to secondary schooling by removing selective examinations at the end of primary school (see Grima et al., 2008), the Secretariat for Catholic Education decided to remove the highly competitive Common Entrance Examination into its secondary schools. This guarantees that students enter Church schools, at both primary and secondary levels, through a ballot system that leads to a mixed-ability student population throughout. The transition from primary to secondary schooling in the Church sector is often smooth, as most of the Church educational institutions have schools that cover both the primary and secondary levels of education.

2.3.3. The National Curriculum Framework and its implication for students with SEBD

The Education Act (Act XXIV of 1988) – the law that regulates education in Malta – introduced several new ideas including “the right of the state to establish a National Minimum Curriculum of studies of all schools” (Part 1, section 7). The latest National Curricular document is *A National Curriculum Framework for All* (MEDE, 2012, p.xii), which was founded on an overarching principle of “giving children and young people an appropriate entitlement of learning that enables them to accomplish their full potential as individual persons and as citizens of a small State within the European Union” sets out to:

- Enable young people to work towards the attainment of a formal qualification in key abilities as the basis for lifelong learning;
- Provide more flexible and diverse pathways for all students increasing engagement in education;
- Address the gaps in the education system that have led to absenteeism, high rates of early school leavers and low skills and competences for a sector of students, and
- Develop a Learning Outcomes Framework that are different from stand-alone subjects to learning areas that form the entitlement for all students towards inclusivity, citizenship and employability.

It also has important implications on the educational journey in schools for students exhibiting with SEBD. For instance, the document states that all students need to be supported to develop their full potential given that every student has a right to a quality education. It also acknowledges student diversity and the diverse needs of different students. With regards, to learning it emphasises that this should be relevant, meaningful and engaging for the students.

Lately, a new Framework for Education Strategy for Malta 2014-2024 (MEDE, 2014b, p.3) was introduced, dealing with all cycles of education in Malta from early years to adult education. This framework has four aims that are in line with European targets (see *Education and Training 2020*):

- “to reduce the gaps in educational outcomes between boys and girls and among attending different schools; decrease the number of low achievers and raise the bar in literacy, numeracy, and science and technology competence; and increase student achievements”;
- “to support educational achievement of children at risk of poverty and from low socio-economic backgrounds; and reduce relatively high incidence of early school-leavers”;
- “to increase participation in lifelong learning and adult learning”; and
- “to raise levels of student attainment and retention in further, vocational and tertiary education and training.”

2.3.4 SEBD in Malta

With only 0.1% of the school population attending special schools in Malta, one can say that almost all Maltese students attend mainstream schools and Malta has one of the highest proportions of students with special educational needs attending mainstream education amongst the EU Member States (EASNIE, 2014). Moreover, only 0.2 % of the 10 percent of local students presenting with SEBD attend in special schools (Cefai et al., 2008). Most

recent statistics show that from a total school population in Malta of 45,808 (NSO, 2016) only 50 students attend specialised SEBD schools (0.1% of the school population). Thus, since most students exhibiting behavioural problems attend mainstream education, the success and effectiveness of inclusive education relies heavily on the education of students exhibiting with SEBD in mainstream. This is so because the challenging behaviour, apart from disrupting the teaching and learning process, could also present with possible threats to others in the classroom (Cefai & Cooper, 2011).

Verbal abuse, intimidation, classroom disturbance and vandalism are major concerns for Maltese teachers. In fact, they claim that 14% of their time is being committed to keeping order in the classroom (The Organisation for Economic Co-operation and Development [OECD], 2009). Moreover, these classroom teachers often claim to favour teaching students with other forms of disability or difficulty, such as physical or intellectual disabilities, rather than students presenting with SEBD (see Tanti Rigos, 2009). In fact, Jull (2008) claims that SEBD is the only SEN category in which identification with the category can create more problems for the child than good. For instance, Reinke and Herman (2002) claim that often teachers use harsher disciplinary action with students identified as being disruptive.

Various studies exist locally on students who exhibit with SEBD and their learning experience in schools. Reference will now be made to four studies carried out locally with school students who present with SEBD with the aim of exploring students' perspective on their educational experience. In these studies, the students linked their difficulty in academic achievement and behaviour to several school factors. In Massa's (2002) study, the students credited their weak educational attainment and negative misbehaviour to bad attitudes by teachers and peers, and to a system that failed to address their needs. Moreover, they also criticised the poor school environment, bullying by peers, and poor relationships with teachers. These students found it particularly difficult to relate with teachers who did not respect them and who did not understand them. In a related study with 20 students exhibiting with SEBD (see Bartolo & Tabone, 2002), students put the blame on unfair,

unsupportive and unresponsive teachers for their behaviour difficulties. In Magri (2009), ten girls exhibiting with SEBD in a mainstream secondary school were asked to discuss their educational journey and their perspective on the curriculum offered at school. Five themes emerged: a) The incomprehensible differences between primary and secondary schooling, b) Relationships: the exacerbation or alleviation of difficulties in accessing the curriculum, c) The curriculum: what is important, what is acceptable and what needs to be changed, d) The pros and cons of academic assessments e) Discipline and Good Behaviour Systems: what is fair and just, and what is an outright counterproductive provocation. Finally, Ho (2009), explored the perspectives and experiences of primary school students with challenging behaviour attending school in a socially and economically deprived area in Malta. The children's perspective is presented in this study to provide educators with the opportunity to simply listen. Paradoxically, this study claims that this cry for help often takes the opposite form and comes out as resentment, denial or withdrawal towards the educators who can give a helping hand. In these instances, the students push those around them to the limit of tolerance and patience; and Ho (2009) concludes that this might be because experience had taught them that everyone finally rejects them.

Moreover, several local studies have linked school absenteeism by students to school factors such as curriculum that is irrelevant to them and poor personal relationships with educators (see Cefai, 2006). For instance, Clark et al. (2005) report that students attribute their decision to stop going to school to uninteresting school activities, unconnected and irrelevant curriculum, and negative relationships with staff and peers.

2.4 A meaningful teaching and learning environment – A true inclusive scenario for students exhibiting with SEBD

Students' disengagement with the learning process can result in misbehaviour or skiving from school (Dunlap, 2006; White, 1982). Hence it is of key importance to adopt a pedagogy that is suitable for all the students in class (Davies & Ryan, 2014). However, rather than to develop appropriate pedagogical approaches there is an inclination to focus support to students presenting with SEBD on issues related to behaviour management. Hence, students exhibiting with SEBD have vast problems with literacy and numeracy (Farrell et al., 1999). Furthermore, there exists a relationship between behavioural and learning difficulties. Hence, students exhibiting with SEBD have significantly greater difficulties in learning than most of their peers (Mowat, 2010; Farrell et al., 1999). Thus, the basis of intervention for such students should have a focus on both the therapeutic and educational factors.

For students presenting with SEBD to profit from their educational experiences close attention needs to be given to how the teachers deliver the curriculum at school (Moody et al., 2000). Undeniably, the engrained policies, practices and provisions in the selected pedagogy either support or hinder the learning of these students (Visser, 2005). For example, technology can be used with students exhibiting with SEBD to give immediate and regular feedback/gratification. This is known to be beneficial when working with these students (Hughes & Cooper, 2007). Technology can also be used as a tool by the teacher to be flexible according to student's needs (see Camenzuli, 2015). Thus, technology can help the teacher set individualised learning tasks and carry out individualised teaching in the classroom. This can be beneficial for students presenting with SEBD who are known to engage more with a flexible academic programme (see Griffiths & Rees, 2007; Habel et al., 1999; Crowley, 1993).

Various pedagogical/educational strategies that are used by teachers to support students with behavioural difficulties are designed to exploit, rather

than prevent some of the characteristics that are associated with ADHD or any other form of SEBD (see Hughes & Cooper, 2007; DuPaul & Stoner, 2004; Purdie et al., 2002; Zentall, 1995). For instance, Cooper (2005) recommends that students with ADHD have a habit of preferring concrete learning experiences and active learning styles. These learning styles are most useful in circumstances where tasks are experiential in nature: where the learning emerges from doing. Another example of an educational strategy involves students writing answers to teachers' questions on cards and holding these up for inspection by the teacher (see Zentall, 1995). Such a strategy increases the active participation of students presenting with SEBD, hence decreasing the difficulties associated with waiting intervals between the completion of the tasks and the receiving of teacher feedback. These strategy, helps to improve both performance and behaviour of students exhibiting with SEBD (Hughes & Cooper, 2007). For example, the behaviour of students talking out of turn can be very annoying for teachers and disrupt learning (see The Office for Standards in Education [OFSTED], 2014). An increase in participation by students can reduce the occurrence of this problematic behaviour (Zentall, 1995).

Giving an active role to students exhibiting with SEBD is important during the lessons given they react well to an active style of learning. In fact, Munby (1995) argues that students who present with SEBD often experience disengagement when they are required to take a passive role in the learning process. Thus, active learning increases students' attention levels while doing tasks, thus decreasing disrupting and impulsive behaviours (Hughes & Cooper, 2007). It also inspires student activity which is a crucial feature of a constructivist approach on which inventive learning styles are grounded.

The learning environment generated in class is also very significant. Naude, Van Den Bergh & Kruger (2014) stated that students consider that a learning environment that stimulates good emotional experiences promote increased personal involvement in learning and widened thought processes and actions. The authors state that emotions play a central part in the learning process taking place in class. Ingleton (1999) states that emotions control the level of

involvement in learning since they control social relations, self-esteem and identity. Emotions have a great impact on the learning in class, in fact, Trigwell et al. (2012), found a meaningful relationship between positive emotions and engaging learning experiences and higher educational attainment. Positive emotions increase the student's thought-action repertoire. Interest and enjoyment can aid engagement in class activities, as well as deeper engagement of learning material. This wider approach enhances students' academic achievement (Fredrickson & Branigan, 2005; Fredrickson & Joiner, 2002; Fredrickson, 2001). Also, there is evidence of relationship between social and emotional well-being and academic learning (Côté-Lussier & Fitzpatrick, 2016; Durlak et al., 2011)

There are many skills and principles that need to be considered when working with children's emotions. Teachers are always working with emotions, and hence, the more aware they are on how emotions work, the better able they will be to create strategies that will help support students presenting with SEBD (Long & Fogell, 2007). When a teacher manages to uncover the underlying dominant sensation of the child, he will be able to use the appropriate language and develop an appropriate strategy to support the student.

2.5 The teaching of Mathematics

There is a belief that Mathematics is a collection of unrelated facts and rules that are right or wrong and boring (Noss & Hoyles, 1996) and that Mathematics education is about learning by heart and an execution of procedures that lead to a definite right answer (Schoenfeld, 1992). These beliefs have promoted a behaviourist approach to teaching and learning, with formal and abstract Mathematics remaining dominant in many countries (Ayinde, 2014; Maaß & Aritgue, 2013). Hence, the teacher is regarded as the main and sole actor with the purpose of transmitting knowledge. Methods of assessment often reinforce the idea that Mathematics is a set of rules and procedures (Hoyles, 2016). However, recently, reforms in Mathematics education have supported the notion that mathematical competence is not exclusively linked to procedures

and concepts that can be achieved with practice (Contreras, 2014). There are equally important components such as creativity and problem-solving (Bray & Tangney, 2017). Also, the importance of embedding Mathematics within meaningful context has also been recognised (Hughes & Acedo, 2014).

2.5.1 The importance of Mathematics

The Lisbon Conference in 2000 directed the European Union (EU) to a vision of the creation of the 'European educational model'. Put simply, the EU aims at being "the most competitive and dynamic knowledge based economy in the world" (EU, 2000, p.2) with the intention of developing strategies to expand the production of high-skilled workers. Further importance of skills desired for the economy have been lately reinforced in the European Commission [EC] statement on 'Rethinking Education' (EC, 2012) in which the text puts its emphasis on active citizenship, personal development, well-being, and more specifically underlines what is presented as the urgent need to deliver "the right skills for employment" (p.2). Thus, the perceived functional necessity for a more mathematically competent workforce and citizenry probably explain the aura of "sanctity and redemption of humanity" (see Valero, 2004, p.13) that surrounds Mathematics in the school curriculum and beyond. The essential belief is that:

Mathematics is in itself an indispensable, good and desired knowledge in our current (Westernised) world, and that Mathematics education has the positive role of enculturating the new generations into that knowledge and all its related values. (Valero, 2004, p. 13)

Furthermore, Malta through the policy on Early School Leavers (ESL) has committed itself at reducing ESL to 10% by 2020 (MEDE, 2014). Mathematics plays a pivotal role here as it presently serves as a gate keeper for most post-16 education courses on offer in Malta. Thus, unless Mathematics is made truly accessible to all, including students who present with SEBD in an inclusive setting, this ambitious target will be difficult to achieve.

2.5.2 Is the current Mathematical program in Malta serving all students?

In my opinion, the current Mathematical program in Malta is only serving a part of society and unfortunately some students with IEN, such as SEBD, mild and severe disabilities are not finding it accessible. A recently conducted EU audit on the current condition of special needs and inclusive education in Malta (EASNIE, 2014), calls for a drastic change in the Maltese educational system: a shift from a charity-based model to a human rights approach. Inclusion doesn't come naturally within the system. We need to work to achieve it. There is no one-size fits all system and no one size fits all Mathematics syllabi, mode of assessment, method of teaching and learning. The school and the teachers need to be empowered to make education, within their classroom and beyond as accessible as possible.

Also, another indication that our schools are not catering for all with regards to education in Mathematics is that only 57.5% sitting for the final national examination at the end of secondary school managed a pass in Mathematics in Malta in May 2018 (University of Malta, 2018). This figure would be even lower if one would consider all those school leavers who do not even consider applying to sit for the Mathematics exam. Thus, approximately half of the population of school leavers in Malta have no form of certification to show that they studied Mathematics for a minimum of 11 years and most are filtered away from the educational system. This is because most post school institutions require Mathematics as an entry-requirement.

The following quote, for instance, demonstrates the fundamental role that Mathematics plays in assigning individuals to different work/social strata (whether this is fair or not is another matter):

Mathematics has been remarked upon as playing a special role in sorting out students and preparing them to different social stations. ... Indeed, Sells (1978) coined the term *critical filter* for this social

function of mathematics. Thus, the teaching and learning of mathematics seems to occupy a special place in the provision of social justice – or its obstruction – within the education system. (Ernest, 2007, p. 3)

Even though in these past few years Maltese schools have opened their doors to all students and in most cases, they are able to cater for all students from a structural point of view, our schools are not catering for the diverse learning needs of all the students who learn in different ways and need to be assessed fairly. The Mathematical learning experience I experienced as a student when our schools were exclusive and did not cater for students with IEN and the one on offer today has varied very little in reality.

For instance, even though a constructivist approach in teaching Mathematics such as Inquiry Based Learning is known to be beneficial for students with SEBD (see Camenzuli & Buhagiar, 2014; Camenzuli, 2011), an investigation of national contexts commissioned by the EU-funded PRIMAS project (Promoting Inquiry in Mathematics and Science Education across Europe, see <http://www.primas-project.eu/en/index.do>) exposed the low level of implementation of IBL oriented pedagogy in all the twelve participating countries, Malta included (PRIMAS, 2010). Instead, this investigation shows the unrelenting supremacy of the transmission teaching approach in most of these countries. All this, regardless of PRIMAS (2010) reporting that, in recent years, in all the countries taking part in their project there have been policy changes in favour of the adoption of IBL-friendly pedagogies. This reality reveals that it takes more than policy changes to change teacher practices. For instance, *The National Curriculum Framework for All* (MEDE, 2012) in Malta promotes the use of an inclusive pedagogy integrating “a combination of different learning styles and through differentiated teaching taking into consideration different learning style” (p.53). However, as evidences by PRIMAS (2010) most teachers are resisting the adoption of different teaching styles, and most Mathematics teachers are still using transmission as their main mode of teaching.

More generally, could this signify societal and pedagogical ableism? Oppression through ableism results in exclusion and disregarding of people with disabilities and takes the shape of othering (El-Lahib & Wehbi, 2011). Young (2000) regards marginalization as “the most dangerous form of oppression” (p.41). For instance, people with disabilities, who belong to a minority social group, face barriers to inclusion in society. This is not because of their own individual ‘deficits’ or impairments, but because of the power relations present in our society (Scherer, 2005; Morris, 2001). Hence, students with IEN are excluded through societies and exclusionary policies that hinder their input in significant areas such as the educational setup (Manderson, 2004; Turmusani, 2003). For instance, here the participation of students exhibiting with SEBD in the Mathematics lesson is being limited since a non-inclusive pedagogical framework is being applied.

2.5.3 John Dewey's progressivism

The delivery of the curriculum by teachers is crucial. In fact, the above-mentioned EU audit (EASNIE, 2014) recommends that schools are supported to provide a personalised curriculum to engage all students with an evidence-based teaching and learning approach that caters for and motivates all individual needs. This can also be linked to Dewey's educational philosophy, who argued that the teacher should not be a dictator, but a motivator and stimulate students' learning (Brätting & Österman, 2017). In fact, Dewey (1959, p. 105) stated that the teacher should *psychologize* the subject. In other words, the teacher is invited to make the subject more motivating for the students through relating it to their experiences. In fact, Dewey (1966) promotes the link between the Mathematics' curriculum to the students' experience. In an uncommon direct mention of Mathematics, Dewey states that:

Mathematics is said to have, for example, disciplinary value in habituating the pupil to accuracy of statement and closeness of reasoning, it has utilitarian value in giving command of the arts of calculations involved in trade and the arts; culture value in its

enlargement of the imagination in dealing with the most general relations of things; even religious value in its concept of the infinite and allied ideas. But clearly mathematics does not accomplish such results, because it is endowed with miraculous potencies called values; it has these values if and when it accomplishes these results, and not otherwise. The statements may help a teacher to a larger vision of the possible results to be effected by instruction in mathematical topics. But unfortunately, the tendency is to treat the statement as indicating powers inherently residing in the subject, whether they operate or not, and thus give it a rigid justification. If they do not operate, the blame is not put on the subject as taught, but on the indifference and recalcitrancy of pupils. (p.254)

Here Dewey (1966) criticises the notion that Mathematics has integral values autonomous of our social activities. He is here endorsing the link between the curriculum and human experience. Similarly, Vygotsky (1986, p.172) states that scientific concepts such as Mathematics, needs “conscious and deliberate control” by being “placed within a system of relations of generality”. Vygotsky highlights the important role of the school in presenting such ways of thought, although he was equally conscious of the risk of “empty verbalism” if such systems are learnt (or memorised) without rich connection to concrete experiences.

Dewey (1966) looks at learning as an active process, a process that students needs to engage with to learn valuable material. All students will profit from experiencing a more active and engaging pedagogy in the Mathematics classroom. One that supports students’ diverse abilities to actively engage in and make meaning of Mathematics (see Allsopp et al., 2010) and one that makes the use of prior knowledge and incorporation of relevant connections more possible (see Hofstetter, 2001). Linked to this, in *How we think*, Dewey (1933) promotes “setting up connections in thinking experiences that will on later occasions promote the flow of suggestions, create problems and purposes which will favour consecutiveness in the succession of ideas” (p.157). The paradigm shift in pedagogy will be particularly effective with

students who present with SEBD given their acute disposition to challenging behaviours when poor educational experiences are presented to them (see Cooper, 2010; Kolb, 1984). However, I will also add that it will likewise profit the learning experience of every student in the classroom

This paradigm shift in pedagogy refers to one that moves away from *shallow learning* towards *deep learning* (see Marton & Säljö, 1976). According to Marton and Säljö (1976), there are two approaches to learning. Shallow learning is reliant on efforts to learn content material while considering this material as if different topics are unrelated. On the contrary, a deep approach to learning links different concepts or ideas together. It encompasses an active exploration for meaning and underlying principles. Deep learning simulates the Mathematicians' efforts to develop mathematical knowledge, and thus, calls for some form of inquiry by the student (see Van Schalkwijk et al., 2000). Dewey (1966) argues that if the motivation to learning is external to the subject content (such as rewards and consequences, summative assessment), the students will only learn to meet these requirements as set by the teacher. Instead Dewey (1966) believes that motivation should come from the task as this encourages real understanding and learning.

Inquiry-based learning (IBL) is an instance of a constructivist pedagogical tool that can be used by teachers in class to promote learning as an active process that motivates the students. Its main characteristic is that of constructing mathematical understanding through student investigation, cooperation and communication (Cheeseman, 2008; Leikin & Rota, 2006). There is encouraging research on how IBL in Mathematics leads to improved students' engagement and theoretical understanding (Walshaw & Anthony, 2008). Its features can be a perfect fit for students who exhibit with SEBD, since it advocates for student-centred hands on approach. I will now share an example of how this is possible by drawing upon a study (see Camenzuli, 2012) I conducted. This study was basically a pedagogical intervention that had as its focus that of creating a learning environment that would help students with SEBD to engage in their learning experience. Keeping in mind Uta Frith's (1992) model and my own biopsychosocial perspective of SEBD,

the *mediating factors* presented to the students were positive, and thus, students in class were engaged in their learning, hence reducing the risks of the undesirable behaviours. Uta Frith (1992) in her model of developmental disorders, argued that the interaction between biological and other factors play a crucial part in the observable behavioural outcomes. Students' behaviours can be influenced by *mediating factors* such as the individual's experience and level of motivation. Hence, the role of the educator is to respond to difficulties in behaviours using educational approaches (Cooper, 2005). Here, I will be drawing upon an example where the environment was manipulated by using a constructivist pedagogy that as will be discussed increased students' motivation and enhanced their learning experience in Mathematics.

Using an action research methodological framework, I departed on a journey of using an inquiry-based learning methodology with one of my Mathematics classes. This class grouped students exhibiting with SEBD. By the opening spaces for philosophical inquiry in the Mathematics classroom, I was pursuing what Dewey called as intellectual education. This refers to the change of students' raw talents into more developed, smart habits that create meaningful inquiry when a situation warrants it (Stoyanova Kennedy, 2012).

The idea to investigate the use of an active learning style, such as IBL, with students presenting with SEBD originated from two beliefs. Firstly, that by increasing their levels of engaging with tasks will reduce disruptive and impulsive behaviours (Hughes and Cooper, 2007). Secondly, that teaching founded on inquiry has delivered results in emotional engagement, memory retention and cognitive understanding (Dow, *n.d.*). Therefore, the results of this study show how, if students exhibiting with SEBD are presented with a more engaging learning experience, by using a pedagogy that is student-centred and hence promotes students' involvement, students will engage more in their learning experience of Mathematics. Hence, drawing upon Uta Frith's (1992) model, the *mediating factors* here were changed using IBL and this resulted in improved observable behaviours.

During this study (Camenzuli, 2012), the students regarded their learning experience as an activity in which they were active agents (see Murphy, 1996). The students reacted positively with this new, active way of learning Mathematics compared with their previous traditional experiences. This paradigm shift away from traditional teaching by using an innovative pedagogy such as IBL resulted in students enjoying their Mathematics lessons. This enjoyment of the Mathematics lesson was also since students had the chance to apply their mathematical knowledge in a real-life context (see Boaler, 2009). Hence, again drawing upon Dewey (1959), the subject was made more motivating through relating it to experience. Also, whilst using IBL, motivation came from the task itself, hence in line with Dewey's (1966) thoughts, this encouraged learning and presented learners with a more engaging learning experience. In fact, the research also evidences a remarkable progress in students' behaviour. Together with my students, I attributed this improvement largely to a less formal classroom environment combined to a more active and collaborative learning approach. This supports Moody et al.'s (2000) claim with regards to the importance of curriculum delivery in the classroom.

In line with Dewey's (1966) who stated that increased motivation by students in the task they are doing will encourage learning, the students linked their increased motivation because of being exposed to IBL. This finding also compliments the argument put forward by Fogell and Long (1997) that the lesson's worth and the teaching methodology adopted influence students' motivation. In fact, the teacher was very careful in choosing investigative activities that were of the correct cognitive level for students to avoid disruptive behaviour and capture their attention (see Lawson, 2000). Data from the study being discussed also suggested that IBL supported students' learning of Mathematics and this resulted in enhanced academic attainment. Also, it was evident that their engagement with IBL was not just due to enjoyment, but they were also understanding the Mathematical concepts.

2.5.4 Vygotsky – Social Interactions

Vygotsky's (1978) regards learning as an application of social interaction. This is so since new material is learnt from another person: the teacher. Verbal communication is at the centre of such transfer of new material. In the classroom the teacher is viewed as the *informed* one. The one that knows the new material to be taught. However, other students can also have knowledge and understanding of the subject. Thus, they can also interact with peers who require further explanation and more understanding of the subject, and help them in class. In fact, Ebert and Culyer (2011) invite teachers to adopt strategies that are not only student-centred. Collaboration between the teacher and the students can create instances where the students are able to verbally elaborate developing concepts.

All students in class can and should have the opportunity to participate in the learning process. Haji Botty and Shahrill (2014) argue that Vygotsky's theory of the *Zone of Proximal Development* (ZPD) promotes this participation in the learning process. In his theory Vygotsky (1978) described *ZPD* as the gap between the actual attainment level to independently solve problems as opposed to solving them under guidance or in collaboration with more capable peers. During classroom tasks, the teacher and students can support the low ability students to reduce/close this gap. Blake and Pope (2008) argue that peer-tutoring can be one of the implications of Vygotsky's theory.

2.5.5 SEBD and Mathematics Education

There is lack of research with regards to effective intervention in Mathematics education for students presenting with SEBD (Tan, 2016; Templeton et al., 2008; Hodge et al., 2006; Mooney et al. 2003). Tan (2016) in a review of studies conducted from 1985 to 2015 in this area concluded that very few studies engaged with mathematical pedagogy to target understanding of the subject by students presenting with SEBD. However, according to Tan (2016) recently researchers have started to explore the use and the importance of

mathematical pedagogy with regards to the engagement of students exhibiting with SEBD in the mathematical learning experience and the use of more reliable methods of assessment.

2.6 Conclusion

Even though different views on SEBD exist and some see the labelling of students presenting with SEBD as a way of shifting the blame away from the 'failing' school systems onto students presenting with SEBD, one cannot but accept the fact that this term exists in schools. It is a term used by teachers and educators in their daily professional practice.

Although, I am aware of the problematic associations with the definition of SEBD and this has been explored in this chapter; the aim of this study is not to debate such issues. However, the aim of the research is to give a voice to students who are exhibiting with behavioural difficulties at school and as my working definition of SEBD states are "disruptive and/or disturbing, and which interfere with the students' learning, social functioning and development and/or that of their peers" (Cefai, 2010, p. 117). Ultimately, this will shed light on what could help them have a more engaging learning experience of Mathematics. In obtaining such understanding, teachers and other stakeholders in the educational field will be in a better position to offer students exhibiting with SEBD a better learning experience.

2.6.1 The research questions

Firstly, the research will give the students presenting with SEBD a voice on their learning experience of Mathematics. Afterwards, based on the findings, suggestions will be made as to what can enhance the learning experience of Mathematics for students exhibiting with SEBD. The following are the research questions:

- How do students presenting with SEBD experience learning in the Mathematics classroom?
- What educational strategies and interventions could help in offering students presenting with SEBD with a more engaging learning experience?

Chapter 3: Methodology

Chapter 3: Methodology

3.0 Introduction

In this chapter I will provide the reader with an overview of the theoretical framework chosen grounded on Interpretative Phenomenology Analysis (IPA). In doing so, I will engage on a discussion about the epistemological features of such an approach and on my own positionality with regards to this study. I will also describe in detail the research methods adopted to collect the data, with a critical focus on issues concerning the quality of my research. Moreover, I will examine in detail the ethical considerations encompassing the research process.

3.1 Interpretative Phenomenological Analysis

Interpretative phenomenological analysis (IPA) is a qualitative research methodology with the aim of exploring how people make sense of their life experience that originated in the field of psychology. In fact, most of published work using IPA has been in this field (Brocki & Wearden, 2007). This approach has rarely been used in Mathematics education; however, Bleiler (2015) has used this methodological approach in her investigation of the lived experiences of a mathematician and a Mathematics teacher educator as they team-taught a Mathematics content and Mathematics methods course for future secondary Mathematics teachers. Although, my research is very different in nature, we both wanted to produce knowledge about the experience of the research participants and IPA is a fitting methodological tool to do so. In fact, the aim of this study was to get as close as possible to the students' experience in class and to look at the world through their own eyes. Hence, I adopted a phenomenological approach and I produced knowledge about the experience of the research participants. This approach aimed to understand experience and to obtain knowledge of the "quality and texture" of the experience itself (Willig, 2013, p.16). For example, finding that a student feels 'treated unfairly'

by his teacher constitutes phenomenological knowledge regardless of whether or not the participant truly is being treated unfairly by the teacher or not. IPA is phenomenological in the sense that it deals with investigating experience in its own terms (Smith et al., 2009). When people are engaged in an experience they begin to reflect on it and IPA aims to engage with such reflections. Hence, as a researcher I will try to make sense of these lived experiences as shared by my research participants using various tools made available to them and interpret them.

I will now briefly discuss the main theoretical underpinnings governing IPA: phenomenology, hermeneutics and ideography.

3.1.1 Phenomenology

Phenomenology is the study of experience. Husserl, Heidegger, Merleau-Ponty and Sartre are all well known for their work in phenomenological philosophy. Husserl's work highlights the significance and relevance of focusing on experience and its perception. In developing Husserl's work, the other three philosophers move us towards a more interpretative and world positional view of phenomenology. Thus, concentrating on understanding the perspectival directedness of our participation in the lived world. An experience that is particular to each one of us. However, it is the creation of our relationship to the world rather than us living in isolation. Therefore, the person is regarded as submerged in a world of objects and relationships, language and culture, projects and concerns (Smith et al., 2009).

3.1.2 Hermeneutics

Hermeneutics is the theory of interpretation. Denzin and Lincoln (2011) define it as an approach to the analysis of texts that stresses how previous understanding shape the interpretive process. Founded because reality is socially constructed, it endeavours to understand situations through the eyes of the participants (Berger and Luckmann, 1967). Hermeneutics involves

recovering and reconstructing the intentions of the other actors in a situation (Cohen, Manion & Morrison, 2011).

As an IPA researcher, I was engaged in a *double hermeneutic*, thus having a dual role. This is because I tried to make sense of the participants trying to make sense of what was happening to them. My unique access to the participants' experience were through their own account of this same experience.

Heidegger's direct linking of phenomenology, as a hermeneutic enterprise is also relevant. This is because, IPA deals with exploring how a phenomenon appears, and how the researcher that is analysing the data makes sense of this appearance (Smith et al., 2009). Interpretative phenomenology aims at getting a better understanding of the participants' lived experience of a phenomenon. However, using this version, I did not separate description from interpretation, instead I drew on insights from the hermeneutic tradition and considered all description as a form of interpretation (Giorgi & Giorgi, 2008).

The *hermeneutic circle* (Schleiermacher, 1998) is the most common hermeneutic theory. It deals with the dynamic relationship between the part and the whole at different levels. Hence, to understand any given part, you look to the whole; to understand the whole, you look to the parts (Schmidt, 2006). The hermeneutic circle provides a useful framework for using IPA. Even though IPA can be seen as a linear, step-by-step process, like any other method of analysis, this approach also highlights that the process of IPA is iterative. Thus, as an analyst I will "move back and forth through a range of different ways of thinking about the data, rather than completing each step, one after the other" (Smith et al., 2009, p.28). As I will be moving back and forth, according to the hermeneutic circle, my relationship to the data will change. The whole idea here is that the meaning of a text can be made at different levels, all of which related, and many of which will offer a different perspective on the part-whole soundness of the text (Smith et al., 2009).

3.1.3 Idiography

Idiography deals with the particular and IPA inclines towards the idiographic level (Larkin, Watts & Clifton, 2008). In psychology, idiography has generally been linked with the study of the individual people. However, it also serves a broader purpose, specifically to differentiate between the study of specifics from the study of *things-in-general* (see Lamiell, 1998; Windelband, 1998). Thus, the study of any specific situation or incident can also be called idiographic. IPA often draws upon the two meanings of idiography as exemplar studies using IPA focus on individuals as they deal with circumstances or incidents in their daily experiences (Larkin, Watts & Clifton, 2008).

According to Smith et al. (2009), IPA's concern with the functions at two levels: detail and the depth of analysis. Analysis must be exhaustive and systematic, committed to understand the perspective of people, in a context. To achieve this IPA utilizes small, purposively selected and carefully situated samples as will be described later in this chapter.

3.2 The ontological and epistemological bases of my study

Heidegger (1985) argues that an individual is always a *person-in-context*. As an individual and researcher, I cannot sporadically move out of my subjective sphere to give meaning on a word of otherwise insignificant objects. I am always and already *out there* in a world that has a significance to me. In short, I am part of a significant world and the significant world is also part of me. Hence, I understand the world through my constant involvements with it. Larkin, Watts and Clifton (2008) consider this as a dismissal of the divide between the subject and the object. This is captured by Heidegger's classification of humans as *being there* (Dasein). Hence, my very nature is to be there and involved with the meaningful setting. This perspective of the individual has some interesting implications on IPA. The most obvious implication is that I cannot remove my thoughts from the word to explore things. Hence, put simply, any findings I made are the meaning of the relationship that

existed between the subject I explored and me. I was a comprehensive part of the world that I describe in this thesis.

Indeed, IPA is a variant of the phenomenological method that is founded on the concept that even though it targets to explore the research participants' experience from their perspective, my own view of the world and my interaction with the participants played an important role in the research findings and conclusions. Hence, the phenomenological analysis is my interpretation of the students' experiences (Willig, 2013). As a result, I engaged in a 'double hermeneutic' as I was "trying to make sense of the participants trying to make sense of what is happening to them" (Smith et al., 2009, p.3). Consequently, I approached my data with two aims in mind. The first aim of my study was that of understanding the students' experience in the Mathematics class, and to describe what it is like for them. The second aim was that of interpreting the data, positioning the initial description in relationship with the wider context. Hence, using such a theoretical framework, I had an opportunity to speculate and to think why the students made certain claims (Larkin, Watts, Clifton, 2006). Thus, it is very important to take into consideration my own background as described in chapter 1. Henceforth, I did bring into the research my own values and knowledge. However, this is epistemologically sound due to the methodological framework I adopted.

When researchers choose what research methods they adopt they will certainly be motivated by their core ontological and epistemological positions. I will be adopting the definitions as described in section 1.1. In the next section, I will discuss my epistemological and ontological position within a critical framework.

3.2.1 What kind of knowledge does this study aim to produce?

I acknowledge that IPA does provide direct admission to someone else's private world. I obtained an understanding into another person's thoughts and beliefs in relationship to the phenomenon under investigation, in this case, the

learning experience of the students exhibiting with SEBD during their Mathematics lesson.

Hence, the IPA approach helped me produce knowledge of what and how people think about the phenomenon under investigation. Here, I took a critical realist approach to knowledge production, since I acknowledged that my understanding of participants' thoughts is necessarily influenced by my own ways of thinking, assumptions and conceptions. However, as Willig (2013) states, these are not to be considered as inaccuracies that need to be rejected. On the contrary, they can be seen as a needed condition for making sense of another person's experience. Hence, understanding the experience of other requires interpretation. In fact, critical realism as described by Bhaskar (1989) suggests that first we need to comprehend the central structures that perceive these events or discourse before understanding and changing the social world. Social relations and interactions make these structures.

IPA is dependent on or influenced the hermeneutic versions of phenomenology (see Moran, 2000). As a methodology, IPA acknowledges the presence and role of the researcher within the data collection and analysis process, hence, its stress on the double hermeneutic. Watts (2013), argues that findings of any analysis is always, to some degree, a reflection of the questioning activities of the researcher. Hence, Watts (2013) concludes that a qualitative data analysis is an intellectual interpretation. As a researcher, I accept that my own position with regards to the phenomenon under exploration played a crucial factor whilst making sense/interpreting the participants' description of the same phenomenon. Hence, the knowledge produced, will also be reflexive and will contain my position.

Thus, I acknowledge that my position with regards to the research undoubtedly played a part in this study and the analysis of text is the product of my interpretation. Consequently, as a researcher I was involved in the research. Hence, the analysis was both phenomenological (with the aim of sharing the participants' views on the phenomenon under exploration) and interpretative (it is dependent on my own perceptions and positionality). As Willig (2013)

states, IPA requires a reflexive approach from my end as the researcher. Even though it does not claim advantaged, or direct, access to participants' experience, the terminology used in the presentation of its findings invoke a sense of discovery rather than construction. Hence, the themes emerged and categories identified are in line with a grounded theory approach rather than a social constructivism approach.

3.2.2 What kinds of assumptions does IPA make about the world?

This research is about how individuals perceive the world. However, I am aware that different participants can experience the same phenomenon in a different way. This is because different individuals have different thoughts, beliefs, expectations and judgments on the same experience. Hence, keeping in mind the nature of IPA, I did not make claims about the external world and did not deal with issues whether or not the participants' perception of the world is true or not. What mattered to me is how the participants experienced the situation or event. Willig (2013) states that meanings people give to events are the product of social interactions between the participants and the world around them.

3.2.3 Adopting a phenomenological approach

I adopted a phenomenological approach to the production of knowledge, since I attempted to produce knowledge about the individual experiences of the research participants. Willig (2013) argues that even though a phenomenological researcher still seeks to record the participants' feeling, thoughts and perceptions that represent their experience, the researcher does not make any assertion about what causes these. From a phenomenological perspective, what seems to be the *same* event (e.g. the Mathematics lesson) can be lived in many various ways. Thus, potentially there are, as many experiential worlds, as there are individuals. Hence, throughout my research I was asking, 'What is the world like for this participant?'

More specifically, I adopted an interpretative phenomenological approach, since I sought to understand the meaning of a description of an experience by stepping outside of the account and reflecting upon its wider meanings. Hence, I started by producing a description of the experience of students exhibiting with SEBD during their Mathematics lessons. I then attempt to shed further light on the phenomenon by relating to its wider context – for example the social and cultural expectations of students.

3.3 The research design

3.3.1 A qualitative case study approach

A case study approach was adopted for this study since it will portray ‘what it is like’ to be in a particular situation and to record a close-up reality and ‘thick description’ of participants’ lived experiences of a situation (Geertz, 1973). Hence, this type of methodology is the most suitable to answer my research questions since it follows the interpretive tradition of research; I was seeing the situation through the eyes of the participants, rather than the quantitative methodology. This methodology provides a unique example of real people in real situations and it can explore situations in ways that cannot be investigated by numerical analysis (Cohen, Manion, Morrison, 2011).

3.3.2 The participants

Sampling was theoretically reliable with the qualitative paradigm and the IPA methodology adopted (Smith et al., 2009). Hence, the participants were selected strategically because they could offer the research project insight into a particular experience, hence they granted me access to a particular perspective on the phenomenon under study. Therefore, the sample represented a viewpoint, rather than a population.

Since IPA has an idiographic characteristic and deals with exploring phenomenon in a context, this IPA study was conducted on a small sample size. Hence, four students exhibiting with SEBD took part in this research attending the same school. As discussed in Chapter 2, there are various classifications and discussions with regards to the term SEBD. Nonetheless this is a term that is used in schools. Also, students exhibiting ***behavioural difficulties*** at school is a reality that cannot go unnoticed. I adopted a working definition of SEBD as described in section 2.1.

REFLECTION BOX:

The phrase *behaviour difficulties* is a very particular description of the 'reality'. For a child this may be viewed as 'having a laugh' between friends. For a psychotherapist this may be interpreted as a child in distress. The teacher in class might interpret it as a difficulty. I am aware that there are different perceptions of this reality. The reality is students being in class. But the description is based on my experience. Behaviour difficulty is a particular interpretation of the reality: I am reading my findings from a teacher's perspective.

The study was carried out in a boy's only secondary school in Malta that caters for students aged between eleven and sixteen years of age, in mixed ability classes spread over five years. To identify the four students participating in my study, the school's behavioural system that is based on points was used. Every time a student misbehaved (behaviours and expressions of emotion among students which are experienced by adults and students as disruptive and/or disturbing (Cefai, 2010)) he gets a report by a teacher and a corresponding amount of points depending on the seriousness of the misbehaviour. The four participants were the top four students in this list at school at the start of the project. This ensured that the students participating in this study had similar trends of SEBD, thus, a homogeneous group of participants was chosen. My sample size provided sufficient cases for the development of meaningful points for discussion. Also, the sample was purposely chosen to be as homogeneous as possible. All the four participants met the sample criteria and therefore shared experiences of the phenomenon being studied. Hence, sampling was theoretically consistent with the qualitative paradigm in general, and with IPA's

characteristics. Homogeneity of the group will also address the variability within the construct of SEBD, hence allowing me to use an IPA approach. Consequently, the participants guaranteed access to a perspective on the phenomenon under study. In fact, the main characteristic for all four students was that they were exhibiting behaviours that were disruptive in the classroom, and thus interfering with their learning and that of the students around them. This was confirmed by the fact that they had received a lot of negative points in the school's behavioural system. The sample selected is in line with the aim of this study that was to produce an in-depth analysis of the educational experience of mathematics of male students aged between 12 and 14 who were recognised by the Maltese education system as exhibiting with SEBD. Smith et al. (2009) suggest a sample size of between three and six participants. The names that will be used to refer to these four students are: Neville (12 years old), Kevin (13 years old), Manuel (13 years old) and David (13 years old). Three different teachers were teaching the students. I did not teach any of the students and did not know the participants prior to the study. However, during the study after watching the video diary entries and conducting interviews with the students I undoubtedly got to know and understand these students better. This does not go against the spirit of IPA as the result of the study ought to be an improved understanding into the phenomenon at hand, informed by my own engagement with the phenomenon being explored (Larkin, Watts, Clifton, 2008).

3.3.3 The methods

Data was collected and recorded over a period of 12 weeks using a qualitative case study approach. To record the implications of the different variables required the use of more than one tool for data collection. Hence, two different qualitative methods were used to collect data alongside each other, i.e. video diaries and interviewing. Tracy (2010) argues that multiple types of data increases scope, deepens understanding, and encourages consistent interpretation. Denzin and Lincoln (2000) make a very interesting observation

with this regard. They argue that the principal instrument in qualitative research is the researcher himself and is generally the instrument that needs most sharpening.

3.3.3.1 Video Diaries

For the objective of my research the quality of the production of the video diaries was key, as my main purpose was to construct an environment that would generate data. For a twelve-week period, I set up a video camera in an unused room. All four students were invited to talk about their experiences with regards to the Mathematics lesson whilst they were alone in front of a video camera once a week. A total of 5 minutes of video recording were collected weekly from every student over the 12-week period. Thus, approximately, a total of 1 hour of video diary recordings per student was collected over this period.

The use of video diaries was very useful since it enabled the students to describe their personal experiences. (Noyes, 2004). Unless they felt the need to talk about others to describe their own experience, the students used the video diary as an opportunity to talk about themselves. The video diary entries functioned as lenses through which otherwise difficult to access characteristics of students' experience could be viewed. Students' comments were quite poignant at times and I was particularly impressed by the depth of their comments. Video diary entries eliminated my presence, hence this made it easier for the students to talk freely about their unseen daily experiences. The video diaries were crucial and highly significant to the empirical work upon which the analysis was based. Their prospective for opening new opportunities of inquiry was instrumental. What the students said and did in front of the cameras was exclusive to that specific occasion, hence the video diary entries were representations. There was a conversion taking place as I interpreted the data collected from video diary entries. This is where an attitude of reflexivity was crucial as I brought to my interpretive task my own personal experiences, as I alluded to earlier.

The issue of privacy was treated very carefully so that students could freely say what they really wanted to say. Thus, this room was situated away from where they could be heard. The contents of the video diaries include feelings, descriptions of their experiences of learning and doing Mathematics, points of view and general thoughts. An agreement was reached with the participants, whereby video footage will not be replicated or made accessible to others. Students used Maltese during their video diary sessions and what was said was later translated and transcribed in English as faithfully as possible.

The video diaries entries enhanced what is already accessible in the classroom and the entries also provided narratives of practices and/or relationships within peer groups that could shed light upon students' openness to learning, schooling and the learning of Mathematics (Noyes, 2004).

3.3.3.2 Interviewing

Semi-structured interviews were held with the students during the 5th and 9th week of the study instead of the regular video diary sessions. A qualitative research interview can be regarded as “a conversation with a purpose” (Smith et al., 2009, p.57). The aim of the interview sessions was to facilitate an interaction with the research participants in such a way to allow them to tell their own stories in their own words.

Hence, the interviews focused on the experiences of the students of the Mathematics lessons. The interview sessions were planned according to what the students had said during the video diary recordings. These served to enrich and clarify video entries if the need aroused. The questions were formulated after I carefully watched the video diary entries that were held during the prior weeks. Whilst watching the video diaries, I jotted down my own reflections on the participants' account of the situation. Whilst doing so I categorised my own reflection under different emergent themes. Questions formulated were listed

under the different themes that emerged after my reflection of students' account. Such reflections and resultant question can be found in Appendix 1.

Thus, the responses enabled me to test the validity of hypotheses drawn after my observations of the video diary entries. Hence, a distinct characteristic of these focused interviews was my prior examination of the circumstances in which the participants had been involved in (Cohen, Manion, Morrison, 2011). It is very important to make it very explicit that I had not analysed the situation in which the participants were involved by attending the Mathematics lessons. Rather I analysed their account of the situation. Although, this might seem as a minor clarification, it is a very important one as it ensures a fit with my theoretical position adopted for this study. Consequently, the interview was used to investigate the research questions 'sideways'. They were an occasion, which facilitated the discussion of pertinent topics, and which allowed me to answer the research question subsequently, via analysis (Smith et al., 2009).

Maltese was used during the interview sessions and these were later translated and transcribed in English as faithfully as possible.

3.4 The analysis of data

As discussed, IPA acknowledges that it is impossible to gain direct access to research participants' lived worlds. This is because the exploration of the participants' experience will undoubtedly include my own views of the world and my own interactions with the participants (double hermeneutic). Hence, the phenomenological analysis I produced in this research is an interpretation of the participants' experience (Willig, 2013). Moreover, an IPA approach was used to analyse the data collected because this study focused upon the students' experience, understanding, perceptions and views of a phenomenon. Smith et al. (2009) argue that IPA research deals with a detailed examination of the lived experience. In fact, this research will examine in detail the lived experience of students exhibiting with SEBD in Mathematics. I

adopted a framework for analysis based on Smith et al.'s (2009) steps for IPA analysis (see table 3.1).

Stage	Name	Description
1	Reading and re-reading	First written transcript. A carrying out of holistic reading of the data (i.e. video diary transcripts, interview transcripts) while listening to audio files.) Engagement in analytic memo-writing to bracket initial inclinations.
2	Initial noting	Writing exploratory comments and assigning codes of three forms: descriptive (text in normal font), linguistic (text in italics) and conceptual (underlined text).
3	Developing emergent themes	Analysis of the exploratory comments in stages 1 & 2 to determine overarching themes.
4	Searching for connections across emergent themes	Identification of patterns and making connections across emergent themes. Creation of diagrammatic presentation of emergent themes to organize meaning.
5	Moving on to the next case	Moving on to the next participant's transcript and repeating process 1 to 4.
6	Looking for patterns across cases	Looking for patterns across the four cases.

Table 3.1: Four-stage analytic process, following the recommendations of Smith et al. (2009)

The first stage of IPA analysis involved that of *reading and re-reading* the original data. This stage allowed me to actively engage with the collected data

and it involved the first written transcript. Truly, this stage started before all the data was collected as I watched closely and reflected on the video diary entries to prepare the questions for the interviews. The second stage involved *initial note taking* as I noted down anything of interest within the transcripts. Exploratory comments were made on the same transcript. This involved thinking about the participant's experience in terms of their relationship to the world. During this stage I noted anything of interest within the transcript. In practice, steps 1 and 2 merged together as I started writing down reflections as I started watching video diary entries to prepare for interview sessions with the participants, adding more exploratory notes/comments with subsequent readings of the transcripts. This process is illustrated in Appendix 2. Exploratory comments during stage 2 were conducted using three different focuses that are described in table 3.2 and visible in Appendix 2.

Descriptive comments	Focused on describing the content of what the participants had said (normal text).
Linguistic comments	Focused upon exploring the specific use of language by the participants (italic text).
Conceptual comments	Focused on engaging at a more interrogative level (underlined)

Table 3.2: The different focuses employed for the exploratory comments.

The next stage was about *developing emergent themes*. Exploratory comments were analysed to identify the emergent themes. The themes did not only reflect the participant's original words and thoughts, but also my own interpretation. Here I took a hermeneutic approach and made sure to make my interpretations in relation to the whole. Appendix 2 also presents the emergent themes for the transcripts present. During the next step I searched *for connections across emerging themes*. Here, my main aim was to come up with an organisation that allowed me to point to all the most curious and significant aspects of my participant's account as I looked for means of drawing together the emergent themes.

After finishing these four stages, I *moved onto the next case*. Hence, the next participant's transcripts were analysed by repeating the process described above. All transcripts for the four participants are available in Appendix 2. It was very important that I allowed new themes to emerge with each case and bracketed as much as possible the notions emerging from the analysis of the first case whilst working on the next case. In doing so, I kept with IPA's idiographic commitment.

The final stage of an IPA approach involved looking for *patterns across cases*. Are there any connections across cases? How can a theme in one situation help in resolving a problem in another situation? Which themes are the most powerful? This led to a relabelling of themes. This reorganization of themes helped me move to a more theoretical level. At this stage, recurrent themes were identified as a way of showing the interconnections between the different participants. The final table of emergent themes and recurrence for different participants is found in chapter 4 illustrated in table 4.1.

3.4.1 The limitations of IPA

IPA analysis works with text as participants' account of events is transcribed. Language is the method by which participants described their experiences. Here one might argue that given that IPA relies on the language the participants use, and language constructs instead of describing reality. Thus, a specific version of that experience is constructed by the words the participants select to define their experience. Different participants can describe the same experience differently. Thus, language adds meaning that exists in the words chosen. Hence, direct access to someone else's experience is impossible. Therefore, it can be argued that language does not constitute how we express something we think or feel; rather it describes and constructs ways we can think and feel. Thus, one can criticise the use of language in phenomenological research for not engaging adequately with its constitutive role (Willig, 2013). For this reason, it is important to keep in mind the epistemological features of this research and what knowledge it aims to produce.

Another issue that can be criticized with regards to IPA is that it is dependent upon participants' description of their experiences. It is argued that it aims to capture the experiences and meanings associated with a phenomenon rather than to identify people's opinions about it. Willig (2013) raises some questions here:

- Are the participants' accounts suitable material for phenomenological analysis?
- Can participants express the rich texture of their experiences?
- Can participants use language to adequately describe their physical and emotional experiences?

Even though the limitations mentioned above are valid, this research is sound from an epistemological and ontological point of view. IPA deals with how the participants experience the world around them as they engage with it in a context (Willig, 2013). In this study, this refers to how the participants describe their experience of engagement with the Mathematics lesson in the classroom. IPA's nature cannot be used to make claims on the nature of the world itself, hence the Mathematics lesson. Thus, this phenomenological research describes and documents aspects of the lived experiences of the participants, but does not attempt to explain it.

Consequently, it might be argued that it is an exclusive description about the experiences without considering the causes or origin that limits understanding of phenomena. However, my counter argument here is that this study aims at giving the participants a voice to describe their educational experience in Mathematics. This might offer teachers with a better understanding of students exhibiting with SEBD. Thus, it can help them to cater better for the educational needs of all the students in their classroom including those presenting with SEBD.

3.5 Validity and reliability

The validity and reliability in research methods is key to effective research. Cohen, Manion and Morrison (2011) state that whilst earlier versions of validity were more focused on showing that a particular instrument in fact measures what it is supposed to measure or an account accurately represents what it is intended to describe, lately validity has taken different forms. In qualitative research validity can be measured through the honesty, depth, richness and scope of the data achieved, the participants approached, the extent of triangulation and the impartiality of the researcher (Winter, 2000). Tracy (2010) in fact proposes a model for quality in qualitative research that makes distinctions among the methods and procedures used. The author presents eight key points for evaluating the quality of qualitative research. These eight key points governed the quality of my research and I will now be drawing upon these markers to demonstrate the quality of my work.

3.5.1 A Worthy topic

The topic being discussed in this research is worthy and relevant to the current educational sphere, timely, significant and interesting. In fact, OECD (2009) stated that one of the main issues that hinder teachers' effectiveness was misconduct at school. Maltese teachers participating in the survey said that students intimidating and verbally abusing other students (almost fifty percent of the teachers) or members of staff (twenty per cent of the teachers) interfered with the quality teaching and learning in class. Thus, gauging what students exhibiting with behavioural problems in class think about their learning can shed light on how these students can be offered a more engaging educational experience. Such changes might reduce instances of misbehaviour in class and this would be beneficial for both the teacher and students in the classroom.

As discussed in the literature review very little research has been carried out about learning from the students' perspective in any content area, including Mathematics (Hoffman, 2009). Moreover, as discussed in section 2.5.4 very

little research has been conducted with regards to the Mathematics education of students presenting with SEBD. Hence, this study deals with a phenomenon about which little is known. Therefore, this makes it interesting and could point out surprises, thus making it a worthy study.

3.5.2 Rich Rigor

Rich complexity of abundance indicates high-quality research (Winter, 2000). Data and time in the field, sample, contexts and analysis are the fundamentals for having a qualitative research. The following table (table 3.3) summarizes these characteristics related to my study.

Time in field	<ul style="list-style-type: none"> • A twelve-week period.
Sample	<ul style="list-style-type: none"> • 4 male students exhibiting behavioural difficulties
Context	<ul style="list-style-type: none"> • Secondary school in Malta.
Data collection and analysis processes.	<ul style="list-style-type: none"> • Video diaries (Approximate total of 60 minutes per participant over 12 weeks) • Interviewing (Approximate total of 60 minutes per participant over 12 weeks) • Interpretative Phenomenological Analysis (IPA)

Table 3.3: Methodology and methods

The data collected provided enough evidence for the research questions to be answered in a meaningful way. Twelve weeks in the field and a total of eight hours of raw data assured that this objective was reached.

Rigor is also judged by the care and practice of data collection and analysis (Tracy, 2010). When it comes to interviewing, demonstration of rigor includes the questions asked and the level of transcription detail and quality. Finally, rigorous analysis was also achieved by giving the reader a detailed description of this process in this chapter.

3.5.3 Sincerity

Self-reflexivity and transparency were key elements to maintain quality and validity of my qualitative research. The issue of self-reflexivity, i.e. being honest with one's self, in relation to one's research and one's audience has already been highlighted in section 3.0. Basically, as a researcher I have the task of being honest through self-reflexivity by assessing my own biases and motivation. As a researcher I practiced self-reflexivity from an early stage in my research journey whilst discussing access and trust, data collection, analysis and presentation. I did this by writing my reflection whilst reading the transcripts and formulating the interview questions. I also clearly stated my involvement and connections with the field of education and SEBD from the start of the study in chapter 1. Reflection boxes were also used.

When it comes to transparency, it is very important that as a researcher, I gave an account of "a methodologically self-critical account of how the research was done" (Seale, 1999, p.468). Sharing my position to the research will help the reader to gain a better understanding of the interpretative nature of this research.

3.5.4 Credibility

One of the most important ways for achieving credibility is by giving what Tracy (2010) calls as a *thick description*. Hence, this study will be giving an in-depth description that explains culturally situated meaning (Geertz, 1973) and concrete detail (Bochner, 2000). Any single behaviour/interaction must be placed in its context to be meaningful. In qualitative research, "things get bigger, not smaller and tighter, as we understand them" (Gonzalez, 2000, p. 629).

Tracy (2010) also suggests that the researcher should use tactical knowledge. For instance, I should not only take note of what the participants are saying, but also what is not being said. Indeed, in my research I will try and explore in

detail to investigate issues that are assumed, implicit, and have become part of the participant's daily routine.

Triangulation is also key. Denzin (1978) states that triangulation in qualitative research suggests that the conclusion is more credible if two or more sources of data, theoretical frameworks, types of data collected, or researchers point to the same conclusion. In my research, two different methods were used to collect data. Interviews were used to explore in more detail what was told by participants during the video diary sessions. Another term that also relates to the practice of using multiple data sources is 'crystallization' (Ellingson, 2008). Tracy (2010) adds that through crystallization, the researcher is encouraged to collect various types of data and engage with various methods, numerous researchers and various theoretical frameworks.

3.5.5 Resonance and generalizability

Another danger is that of the research having limited resonance. Techniques that encourage identification, and echo of the research by readers who have no direct experience with the topic were used. All first-rated qualitative reports must leave their mark, although this is not always achieved in the same way (Tracy, 2010). Lack of resonance can also be the result of the neglect of the wider social contexts and constraints. Wider macro-contexts cannot be ruled out of individual circumstances (Cohen, Manion, Morrison, 2011). In Appendix 5, I present an action plan on how the conclusions drawn from this study will impact on the local educational context.

Generalizations and transfer of findings are directly related to resonance and Yin (1994) acknowledges that within the academic community there is struggle to the concept of case study based on 'lack of rigor' and 'little basis for scientific generalization', and 'they take too long and they result in massive, unreadable documents'. I envisage that the knowledge that will emerge from this study will fall under what Bassey (2010) calls 'fuzzy generalizations'. Unlike scientific generalizations, fuzzy generalizations offer no absolute certainties. Instead they present knowledge as a series of likely events within a context. Thus, any

generalization from this study must be of the form: event 'y' is likely to occur within a context that is similar to 'x'.

The same way as the generalizability of single experiments can be extended by repetition, so too case studies can be part of a growing pool of data, with multiple case studies contributing to greater generalizability (Cohen, Mansion, Morrison, 2011). The study can be seen a single piece jigsaw puzzle forming part of a bigger picture which is formed by hundreds of different jigsaw puzzles. In fact, Robson (2002) and Yin (2009) state that case studies opt for 'analytic' rather than 'statistical' generalization.

In fact, IPA does not avoid generalizations, but on the contrary, prescribes a different way of creating generalizations (Harré, 1979). IPA creates them more cautiously by localising them in the particular.

3.6 Ethical Considerations

As a researcher I had to responsively deal with a series of overarching issues, no matter what the position about the nature of truth and reality may result. Apart from enhancing the authenticity, credibility and trustworthiness (Yardley, 2000; Tracy, 2010) of the data produced, another key concern was the ethics of data collection. Greenbank (2003) states that the researchers need to protect the interests of the research participants. Ethical research practice is a lively process that needs to be scrutinised throughout data collection and analysis (Smith et al., 2009).

I will discuss the ethical issues concerned with my study using Lewis's (2006) framework who identifies six main areas of ethical concerns which are: access/gatekeepers; consent/assent; recognition/feedback; ownership; and social responsibility. I will discuss these areas vis-à-vis my study and how these were implemented during the implementation of my research.

3.6.1 Access/gatekeepers

Access was sought at two different levels. At the primary level, ethical clearance was initially obtained via the University Research Ethics Procedure at the University of Sheffield (see appendix 3). Secondly, after obtaining the ethical clearance from the ethics administrator at the University of Sheffield, ethical clearance was sought from the Secretariat for Catholic Education (see appendix 3). This secretariat governs all Catholic schools in Malta, including the school in which the research was carried out. Finally, when approval was received from the Secretariat for Catholic Education, permission was sought from the Head teacher at the school where the research took place.

At the secondary level, access was obtained from parents or guardians using the information letters (see Appendix 4) approved by the University of Sheffield ethics administrator as will be described in the next section.

3.6.2 Consent/assent

Lewis (2006) and BERA (2011) warn that consent in itself is not sufficient and the fact is highlighted that *informed* consent is needed. Informed consent requires that the participants have information about their opportunity to participate, are aware that they can withdraw from the research, are aware of their role, and are informed with regards to the intended outcome. Alderson (1995) suggest that for the participant to make an informed consent, he must understand and be able to respond to the received information. BERA (2011) also highlight the importance that consent should be voluntary and participants should be clearly informed that their contribution and communications are being observed and analysed for research purposes.

Homan (2001) argues that involving children in research may be very difficult and entails a long process. To achieve this, individual meetings were set up with students and their parents that were identified to take part in this study. These meetings served to: (i) describe the nature of my study and what

participation would entail; (ii) offer guarantees of confidentiality, anonymity and that no student would come to any harm because of participation; and (iii) clarify that students can opt out whenever they wanted without even having to justify why. With regards to the last point, a child's communication of informed dissent may not be easy to recognize as warned by Lewis (2006). Homan (2001) states that the researcher has the moral responsibility to acknowledge informed dissent.

After these meeting, parents and students were given two separate sets of information letters and consents forms (see Appendix 4). Parents and participants were given a week's time to either return the consent form signed and thus acknowledging consent to take part in the study or else not return the consent form thus assenting themselves from the study.

3.6.3 Confidentiality/anonymity/secretcy

Confidentiality of all the students taking part in the study was guaranteed at all times by using fictitious names throughout the writing of the thesis. As stated by BERA (2011), I will acknowledge the participants' right to privacy and will guarantee their entitlement to confidentiality and anonymity. A promise of confidentiality/anonymity/secretcy was given to parents and students in writing through the information letter and consent forms.

The name of the school where this research was carried out will not be mentioned to ensure anonymity.

3.6.4 Recognition/feedback

Participants need to be able to recognize the difference between providing information as part of receiving services and providing information without receiving anything back (Masson, 2001). This research was not presented to the students as part of a routine school activity. The fact that I was not their actual Mathematics teacher helped me in this, since it was easier for the

students to distinguish between their regular Mathematics teacher and myself as the researcher.

It is also becoming widely recognized that participants are entitled to receive feedback from researchers with regards to the conclusion of the study. With young people, feedback can be given to their parents/guardians (Lewis, 2006). At the end of the research I held information meeting with the participants and their parents to share and discuss the findings. Related to this, BERA (2011) states that:

Researchers have a responsibility to seek to make public the results of their research for the benefit of education professionals, policy makers and a wider public understanding of educational policy and practice... (BERA, 2011, p. 10)

3.6.5 Ownership

The researcher is the owner of the data. Kellett and Nind (2001) compare the researcher to a banker, retaining data/information, but giving others access to it. I have full control of, and act as the custodian for the data that was generated by this research. The analysis of the data from the study took place at my home and I was the only person to analyse the data. Anonymization and confidentiality was safeguarded from start to finish of the research. The only people who had access to the data generated by the research were my supervisor and me. Also, parents and guardians who asked to view the data belonging to their son was allowed to do so as was clearly explained to all research participants and their parents/guardians in the information letter.

The data will not be made available for future research projects. The data will be stored safely at my home and locked up. I am the only one to have access. Data will remain locked up for two years and I will destroy the data afterwards.

However, I agree with Lewis (2006) who stated that schools should have access to such information and the right to use it to enhance the quality of their service. Data and information are not the same. Information refers to what is collected, while the process of conversion or extraction from information generates data (Lewis, 2006). Thus, I will share any useful conclusions generated by this research to all relevant stakeholders, including teachers working with students exhibiting with SEBD and policy makers. This will ensure that the conclusions generated from this study can be fruitful to all students including those presenting with SEBD. Whilst doing so the confidentiality of all research participants will not be endangered in any way.

3.6.6 Social Responsibility

My own values and position was acknowledged from the start. The integrity of the research was an over-arching principle throughout. (Pring, 2000)

3.6.7 Responsibilities to the sponsors of research

My research is externally funded by the Maltese Government Scholarship Scheme (MGSS). However, all rights to the data collected will remain my own and they will be stored, used and destroyed by myself. In section 9 of the scholarship agreement between MGSS and myself, it is clearly stated that the research is covered by an Intellectual Property Rights (IPR) and that MGSS will not seek to obtain any intellectual property rights owned by the university and/or the scholarship awardee. It is also clearly stated that nothing in the scholarship agreement shall give the MGSS Board any rights in intellectual property owned by the university and/or the scholar. A copy of the contract agreement for the scholarship was made available to the Ethics administrator at the University of Sheffield.

BERA (2011) invites researchers to fulfil their responsibilities to the sponsors to the utmost achievable standards and keep into account the need of a democratic public to be informed by the conclusions of the research. This will

be possible without endangering in any way the participants' confidentiality and anonymity.

3.7 Conclusion

According to Tracy (2010), two simple questions must be asked when measuring the significance and quality of a study's contribution to knowledge: 'Does this study extend knowledge?' and 'Does it improve practice?' This study will attempt to give a detailed and *thick* description of the educational experience of the students presenting with SEBD in Mathematics using an interpretative phenomenology approach. In obtaining such understanding, teachers and other stakeholders in the educational field might be in a better position to offer students exhibiting with SEBD a better learning experience. This research will build on existing theories with regards to students presenting with SEBD and further problematize current theoretical assumptions. Such contributions will undoubtedly offer new and unique understandings that will emerge from the data analysis.

Chapter 4: An Interpretative Analysis of Data

Chapter 4: An Interpretative Analysis of Data

4.1 An Interpretative Phenomenological Analysis

The aim of this research is to create knowledge about the students' experiences in the Mathematics classroom. As Willig (2013) states, a phenomenological approach has the aim of understanding the experience rather than to discover what is *really* happening. Thus, the methodological framework used aims to construct knowledge of 'quality and texture' of the experience itself. Interpretative phenomenological analysis (IPA) is a type of the phenomenological method that consents that my exploration of students' experiences, must inevitably involve my own view of the world as well as the nature of the interaction between the participants and me. Thus, as discussed in chapter one, it is useful to remember that during the research I was working as a Mathematics teacher, and due to the methods used I spent a lot of time listening to student's video diaries, reflecting on them and conducted two interviews with each student. Hence, during this time I developed a rich understanding of the students' world that has surely influenced my interpretation of events. Hence, the phenomenological analysis produced in this chapter is my own interpretation of the students' experience that is undoubtedly influenced by own life experiences. However, this is epistemologically sound due to the methodological framework adopted.

The theoretical framework adopted to answer the two research questions is founded on a double hermeneutic approach as I am "trying to make sense of the participant trying to make sense of what is happening to them" (Smith et al., 2009, p.3). Thus, in this chapter I present the experiences as described by the students and afterwards interpret this phenomena through my own eyes. Hence, my interpretative engagement with the texts becomes apparent. In fact, IPA does not declare to create a 'definitive' or 'true', construct of the participants' accounts, but instead the results of such analysis are indispensably "a co-construction between the participants and me" (Osborn and Smith, 1998, p.8).

Table 4.1 illustrates the super-ordinate and sub-ordinate themes. It also gives an indication of the incidence of such themes with respect to the four students participating in this study. The analysis in this study does not stop with the construction of such a table, but occurs at two distinct levels of interpretation (see Larkin et al., 2006; Smith 2004). The first level is basically the description of the phenomena being observed, allowing me to enter the students' word. Whereas the second level gave me the license to interrogate and speculate on these phenomena, thus taking me beyond the students' own word and understanding. Hence, the creation of an analysis that is grounded on a theoretical framework that is based on a double hermeneutic approach. This will be presented in this chapter.

Theme	Students
Super-ordinate Theme 1: The Mathematics learning experience	
Sub-ordinate theme 1(i): Students' voices on their interest towards the subject.	David, Neville, Manuel, Kevin.
Sub-ordinate theme 1(ii): Students' voices on activities in the Mathematics classroom.	David, Neville, Manuel, Kevin.
Sub-ordinate theme 1(iii): The level of Mathematics difficulty.	David, Neville, Manuel, Kevin.
Sub-ordinate theme 1(iv): Mathematics' usefulness to students' life experience.	David, Neville, Manuel, Kevin.
Super-ordinate Theme 2: Relationships in the Mathematics classroom	
Sub-ordinate theme 2(i): Interactions between students.	David, Neville, Manuel, Kevin.

Sub-ordinate theme 2(ii): Student-teacher interactions.	David, Neville, Manuel, Kevin.
Sub-ordinate theme 2(iii): Taking control of the classroom.	David, Neville, Kevin.
Super-ordinate Theme 3: Feelings in the Mathematics classroom	
Sub-ordinate 3(i): Mathematics learning as an emotional experience.	David, Neville.
Sub-ordinate 3(ii): Students' voices on different emotions in the Mathematics classroom.	David, Neville, Manuel, Kevin.
Super-ordinate Theme 4: Students' behaviour in the Mathematics classroom	
Sub-ordinate 4(i): Triggers and instances of positive student behaviour.	David, Neville, Manuel, Kevin.
Sub-ordinate 4(ii): Triggers and instances of negative student behaviour.	David, Neville, Manuel, Kevin.
Super-ordinate Theme 5: Experiences of teacher application of the school's behaviour system in the Mathematics classroom	
Sub-ordinate 5(i): Consequences.	David, Manuel, Kevin.
Sub-ordinate 5(ii) Appraisals.	Neville, Manuel.

Table 4.1: Super-ordinate and sub-ordinate themes

4.2 Super-ordinate Theme 1: The Mathematics learning experience

All four participants talked about their learning experience during the Mathematics lesson. On some occasions the students focused on the negative aspects of this, whilst on other instances students spoke positively about this experience. Another aspect worth noting is the students' view of Mathematics as an irrelevant subject that has no connection to their daily-lived experiences.

4.2.1 Students' voices on their interest towards the subject.

Kevin talked about his difficulty in engaging with the Mathematics lesson: *'I do not usually manage to focus during the lesson. This happens particularly during the Maths lesson because I do not like the subject'* (K1.3). However, when he liked the topic being covered his attitude changed: *'I like the subject a lot so I am more focused and I am more active during the lesson. I learn a lot about them...'* (K8.32). Manuel had a similar experience and said that: *'In the Maths lesson, I do not think I am giving the best I can, because I do not like this Probability topic'* (M6.25). My understanding of this is that lack of interest towards the subject brings about lack of motivation; however, it appears that interesting lessons can bring about student interest in the topic being covered.

Kevin also found it difficult to engage in boring lessons: *'Because, as I told you, sometimes we do interesting lessons and other times we do boring lessons. Thus, I do not always pay attention. When I do not enjoy the lesson, I find it difficult. But for the rest all is good'* (K7.31). Manuel also argued in the same manner: *'I do not think I am doing my best in Maths. This is because this topic is really annoying me. It really annoys me'* (M4.8).

David argued that his interest for the Mathematics lesson depends on the topic being covered: *'I think that lessons are enjoyable, but not always, because I do not like all topics. For example, I do not like the graphs topic. On the other hand I like percentages, for example'* (D1.2). David also thought that Mathematics can be frustrating: *'There were lessons that I wanted to go out, I started to do it on purpose to go out. That means I really got bored. I wanted to go out'* (D9.38). Neville also shared a similar thought: *'If it interests me a lot, I will do more. Sometimes, if it annoys me, I do not pay attention'* (N5.15).

Talking about interesting lessons, Neville said that: *'I was helped by the fact that I was interested in the lesson, because I love it a lot'* (N1.3). It seems that Neville loved the subject and enjoyed it sincerely: *'The topic I enjoyed the most*

is algebra. I'm being serious. The most enjoyable topic for me in the senior school was algebra till now. I regard it as interesting and beautiful' (N4.12). Later, during his second interview Neville said that he likes algebra and not graphs '*because Algebra is something we really need more than graphs'* (N9.39). My interpretation of this is that Neville gives more importance to subjects that he thinks he needs for his future ambitions or daily life experience.

Perhaps one of the biggest factors attributing to participants' struggle to engage with the Mathematics lessons is related to not being presented with a meaningful curriculum that is stimulating. Hence, I can understand this as the students become disengaged and losing interest in the lesson. In fact, students have talked about becoming bored and not finding any motivation to work if the lesson is not interesting. Another interpretation can be that students do not understand the Mathematical concepts being presented or they are too complicated, and thus, they become annoyed. In fact, Kevin said that '*... the angels are annoying me because I find them difficult'* (K3.7), however when he understood them he found them '*enjoyable'* and he felt '*comfortable'* (K3.7). Also, David said that Mathematics annoyed him because '*it has a lot of complicated stuff...*' (D3.8). My construction of this is that boredom and frustration are being derived from students not understanding the lesson. I believe that understanding the lesson and finding it interesting are dependent of each other. If the students cannot understand the lesson, they cannot find it interesting, as it will be difficult for them to engage with such a lesson. Thus, perhaps rather than saying that they do not understand the lesson, students say that it was boring and not interesting. This could be another interpretation of events here apart from taking their comments at face value, that is, they get frustrated and bored when the lesson is not interesting. What I am saying here is that maybe the situation is more complex than a single explanation of the situation suggests.

4.2.2 Students' voices on activities in the Mathematics classroom

Manuel, Neville and Kevin described various activities done during the Mathematics lessons. On the contrary, David talked about the lack of activities in his classroom.

Kevin said that if he were the teacher he would *'make the lessons more fun'* (K1.1). He enjoyed lessons that were not routine and the teacher did *'something that isn't done every day.'* (K5.19). Kevin also said that: *'The most enjoyable lesson was last Monday's lesson. Because as I told you, we played a lot of games on Monday and there was a very good game. Thus, we did not get bored. We enjoyed it'* (K6.28). It is not only about enjoyment, Kevin also argued that activities during the Mathematics lesson helped him understand better: *'Now, I am learning a lot during these lessons. They are helping me a lot because I understand with games... That means I am a slow learner. That means I am not able to learn well if I do not play with things during lessons etc.'* (K7.30). It appears here that Kevin made a connection between enjoying Mathematics lessons using activities and understanding.

Also, Kevin spoke enthusiastically about activities that he liked: *'It was like a Mathematical game, but not only Maths. We had Maths, angles, plus, minus, times, division and many other types. We were playing this game and we really enjoyed it. That means that I liked the lesson'* (K4.9). It seems that such games, are offering Kevin with a move away from the usual routine lessons, *'because a game is not like a lesson. It is more like a game. That means you are playing with your friends'* (K5.19). Neville also talked very positively with regards to an activity held at the end of a topic: *'It was useful. We enjoyed it. All the class started to celebrate and I felt really good about it. I did not feel bad at all. It was good'* (N1.1).

Manuel suggested that *'for the teacher to make the lessons more exciting he should give us a quiz and for every question I get right he can give us a sweet'* (M3.6). He also suggested that *'maybe he could bring props to do better lessons. Maybe he could show us how probability happens in reality'* (M6.25).

During his second interview he also gave an example: *'for probability, he brings a dice so that we get to know better. We see it in a real context. So like that we understand better'* (M9.29).

It appears that the activities during the Mathematics lesson have to be suitable or else they will have a negative effect on the student. In fact, Kevin, in one of his Video Diary entries said that the students *'had activities, but they were stupid. Such that no one enjoys them'* (K1.2). Kevin argued that *'an activity can be good when it makes the student more interested, and thus we learn more. It is bad, when other students take over, start talking...'* (K5.21). Kevin complained when the activities were repetitive: *'At the moment the teacher is doing the same games. He can change the game a bit. Because always the same games are a bit boring. For example, yesterday was ok, he changed the game, but only one. But by changing only one game, will not make a big difference, you still end up with the same games. And we do not really enjoy it'* (K7.32).

Perhaps the students regarded activities as a move away from the 'routine' lessons that they fail to engage with. Non-routine tasks give the students an opportunity to engage with the lesson and enjoy it. However, I agree with Kevin when he says that activities themselves have to be meaningful and relevant to students. Doing an activity just for the sake of doing it can be counterproductive. Students will get disengaged from such activities and the risk that they misbehave is increased.

Whilst all the other participants mentioned that activities do take place in their classroom, David, in his first video diary entry immediately stated that *'with regards to activities. I never have during the Maths lessons'* (D1.1). However, even though he did not have activities, it appeared that David thought that resources and activities can help him understand the subject better: *'In order to learn this topic in a better way, maybe videos could help. I do not know. Or PowerPoint?'* (D3.7). He added that this is because he thought that *'things that are animated, with a PowerPoint, on a screen, help me to concentrate better'* (D5.24).

David also argued that activities can help him calm down: *'Well, since I am a bit hyper, the hands on seem to calm me down. Hand on in the sense, mhm, for the three-dimensional shapes, the 3D shapes, and you do the 3D shapes yourself. Not you see them on the board. You do them yourself for example. With the cardboard or something'* (D9.37). According to the student, this helped him: *'... understand more.... for the cuboid, those who see it on the screen [referring to other students], for example, they will not tell you that it has six sides. All they will tell you is that it has four. If you see it on a board, you will only see four. But if you mark them, like you do with the dice, you will see that there are six. Maybe the students will understand it better'* (D9.37). I agree with David that activities can perhaps have a calming effect on the student and due to the nature of the activities themselves (require movement) they can help students like David.

4.2.3 The level of Mathematics difficulty

It appears that choosing the correct level of difficulty is key, as this will give students a fair chance to engage with the topic being covered. However, it seems that students will get disengaged, bored and frustrated if they are not able to understand. All four participants engaged on this theme. Kevin's engagement was the most evident.

During his first interview, Kevin said that: *'I do not really understand Maths'* (K5.23). He also shared the way he felt about this: *'Sometimes I feel frustrated. But the lesson is not always the same'* (K5.23). In fact, Kevin argued that: *'... when I understand them, I find them enjoyable and I am all right. I feel comfortable etc.'* (K3.7). David also talked about how he felt when he was unable to understand the lesson: *'I feel confused. Confused. The fact that I need it, but at the same time I do not like it. I get confused. Confusing. The fact that you need it and at the same time I do not want it. I think that I do not like it so much because it is difficult. The more years that pass, the harder it is becoming'* (D5.26).

It seemed that Kevin found it hard to understand the Mathematics lesson: *'I take a long time to understand... I take a long time to understand'* (K9.43). He also, admitted that since he finds it difficult to understand the subject, he sometimes felt like an observer during the lesson: *'I am not capable of understanding the Maths lesson. I like it; I pay attention during the lesson. Ok, I did not really pay attention, but I enjoyed listening to it'* (K8.34). Similarly, David also found the subject difficult: *'Personally I do not like Maths as a subject, because it has a lot of complicated stuff and open places. I do not like it'* (D3.8).

Whilst talking about the reason for being interested in one particular topic, but not the other, Kevin said that *'they are not the same [referring to different Mathematics topics], in the sense, that you do not need to stay looking for this and that. You only need to think a little. I felt that it was easier'* (K9.39). When Kevin managed to understand the Mathematics lesson, he said that he: *'enjoyed that... I tried to understand and I managed. So, I am trying to get myself more involved'* (K10.44). It appears that understanding and enjoyment are strongly linked to each other. Also, when Manuel was asked to talk about a lesson he enjoyed during the first interview, he also directly linked enjoyment and understanding and gave the following answer: *'When I really understood a subject'* (M5.12). When asked further whether there was anything in particular he liked during those lessons he enjoyed his answer was: *'Nothing really. Because I understood them and I was participating during the lesson. I felt good about it, during Pythagoras'* (M5.13). My construction of this is that being able to understand the lessons gives an opportunity to students to enjoy the Mathematics presented to them. Understanding and enjoyment of the lesson are linked to each other. A student cannot understand a lesson if he is unable to understand the Mathematical concept being covered.

It seems that David was able to understand simple Mathematics involving one-step methods. However, when multi-step methods were used, he got confused:

'...In angles, you have a triangle and then you have a line to find. I find that really easy. 180 minus the angle you have, 120 for example and you are left with 60. I have a good brain. All teachers say so. They tell me, 'You manage to work the problem faster than I do'. But for graphs, the fact that you need to split it into two, you need to do a sort of cross, and then you need to do minus 1 and so on. That confuses me. How they fit it. I am not that certain where they need to go. The Xs and Ys' (D5.27).

Also, Neville stated that *'a difficult lesson really annoys me'* (N6.30). Also, during a particular week he *'disliked all the lessons. Because you need to grab the thing and do this and that. Too confusing'* (N7.32).

My interpretation of this is that a curriculum that is too difficult for the students can cause disengagement. However, one must also be careful to present a curriculum that is cognitively challenging for the students' level of ability and not too easy. Perhaps, here the students are opting for the easier concepts in Mathematics by labelling as boring, confusing and too difficult that curriculum that is challenging and requires more thinking. However, this is their experience and has to be respected as such.

4.2.4 Mathematics' usefulness to students' life experience

Mathematics as irrelevant to student's life experiences was a recurrent theme for all four participants. One can perceive mixed feelings when Kevin, David and Neville talked about Mathematics' importance for their daily life experiences. For example, Kevin said that: *'Maths is good for me, but it is not that important. I will have to drop it in the future, but as a subject I will use it when I grow up. As I already said, you can use everything. I will not drop it now because as a subject it is very good for me'* (K2.5). This feeling of uncertainty with regards to Mathematics can also be noticed when David talked about the three-dimensional shapes: *'I think we are learning this topic so that we will be able to... So that we will know them. It is a topic that can do you good for your future'* (D4.9). Neville also said:

'I am not sure about what problems in the life could be related to this topic. I know that, someone, what's his name? He saw a fly flying in the ceiling. But I am not certain why they did it and the problems etc.' (N7.32).

Perhaps students know that Mathematics is a fundamental requirement to continue their studies, but still they do not see its usefulness to their daily life experiences. Hence, this could have caused this level of uncertainty and contradiction when students talked about this subject.

However, during the various other video diary entries Kevin complained about the uselessness of the topic being carried out in class: *'According to my opinion they are quite useless, the angles... and I do not know why we are doing this topic'* (K3.6). Furthermore, he failed to see how Mathematics can be important in his life: *'Because in Mathematics, not everything we do is useful, in my opinion. In my opinion it is not useful. But if you want to become a Maths teacher, you will need it'* (K4.8). David thought that Mathematics could be useful *'because for example when I will have kids I will be able to help them'* (D3.7). Like Kevin, also mentioned that Mathematics was important *'if you are going to become a Mathematics teacher, yes, you will need it. But I will not become a Maths teacher and I do not think I need them'* (D6.28).

Kevin could not see any connection between his future ambitions and the Mathematics lesson: *'Because I want to become a chef when I grow up, and Maths isn't really relevant to what I want to do'* (K5.22). However, it seemed that Manuel managed to see the importance of Mathematics for his future ambitions: *'I go to school to learn... To have a future. I would like to have a future in business and learn Mathematics, English and Maltese. This is because for business you need them'* (M2.3). It appeared that Manuel knew what he wanted for his future and is quite determined: *'Because I want to become a businessman like my father. It is important to learn Mathematics because I will need it, but sometimes I put it aside because I do not like it'* (M2.4).

Kevin talked about the negative feelings associated with doing things that he does not see as relevant for his life: *'I feel helpless about it, since I will not need it'* (K5.22). He also said that: *'I feel sad. It does not make any sense. Because they will be of no use to me. Not all. For example, algebra will never be useful. Not for all professions at least'* (K5.24). Manuel also talked about how he felt about this during a video diary entry: *'It annoys me a little bit because you do not need angles in your life. I want business. I do not need angles for business'* (M3.5).

Kevin would like the Maths lesson to contain more basic material that could help him with his daily life: *'This topic, for me, counts for nothing. Because I need more basic things. That means I will need it, but not for my everyday life'* (K7.30) According to Kevin: *'because in your life, you will have plus, minus, division... you will not have angles or something similar. You will only need times and so on'* (K9.40) He continued by giving a concrete example: *'For example for doing the bills'* (K9.41). During his second interview, Manuel also had a suggestion to make:

'For example, from Form 1 onwards, they say, for example, who wants to do that subject and so on. They see and they split Maths for different students. For example, I will have Maths for business' (M9.30).

Kevin also admitted that when he does not regard a topic as interesting, he sometimes does not pay attention: *'But because it is of no use to me... thus I pay attention, but sometimes I do not.'* (K8.33) However, when Kevin manages to see a connection between the topics carried out in class and his future ambitions his attitude towards the subject changes: *'At the moment for this topic, I can find some use for it. Because, for example, I want to become a chef, and you need to find out how large things are to be done. Their radius for example, so it is a good topic'* (K10.45).

During the first interview, when Manuel was asked about his behaviour during the lessons that he felt were irrelevant for his life, his answer was: *'I do not*

take part in the lesson. I stay watching the PowerPoint and so on, but I do not write' (M5.16). On the contrary his answer with regards to the lessons he felt were relevant to his life was: *'I take part in the lesson. I write, I understand, and if I do not understand something, I ask the teacher'* (M5.16).

It seemed that Neville had a different view on the usefulness of Mathematics for his life and he thought that *'Maths is the most important lesson. This is because there is a lot of Maths in the world. Even the jobs. They will tell you that you require Maths or else something similar'* (N2.6). However, on various occasions he was not sure how he needs the topic being covered. For example, whilst talking about the probability topic he said: *'Personally I do not see how I need this topic in my life. But for example, in a casino, they would need it'* (N4.10). In his second interview he also challenged the examples being given in class and he thought that they were rather superfluous:

'... When we have a problem we do not stay doing the Maths and going mad about it. We do not do this and that. We just do it. For example, for the dice we do not stay counting the chances. I just throw the dice and that's all' (N5.27).

Neville also had this to say about the usefulness of Maths in his life: *'I feel that without it you cannot do anything. Literally, without it you can do nothing'* (N5.25). Here Neville was perhaps trying to impress me, by saying that Mathematics is very important and essential. However, when one reads his previous thoughts on the subject, he is not sure how the Mathematics being carried out in class can help him. My construction of this is that the students are failing to link what they are doing in class with their real-life experiences or only do so at intervals. This does not necessary mean that what they are doing in class is irrelevant, but it appears that they are failing to make the connections. However, as Neville warns, such links must not be superfluous, but must make sense. It seems that presenting the students with irrelevant Mathematical content or content that they are not able to link with their real-life experiences will make it more difficult for them to engage.

4.3 Super-ordinate theme 2: Relationships in the Mathematics classroom

Teacher-student, student-student interactions are an integral part of the Mathematics lesson. In this section, I will illustrate how students talked about the relationships with their peers and their Mathematics teacher. Kevin, David and Neville also talked about the power struggles that arose with their teacher.

4.3.1 Interactions between students

Sometimes relationship with peers can have beneficial outcomes. Kevin said: *'I used to sit near a student and he used to help me a lot'* (K1.1). Manuel also talked about being helped by his peers: *'The lesson was enjoyable. My friends were helping me. I was enjoying the lesson and the teacher helped me a lot and my behaviour was very good'* (M1.1).

Indeed, Neville also talked about the benefits of peer interactions. As this excerpt exhibits, this could be peer tutoring:

'For example, if they say, 'We need to do that this way.' I would know, for example, I would not have known that it should have been done that way. That means that they [other students in class] come up with something that I would not have thought of. So I learn from it and that is good' (N5.18).

However, on other occasions students described their relationship with peers in the class as negative, leading to distractions. On several instances, Kevin, Manuel, David and Neville talked about being distracted by peers. In fact, Kevin said that *'There is a boy and he distracts me etc.'* (K3.7). In another video diary entry, he described such distractions: *'They talk, shout, and they annoy me. Because I try to pay attention, but they do not allow me to cooperate'* (K4.9). Neville also talked about being annoyed by such peer interactions: *'What annoys me? I already said. People who distract me and*

talk' (N4.12). However, such distractions are not just one-way, but could also be from both sides as Kevin acknowledged the fact that he does talk back to his friends: *'My friends distract me a lot. We talk with each other. We talk a lot etc.'* (K7.32).

Indeed, Manuel talked about various similar incidents of negative peer interactions in his class: *'Sometimes my friend, my neighbour, Tom disrupts me and he annoys me because I want to pay attention'* (M1.1). Such interactions can lead the student to a loss of interest in the focus of the lesson: *'I sit near Tom and he distracts me a lot. This is because we stay talking together and we distract each other. We do not do the assigned work, even though sometimes I do it'* (M3.6). Also, such interactions can lead to **deviant and off task behaviour**: *'... there is a student next to me, I grab the biro, and pinch him in his arm with it. As a joke'* (M5.12).

Interactions between his peers can also trigger negative feelings. Neville and David talked about feeling nervous, anxious and aggressive:

'When we have the lesson, normally, as long as there is no one who is making me laugh, I try to really pay attention. But when there is a student who distracts me and annoys me. He makes me nervous and anxious and I lose

REFLECTION BOX:

In this paragraph I refer to a particular behaviour as *deviant and off task*. Such behaviour is regarded as deviant/off task at school by educators and hence, once again, I am adopting a teacher's perspective whilst interpreting students' experience. However, it is clear that the student interprets this as a joke. Once again, I am aware that there exist different interpretations and my interpretation is not exclusive. Whilst working on the analysis and following discussion with my supervisor I was aware that the interpretation that I brought heightened my awareness of just how tied my interpretation was to a teacher's perspective and the dominant discursive constructions that shape educational perspectives.

my temper, I start to talk and I start distracting others. But when there aren't other students who distract me, I really manage to focus and pay attention to the lesson' (D1.1).

'Who does that on purpose to distract me annoys me. I feel like banging him on the wall' (D5.17).

'... I have a trigger. When someone starts to annoy me, I will be, I will be normal, but when they make my trigger go, sort of making my automatic circuit breaker go, then I will not reason things out anymore' (D9.44).

'I behave according to how my friends treat me... I am not going to fight for nothing. However, when thinking about something that happened in the past, for example, if someone offends me by mentioning my departed loved one, I will become aggressive' (D11.51).

'On the other hand let me mention one thing that has been annoying me for a long time. Because sometimes they stay talking to me, they stay... Sometimes they really make me angry and I feel like hitting something' (N4.10).

David also talked about his experience with dealing with the class environment:

'I think that everything distracts me. Even if there is a chair being moved. If I am focused on the lesson, I try my best not to get distracted, but if someone tries to make the class laugh, I will laugh. I try to control myself and not laugh, but I will laugh. They tell us not to laugh and such stupid things, but I will laugh' (D3.8).

It seems that due to his difficult and often problematic relationship with his peers David thought that isolating himself would be more beneficial to him:

'sometimes I say that I'd better have one-to-one. Sometimes that's what I say. Yes. Better one-to-one rather than with the class' (D9.45). He goes on to explain why he thinks this is the best solution for him: *'Because no one will annoy you. Nobody will annoy you. You will annoy no one yourself. When something happens you can talk to him'* (D9.46). Perhaps this can be interpreted as a cry for help from David. It seems that he wants to isolate himself to avoid negative interactions with peers and thus avoid getting into trouble.

David also admitted that he also distracted others from paying attention during the Mathematics lesson. In this excerpt, David described how he distracted others:

'Sometimes I did distract my friends during the lessons. There are many ways in which I did it. For example, I do a gesture, or act the fool, or talk, or make them laugh by saying something, or I throw something; a paper plane or a squashed up paper. Yes, I know that I distract others and the teacher gets annoyed. And sometimes he kicks me out because he will need to get on with the lesson. Obviously. Yes I do distract others' (D3.8).

Kevin also talked about peer-pressure and his choice to behave well during the Mathematics lesson: *'I am doing the right thing according to myself. I do not care what others do'* (K3.6). Furthermore, Manuel used his peers to justify his disruptive behaviour: *'Thus, maybe I distracted someone else. Maybe my friends. But I do not think so because he doesn't like this Maths topic as well'* (M6.23).

It appears that Kevin distracted others to get back at them: *'I think that they should not stay distracting others if the others want to pay attention. So I do the same to them'* (K4.10). In fact, he admitted that: *'Yes, I try to pay attention, and they distract me. So, when they are paying attention and I am not, I distract them'* (K5.19). Perhaps Kevin is trying to justify his own behaviour by arguing that he only does it as revenge to get back to his peers.

4.3.2 Student-teacher interactions

It appears that relationships between the students in class and the teacher can be complicated and during various video diary entries the students talked about difficult and turbulent relationships with their teachers.

Kevin described some very intolerable situations: *'I do not have a good relationship with the teacher. Last time I insulted him'* (K1.1) and also described negative feelings associated with such turbulent relations with his teacher: *'I fought with the first term teacher and I did not feel good about it. I did not feel useful for the lesson'* (K1.2). Manuel also described a clash with his Mathematics teacher: *'The teacher turned and he saw the paper flying and he thought that it was me that threw it. He told me to go in front of the Head of School, I got angry and I said a rude word in a low voice and he heard me'* (M5.19).

David also talked about his difficult relationship with the Mathematics teacher:

'Because he is not a person that understands you. Not that he does not understand you, but he is not a person that is outgoing with his students. He does not understand you well, for example, from what you are going through' (D5.11).

Kevin also described his struggle in coping with changes in teacher. For some reason his Mathematics teacher changed and this did not help him to build a positive relationship: *'Now, because we changed the teacher, I do not feel good about it'* (K1.3). However, after some weeks he began to say that his relationship is changing for the better and started describing a totally different relationship: *'With this teacher, slowly, slowly, I am building a positive relationship. It is always the same for me. At first I start negatively, but then it gets positive'* (K5.16). Perhaps Kevin found it difficult at first to build a positive relationship with his teacher, but eventually managed to build a positive one. It seems that stability is important for Kevin as he takes time to build a

relationship with his teacher. Thus, having a change in Mathematics teacher in the middle of the year did not help him.

Kevin also said that a good relationship with his teacher can be beneficial: *'I enjoy it when I have a good relationship with my teacher because it will be better... how can I explain this? You will enjoy it better when you have the teacher on board with you'* (K5.11). He also shows empathy towards the teacher when others misbehave: *'They make the teacher very angry, they act deviant and it is not right for the teacher. So I stay one step back, because it is wrong to stop his lesson when he is trying to teach us. It is not worth doing bad things'* (K6.28).

David also talked about empathising and understanding his teacher:

'The same way every student has problems, even the teachers have their own. That means that even we need to understand them. In the sense that if you see that the teacher is having a bad day, you do not make it worse for him. But you try to help him as well' (K9.35).

Neville spoke about the academic benefits of having a positive relationship with the teacher: *'... if you do not have a good relationship, for example, you have a question and you will not want to talk to her because you will not have a good relationship with her'* (N5.16). Similarly, when asked whether having a positive relationship makes a difference for him, Manuel said that: *'I am more confident in Maths. If I have any problems, I always tell him to help out'* (M5.10). Manuel also admitted that due to the positive relationship with his teacher he finds it more difficult not to do his work: *'Our teacher is really friendly, so you cannot tell him, 'I did not do the HW because I did not feel like it'* (M1.2). Perhaps here it can be argued that the motivation to learn is relationship dependent. It appears that if students have a good relationship with their teacher they will be more determined to learn and ask questions.

Similarly, David also talked about the positive effect that a good relationship with the teacher could have on his performance in the subject:

'They [the teachers] need to understand you and accept you the way you are. For example, if a teacher gets along well with me, not in the sense that she continues to joke with me, but she understands you, they will know what you have, I love them, not actually love them, but I will have a good relationship with them' (D5.15).

It seemed that a positive relationship can also promote positive behaviour. During an interview, whilst Kevin was describing how his relationship had improved with his teacher he said that now: *'Instead of talking and so on. I went towards the front of the class... And I felt more close to the teacher. That means we talked to each other. Not like before, when he used to only shout at me'* (K9.36). A positive relationship also promoted a positive environment: *'The best part of the lesson is that the teacher starts laughing with us. He jokes a lot. But we still managed to do the lesson'* (M3.6).

Manuel spoke fondly about an occasion when his teacher praised his work: *'For example, yesterday I did very well, the teacher himself told me. He told me that if I continue like this, mhm, I will pass'* (M11.36). David acknowledged the fact that the teacher changed her attitude towards him when he did well and participated: *'The teacher enjoys it more when I participate and I am part of that class... Even when, for example, when he talked to me, he does not shout at me as when I do not obey'* (D8.34). Neville summed this positive feeling related to the teacher's acknowledgement of good work by saying:

'I liked all the angles and construction lessons because they are interesting. The part that I enjoyed the most was yesterday, when there was a question and I said the most difficult part, and the miss said, 'Like Neville said!' I felt really good...' (N6.35).

Kevin and David also talked about how the teacher's mood and attitude can influence the lesson and their performance: *'Because the teacher is moody. He gets easily angry with the same students and so on. And then he comes during the lesson and he is sort of like this. Boring. We do not do a lesson'* (K9.42). Teacher's mood can also make the student nervous: *'If the teacher has a bad mood, I end up getting nervous'* (D1.1). David also talked about negative behaviour to counteract his teacher's 'mood of shouting': *'It depends. If the teacher has a good mood, I will enjoy the lesson. But if he has a mood of shouting at you if you talk, I will start shouting myself and then I get into a lot of trouble and talking to'* (D5.13).

It is also interesting to note down that according to Neville, a good teacher is one who helps you: *'If she does not tell you, she is not a good teacher. Because all teachers need to explain to you'* (N4.11).

It appears that the relationship between the student and the teacher is of vital importance in the classroom. Here students are making a very strong point about how they feel about their relationships with their teachers. Negative relationships can have a harmful effect on student's performance and can put the student at risk of exhibiting negative behaviours. In fact, students have talked about positive behaviours and more motivation to learn linked with having a good relationship. Also, it appears that student empathise with

their teachers when they have a good relationship with them and thus find it harder to exhibit negative behaviours. Through experience **as a Mathematics teacher**, I tend to agree with Manuel that students who respect their teacher will find it harder to exhibit bad behaviours in class.

REFLECTION BOX

It is once again clear here that I am interpreting the students' experience from a teacher's perspective. In fact, I clearly state that I am making this particular interpretation from the perspective of someone who has experience *as a Mathematics teacher*. Thus, I am being very clear with regards to my positionality with the students' experiences being interpreted.

4.3.3 Taking control of the classroom

Issues of a battle for control in the classroom cropped up on various occasions during this study. The teacher wanted to assert his/her authority in the classroom and on the other hand, the student wanted to take control.

When asked why he does not report other students who are disrupting the teacher, Kevin had said: *'No, I take care of it myself. I leave the teacher out of it to avoid trouble'* (K5.19).

David also talked about taking the situation under his own control: *'Maybe I distracted the teacher, because I was trying to stop others, but there is nothing to do about it'* (D8.34). My interpretation of this is that perhaps students have lost their trust in their teachers to deal with certain situations involving their peers. Another interpretation could be that the students want to show that they

are in control and they can deal with their peers on their own. ***Given that I was a teacher myself***, I find this worrying. Perhaps this can lead to arguments and negative behaviours between peers. The student does not trust his teacher and settles the score on his own. Through experience, this can lead to trouble between peers. This is also linked to what I discussed earlier about the importance of building positive relationships in class. If positive relationships are built, students will trust their teacher.

Kevin and David also liked it when the teacher 'gives up' some of his/her power and allowed the student to help. Kevin said that: *'... the teacher has allowed me to erase the white board. I enjoyed this and was not annoyed. I enjoyed it,*

REFLECTION BOX

My experience as a teacher leads me to worry that students deal with a situation themselves without involving the teacher. However, this is my interpretation of events influenced by a particular experience or experiences I might have had as a teacher. However, students can regard this as being independent and empowered to take care of themselves.

an adventure' (K6.29). Also, David spoke fondly about when the teacher allowed him *'to control his laptop...'* (D1.1). My construction of this is that the students feel useful and this could be the reason why they felt positive. Perhaps for them it is an opportunity to do something positive during the Mathematics lessons and an opportunity to help their teacher rather than getting into trouble. Thus, it appears that when the teacher in a tactful manner 'gives up' some of his/her power to the students, this can reduce tensions in the class. Kevin and David felt important to the class when they could erase the white board or control the laptop. Both actions do not mean that the teacher has lost his/her authority, but it appears that such acts mean a lot to the students. Good acts can compensate for the times these students misbehave or find it hard to meaningfully engage with the lesson. Thus, talking about instances where they felt 'useful' can be interpreted as an opportunity for the students to be proud of an act they did rather than talking about negative incidents.

Also, Kevin felt good when the teacher listened to him: *'Because I spoke to the teacher and he is doing them better. He is doing as I told him. Lessons with... games etc.'* (K7.30). Later, during his second interview Kevin said that: *'I enjoyed it that he listened to me'* (K9.37). Perhaps this can be seen as a way forward; building a positive relationship with his teacher based on communication. It can be interpreted that Kevin is highlighting the importance of two-way communication in his relationship with his teacher, and the importance of being listened to.

David also talked about his 'power' over the teacher: *'When I have the mood to make teachers go mad, I do so'* (D1.4). I find David's comment about having the power to make teachers go mad very worrying. David feels that he is in control over the teacher and whether or not the teacher is allowed to do the lesson. Perhaps this can also be interpreted as a cry for help. David's difficulty to build a positive relationship with his peers and teacher, as seen in the

previous two sections, is eliciting in him this sort of reaction. He wants to show that he is in control and has the power of his teacher, even though in reality he is finding it difficult to integrate meaningfully in class and as he said previously he would prefer having lessons on his own. It appears that he is down playing his difficulties and apparent weaknesses by saying that whenever he wants he can take control of the situation.

REFLECTION BOX

There may be multiple interpretations to David's comment here. Once again I am constructing my own interpretation, but I am very well aware that there might be other ways of understanding what is communicated here.

Neville complained about not being given the opportunity to share something he knew before the teacher explained it:

'But the most annoying thing is that sometimes when you want to say something, teachers tell you, 'No, I want to continue with the lesson, I do not want to listen to you.' Or else, once I said, 'Miss, miss I know how to work it out.' Or for example the algebra, no not the algebra, something else, I knew the equation, I knew how to work it out and do it, formula! Formula not algebra and I was saying 'Miss, Miss, Miss!' and she tells me, 'I do not want your answer, I do not want, I will explain!' (N4.13).

He went on to refer to this as *'the teachers' rule'* (N4.13) implicating that only the teacher can explain and that it is a no-go zone for the students.

4.4 Super-ordinate theme 3: Feelings in the Mathematics classroom

Students talked about how they feel during the Mathematics lesson during various video diary entries and interview sessions. In this section I will illustrate how feelings are an integral part of the Mathematics lesson.

4.4.1 Mathematics learning as an emotional experience

Sometimes students talked about not being able to follow the Mathematics lesson because of unmet needs, often related to the way they were feeling.

David talked about this in his video diary entries: *'Sometimes when I feel down, for example, when I have a headache, I do not feel like staying in class. I do not feel like listening to anyone because when I have a headache, it is not a mild one. When I get a headache, it is a migraine'* (D1.3). On other occasions he described himself as hyper and going mad:

'Sometimes I am hyper, going mad and sometimes I am good, quiet and settled. Ready for the lesson. I behave in this manner depending on a lot of factors. If I feel angry, or something has happened to me and I do not feel like it on that day. I will be angry and behave in a different manner in class' (D7.31).

He also described himself as feeling destroyed:

'I am bored. Sometimes I feel destroyed as well. I do not feel like doing anything. For example, sometimes he [the teacher] tells me to sleep, but I do not feel like sleeping. I tell him I want to go out. I feel bad, sort of destroyed, I feel sort of having coke. Not in that sense. But sort of. Do you understand? Really sad' (D9.39).

It seems that sadness also prevented him from working: *'When I am sad, I would want to do nothing. I would want to put myself like this on the table [putting his head on the table] and just stay like this'* (D9.42). Neville also talked about times when he did not feel in the mood of doing a Mathematics lesson because he felt sad and angry: *'When I am not happy, I do not feel like doing anything'* (N9.42). He also describes this feeling: *'I start quiet, but I will be angry in my inside. I say, 'Oh, how annoying, hope the lesson passes quickly, I do not feel like doing anything...'* (N9.42)

David and Neville said that if they were not in the mood for the lesson since they had negative feelings, they would not manage to engage with the lesson. Perhaps, emotions play an important part as to whether or not students will engage with the lesson, irrelevant of how good the lesson is.

When I was a teacher, I often overlooked and gave little importance to how students are feeling. Most of

the time, a lot of importance is placed on the actual pedagogical aspect of the lesson delivery rather than how the students in class are feeling. For David, this could also be interpreted as his body shutting down and being unable to follow the lesson.

REFLECTION BOX

Here, I also reflect on my own personal experience of ignoring how students are feeling. I am well aware of this and once again it is evident that I am interpreting data drawing on my experience as a teacher as a reference point for my sense making.

4.4.2 Students' voices about different emotions in the Mathematics classroom

Students talked about various instances when they felt happy and enjoyed the Mathematics lessons. Pleasure and enjoyment can be caused both by positive incidents in the classroom, but also by negative instances as the following example shows. Indeed, David said that: *'... I enjoy being kicked out of class. I like being kicked out of class because I would need to calm down'* (D1.2).

However, most of the times, the students got their enjoyment from the Mathematics lesson in itself. All the students exhibited satisfaction at being able to work and understand the topic and this is evident here: David talked about working and enjoying it as these two excerpts show: *'I was working, I was enjoying it, and I was getting involved in the subject...'* (D8.33). Also, *'I enjoyed doing them, I worked with my teacher and so on'* (D12.54).

Kevin also talked about enjoying himself during the Mathematics lessons: *'I am enjoying myself during these lessons. I behave well because I would like to try and learn'* (K3.6). This enjoyment is also related to the fact that he is able to understand: *'... when I understand them, I find them enjoyable and I am all right. I feel comfortable etc.'* (K3.7). Also, games during the Mathematics lessons increased this feeling of enjoyment: *'We were playing this game and we really enjoyed it. That means that I liked the lesson'* (K4.9).

Just as Kevin, Manuel linked enjoyment to understanding of the Mathematical content: *'Nothing really. Because I understood them and I was participating during the lesson. I felt good about it, during Pythagoras'* (M5.13). Manuel also talked about the gratification he gets by getting rewards during the lesson: *'Last week we had a Maths lesson and I really enjoyed it. The teacher gave us a sweet for every right answer we got. My behaviour was good because I was enjoying it and I understood the topic more because I was given sweets'* (M1.1).

Neville was specific in singling out a topic that he liked: *'The most enjoyable topic for me in the senior school was algebra till now. I regard it as interesting and beautiful'* (N4.12). My construction of this is that most often positive feelings are directly linked to the understanding of the lesson. If students understand the lesson they manage to engage and enjoy it.

Negative feelings were associated with being given homework. David, Manuel and Neville talked about this: In fact, David said that he feels confused and it is hard on him when he is given a lot of HW:

'... sometimes I feel that it is hard. This is when they give me a lot of HW and I am not good when it comes to doing a lot of HW. When I come to do the HW sometimes I feel ehh... Confused.... I do not know why' (D2.5).

Manuel spoke negatively about being given HW: *'...I get bored doing HW during my free time'* (M1.2). Neville said that *'if I do not have HW, I go home happy and so on'* (N5.23).

Kevin, Manuel, Neville and David also talked about negative feelings associated with the Mathematics lesson, mainly those of boredom and frustration: David said that *'sometimes I get bored during the Maths lesson'* (D2.6) and *'It annoys me. I do not feel like it'* (D7.30). Manuel also shared the same feelings of boredom: *'Everyone gets bored during the lesson. I do not know why we need two-dimensional shapes'* (M4.9) and *'thus, we do not need it when we grow up. Thus, I get bored during the Maths lesson'* (M6.24). Agreeing with David and Manuel, Neville also talked about feeling bored: *'That means that sometimes I talk, because I get bored... And I get really annoyed when she continues repeating things...'* (N7.33). Finally, Kevin talked about frustration: *'Sometimes I feel frustrated. But the lesson is not always the same'* (K5.23).

David talked about how his feelings influenced his performance in the lesson: *'During the lesson, it depends on my mood on how I behave. If it happens that on a particular day I feel aggressive, I will also be aggressive during the lesson. But, if I feel all right on a particular day, happy, I will do well during the lesson'* (D4.10). His feelings also affected his behaviour during the lesson: *'The way I behave is not always the same. Like I have always said, it depends on my mood on the day. It depends whether I am happy, I am sad, I am aggressive. It always depends on this'* (D10.48). This can also be interpreted as David using his mood to justify whether he engages with the lesson or not. It could be that when the lesson is of a higher cognitive level than his actual ability, he will disengage and use his mood as an excuse for doing so.

This can also be true for Kevin who also talked about not feeling good during the Mathematics lesson: *'I did not feel good during the lesson. I would have changed, with regards to Friday's lesson, the way in which he [the teacher] teaches us. On that day he did not teach us well'* (K1.2).

All four students also talked about getting angry and aggressive during the Mathematics lesson on various occasions as the result of different situations. Firstly, it seemed that the teacher can trigger the feeling of anger. David said that: *'If the teacher is aggressive, I will become aggressive. Then the lesson will go wrong and I will start distracting others'* (D5.14). He also talked about trying to avoid confrontations with his teacher that can escalate to aggressive behaviour:

'When I get angry that is what I do. I lose control. And sometimes it is better that I say, 'Ok, you are right.' Rather than letting things get out of hand. Because there will be a lot of yelling that it is not true, and I lose control. I start yelling, I lose control and I would not know what I am doing' (D9.40).

Kevin talked about fighting with this teacher and the negative feeling associated to this: *'I fought with the first term teacher and I did not feel good about it'* (K1.2). Neville was also angry for not being allowed to share his explanation of a Mathematical concept: *'That really makes me angry, when she does that. I wish she would tell me, 'Ok, let me listen to you'* (N4.13).

When asked how he felt about not being trusted by his teacher during the second interview, David said that he felt very aggressive about this:

'Sometimes I get angry. Sometimes, I feel sad. Sometimes I am sad and become more aggressive. I become aggressive sometimes, not always. Sometimes I start throwing things. Not chairs, a rubber for example. I start throwing things. A piece of paper, a rubber' (D9.41).

Kevin also talked about feeling sad because the teacher did not bring him the notes he was promised: *'I felt sad because he did not get them for me'* (K5.17).

Moreover, David talked about instances when peers in the classroom triggered negative and aggressive behaviour. David talked about his struggle to control his anger when others distracted him or provoked him: *'I get angry because when I am paying attention, then the others will distract me'* (D5.16). His mood also effected how aggressive he was with his friends: *'If I have a good mood and they make me angry, I will have control. But if I have a bad mood and they make me angry, if I have the mood to fight, I will fight'* (D5.21). David also said that anger is caused by his interactions with others and thus he is not always angry: *'It does not come on its own. It is not like when you have a depression and so on. But, for example there is someone who is picking on you all the time, he will make me really angry'* (D5.22). This can be linked to previous data when David said that he would prefer to be isolated and having lessons on his own. It seems that certain interactions with his peers triggered in him uncontrollable negative feelings that lead to undesirable behaviour.

Talking about an incident with his classmate, Manuel also talked about anger provoked by his peers: *'I got angry and I said a rude word in a low voice and he [the teacher] heard me'* (M5.19).

David also talked about uncontrollable behaviour related to anger:

'When I am aggressive, I start shouting, sometimes even with the teachers. Whoever talks to me, I will snap at him. I will not talk to him: 'What do you want?' But 'What the hell do you want?' That's it... I feel like there is someone inside of me...' (D9.43).

He also goes on to say how he felt about this:

'The way I feel is linked to the way I am. I react to the lesson. For example, when I am aggressive, I do not feel good; I feel as if I lost control, I am not going to do anything, better not. When, for example

I am sad, I do not feel like doing anything, I just put my head like this [putting his head on the table]' (D10.48).

Finally, he talked about different feelings associated with him being angry:

'The way I feel is not always the same. Sometimes when I am aggressive, I feel good that I am aggressive, sometimes I feel bad, and it is not always the same. Sometimes I feel exhausted; I do not feel like doing anything... If the teacher talks to me, I either do not talk to him back or shout at him back' (D11.51).

This can be interpreted as a cry for help made by David. He is sometimes unable to control his anger feelings and is unable to deal with it.

It appears that interactions between the teacher and the students in the Mathematics classroom gave rise to different feelings; these can be either positive or negative. There is a strong dominance of feelings when students talked about their educational experience in Mathematics. Perhaps the ways students feel is linked to the way they perform in the subject.

4.5 Super-ordinate Theme 4: Students' behaviour in the Mathematics classroom

Students talked about their behaviour on numerous occasions during the video diary entries and interviews. These will be discussed in this section.

4.5.1 Triggers and instances of positive student behaviour

It appeared that instances when the students are engaged, interested, and enjoying the lesson promoted positive behaviour. This is what Neville said with regards to a Mathematical activity in class: *'... with regards to behaviour we can say that I was really interested. That is, I wanted to win a lot...I wanted to win a lot a lot! I felt really... really concentrated and I wanted to win a lot' (N1.1).*

Manuel linked good behaviour with enjoying the Mathematics lesson: *'My behaviour was good because I was enjoying it and I understood the topic more because I was given sweets'* (M1.1). Indeed, Kevin also exhibited positive behaviour because he was enjoying the lesson: *'I am enjoying myself during these lessons. I behave well because I would like to try and learn. In the past I did not make any effort, and did not try, but at the moment I am learning a bit'* (K3.6). Enjoyable lessons also increased David's engagement: *'The lessons were more fun and I was more focused on the lesson'* (K9.37).

David also talked about positive behaviour during lessons he was interested in: *'This week, there wasn't a lesson that I did not like. I liked all the lessons because they were really interesting and I tried to behave in the best way possible in the classroom'* (D8.33). Neville and Kevin talked about good behaviour associated with topics and lessons they liked: *'... according to me, my behaviour was good during the lessons. Because I like Maths a lot'* (N1.3) and *'I am behaving well in my opinion, because I like the topic'* (N3.7). Neville also said that it does not make any sense misbehaving when you like a particular topic:

'Because if you like it, it does not make any sense that the teacher needs to tell you to stop talking. It does not make sense being asked not to talk and you love the lesson. This will never happen. That is, if you love the lesson, you will not get a break in or anything, because you behave well and do your work well' (N5.29).

Kevin shared the same thought as Neville: *'I like this topic a lot. So, I do not act deviant and so on'* (K10.45). Indeed, Manuel said that his behaviour is dependent on the topic being covered: *'Sometimes it is good, other times it is bad. It depends on the topic being covered'* (M5.21).

It seemed that the students' behaviour was strongly dependent on how interesting the topic was to them. Interesting topic would enhance student engagement. However, one has to reflect on what the term 'interesting' really means here. Interesting for students could mean lessons that they understood

and were able to engage with. If lessons were too difficult or beyond their level, students might be more inclined to say that the lesson was not interesting and thus they misbehaved and did not pay attention. They might have felt awkward to say they misbehaved and do not follow the lesson because they did not understand.

Neville felt that it is more important to understand the lesson rather than behaving well: *'I do not know. I do not know how I behave. I will start to say that I behave well but, you know, I do not really care. What is really important to me is that I understand and I know. If I misbehave, I do not care'* (N4.11).

It is also interesting to note how Manuel measured his behaviour: *'This week my behaviour was good. I did not get anything. I am not getting any serious consequences, so that means that I am good'* (M7.25). However, this did not mean that his behaviour was good. He did not get caught doing bad things and thus did not get any serious consequences.

During his last video diary entry, David made a very interesting observation:

'Since, this is the last time I am doing this type of interview, mhm, I would like to say thank you to the teacher for doing them. This is because this helped me as well. In what sense? Mentally. That is even during lessons I was behaving better... I do not make other people laugh and distract others so much anymore. Because these recordings made me reflect' (D12.55).

My interpretation of this is that reflecting on his behaviour during his video diary entries helped him improve his behaviour. Kevin also reflects on his behaviour: *'When you are well behaved, you do not just do it for yourself, you do it to learn and to be better at school and so on'* (K8.34).

It appears that lessons that are engaging, *interesting* and enjoyable will promote positive behaviours and keep students away from deviant behaviour. Perhaps this seems obvious, but one must not take it for granted. This requires a lot of preparation from the teacher's part and places a huge amount of responsibility on the teacher. If the teacher delivers lessons that are interesting, it seems that the risk of negative behaviour will be reduced, thus making the educational experience for all students in class a more meaningful one. Also, this will strongly impinge on the educational experience of students exhibiting with SEBD whose risk of exhibiting negative behaviours will be reduced, and thus be put at a lesser risk of exclusion.

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What is an *interesting lesson*? What is interesting for some might not be interesting for others. Here I am referring to lessons that are meaningful for the students and that students manage to engage with. I am well aware that this is very difficult to achieve. What is interesting for one student might not be interesting for another one. My suggestion is for the teachers to use various methods so that they manage to capture the interest of the different students in class.

4.5.2 Triggers and instances of negative student behaviour

Apart from peers, as discussed previously, students talked about other instances that promoted negative behaviour. Many often these were minor distractions that however caused disruptions to the lessons: Neville described the following minor incidents in the classroom: '*... sometimes, I see something funny and I will turn onto someone and tell him, 'Listen look at that'*' (N4.14). Another minor distraction mentioned was talking to other peers: '*What distracted me from my attention towards the lesson were small things. For example, when someone talked to me or I talk to someone else. This happens when, for example, I see something funny, or for example, I would have invented something up and I would want to share it with my friends*' (N7.33). Neville also said that sounds from outside the classroom also distracted him:

'...Some sounds from outside, or for example, I see someone outside, or someone knocks, and I will have to look at him for sure, or if I am writing and someone calls me' (N12.50). David said that he distracted himself: 'I usually get distracted on my own' (D4.9).

As illustrated earlier, it appeared that interest towards a topic caused positive behaviour. Conversely, disinterest towards the subject promoted negative behaviour: *'If I do not like the topic, if I do not like it, I would pay less attention for sure and I would talk to my friends during the lesson' (N5.27) and 'Talking about my behaviour. I tend to lose my concentration quickly, because when the student doesn't like it, he will not really pay attention, attention, attention. He will surely do something' (N7.33).*

David also said that he put in less effort if he did not like the lesson: *'My behaviour this week was normal. Normal. Because since I did not like it, I did not have the same behaviour as when we were doing percentages. I enjoyed doing them, I worked with my teacher and so on' (D12.54).* Perhaps, behaviour can be seen as linked to the lesson on offer. Interesting lessons appear to promote positive behaviours, whilst meaningful lessons seem to bring about negative behaviour.

Indeed, Kevin said that sometimes he did not feel like a lesson and distracted others: *'But sometimes there are lessons during which I do not feel like. I distract others and as a consequence I think I start to annoy others. I annoy other students' (K4.10) and '... sometimes I act deviant; sometimes I annoy the teacher etc. Sometimes I do behave well. But not always. But sometimes I get annoyed' (K6.29).*

Manuel, David and Kevin talked about various examples of deviant behaviour in the classroom: Such deviant behaviour could be saying rude words: *'... once Joseph threw a paper at me and I said a rude word. The teacher blamed me and I got in trouble' (M1.1).* Throwing paper pallets at each other: *'... we throw things to each other. Paper pallets most of the time. Because I do not like this topic we are doing because it is hard' (M3.7).* This is another example: *'...*

there is a student next to me, I grab the biro, and pinch him in his arm with it. As a joke' (M5.12). When asked why he did this during the first interview his answer was: *'To have a laugh'* (M5.12). Kevin also talked about disrespecting his teacher: *'I stay playing it up. I stand up from my place. I talk to the teacher disrespectfully, 'Hi Sir' and so on. I stay talking during the lesson. I disrupt others as well'* (K9.41).

David also said that when he is in the mood to act the fool he will make his teacher ask questions about his sanity *'... if I have a good mood, I decide to make other students laugh, and obviously the teacher gets mad. I frustrate him, I make him start to think whether I am sane or not'* (D1.4) and *'For example, I spend a whole lesson playing the fool ...'* (D5.17).

David admitted that he distracted others on purpose: *'I did distract others during these lessons. Either by talking to others, or I decided to distract on purpose. Yes, sometimes I distract others on purpose. Sometimes I have a breakdown and I feel like distracting others for the fun of it'* (D6.29). Perhaps this is the result of David not being able to engage meaningfully with the lesson. As a result, he exhibits negative behaviour to compensate for this.

Manuel slept to avoid bad behaviour and trouble: *'... my behaviour is not bad. Because during the Maths lesson I am sleeping mostly. Thus, I am doing nothing wrong'* (M8.27). However, when he did not sleep he misbehaved: *'I sometimes get a rubber band and stay doing paper pellets, when I do not feel like a lesson. Or sleep. When I do not feel like a lesson'* (M9.32). This could be interpreted as a mechanism adopted by Manuel to avoid getting into trouble. He failed to engage with the lesson, and thus slept it through.

David talked about being hyper and how this affected his behaviour that is uncontrollable at times:

'... When I get confused or hyper. I start fooling about and disrupt the teacher, disrupt my friends and obviously we do not do well. It

depends on the reason why I do this. I do not always do it. I do not do it on purpose. I do not plan on doing it' (D1.2).

His mood also greatly influenced his behaviour:

'I do not always behave in the same manner. It depends on my mood. Whether I am hyper or not. The way I behave? It depends. I cannot even describe it. Sometimes I am a good boy. Sometimes I distract others, other times I do not. Sometimes I really distract others and get kicked out' (D3.7).

David also talked about the medication he takes to control his behaviour:

'I take the 'Ritalin', that the psychologist gave me, to concentrate more during the lesson and at the moment I am taking a small dose, only 3ml. When I feel like following the lesson, I pay attention and I bring the books. Not really pay attention, but try not to disrupt others and stop the teacher. I try to behave better' (D1.2).

On the same topic:

'The 'Ritalin' is not a cure for it. It is there to help you concentrate more. That's what it is all about. To concentrate more, not to calm you, but you feel more calm. You do not feel that aggressive' (D5.21).

During an interview, asked how he felt about taking medication, David said: *'Better. It helps me'* (D5.21). It is very interesting to hear what David had to say on the fact that he takes medication. He believed that this helps him concentrate and focus on the lesson. However, David during various occasions talked about not being able to control his behaviour. When he felt hyper he felt that he was not able to control his behaviour and it was beyond him. When I was a teacher it was hard to distinguish between 'naughtiness' and a pupil's difficulty to behave properly. The teacher is very often in a difficult

situation to differentiate between the different attributions of the same behaviour (same behaviour, but different motivation i.e. thoughts and feelings).

4.6 Super-ordinate Theme 5: Experiences of teacher application of the school's behaviour system in the Mathematics classroom

4.6.1 Consequences

Kevin talked about being 'destroyed' by the consequences being given: '*... sometimes it destroys me a lot. For example, I have a lot of break-ins, after schools, suspensions and so on*' (K2.4). David felt like exploding when given a consequence (pink sheet):

'This is because, yesterday, when they gave me the pink sheet, I was going to explode. I did not explode to be respectful to the teacher who was doing the lesson. Because, I would have gotten out my frustration. I did this [covering his face] and stayed on the table like this' (D11.52).

However, Manuel had a different point of view. When asked what he thought about break-ins, after schools and suspensions his answer was that: '*They are good for discipline*' (M5.18). Such consequences seem to have had the desired outcome on his behaviour as he admitted that he stopped doing the undesired behaviour: '*I will not do it again because I really hate being suspended. And now it will be put in my school leaving. And it will be more difficult to find a job and so on*' (M5.18) and '*... with regards to fighting, I do not fight anymore. That's it*' (M5.18).

However, David was of an opposite opinion. When asked about being given an afterschool consequence, this was his answer: '*... they do not help me. If I am given an after school, it is for nothing. It is just one hour*' (D5.18). Kevin also questioned the effectiveness of the consequences he was given as a result of his bad behaviour: '*Instead of staying out of class and writing next to*

the office, I could have remained out of class, but next to the door with the desk, but still followed the lesson' (K5.25). He went on to suggest an alternative consequence that would not make him skip school: *'I would have preferred coming sometime on a Saturday. Something similar to that arrangement for example and not missing school'* (K5.25). David also suggested a different type of intervention to deal with negative behaviour: *'... it is better that he talks to me gently rather than shouting at me. This is because I will shout back and as I already told you this will lead to a lot of panic and trouble'* (D5.19). When asked what he can be given instead of after schools and break-ins: *'... some time to stay alone. I go out of the class and stay alone'* (D5.20).

Kevin talked about shouting and aggressive/agitated behaviour by the teacher as a consequence of negative behaviour: *'... the teacher was shouting at the other students'* (K4.8) and *'Today, the teacher stopped the lesson, for the last 15 minutes. He was very angry'* (K6.27). David also talked about aggressive behaviour by his teacher in dealing with negative behaviour. Such aggressive behaviour by the teacher also made the student aggressive: *'... he bangs on my table and I get angry. To stop me he starts to shake my table and I get angry'* (D5.11) and *'He stops you by saying, 'Shut up!' [In a harsh voice]. 'If you open your mouth again, I will kick you out of class,' for example. Or else he shakes the table and I get very angry'* (D5.14).

David said that some teachers are more effective than others when it comes to dealing with negative behaviour:

'There is a teacher, that even with a look, she makes me stop. I will realise that I am annoying her, but she does not come and shake my table, tells you, 'shut up'. That way. You need to be calm with me. If the teacher is aggressive, I will become aggressive. Than the lesson will go wrong and I will start distracting others' (D5.14).

On the contrary to David, Manuel believed that shouting is necessary for his teacher to correct students: *'They have their own rules and if we do something wrong they definitely need to shout at us, or something similar'* (M2.3).

Kevin said that the teacher sometimes skipped parts of the topic because of bad behaviour in the classroom:

'He told us that he was not going to do the last question he prepared. Since we did not behave well, he told us that he was not going to do the last page of the topic and we will start the new topic tomorrow' (K6.28).

Kevin and David spoke about unfair consequences and how they felt about it: *'That means I feel guilty. I prefer getting the blame myself for something I did rather than my friends getting the blame'* (K5.15) and *'I spend a whole lesson playing the fool and I get away with it. No copies, no break-ins, nothing. Then I spend a day with the notes and writing and I am given a break-in'* (D5.17).

However, David did not want any special concessions or to be treated differently due to his condition. When during an interview he was asked whether he wanted 'special' treatment, this was his answer: *'Because David [Referring to himself in the third person] is hyper, no. I do not want it. As if I am special when compared to the others'* (D5.23) and *'I do not see it as fair that I do not get into trouble, but others do. I do not want any special treatment'* (D5.24).

My construction of this is that **inadequate** consequences can have harmful consequences on students. Kevin and David talked about feeling destroyed and feeling like exploding when given inadequate consequences. Also, they argued that

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The term *inadequate* here is a perception rather than a fact. What is inadequate for Kevin and David might be adequate for others. In fact, the same consequences described as inadequate had a positive effect on Manuel.

the consequences that they were being given did not make sense at all to them and they were not helping them improve in their behaviour. On the other hand, the same consequences were having a positive effect on Manuel. Kevin and David also talked about aggressive behaviour by their teacher in dealing with negative behaviour. It appeared that this did not help the situation, but rather made things worse.

4.6.2: Appraisals

Manuel, during his video diary entries, talked about the effectiveness of positive reinforcement: *'I felt very good because he was giving us sweets and I understood more'* (M1.1). When asked whether he preferred being given consequences or appraisals during the first interview his answer was the following: *'with the appraisals, and I enjoy it more and participate more during the lesson because if you do this you take something back'* (M5.21). Neville also hinted about the positive effect appraisals can have: *'... she was going to give me an appraisal to cheer me up'* (N9.43). Asked how he felt when he is praised during the first interview, Neville said: *'I feel good, because I start saying to myself that I am a person that is intelligent...'* (N9.36).

It is interesting to note that only two students engaged with the topic of positive reinforcement. Perhaps this can show that this is not used in Mathematics class too often. In fact, David and Kevin had nothing to say on this topic. This could be an important indication showing that appraisals are rarely used in the Mathematics classroom.

Chapter 5: Discussion

Chapter 5: Discussion

5.1 Introduction

This research aims at giving a voice to students presenting with SEBD with regards to their learning experience of Mathematics. But why is it important to listen to these voices? Cefai & Cooper (2010) answer this question by saying that by understanding better the challenging situation, one is in a better position to resolve it. Moreover, students who present with SEBD can present “valid, useful and challenging messages about what makes a relevant curriculum and an effective learning environment” (Michael and Fredrickson, 2013, p. 408). Hence, by listening and trying to understand these experiences of students presenting with SEBD with regards to their learning experience of Mathematics, I will be in a better position to suggest strategies and interventions related to promoting a better learning experience in the subject.

This chapter will relate the interpretative phenomenological analysis with the relevant literature as presented in chapter two, although some literature will be newly presented at this stage. The structure I will adopt for this chapter is that of answering the two research questions in two main sections by referring to the five super-ordinate themes and respective sub-ordinate themes. However, it is good to point out from the onset that I regard both research questions as complementing each other, in the sense that whilst discussing what students think about their learning experience of Mathematics, I will also be discussing what strategies and interventions can be used to support students exhibiting with SEBD have a more engaging learning experience in Mathematics. Thus, one has to appreciate that there is a certain degree of overlapping between the two sections. Hence, the sections are not distinct, but closely related to each other.

5.1.1 Revisiting the research questions

The following are the research questions that will be answered in this section based on the findings presented in chapter four:

- How do students presenting with SEBD experience learning in the Mathematics classroom?
- What educational strategies and interventions could help in offering students presenting with SEBD with a more engaging learning experience?

5.1.2 Using Interpretative Phenomenological Analysis (IPA) to answer the research questions.

On one hand, IPA's phenomenological element described the students' experiences of the Mathematics lesson. Hence, as an IPA researcher, I tried to understand the students' world and to describe what it is like. On the other hand, IPA's interpretative element placed these experiences within their cultural and physical settings whilst trying to make sense of the relationship between the person and the world. This interpretative nature allowed me to deal with data in a speculative manner. I reflected on what it means to have students make such assertions, and to have articulated such feelings and anxieties in that particular instance (Larkin, Watts & Clifton, 2006). I also reflected on how I understood those assertions, my predisposition for making sense of classroom experience from a teacher's perspective.

The interpretative phenomenological analysis revealed five super-ordinate themes and various other corresponding sub-ordinate themes (see table 4.1 in chapter 4). The richness and complexity of the IPA analysis reflects the extensive array of the super-ordinate themes that range from the Mathematical learning experience to the experiences of teacher application of the school's behaviour system in the Mathematics classroom. This interpretative work will be well versed by direct engagement with present literature (theoretical

constructs) and this process will allow me to answer my originally set research questions.

5.2 How do students presenting with SEBD experience learning in the Mathematics classroom?

5.2.1 An engaging curriculum

To answer this question, I shall be discussing three super-ordinate themes together with the deriving sub-ordinate themes. The first super-ordinate theme, *The Mathematics learning experience*, is directly related to the research question as the various sub-ordinate themes are linked to the first research questions. These are *Students' voices on their interest towards the subject*, *Students' voices on activities in the Mathematics classroom*, *the level of Mathematics difficulty* and *Mathematics' usefulness to students' life experience*. The third super-ordinate theme, *Feelings in the Mathematics classroom*, will also be discussed to answer the first research question. Here the Mathematics lesson is an emotional experience and students' experiences of different emotions will be discussed. Moreover, how these feelings affect learning will also be considered. The fourth super-ordinate theme, *Students' behaviour in the Mathematics classroom*, will likewise be discussed to help answer the first research question. Triggers and instances of both positive and negative student behaviour will be discussed as emerged from the IPA analysis.

Referring to super-ordinate theme 1, the interpretative analysis suggests that if students are presented with a Mathematical curriculum that is not stimulating to them, they will become disengaged and disinterested in the lesson. Manuel summed up this argument as he said that he is not doing his best in Mathematics *'because this topic is really annoying me. It really annoys me'* (M4.8). Further supporting this conclusion, with regards to super-ordinate theme 4, that deals with behaviour, the interpretative analysis of data suggests that the Mathematical lessons that are engaging, interesting and enjoyable will

help students be more engaged in their lesson. In fact, for instance, Neville said that *'I am behaving well in my opinion, because I like the topic'* (N3.7). Hence, students will be at a lesser risk of exhibiting deviant behaviour that would get them in trouble. Conversely, lessons that are not engaging will stimulate negative behaviour. Indeed, interest and enjoyment can promote student engagement in class activities, as well as richer exploration of learning material (Naude, Van Den Bergh & Kruger, 2014). Similarly, Dewey (1966) states that motivation arising from doing the task itself will encourage learning.

Indeed, supporting my argument, various literature (Fogell & Long, 1997; Porter, 2000; Hamill & Boyd, 2002) has drawn attention to the relationship between how behaviour difficulties can be provoked when students are presented with a curriculum that doesn't capture their interest. Conversely, David said that he did not exhibit his *'normal'* defiant behaviour when they were doing a topic he liked and he *'enjoyed doing them'* (D12.54) and worked with his teacher. Davies and Ryan (2014) states that failure to engage with the curriculum will very often result in deviant behaviour for the student to compensate for his low academic status in line with the findings presented in this research. In fact, research (Kendall et al., 2001; Williamson & Cullingford, 2003) shows that the students who were excluded from school for exhibiting deviant behaviours describe their learning experiences at school as frustrating and unfulfilling. Moreover, they portray schools as failing to meet their needs when "problems with schoolwork cause them to feel disengaged and frustrated, which in turn led to bad behaviour" (The Prince's Trust, 2002, p48). Thus, both my research and the literature reviewed show that a curriculum experienced as lacking relevance and one that is not meaningful will make students lose their interest and motivation. Here, I can also link to Uta Frith's (1992) model (see section 2.5.2). The observable behavioural outcomes, are influenced by the student's experience and level of motivation. Hence, a curriculum that is not engaging can influence student's level of motivation and this might also increase the risk of students exhibiting challenging behaviour. It is also interesting to note that this research does suggest that the problem or the struggle to learn comes first (see section 4.2.1). Such challenging behaviour might not always be very visible and extreme, but can take the

shape of low-level disruptions such as talking out of turn. Indeed, in super-ordinate theme 4, the students also talked about various examples of minor disrupting behaviours that might be low-level disrupters, but nonetheless disrupt the flow of the lesson just the same. In fact, OFSTED's (2014) report on low-level disruptions, *Below the radar: low-level disruption in the country's classrooms*, finds that teachers, parents and carers are worried about the recurrent waste of time through low-level, but frequently occurring disruptive behaviour. It goes on to conclude that this sort of behaviour can be very annoying for teachers and causes frustration amongst them. Also, teachers are often critical towards educational leaders, who according to them are not doing enough to ensure better student behaviour. Hence, low-level disruptions can also be an issue of concern at schools and the recurrence of such behaviours can have a negative result on the educational experience of students.

Can it be that students' misbehaviour in class is related to the content being covered in class rather than them not liking the school altogether? The interpretive analysis of super-ordinate theme 1 suggests that the mathematical content presented to the students must be adequately matching their ability. As a person who has worked as a teacher for several years, I must say that this is difficult to achieve in a class of 25 students, who have various levels of abilities. However, Kevin, for example, talks about feeling frustrated at not being presented with mathematical content matching his level of ability. This, undoubtedly, has a negative effect on his performance and behaviour during the Mathematics lessons. Undeniably, this again results in the student being disengaged in the lesson. Indeed, research (Habel et al., 1999; Clarke et al., 2005; Magri, 2009; Cefai & Cooper, 2010) claims that alienated students appreciate opportunities to engage in a flexible academic curriculum based on their needs and level as opposed to a rigid one. Moreover, Davies and Ryan (2014, p. 352) state that students 'behave inappropriately whilst they are there [at school], not because they dislike school but because they do not appreciate particular lessons or the way they are taught'. Likewise, White (1982) argues that the curriculum on offer is key to the way students behave. Supporting my conclusions with regards to the importance of the level of Mathematics

difficulty, Kauffman (1997) states that from indications from students themselves, irrelevant content and delivery of curriculum will encourage them to adopt undesirable strategies such as lesson disruptions to battle boredom and to avoid the labelling associated with failure to be successful in the curriculum being presented to them.

Also, super-ordinate theme 1 suggests that if meaningful, well-planned and relevant Mathematical activities are carried out in the class, these can further enhance the learning experience of all students in the class, including those with challenging behaviour. The students *'enjoy'* it when non-routine activities are carried out in class. Kevin sums this up by saying that he enjoyed it more when they did *'something that isn't done every day.'* (K5.19). Due to the nature of such activities, such as moving about and being allowed to talk, certain traits associated with challenging behaviour can be reduced. That is, if a student can move about and discuss with his peers, he will not get into trouble for standing up and talking. In my opinion this could drastically decrease low-level disruptions in class. Giving students who exhibit with SEBD an active role during lessons is indispensable as discussed in chapter 2. For, as Munby (1995) and Cefai and Cooper (2010) warn, these students become easily disengaged from the learning process if they are relegated to a passive role. Conversely, students who exhibit with SEBD react well to an active style of learning. Indubitably, Moody et al. (2000) claim that the approach used by teachers to deliver their curriculum is key if students who present with SEBD are to have a more engaging learning experience. It is suggested by the authors that the teachers modify the way they teach to adapt to students' needs. Indeed, it is suggested that teachers need to teach in ways that the students learn the best. However here I am not just referring to the implementation of active lessons. This needs to be accompanied by a variation in teaching pedagogy (see Camenzuli, 2012).

Hence, this places great responsibility on the teacher to prepare a Mathematical learning experience that is engaging and meaningful for all the students in class. This is not easily achievable as different students will have different needs and one must not forget those students who are more

comfortable with theoretical lessons. Pirrie, Head and Brna (2006) warn that there will be negative outcomes if teachers feel that the inclusion of students exhibiting with SEBD is being forced on them. Such outcomes might be that of having teachers distancing themselves from the needs of the students whom they perceive to be the source of the problem. However, I believe that if the teachers understand that by preparing a meaningful curriculum and activities in the classroom, this will increase student engagement and improve behaviour, there will be less resistance towards the inclusion of students exhibiting with SEBD.

In fact, linking to section 2.5.2, Dewey regards learning as an active process. If the motivation to learning is external to the actual subject content (such as consequences and rewards, summative assessment), the students will only learn how to cater for what is required from them, what the teacher requires from them (Dewey, 1966). However, Dewey (1966) believes that motivation should come from the task itself. This will promote real understanding and learning. IBL can be an approach to present students with an active and meaningful learning experience that enhances motivation (see Camenzuli & Buhagiar, 2014; Camenzuli, 2012).

The relevance of the topic for the students' future educational and professional life is a motivating factor in students' engagement in the topic (Kacerja, 2011). In fact, Dewey states that the motivation to learn should come from a problem or difficulty the students want to solve (Bråting & Österman, 2017). The teacher is invited to *psychologize* the subject by making it relevant and relating it to their experiences (Dewey, 1959, p.105). By doing so the subject will be more motivating through relating it to experience. Similarly, Vygotsky (1986) promotes the relation to concrete experience in the students' learning experience. However, Kevin, David and Neville have mixed feelings on how relevant the Mathematics content being presented to them in class is to their future. What is worrying to me is that Kevin, who wants to become a chef, is not able to connect his future ambition with the Mathematics being carried out in class. In fact, he says that *'Maths isn't really relevant to what I want to do'* (K5.22). However, I know that Mathematics is relevant to becoming a chef and

many topics in Mathematics can be related to this area. Thus, it is disappointing that Kevin is not able to make this connection. On the contrary, confirming Kacerja's (2011) conclusions, Manuel is motivated to learn Mathematics because he wants to become a businessman like his father and thinks that Mathematics will help him. However, he also states that when he feels that the lesson is not relevant to his future ambitions he does not take part in the lesson and does not find any motivation in doing the lesson.

Kevin voices his wish to have Mathematics lessons that teach him 'basic' Mathematics that one can find useful in real-life contexts. Indeed, I agree with Svecova, Rumanova, Pavlovicova (2014) that one of the main goals of Mathematical education should be that of preparing students for dealing effectively with real-life circumstances. Students should be taught Mathematical concepts that are relevant to their daily routines and that equip them with the necessary skills to be able to integrate and give a valid contribution to society. Indeed, Parnell (2001) argues that meaningful learning only takes place when the students can connect the concepts being carried out in class to their daily lives. However, Neville makes a very valid point when he says that the examples related to real life must not be superfluous and these must be meaningful and truly related to his daily life experiences.

In *The Child and the Curriculum*, Dewey (1959) argued very clearly that *psychologizing* can only be successfully carried out by the classroom teacher. Only teachers are in a position to understand how the curriculum they are presenting to the students in class has elements that are already present and active in their students' experiences and could be used to engage them to develop their logical thinking. I agree with Smith and Girod (2003) that the teachers are the subject-matter experts and hence they can link elements in the curriculum to the students' present experience, activity and interest. "Only then could the opposition between the child and the curriculum- and the resulting pendulum swings between them- be overcome" (Smith & Girod, 2003, p. 298). As discussed in section 2.5.2, Vygotsky (1986) also stresses on the importance of the relationship between subject matter and the concrete experiences.

5.2.2 Emotions in the Mathematics Classroom

IPA research is also appropriate for drawing out emotions (Smith et al., 2009). Indeed, students talked about how they felt throughout their video diary entries and interviews. Undeniably, theme 3 is rich in emotions. The super-ordinate theme of Emotions in the Mathematics classroom lends itself to Maslow's (1943) hierarchy of needs. At the center of Maslow's studies is the question of how motivation impacts on individual experience (Milheim, 2012). Indeed, the interpretative analysis with regards to theme 3 suggests that students' mood and emotional condition will greatly influence their performance and engagement in the Mathematics lesson. It is evident that students' emotional state of mind is key to whether or not students will engage in the mathematical lesson being presented. This is the first step towards students' engagement in the lesson. This study shows that if students do not have the right state of mind to engage in a lesson they will not do so even if this is well prepared and tailored to meet their needs. Hence, even though the quality of pedagogy used is of utmost importance, one must not ignore that the students in the class have feelings and that these feelings will hugely impinge on their performance during the Mathematics lesson. Indeed, Trigwell et al. (2012) and Naude, Van Den Bergh and Kruger (2014) argue that there exist meaningful connections between positive emotions, deeper learning and higher achievement. Hence, one needs to be aware of such feelings and address the needs of the students under his care. Moreover, Long & Fogell (2007) state that emotions induce the students to learn new material. They refer to three key emotions: interest in making students feel alert and focused, happiness in making students confident, energised and increase self-esteem and security in making the students open to new information. For example, in his second interview David said that when he is sad, he would not feel like doing anything. Neville also shared David's view in his second interview.

Here I need to examine and reflect on the strengths of the experiential data obtained in this study, especially emotions in the mathematics classroom. The data suggests that Mathematics learning is an emotional experience. Students

talked about feeling 'down', 'hyper', 'mad', 'bored', 'destroyed', 'sad', 'excited', 'frustrated', 'confused', 'annoyed', 'nervous', 'anxious', 'aggressive', 'like exploding'. Such feelings and many more are embedded in students' discourse throughout the experiential data collected, all of which are strong emotions that if not dealt with will result in a negative learning experience for students. Indeed, the strength of emotions involved can be felt throughout the experiential data collected and not just the theme dealing with feelings and emotions. Through capturing students' voice, I also captured different emotions. Positive emotions are directly related to positive and engaging learning experiences, whilst negative emotions are linked with negative learning experiences. Undeniably, there is a growing acknowledgment on the dynamic and complex role emotions play in the learning process (Naude, Van Den Bergh and Kruger, 2014). Fredrickson (2001) states that negative emotions limit focus and prepare students for defence action. On the other hand, positive emotions broaden focus.

Maslow (1943) designed his hierarchy (see p. 24 for the figure) from the basic survival skills (physiological stage) to safety, love and belonging, esteem, and finally self-actualization. Applying this to the learners in class, it is only when the physiological and safety needs of a student are met that can a student starts to interact meaningfully with others and the teacher. Consequently, only then can the student start to behave in a pro-social manner (self-esteem) and finally learn new concepts and materials. Data in this study does not suggest that the safety needs of the students were not being met. In fact, no participant complained that his basic needs were not being met. However, at times David and Neville said that they felt destroyed, sad, angry, and hyper or as having a headache. The teacher was not addressing these feelings and needs; thus, they could be the source for preventing the students from engaging meaningfully with the lesson. To arrive to the final level of self-actualization, students must first reach each successive prior level which are physiological needs, safety needs, affiliation, belongingness and love and self-esteem. Hence, applying this to this scenario, before students are expected to engage meaningfully in the Mathematics lessons, they need to have their prior needs met and addressed.

Thus, the implications of Maslow's (1943) theoretical framework for the understanding of students with SEBD are that if a particular category is left unmet, then the needs above are irrelevant. For example, drawing upon this study, if students feel sad and angry, they will not be in the right state of mind to perform well in the lesson. I am suggesting here that if students feel sad and angry then their safety needs, affiliation, belongingness needs are not being met and they cannot move onto the next level of behaving in a pro-social manner (self-esteem) and experience self-actualization through participating and understanding the lesson content. This is summed up by David's comment: *'if I feel angry, or something has happened to me and I do not feel like it [the lesson] on that day. I will be angry and behave in a different manner in the class'* (D7.31). Thus, as Cole (2005) states, it is very important that the educators look at the emotions beneath the expressed behaviours.

Moreover, interactions between the teacher and the students in class give rise to different emotions, these can be either positive or negative. Consequences for negative behaviour that elicit positive feelings by the student are to be avoided. For example, David was getting pleasure from being sent out of class as a consequence of negative behaviour. This will undoubtedly encourage the student to misbehave since the student desires this outcome from a behavioural perspective. Positive emotions must be associated to positive behaviours and outcomes such as participating and understanding the lesson. This is because, as seen from the example just mentioned, David was experiencing a positive emotion by exhibiting a negative behaviour. Obviously, from a teacher's perspective this is unwanted. The teacher has to try and elicit positive emotions in students through positive behaviour. In fact, all the research participants talked about feeling joy and happiness when they experience lessons that are interesting and they manage to participate and understand the lesson content. Here, the positive behaviour is participating and understanding the lesson content and the positive emotions are that of joy and happiness. Undoubtedly, this will place students exhibiting with SEBD at a lesser risk in engaging in deviant behaviour. Unfortunately, the research participants also talk about the feeling of boredom and frustration associated

with the Mathematics lessons. Such feelings place the students in a vulnerable position to misbehave. Thus, as already discussed, it is of paramount importance that students are presented with a curriculum that is engaging to them.

Negative feelings such as frustration and boredom can be the result of students being given homework. David, Manuel and Neville all associate negative emotions to being given homework. However, one cannot be over simplistic and say that no homework is to be given to avoid such negative emotions. Homework is necessary for the consolidation of concepts learnt in class, however in my opinion this has to be given in reasonable amounts and should not be boring and repetitive.

Feelings of anger can also be the result of interactions between the student and the teacher. Students talk about confrontations with their teachers and aggressive behaviours in class. Indeed, Long and Fogell (2007), state that students are different amongst themselves in how they respond to different emotions and some will act out aggressively when angry. For instance, David talks about getting aggressive when his teacher confronts him aggressively. This places a huge responsibility on the teacher. If the teacher deals with a challenging situation by confronting their student, the student will be at risk of exhibiting negative behaviour that will get him in trouble. Thus, the way that teachers deal with challenging behaviour is of paramount importance. However, the responsibility is not to be placed solely on the teachers, but also on policy makers. Teachers need to be trained adequately in dealing with challenging behaviour so that the teacher is in a position to adequately deal with challenging incidents. David says that *'if the teacher is aggressive, I will become aggressive'* (D5.14). This sums up the importance of how the teacher deals with a challenging situation.

Interactions between students in the Mathematics class can also elicit emotions. David and Manuel talk about getting angry because of interactions with peers. David is very clear in describing how he feels when he is angry. He does not feel good and he feels as if he has lost control. Thus, I suggest that

it is very important that students in class who are at risk of getting angry and aggressive receive adequate training to deal with anger. Also, it might be helpful if teachers are equipped with the necessary strategies to deal with situations during which students get angry. Anger can be positively managed to everyone's benefit. Teachers and students will feel more secure when they are coached on strategies that they can learn to deal with this emotion effectively. They will realise that this emotion is not uncontrollable, abnormal or bad (Long & Fogell, 2007). For instance, the link between decision-making, social functioning, and moral reasoning is vital in understanding the role emotions play in decision making. Educators should place particular attention with regards to these topics whilst preparing skilled and informed students who can cope with the world's social, moral, and cognitive challenges as citizens (Immordino –Yang & Damasio, 2007). The more considerate we are on how emotions work, the better position we will be to construct strategies that will help support students with SEBD (Long & Fogell, 2007).

5.2.3 Conclusion

A Mathematics curriculum that is of good quality is the key for the inclusion of all students, including those who present with SEBD. This research suggests that when an appropriate, relevant and stimulating curriculum is presented to the students, this will increase the student's engagement in the lesson and hence reduce occurrence of negative challenging behaviour. On the contrary, curriculum that is not engaging to students will place students who present with SEBD at a risk of exhibiting negative behaviours that will get them into trouble.

Traditional lessons with little interaction and application are disliked by students presenting with SEBD and such lessons place students exhibiting with SEBD at a disadvantage as will become increasingly disengaged from the learning process (Von Glasersfeld, 1989; Cefai, 2010). Students who exhibit with SEBD tend to find it more difficult to cope with such scenarios, as they find it especially hard to adopt a passive role in the learning process (Munby, 1995). Hence, it is important that these students are actively involved in the

learning process (see Groom and Rose, 2005). Here, I can also link back to section 2.5.2 where it was discussed that Dewey's educational philosophy invites the teacher to be a motivator and stimulate students' learning (Bråting & Österman, 2017).

If students are presented with a curriculum that is not relevant to them and related to concrete experience there is a greater chance that they will become disengaged, and thus exhibit undesirable observable behaviours (see Vygotsky, 1986). Presenting students with a relevant curriculum, related to concrete experience will benefit all students and not just those exhibiting with SEBD. Here one also has to mention Dewey's (1959) concept of *psychologizing* of the subject – making the subject more motivating through relating it to their personal experience. Personalised learning experiences is the way forward (see Hart, 2013). Not all students will like the same activities and methodology of teaching and learning. Some students in class might like traditional learning based on transmission of facts, rote learning that is teacher led. Other students might prefer an active pedagogy based on investigations and inquiry. A group of students have divergent likes and needs. By pleasing one group, there might be another group of students who would become bored, but who do not exhibit their frustration explicitly. However, one must take note of these students who might be silent, but still deserve a meaningful learning experience. Hence, I am aware that there is no perfect solution. This is a complex challenge for all policy makers to cater for all students. Other students who have been traditionally privileged cannot be now disadvantaged to cater for the needs of other students. To maximise inclusion different learning and teaching experiences must be presented to students in class. Personalised learning is the way forward. Celebrating successful outcomes through different learning and teaching.

5.3 What educational strategies and interventions could help in offering students exhibiting with SEBD with a more engaging learning experience?

To answer this question, I shall be discussing two super-ordinate themes together with the deriving sub-ordinate themes. The second super-ordinate theme, *Relationships in the Mathematics classroom*, shows the importance of relationships in the Mathematics classroom and how important these can be to offer students exhibiting SEBD with a better learning experience. *Interactions between students*, *Student-teacher interactions* and *Taking control of the classroom* will be discussed. The fifth super-ordinate theme, *Experiences of teacher application of the school's behaviour system in the Mathematics classroom*, will also be discussed to answer the second research question. Here, following the IPA analysis of data, the impact of consequences and appraisals will be discussed vis-à-vis the students' learning experience in the classroom. What interventions are best suitable to make the learning experience of students exhibiting with SEBD a more engaging one?

5.3.1 Relationships in the Mathematics classroom

The creation of relationships in the classroom is inevitable. In fact, Vygotsky (1978) views learning as an exercise of social interaction (see section 2.5.3). Relationships will come into being on the first day the students and teacher enter the classroom. The ways these relationships develop and evolve are crucial in creating a positive environment conducive to learning. In fact, Long and Fogell (2007) argue that the context in which the students face difficulties is another important factor to be considered whilst dealing with students who exhibit with SEBD. Thus, creating a positive learning environment through the creation of positive relationships is crucial.

The first sub-ordinate theme in super-ordinate theme 2 deals with relationships between peers in the Mathematics classroom. Positive relationships between students can have a positive impact on the students' learning experience in

the subject. In fact, Long and Fogell (2007) state that relationships in the classroom are central to how effectively students learn. This can encourage peer tutoring and students can learn from each other. During peer tutoring, students can explain to each other in a more simple and accessible way to their peers, and thus, reduce the problem of lack of understanding as already discussed. Indeed, whilst talking during a video diary entry, both Kevin and Manuel refer to instances when they profited from peer tutoring and received help from a peer sitting next to them in the Mathematics classroom. Indeed, students who present with SEBD find peer tutoring very helpful (see Cole et al., 1998; Hughes & Cooper, 2007; Cowie, 2009). For example, whilst working with students exhibiting with SEBD in class, Camenzuli (2012) states that “the students enjoyed working together and that they found collaborative work a beneficial experience for their learning” (p. 63).

Similarly, Neville also talks about the benefits of peer interaction in his Mathematics classroom. During an interview between the student and myself it was evident that peer tutoring in the classroom resulted in Neville learning Mathematical concepts in a different ‘way’ through his peers. Neville says that he discovered different ways of solving a particular problem in Mathematics; a method that he did not think of before. This is an example of how peer interactions in the classroom can be beneficial. This can also be seen as example of an application of Vygotsky’s (1978) theory of *ZPD* as the other student helped Neville close the gap and understand (see section 2.5.3). Indeed, literature does suggest that peer interaction in the classroom can be beneficial. Karagiannakis and Sladeczek (2009) highlight the importance of meaningful peer interactions in the class. Peer tutoring can actively involve all the students in the classroom, including those students who exhibit SEBD. As was the case with Neville, who was involved in group work and felt that he learnt something from his peers that *‘he would not have thought of before’* (N9.19). It is evident here that whilst tutoring, students who present with SEBD rely on each other’s academic and behavioural performance, and are actively engaged in the learning process. Students tend to respond positively to such strategies (see Smith et al., 2001). As discussed in the literature review chapter, section 2.1.1, one of the problems of including in class students

presenting with SEBD can be related to the extra demands placed on the teacher (see Horne and Timmons, 2007). Peer tutoring can reduce such demands, as it depends on the students themselves (see Dufrene et al., 2005).

Even though the literature and findings discussed above show that peer interactions might be beneficial to students, all the students in this study talked about negative instances related to their interactions with their peers. Various instances were described when these relationships had a negative effect on their learning. Indeed, in sub-ordinate theme 2, the students talked about being distracted and distracting others themselves. In fact, all four students; Kevin, Neville, David and Manuel, talked about instances when the interactions with their peers in the classroom led to distractions.

Neville and David talk about negative feelings such as aggression resulting from negative interactions with their peers. For example, David did not only talk about being distracted, but also said that these distractions made him feel nervous, anxious and made him lose his temper. Thus, this can be seen as triggering unwanted negative emotions that can lead to adverse behaviours. On the other hand, he went on to say that he managed pretty well when other students did not distract him. Hence, although students presenting with SEBD are generally seen as a distraction in class, they are being distracted in turn by other students and this leads them to react and become a distraction themselves. This suggests that it is important to put students who present with SEBD in the right environment and conditions to perform well. Putting students such as David, who is at risk of losing his temper and getting into trouble in the wrong environmental conditions in the class can have very adverse effects on the student's behaviour. The teacher must learn to understand his/her student and keep him/her away from instances that can trigger negative behaviours. I suggest that the teacher invests time to help students build prosocial relationships between themselves (see McGrath, 2005). Indeed, De Leeuw & De Boer (2016), recognise several strategies that teachers used in their daily practice to influence the social participation of students exhibiting with SEBD. These included peer tutoring and improving teacher-students relationships. In the long run this will be very beneficial for all in class as it will create a positive

learning environment with less chances of negative interactions between peers. Indeed, Naude, Van Den Bergh & Kruger (2014), highlight the importance of the learning environment with regards to enhancing students' involvement in the learning process.

For instance, David admitted that such negative relationships can trigger aggressive behaviour that can obviously have adverse consequences. The analysis of data shows that David was aware of what triggered his negative aggressive behaviour and what he needed to avoid triggering such behaviour. This leads me to suggest that the teacher must also be aware of this by understanding his/her students better and supporting them by keeping them away from instances that trigger aggressive behaviour. Peer relationships that trigger negative behaviour is not only an issue for David, but Neville also mentioned that he was often made to feel angry by his peers in his fourth video diary entry.

David also talked about his difficulty concentrating when there is movement around him and this leads him to suggest that he would be better off if he would have his Mathematics lesson outside of class alone with an educator. This can be interpreted as if David is rejecting any form of peer interaction in class since he thinks that these are only negative and sees no benefit from such interactions. In fact, David was the only participant who did not talk positively about the interactions with his peers. The student was here excluding himself rather than waiting for the system to exclude him. This should make us reflect on the difficulties students who present with SEBD encounter to control their behaviour to ones that are acceptable in class. Here, David was saying that he preferred to be excluded from class and have the lesson alone to avoid instances of negative behaviours and the consequences related to this. I believe David should not be afforded this possibility. This is an instance when a student exhibiting with SEBD is being excluded from schooling given that no appropriate strategies or techniques are being employed to cater for his needs. Thus, he would rather isolate himself to avoid getting into trouble. In fact, the inclusion of students presenting with SEBD is perceived as highly problematic by teachers given their inclination to disrupt the learning taking place in class

(Mowat, 2010). The difficulties of students exhibiting SEBD needs to be understood by listening to them. This is a cry for help by David that needs to be taken seriously.

IPA analysis of the second sub-ordinate in theme 2 shows the importance of the relationship between the teacher and the students in class. A negative student-teacher relationship will impact adversely on the learning experience of the student. It will place the students at risk of exhibiting deviant behaviour. Conversely, student participants talked about positive behaviours triggered by the fact that they had a positive relationship with their teacher.

Indeed, Davies and Ryan (2014) states that:

The way that the pupil perceives the teacher, and the relationship that ensues, is seen to impact significantly on their professional effectiveness when working with EBD pupils. (p. 353)

The analysis of data describes complications and turbulences in the interactions between the students and the teacher. Indeed, the research participants describe aggressive and conflicting relationships with their teacher. In fact, Kevin talked about insulting his teacher and not having a good relationship with the teacher. Manuel also talked about crossing swords with his teacher during his first interview. Relationships between students who exhibit with SEBD and their teachers can be difficult at times. Many challenges are presented to the teacher for him/her to establish a positive relationship with students who present with SEBD. Students exhibiting with SEBD tend to have a long history of negative relationships with their teachers and those in a position of authority (Jahnukainen, 2001). Research also suggests that these students tend to analyse their teachers and they do not view all their teachers as the same (Davies and Ryan, 2014). Brannen (1996) argues that students classify teachers into three groups: teachers who are 'powerful' when compared to students, those who are supportive and those who are viewed as less powerful.

On the contrary, Kevin said that he appreciated the fact that his teacher listened to him and did what he suggested when he asked that more activities are prepared by the teacher. He said that the teacher '*enjoyed that he [the teacher] listened*' (K.9.37) to him. The importance of listening to views of students exhibiting with SEBD is also discussed and pointed out by Cefai and Cooper (2010) as they refer to eight studies carried out in Malta with students who present with SEBD. Students referred to in these studies felt humiliated and inadequate when shouted at by their teachers in front of peers, ignored them or refused to listen to their views. Also, Flynn (2014) concludes that giving students exhibiting with SEBD a voice when supporting them is decisive to the growth of an inclusive learning environment for the benefit of all students. Hence, it is suggested that teachers listen to the views of their students in class, as students in class will appreciate being heard to. In return this may increase respect by the students towards their teachers and reduce instances of occurrence of challenging behaviour. As shown in the analysis chapter, the fact that he was listened to had a positive effect on Kevin's behaviour. Indeed, Cefai and Cooper (2010) state that the students who have a good relationship with their teacher felt accepted and more comfortable. Also, they could engage with the learning experience taking place in class. In fact, with this regards Kevin talked about the benefits a good relationship with the teacher can have during the first interview with myself and he stated that he enjoyed the lesson more when he had a good relationship with the teacher. This further highlights the importance for the teacher to build positive relationships with the students in class.

Neville reinforced this argument in favour of having a good relationship with the teacher and the benefits this can have on the students' behaviour and attitude. He argued, during his first interview, that he felt more comfortable to ask questions if he had a good relationship with the teacher. Asking question is vital in the classroom, especially during the Mathematics lesson. In fact, Shahrill and Clarke (2014) affirm that "questioning can be one of ways in generating the kind of talk and communication that can lead to learning" (p.3). Similarly, when asked about having a good relationship with his teacher in his first interview Manuel said that he was more comfortable to ask questions.

Thus, having a good relationship with the teacher will ease student's engagement with the subject content, as they will feel more comfortable to ask questions and participate. This is crucial for having a successful Mathematics lesson since students' questioning might generally be regarded as "a useful process in their pursuit of learning in that questioning is one of the most important ways students can support their own learning to become literate, well-educated people." (Boaler & Humphreys, 2005, p. 72).

Clearly as shown in the analysis chapter, when the students feel that they are listened to, understood and treated with respect they will be more willing to try to improve their behaviour and engage in the classroom activities on offer. In fact, Cefai and Cooper (2010) argue that positive relationship between students exhibiting with SEBD and their teacher can help them find stability in their sometimes "disorganised and chaotic life, to believe in themselves, and to find meaning in their school experience" (p. 42). Positive student-teacher relationships promote positive behaviour by the students. Manuel and Kevin said that they find it more difficult to misbehave or not do their work given that they had a good relationship with their teacher. On the other hand, David talked about his difficult relationship with his teacher and the lack of understanding he got from his teacher. Undoubtedly, this had a negative effect on David's learning experience in Mathematics and his behaviour. I suggest that it would be beneficial that teachers listen to their students in class and understand them better. In turn this might be useful to build a good relationship with the students and hence students will respect their teacher. The students' respect towards the teacher will reduce instances of unwanted negative behaviour because as Manuel and Kevin said, it will be more difficult to misbehave if you have a good relationship with the teacher. Difficulties related to SEBD are soon exposed and the student is put at risk if the teachers fail to consider the impact that personal interaction can play. I believe that a teacher who listens to them and understands them is of crucial importance for their educational experience (Davies & Ryan, 2014).

Finally, Manuel and Neville talked about their teacher praising their work and how good this made them feel. From their comments presented in chapter 4,

it is very evident that students enjoy it when they are praised and they take good note of it. Indeed, David also notices a positive change in the relationship between the teacher and himself whenever he participates and exhibits good behaviour. He feels good that his teacher noticed this and does not shout at him as when he misbehaves. This will be further discussed in the next section and will be linked to literature.

In the third sub-ordinate theme in theme 2, *Taking control of the classroom*, issues of the struggle for power between the teacher and students surfaced during student's video journals and interviews in this study. The students try to assert their power and authority by taking control of a challenging situation themselves. Indeed, Kevin and David talked about settling scores with other peers on their own and leaving the teacher out of it. In fact, David talked about stopping other's misbehaviour in class himself rather than allowing the teacher to do so.

Various examples given by Cefai and Cooper (2010) warn that the way teachers handle the situation can lead to a power struggle going out of control. Kevin and David spoke positively when the teacher 'gives up' some of his/her power and allows them to help. Kevin referred to an incident when he was allowed to erase the white board and how much he '*enjoyed it*' (K.6.29). David referred to a lesson when he was allowed to '*control*' the teacher's laptop (D.1.1). Both actions do not mean that the teacher has lost his/her authority, but they mean a lot to the students. If the students feel useful to the lesson, they are less likely to cause trouble. However, it is very worrying to listen to students saying they prefer to settle their own score rather than involve the teacher when they have a problem with their peers. In my opinion this can lead to arguments and negative behaviour between peers. Also, it shows lack of trust between the student and the teacher. The student does not trust his teacher and settles the score on his own. This is also linked to what I discussed earlier about the importance of building positive relationship in class. If positive relationships are built, students might trust their teacher and ask him/her for help rather than settling their own scores.

During his first video diary recording, David talked about the power he has over his teachers and his ability to make them go mad when he is in the mood to do so. What David is saying here is worrying and warrants some reflection. The student feels he has enough power to stop or disrupt the lesson and make the teacher 'go mad'. One can interpret this as David being a bully. However, keeping in mind that earlier David said that he would prefer being withdrawn from class and having the Mathematics lessons on his own, I am more inclined at concluding that this is a cry for help. I feel that instead of admitting his difficulty to be included in class, the student is acting cool. The student needs better understanding and needs to be listened to. As discussed previously, David's relationship with his Mathematics teacher and his peers is difficult, thus one would expect this sort of attitude. This further enhances my thought that developing a positive relationship with the students who present with SEBD is of crucial importance as this will help the students to foster respect towards their teacher. Hence this reduces instances during which students who exhibit with SEBD feel the need to make the teacher 'go mad' (D1.4).

5.3.2 Consequences and appraisals in the classroom

Super-ordinate theme 5, *Experiences of teacher application of the school's behaviour system in the Mathematics classroom* presents two sub-ordinate themes: *Consequences* and *Appraisals*. Kevin and David associated consequences to negative feelings. In fact, Kevin talked about being 'destroyed' (K2.4) and David felt like 'exploding' with anger (D11.52). Thus, here consequences can be seen as eliciting negative reactions and failing to correct students' behaviour or supporting students to deal with instances of negative behaviour. Indeed, Kevin and David questioned the effectiveness of the consequences being given such as break in, afterschool and being sent out of class. These do not help them to behave better. Indeed, Payne (2005) states that keeping the student in during break can lead to negative response from the student in relation to both their work and their behaviour. On the contrary, as already discussed in the previous section and as will be discussed, the initiative of a reward can have a positive outcome. Also, supporting this argument, Way (2011) states that consequences do not seem

to work and more strict consequences do not imply better behaviour by the student. The author goes on to say that severe punishment might lead to more defiance and deviant behaviour. Similarly, shouting by teacher at a student increases the risk of disruptive behaviour (Reid et al., 2010). Indeed, Kevin and David also complained about the aggressive way the teacher corrected their negative behaviour. They talk about shouting and banging on tables. David said that such aggressive mannerisms can elicit negative reactions from his end. However, this does not seem to bother Manuel as he saw shouting by the teacher at students as a natural occurrence and as an obvious reaction by the teacher to challenging behaviour. Also, Manuel thought that consequences are useful to discipline him. They kept him away from doing anything wrong because he will get into trouble.

Only two students engaged on the second sub ordinate theme dealing with appraisals. Also, their engagement on this topic was short. This is a clear indication on the lack of use of appraisals by the teacher with the participants. Manuel and Neville associated appraisals with positive feelings. Appraisal can build self-confidence as Neville said that being praised by his teacher made him feel good and intelligent. Even though appraisals are scarcely mentioned by the research participants, they are always mentioned in a positive light. In fact, I suggest that they can be an effective strategy in dealing with negative behaviours. Indeed, praise for good behaviour is linked with an improvement in academic performance and a decrease in deviant behaviour in the classroom (Reinke, Lewis-Palmer, Martin, 2007). Moreover, a study by Reinke, Lewis-Palmer and Merrell (2008) showed a decrease in disruptive behaviour because of an increase in praise by the teacher in the classroom. Thus, praise and rewards in the classroom might be a successful strategy in effective classroom strategies.

5.3.3 Conclusions

Interactions between peers can give rise to positive outcomes, mainly peer-tutoring. This can be very beneficial and can facilitate the inclusion of students exhibiting with SEBD. However, as discussed, interactions between peers can

give rise to negative outcomes such as distractions or negative emotions. Hence, one must be cautious about over simplifying this concept. Simply putting a group of students together and asking them to collaborate and work together will not work. It is suggested that students need to be helped to build pro-social relationships with their peers that can lead to positive peer interactions leading to encouraging outcomes.

The relationship between the teacher and the student is also of a paramount importance. If this relationship is a positive one, the student will respect his teacher and there will be an environment conducive to learning. The professional challenge here is for the teachers to build and improve these relationships with the students. Long and Fogell (2007) suggest that insight, understanding, effort and skills are all abilities needed to build such positive relationships. However, if a negative relationship is built between the teacher and the student, the chances of the student exhibiting negative behaviours increase. Negative relationships can elicit negative emotions of anger that can result in the exhibition of aggressive behaviour by the student as shown in this study.

Moreover, consequences as break-ins, suspensions and out of class as response to negative behaviour do not seem to be effective. Research findings suggest that Kevin feels 'destroyed' and David feels like 'exploding' with anger because of inadequate consequences. Also, findings suggest that dealing with negative behaviour in an aggressive manner will only elicit negative emotions from the student and will make the situation worse. Giving praise to students and praising their effort and good intentions can be beneficial. As seen in this research, even if mentioned minimally, students enjoy it when they are praised and this elicited positive emotions as opposed to the negative emotions elicited by consequences.

Chapter 6: Conclusion

Chapter 6: Conclusion

6.0 Introduction

This chapter will present the conclusions I have drawn from my interpretative analysis of the video diary entries and interviews. Furthermore, I will share my recommendations for future research on the topic of Mathematics education to students presenting with SEBD. It will subsequently outline some recommendations for educational practice and policy. Finally, I will describe what I believe are the strengths and limitations of the study presented in this thesis.

6.1 Key findings and areas for further research

This study aimed to add to the current knowledge and understanding about how students presenting with SEBD experience learning in the Mathematics classroom. Moreover, it targeted at suggesting what strategies and interventions could offer students who presents with SEBD with a more engaging learning experience.

6.1.1 An engaging curriculum

Mathematics can be very interesting if it is presented using a stimulating and active pedagogical approach linked to concrete experience. However, this requires a paradigm shift by the teacher to adopt *new* teaching methods and approaches. If meaningful activities are carried out in class, these can enhance the teaching experience of all students, including those with challenging behaviour. In section 5.2.2, chapter 5, it was discussed that if students are presented with a Mathematical curriculum that is not stimulating to them, they will become disengaged and disinterested in the lesson. It was also discussed in sections 2.5.2 and 5.2.2 that this can be linked with Dewey's and Vygotsky's theoretical frameworks that presenting subject content that is relevant to the

students' daily experiences and activities can stimulate students' learning and this can help in providing students who present with SEBD with a more engaging experience. Also, using Uta Frith's (1992) model of developmental disorders, a curriculum that is not engaging can decrease levels of motivation, and hence, produce negative observable behavioural outcomes.

Furthermore, presenting students with content that is adequately matching their level of ability is key. However, one must understand that in a class of twenty-five students, where there are various levels of abilities, various preferred ways to learn, students with different emotional states *etc.*, this can become very challenging to the teacher. Very often, teachers tend to present content of an average level of ability, thus not catering for weak student or high flyers. However, as the students discussed, if material that does not match their ability is presented to them, the students will become frustrated and disengaged.

Also, meaningful, well-planned and relevant Mathematical activities that are planned and carried out in class can further enhance the learning experiences of all the students in class. Moreover, I am of the opinion from the experience of completing this study, that Mathematics can be linked to the daily lives of students more frequently and more adequately. The lack of linking Mathematics to the daily life experience of students, as emerged from this study, is very disappointing to me as a former Mathematics teacher. I believe that every topic in Mathematics can be linked to a daily life experience. This has also been discussed linking it with Dewey's and Vygotsky's views that linking subject matter to students' experience is essential as this encourages deep understanding and learning and hence promotes students' engagement.

On the contrary lessons that are not interesting will promote negative behaviour. Furthermore, students talked about various examples of negative behaviour that can be minor in nature, but undoubtedly disrupted the flow of the lesson. Hence, even if minor in nature, such behaviours need to be reduced since they will disrupt the teacher.

6.1.2 Emotions in the Mathematics classroom

Even though the teacher prepares a well-planned Mathematical lesson, if the students are not emotionally prepared, students will still not benefit from such a lesson. The role emotions play in the Mathematics classroom was discussed in section 5.2.2, chapter 5. Students said that feelings such as anger and sadness stopped them from engaging meaningfully with the lesson. Hence, I suggest that the educators must look at the emotions beneath the expressed actions in class. I also linked this with Maslow's (1943) theoretical framework (see section 5.2.2), since if a category is left unmet (e.g. Sadness, anger), then the needs above are irrelevant (e.g. learning of Mathematics).

It was also evident that interactions between the teacher and the students in class gave rise to different emotions. It is important that students associate positive emotions with good behaviour and positive outcomes. However, feelings of anger were also the result of interactions between the teacher and the student. The students talked about negative confrontations with their teacher. Moreover, interactions between students also elicited different emotions. Teachers need to be professionally equipped with the right strategies and intervention techniques to deal with students' emotions.

The teacher must be careful not to give students consequence that makes them feel good. For example, David said that he enjoyed it when he was kicked out of class. In my opinion, this will encourage David to behave badly, and thus in return is given the pleasure to get kicked out of class. Positive feelings must be associated with positive outcomes. For example, Kevin and Manuel talked about enjoying themselves when they understood. Also, it is worrying to note that homework given is linked to so much negative feelings. In fact, Neville, David and Manuel talked about their struggles in doing the homework that they were given. This will have a negative effect on how the students feel about the subject and ultimately on their performance in the subject. I believe that the right balance must be used when giving work to do at home and the students should not link this with such negative feelings.

6.1.3 Relationships in the Mathematics classroom

Various relationships are created in the Mathematics classroom. In fact, Vygotsky (1978) (see section 2.5.3) views learning as an exercise in social interaction. Mainly these are the relationship between the teacher and students and students themselves. These relationships were discussed in section 5.3.1, chapter 5.

Peer interactions can be very beneficial in the classroom. They can promote peer tutoring and students can learn from one another. However, these must be structured and the students 'trained' to engage in such interactions in a meaningful manner. Otherwise, such interactions will only bring about negative results. The students talked about being distracted by others and distracting others themselves. Also, Neville and David talked about negative feelings such as aggression resulting from negative interactions. I suggest that students need to be taught how to be pro-social in their interactions with each other so that such interactions are beneficial. Peer interactions can bring about peer tutoring that can be very advantageous. During peer tutoring, students can explain to each other in a more simple and accessible way to their peers, and thus, reduce the problem of lack of understanding. In fact, this can be one of the many applications of Vygotsky's theory of *ZPD* (see section 2.5.3). I suggest that teachers invest some time to get to know their students and build a positive relationship. In the long run the time invested in building a good relationship with the students will be beneficial for all.

However, one must be cautious here and sometimes it is not as straightforward as just being 'taught' how to be pro-social. Whilst this is certainly an aspect to be recognised, I also believe that there is a link here to my discussion of Maslow (see section 5.2.2) and possible unmet safety needs that are expressed through anti-social behaviour.

Teacher-student relationships were seen to be difficult at times. Indeed, students described aggressive behaviours and conflicts when describing their relationship with the teacher. However, research participants talked about

characteristics that helped them to establish a good relationship with their teacher. These were being listened to, understood, praised and treated with respect. In turn, a positive relationship with the teacher will have a positive impact on student's behaviour and participation in class. Also, students appreciated the fact that they could positively participate in the classroom routines such as using the class computer. In fact, research confirms that the quality of teacher-student relationships, have a significant impact on school performance (Fredriksen & Rhodes, 2004, Van Uden et al., 2014, European Commission, 2015). However, here one can again argue that even though this is certainly an aspect to be recognised, one also can link certain anti-social behaviour to unmet safety needs as discussed previously.

6.1.4 Consequences and appraisals in the classroom

Section 5.3.2, chapter 5 deals with the experiences of teacher application of the school's behaviour system in the Mathematics classroom. Consequences can give rise to very negative feelings and students felt '*destroyed*' and as '*exploding*' with anger because of being given inadequate consequences. Hence, consequences were not regarded by students as supporting them and helping them in their educational journey. This is with the exception of Manuel who regarded consequences as tool to discipline him and keeping him away from engaging in negative behaviour. In my opinion consequences need to be tailor-made to suit the needs of the students. What works with one student might not work with the other. Very often discussing consequences with the students themselves can be beneficial and students will feel that they were treated fairly.

Only two students engaged briefly on the topic of appraisals. This shows the lack of use of appraisals by the teachers in the Mathematics classroom. However, it was clear that both Manuel and Neville enjoyed being praised and reacted positively to such appraisals. Behavioural systems based on positive reinforcement can be beneficial for both student and teacher and can reduce tensions in class.

6.2 My recommendations

The implications of the findings presented in this study for educational practitioners are various. Firstly, the study highlights the important role that teachers play in students' educational experiences and educational success.

6.2.1 Suggestions for educators

The following are suggestions I am making for educators in schools working with students who present with SEBD:

- The curriculum presented to students is of utmost importance. This must be relevant to students' life experiences and matching their ability. The learning experience must be personalised depending on students' needs.
- Students' experience in class is very emotional. As educators it is very important to be aware of such emotions and the importance they play with regards to students' engagement in the lesson. Also, dealing with such emotions effectively can reduce instances of negative behaviours.
- Building a good relationship between the student and the teacher is very important. The teacher must listen, understand, respect and praise students for their efforts. In return students will appreciate these characteristics in their relationship with the teacher and mutual respect is more achievable.
- Peer tutoring is a tool that the teacher can exploit to his/her advantage in class. It is very beneficial and can have a very positive effect on students' learning.
- Consequences used in class must be tailor-made for the particular students. Some consequences will work with some students, but will

make the situation worse with others. I suggest that consequences are negotiated with the students themselves.

- The use of appraisals in class can be very beneficial. Students appreciate it when they receive praise

6.2.2 Suggestions for school and teachers' continued professional development

International evidence (see Vaillant and Manso, 2013) confirms the benefits of adopting a continuum approach to teacher education through continuing professional development (CPD). In fact, the European Commission (2005) states that “Teachers’ work...should be embedded in a professional continuum of lifelong learning which includes initial teacher education, induction and continuing professional development” (p.4). Thus, it is beneficial that professional development sessions are organised for educators working in schools to share the lessons learnt from this study. The action plan for doing this is presented in appendix 5.

6.2.3 Suggestions for Policy development

Policy makers should keep in mind the following points when developing policy in education:

- The design of a Mathematical curriculum that is more linked with daily life experiences.
- The design of a Mathematical curriculum that is more flexible and directly linked with students’ needs and cognitive level: A personalised learning experience.
- The promotion of the use of peer tutoring in class.

- More support services for students presenting with SEBD to help them deal with their emotions.
- Consequences in behaviour policy documents should be flexible and not based on points system where one size fits all. All students have different needs and consequences need to be tailor-made to support the needs of the different students.
- Behaviour policy documents should be built on appraisals and positive reinforcements. Rewards systems need to be established and promoted in schools.

6.2.4 Suggestions for further studies

As discussed in 3.5.5 in chapter three, knowledge can be gathered over several case studies that explore a specific phenomenon either from different facets or in different contexts. Building on what I have presented here, other researchers may be interested to investigate the following research questions:

- The design of an engaging curriculum in Mathematics for students who present with SEBD. What do students exhibiting SEBD want in their Mathematics lesson?
- How important are student-teacher relationships in class?
- What teacher characteristics help students exhibiting with SEBD have a better learning experience in Mathematics? What teacher characteristics hinder students exhibiting SEBD have a meaningful learning experience in Mathematics?
- How can the teacher deal with different students' emotions in class?

- Appraisals and consequences. How do these affect the behaviour of students?

6.3 Strengths and limitations of this research

This section discusses the strengths and limitations of the study. It should be considered alongside two sections in chapter three: Section 3.41 where the limitations of IPA were discussed and section 3.5 where I discussed Tracy's (2010) model to assess the validity and reliability of this study.

6.3.1 *The aim of the research*

The methodology used fitted the research aims very well. The aim of this study was to gather detailed, rich information about the educational experiences of the participants in their Mathematics lesson, with the aim of understanding what these experiences meant to them. This is exactly what IPA aims to do. For instance, Willig (2013) describes IPA's aims as capturing how individuals experience a particular phenomenon. The present study followed the systematic guidelines by Smith et al. (2009) for carrying out an IPA study. These are described in detail in section 3.4 in chapter three.

6.3.2 *Characteristics of good IPA research*

Smith (2011) lists some characteristics that make a *good quality* IPA research. This study has a number of these features:

- The study is built on the collection of high-quality data. The data collection methods are clearly described in chapter 3.
- The study is rigorous. Each theme is supported with extracts presented in chapter 4 from each participant. Also, all transcripts are made available in the appendix.

- Sufficient space was given to the elaboration of each super-ordinate theme. Sub-ordinate themes of each emergent super-ordinate theme were presented to do justice to each.
- Analysis was interpretative not just descriptive. This was the hardest to achieve. However, I engaged in the double hermeneutic: trying to make sense of the participants' words and how they narrated their experiences.
- The analysis was both divergent and convergent. Both patterns of similarity among participants as well as the uniqueness of each individual experience are presented in this study.

6.3.3 The role of the interviewee and interviewer

Phenomenological analysis works with texts (Willig, 2013). Data collections techniques included both video diary entries and semi-structured interviews. In such cases language is how participants communicated their experiences for the research. Hence, the data collection was reliant on my capacity to interview and relied on the participants' ability to express themselves and describe their experience. I must argue that all my participants were very articulate and were able to express themselves well. With regards to my interview skills, I felt that my skills to carry out interviews improved as I carried out more interviews. I acknowledge that during the first interview I was somewhat leading the participants. However, after careful reflection and discussion with my tutor I felt that I made the necessary adjustments and improved with this regard. This procedure, as well as helping me to improve the interview schedule, helped me to improve my interviewing skills. Interviewing for research purposes is not something I was trained to do and it is not something that I do as a job. Hence, as a researcher I feel that during this study I was developing my skills in interviewing and this served as part of my learning curve.

6.3.4 The researcher

I stated my position in the research in detail from the start in chapter 1. Subsequently, my comprehensive engagement with reflexive matters can be considered as a characteristic of strength of the study. Following Smith et al. (2009) guidance on conducting IPA research, I carried out a systematic and rigorous analysis of data. The interpretative method used gives space for various interpretations by different readers. I have included extensive quotes from interview transcripts within the analysis section (chapter 4) and included the full transcripts to allow for such alternative readings.

6.4 Concluding comments

An IPA methodological framework has allowed me to make an original contribution to knowledge through my focus on the lived experience of learning of Mathematics of students who present with SEBD. A review of research conducted by Tan (2016) of peer-reviewed journals from 1985 to 2015 concluded that there is lack of research in the area of Mathematical education for students exhibiting with SEBD. Thus, the area that this study engaged with is one in which there is a lack of research and the key finding discussed above together with the following consideration for educational practice and policy provide a very important contribution to the area.

Through an in-depth analysis of the lived experiences of four students exhibiting with SEBD during their Mathematics lesson, this study has illuminated the multiple and complex ways in which the classroom influences the educational experiences, behaviour and performance in the subject of students exhibiting with SEBD, with implications for the practice for professionals in the educational field.

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Appendices

Appendix 1: Initial reflections on video diary entries

Reflection on Video Diaries and Interview Schedule 1 – David

Period – 29th February – 15th April (2 weeks Easter recess)

Emergent Themes	Reflection
Relationships	David says that when the teacher has a bad mood, he ends up being nervous. Once again as for Kevin, here we are seeing the importance of student-teacher relationship. It would be interesting to explore how much he valued his relationship with the teacher vis-à-vis his attitude, behaviour and performance in class. However, he rarely mentions his classmates. What about his relationship with his classmates? What is this like?
Relationships, Behaviour and attitude	He says that when others distract him, he gets angry, distracted and starts misbehaving. Thus, he finds it difficult to concentrate. How does he feel about this? I will try to make him elaborate further on the subject and the reasons why he feels that he has to act this way.
Behaviour and attitude	Talks about being 'hyper' and says that he acts mad when this happens. He distracts the teacher, the students <i>etc.</i> He goes on to say that he does not act in this manner on purpose and cannot control himself. Talks about taking medications to control himself. However, he does not elaborate any further on his feelings about this. How does he feel about having to take medications to control his behaviour? Does he feel helpless in controlling his behaviour?
Behaviour and attitude	David admits that when he is in the mood to act the fool he can 'frustrate' the teacher and even make him go mad.

	<p>However, linking to the previous comments during which he said that he could not control himself, it would be interesting to explore this behaviour. How does he feel about it? Does he feel that he is treated unfairly? On various occasions during the VD entries, he mentions that his mood determines his behaviour during the lesson. How does he feel about this? Does he feel helpless? It would be interesting to explore this phenomenon.</p>
Relationships	<p>David complains about the way teachers stop/correct him when he is doing something wrong. However he stops there and does not go into further detail. What annoys him? What are the 'ways' he is complaining about and how does he think he should be corrected?</p>
Importance of Maths	<p>Acknowledges the importance of Maths on various occasions in the VD entries for his life/world but is not too clear about why he feels this way. It would be interesting to elaborate further on this point. He complains that he regards it as difficult and annoying to him but at the same time it is very important. How does he feel about this?</p>
Importance of Maths	<p>David mentions that Maths is important because when he grows up he would like to be able to explain Maths to his children. I think that in reality this is not the right reason why a student should think they should know Maths. It is quite superficial. Can he give other reasons why Maths is important to his world/life?</p>
Behaviour and attitude	<p>Again as in previous VD entries he links his behaviour to his mood swings and whether or not he is feeling hyper. He once again says that he cannot help it. Sometimes he is very well behaved, but on other times he is a handful and distracts others. How does he feel about this?</p>
The Maths lesson	<p>Mentions that video or PowerPoint presentation could help him understand/focus more during the Maths lesson. Why does he feel this way? How could these tools help him? He</p>

	does not elaborate any further on this although he mentions in two separate VD entries over 4 weeks. It would be interesting to explore this during the interview.
Consequences and feeling of injustice.	Complains that he is treated unfairly. He get in trouble when he is good and gets nothing when he misbehaves. How is this happening? Can he give me an example? How does he feel about it? Why?
Behaviour and attitude	Paradoxically, David says that even a chair that is moved or the slightest noise makes him lose attention and focus during the lesson. However, he also says that he distracts the lesson by talking <i>etc.</i> on various occasions. Why is this happening? If he loses focus by the slightest of movements, why is it that he himself feels the need to distract others and make noise during the lesson?
Attitude and behaviour	Once again he is very unclear why he thinks the topic being covered during that particular period is important. He fails to give a particular reason and finds it difficult to reflect on the reason why he is doing the topic.

Interview Schedule 1:

Relationships

- How much do you value your relationship with the teacher? With your classmates? Do these relationships have any effect on your performance/interest in the subject?
- Can you describe your current relationship with the teacher?
- In a VD entry you complained about how the teacher stops/corrects you. Can you describe how you are stopped and what annoys you? How do you feel about it?
- Do you find it difficult to build a positive relationship with the teacher?
- You hate it when others distract you and get angry and you start misbehaving. What are your feelings about this?

- During one particular VD entry you complain about being treated unfairly. You say that when you are good you get into trouble with your teacher and when you are badly behaved you get nothing. Can you elaborate on this further by giving examples? How do you feel about it?

The Maths lesson

- You mention that the teacher should use PowerPoint presentations and videos to help you understand the lesson better? Why do you feel this way? How could these tools help you?

The relevance and importance of the Maths lesson

- On various occasions you say that Maths is important to you because it will allow you to help your kids in the future. Can you think of other reasons why Maths is important to you?
- You acknowledge that Maths is annoying and difficult for you but at the same time it is important. How are your feelings about this?

Attitude/Behaviour

- On various occasions you say that sometimes you feel hyper and find it difficult to concentrate. You start distracting others *etc.* Do you feel helpless and out of control? What are your feelings about the medication you take? Do you feel that you are treated unfairly since you get a consequence for something you cannot control?
- You talk a lot about your mood swings and how these determine your behaviour. What do you think determines these changes of moods? Do you feel helpless? What could help you?

Reflection on Video Diaries and Interview Schedule 2 – David

Period – 11th April – 6th May

Emergent Themes	Reflection
Importance/relevance of the Mathematics lesson. (VD 5,6)	Again David talks about the fact that he doesn't think that the current topic being done in class is of any use to him. He fails to mention any useful ways he can use the topic of areas/volume when he grows up apart from helping his kids do the HW and for exam purposes.
The Maths lesson (VD 5)	David is not clear on why he did not like a particular lesson that week. He only says that 'he doesn't really like them' but fails to say why. I can elaborate further on this during this interview.
The Maths lesson (VD 5)	Same goes for the lessons he enjoyed this week. He fails to say why he like it and is very superficial about this argument. I need to explore why he likes certain lessons and ask him about this subject during this interview.
Attitude/behaviour (VD 5,6)	Says that he is not giving his best but does not say why. Also, in VD 6 he says that he does not always pay attention but again does not say why. It would be interesting to explore this further.
Attitude/behaviour (VD5)	At the end of VD 5, David says that he sometimes has a breakdown and cannot control being disruptive in class. Can he talk more about this? What does having a breakdown mean? How does he feel about it?

The maths lesson (VD6)	Talks about liking 'hand on activities'. Also, says that he liked doing the first part of the notes because these were, as 'he likes them'. However, he does not elaborate any further. It would be interesting to explore this further.
Attitude/behaviour (VD6)	Talks about various reasons why he misbehaves in class. Mentions that if he is angry, he will act angry with his teacher and will be distracted.
The Maths lesson (VD6)	Describes the Maths lessons as being 'off', annoying him. He gets angry, feels the need to go out of the lesson. Why does he feel this way?
Importance/relevance of Maths (VD7)	Unlike areas/volumes, David thinks that probability is useful. However, when he gives an example to support his argument he uses fractions and not probability.
The Maths lesson (VD7)	David says that he liked all the lessons this week, he worked hard and participated but fails to specify why he liked them. What was different during these lessons? Can he talk more about this?
The Maths lesson (VD 7)	Talks about power points and videos in order for the lesson to be more interesting.
Relationships (VD7)	Says that the teacher enjoys it when he participates and pays attention. Also, notices that when he behaves the teacher does not shout at him but talks to him. How does he feel about this?

Interview Schedule 2:

Relationships

- How do you feel when the teacher acknowledges your good behaviour?

The Maths lesson

- Can you tell me of a time you enjoyed a mathematics lesson? What did you do? Which bit did you particularly enjoy?
- What do you particularly like about probability?
- Can you describe a 'hands on activity' you liked?
- How do you feel when the teachers uses a PowerPoint and videos during the lesson?
- Can you tell me of a time when you did not enjoy the mathematics lesson? What did you do? Which bit did you particularly not enjoy?
- Sometimes you describe the Maths lessons as being 'off'. You feel angry about it and feel like going out of the lesson. Can you talk about an instance when you felt the need to move out of the lesson?

The relevance of the Maths lesson

- Often you said that the topics you are doing during the Maths lesson are useless for your life. However, you said that the current topic being done, Probability could be useful for your life. How do you feel about this?

Attitude/Behaviour

- Can you talk about an instance when you misbehave during the lesson? What triggers such behaviour? How do you feel about it? How could the teacher help you?

Reflection on Video Diaries and Interview Schedule 1 – Kevin

Period – 29th February – 15th April (2 weeks Easter recess)

Emergent Themes	Reflection
Relationships	<p>From the start of the video diary (VD) entries, Kevin is honest about his negative relationship with Mathematics and the teacher. He even mentions that once he ‘insulted’ his Maths teachers but stops there. He fails to give any further details. Further details about the dynamics of such an incident would be interesting in order to find out about his relationship with the teacher and about his experience of the subject. As a matter of fact, one of the main purposes of this study is to explore students’ experiences in Mathematics.</p>
The Maths lesson	<p>He repeatedly says that he doesn’t like the Maths lesson because the lessons are ‘basic’ and not fun. What is regarded as ‘fun’ for Kevin? He later says that they have activities during the lesson, but they are ‘worthless’ and his behaviour was bad. In the next sentence he says that he had an activity and he thought it was useful and he learnt from it. This is very paradoxical. This line of thought needs further clarification during the first interview.</p>
Relationships	<p>He talks about his relationship with the Maths teachers. At first he talks about a troublesome and negative relationship with his previous teacher but after sometime this improves. He admits that this was beneficial with regards to his performance in the subject and he started to follow the lesson and pay attention. However, now that he has a new teacher, his relationship with his Maths teacher is back to square one. How does he feel about this? How important</p>

	is his relationship with the teacher vis-à-vis his performance in the subject?
School, the importance of Maths	In a particular VD entry Kevin says that he doesn't like school and it does not help him. However, he admits that he needs it. Thus, school does not help him but he needs it. It would be good to explore such a feeling and ask Kevin to elaborate on it. Also, he mentions that one of the subjects he needs is Hospitality. It would be interesting to ask him to compare and contrast Maths and Hospitality. One is a subject he openly does not like, the other is one that he likes and he feels it is important for his world/life. Why? Can he elaborate on this? Is it the way it is being taught or presented? As a Mathematics teacher, I find it difficult to understand how Kevin does not regard the subject as 'needed' for one's life.
School	Kevin says that school is 'destroying' him as a person because he has a lot of break ins, after schools and suspensions. However, he stops there and only says that he dislikes writing. This needs further exploring. How are these consequences destroying him? What other types of consequences does he deem suitable?
The importance of Maths	Whilst talking about angles, Kevin 'looks' frustrated by both his hand gestures and facial expressions when he says that he doesn't know why he is doing this topic. Again he doesn't see the lesson's relevance to his world/life.
Attitude and behaviour	At the moment he is doing his best and behaving well during the lessons. This is in contrast when compared to the past. He feels good about this. He feels that he is doing the right thing. What brings about this change in behaviour in Kevin? He did not elaborate any further. It is interesting to explore this change of attitude and why it happens.
The Maths lesson	Kevin talks about a lesson that is not of the 'usual' type, 'on the board <i>etc.</i> ' He refers to it as 'beautiful'. However, he

	fails to describe this lesson in detail. It would be interesting to get a description of such a lesson and what made it 'beautiful'
Relationships	Kevin tries his best not to distract others. His intention is not to distract others. He likes it when they work together, they are quiet and they perform as 'one group'. Again, the theme of relationships is emerging from Kevin's VD entries and he feels that they are important to his performance in the subject. I feel that asking Kevin to elaborate on the importance of positive relationships is important.
Relevance of Maths	It is interesting to note that he feels that Maths is not important for him but is important for others who will need it for their jobs. It is only important for the exam but not for his world/life. Once again Kevin is regarding Maths as irrelevant to him and attributing this towards his disinterest towards the subject. Again, as for angles, he cannot understand why they are doing the current topic, quadrilaterals. The fact that he is finding it difficult to associate the importance of a topic to his world/life is becoming recurring and a theme that is emerging in Kevin's VD entries.
Relationships	During a particular VD entry he refers to an incident during which he describes the teacher as shouting with others. He stops there and does not elaborate on this. How did he feel about it? How would he feel if the teacher shouts at him?
The Maths lesson	Kevin mentions that during a particular lesson during the 4 th week he enjoyed himself because a 'game' was played instead of the normal lesson. He mentioned various topics covered during this game. It is also becoming a recurring theme that Kevin likes 'games' as opposed to the 'normal', 'usual' and 'basic' lesson.
Relationships, The Maths	He dislikes it when there is a lot of noise, talking and distractions during the lesson. This makes him lose focus.

<p>lesson, attitude behaviour</p>	<p>He also admits that when he is not in the mood and does not feel like it, he distract others. On reflecting about this, he feels that he 'annoys' his friends by this behaviour. He makes a very interesting point when he says that he distracts others as payback for their disruptions. He feels sad when other students distract him and thus feel that he wants to get even with them by distracting them. This is a very interesting point since it could be one of the triggers that is making him misbehave.</p>
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Interview Schedule 1:

Relationships

- Can you tell me something about your relationship with your teacher?
- Can you tell me something about your relationship with your teacher?
- Can you describe your current relationship with the teacher?
- How would you feel if the teacher shouted at you?
- In a VD entry you said that once you 'insulted' the teacher. Can you describe this incident? How did you feel about it?

The Maths lesson

- Can you tell me of a time you enjoyed a mathematics lesson? What did you do? Which bit did you particularly enjoy?
- During a particular VD entry you said that a particular activity was 'useless'. Yet another one was good and you learnt from it. What makes an activity useless? What makes a good activity?

The relevance of the Maths lesson

- You mention that you find Hospitality as interesting and important, but fail to see the importance of Maths for your life except for the exams. How is Hospitality different from Maths?
- How do you feel about doing something that you do regards as relevant for your life?

The school

- You mentioned in the VD that you felt that school is destroying you when you are given break-ins, after school and suspension. Can you say a little bit more about that?
- What other types of consequences do you deem more suitable?

Attitude/Behaviour

- Sometimes you said that your behaviour is good and you are engaged in the lesson. However, you also admit that other times you misbehave and distract others. What do you think makes this happen?

Reflection on Video Diaries and Interview Schedule 2 – Kevin

Period – 11th April – 6th May

Emergent Themes	Reflection and questions
Attitude/behaviour (VD5)	Talks about an incident during which the teacher had to stop the lesson because of the disruptive behaviour of various students. Also, talks about the disruptive nature of students during the Mathematics lesson. How does he feel about happens?
The Maths lesson (VD 5, 6)	Kevin talks about lessons he enjoyed because it had 'games'. Can he describe such a game and what he learnt during the game?
Attitude/behaviour (VD 5,6)	Admits that sometimes he plays the cool and disrupts the lesson. However, he goes on to say that most of the time he is well behaved. But sometimes he gets annoyed and is deviant. Can he elaborate further on why he has such mood swings during the lesson?
Relationship (VD 5)	Says that since he had his finger broken, the teacher allowed him to rub the white board. He was happy about this. Why is this so? Why does he feel this way about being allowed to rub the white board?
Relationships, The Maths lesson (VD 6)	Begins VD 7 by saying that he had a discussion with his teacher about what he likes during the Maths lesson. This resulted in the lesson having more 'games'. What made Kevin talk to the teacher? How

	does he feel that the teacher 'listened' to his suggestions?
Attitude/behaviour (VD 6)	In a particular instance Kevin talks about being a 'slow learner' but does not elaborate further on this. Why does he think he is a slow learner? How does he feel about this?
The importance/relevance of Maths (VD 6)	Talks about the fact that he does not feel that angles are of any use to him in real life and seems disappointed about it. He talks about his need of learning more 'basic things'. What are the basic things he is referring to? Why does he need them?
The Maths lesson (VD7)	Says that he likes Algebra but in actual fact when he goes on to describe the activities he is doing in class, he describes Probability but not Algebra. Why does he like it? What makes it an interesting topic to him?
The importance/relevance of Maths (VD7)	He also goes on to say that he doesn't see any use to this topic for his life. How does he feel about this?
The Maths lesson (VD7)	Says that he liked a particular lesson about 'heads and tails' but on the other hand he did not understand the concept behind it. He says that he understood nothing even though he liked it. Can he talk further about this activity? What did he like about it? What could have been done better so that he would have understood the lesson?

Relationships, Behaviour (VD 7)	Says that he was well behaved this week and the teacher acknowledged this. How does he feel when the teacher acknowledges positive behaviour?
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Interview Schedule 2:

Relationships

- When you broke your finger, the teacher allowed you to clean the white board. How do you feel about this? Why?
- Last week you said that you were well behaved and the teacher acknowledged this positive behaviour. How do you feel when the teacher acknowledge something good from your part?
- What made you talk to the teacher and suggest that more games are played during the lesson? Has this made any difference to your performance/behaviour during the Maths lesson?

The Maths lesson

- Can you tell me of a time you played a game during the mathematics lesson? What did you do? Why did you enjoy it?
- Can you talk about what you like about probability?
- During a particular VD entry you described an activity about 'heads and tails' as being fun, but you did not understand it. Can you talk about this? What did you like about it? Why do you think you did not understand it?

The relevance of the Maths lesson

- You say that the topics covered during these weeks are of little or no relevance for your life. You said that 'basic things' would be more

beneficial to you. Can you talk about these 'basic things' and how these can help you in your life?

Attitude/Behaviour

- How do you feel when the Maths lesson is interrupted because of disruptive behaviour? What could be done differently by the teacher rather than stopping the lesson?
- Can you talk about when you act cool and misbehave during the lesson? Can you describe your behaviour and what triggers such behaviour?
- You said that you are a 'slow learner'. What do you understand by being a slow learner? How do you feel about it?

Reflection on Video Diaries and Interview Schedule 1 – Manuel

Period – 29th February – 15th April (2 weeks Easter recess)

Emergent Themes	Reflection
The Maths lesson, Relationships	In his first VD talks very positively about his experience of the subject. Says he gets rewarded (sweets) for answering correctly. Talks about a positive relationship with the teacher and his classmates. What can he say about his relationships with his teacher and classmates?
Relationships	Manuel talks about a friend of his who talks to him and distracts him. He says that they do not do the work that they are given because they stay talking, playing <i>etc.</i> (VD3). How does he feel about this?
Behaviour	Manuel describes an incident during which he said a rude word in front of the teacher after being provoked by his classmate. He got a break in for this behaviour.
Relationships, Maths lesson	Towards the end of the VD entry he says that his teacher is very friendly and thus feels guilty about not doing his HW. As a result he does it. Can he say a little more about this?
The school, Behaviour,	Talks about the school and teacher as being very strict with regards to haircuts, uniform <i>etc.</i> He also says that if students do something wrong they need to shout at them at all costs. How does he feel about this rigid environment? What are his thoughts about it?
Relevance	Wants to go into business once he finishes school and thinks that Maths will help him in his business. How does he think Maths will help him? Can he say a little more about this?
Relevance	Talks about Algebra (VD2) and angles (VD3) as being a useless topic. He would remove them as a topic from

	Maths and they annoy him. Can he say a little more about this and why he feels it is useless?
The Maths lesson.	Similarly to the first VD he talks about his likeness of being given rewards (sweets & appraisals) for his positive behaviour. Also, says that he puts an effort and works only because he is rewarded. He doesn't do anything for nothing. Can he say a little more about this?
Relevance	Fails to see any relevance with regards to the topic being covered (two/three dimensional shapes) with his life/world. He spends the majority of the time talking about the fact that he does not know why they are doing this topic. We have seen this repetitively during VD entries by the other participants.
The Maths lesson	Says he is not doing his best because this topic is annoying him. He talks with his classmate and is disinterested because he does not like the topic. The topic is boring.

Interview Schedule 1:

Relationships

- Can you tell me something about your relationship with your teacher?
- Can you tell me something about your relationship with your classmates and your desk neighbour?
- Can you describe your current relationship with the teacher?
- How do you feel about other students that distract you?

The Maths lesson

- Can you tell me of a time you enjoyed a mathematics lesson? What did you do? Which bit did you particularly enjoy?

The relevance of the Maths lesson

- You mention that Maths can be important for you because you want to go into business. How do you think Maths is helping you? How do you feel about doing something that you do regard as relevant for your life?
- You talk that Algebra, Angles, two and three-dimensional shapes are irrelevant for your life. How do you feel about doing something that is irrelevant for your life?

The school

- You mentioned that the school is very strict. How do you feel about this rigid environment? What are your thoughts about this?

Attitude/Behaviour

- You mentioned in the VD that once you said a rude word in front of the teacher. Can you say a little bit more about this incident? How did you feel about it?
- Can you talk about your behaviour during the Maths lesson?

Reflection on Video Diaries and Interview Schedule 2 – Manuel

Period – 11th April – 6th May

Emergent Themes	Reflection
The importance/relevance of Maths (VD6, 8)	Manuel says that he will definitely not need area, volumes and probability for his life and doesn't know why he is learning them. At the end of the VD he says that Mathematics should have topics that are relevant to one's life. What are the topics that should be taught that can be relevant to one's life?
Attitude/behaviour (VD6)	Says that he distracted himself this week. How does this happen? Why?
Attitude/behaviour (VD 6)	Says that if he is given appraisals this might make him more concentrated. Why is this so?
Attitude/behaviour (VD 6, 7)	Over the past few weeks his behaviour was good and he is not receiving any consequences. He says that he isn't getting into trouble as before. Can he talk about this any further? Why did he experience this change in behaviour?
The Maths lesson (VD 7, 8)	Talks about 'props' in order to make the lesson better. What are these 'props' he is referring to? How can these help him?
The Maths lesson (VD 8)	Fails to mention a Maths lesson that he likes. Always mentions hospitality as his favourite subject. Can he talk about a Maths lesson that he liked over these past few weeks? Also, he mentions that he does not

	like probability lessons but does not go into any detail. Can he talk about this?
Attitude/behaviour (VD8)	Admits that he is not giving his best since he is not getting his notes. Why is this so? Can he talk more about it?
The maths lesson (VD8)	Says that he totally dislikes the probability topic. Why does he hate this topic? Can he talk about this?
Attitude/behaviour (VD 8)	Says that his behaviour is good because he sleeps throughout the lesson. He goes on to say that since he sleeps he does not distract others. Why does he sleep? What is triggering such behaviour during the Maths lesson?

Interview Schedule 2:

The Maths lesson

- Can you tell me of a time you enjoyed a mathematics lesson? What did you do? Which bit did you particularly enjoy?
- During various VD entries you mention that the teacher can use 'props' to make the lesson more interesting. Can you describe such props? Talk about how these could help you.
- Can you tell me of a time when you did not enjoy the mathematics lesson? What did you do? Which bit did you particularly not enjoy?
- Can you talk about your dislike towards the probability topic? Why do you feel so negative about it?

The relevance of the Maths lesson

- Often you said that the topics you are doing during the Maths lesson are useless for your life. During one particular VD entry you say that Maths should have topics that are relevant to one's life. In your opinion, what are the topics that should be taught that can be relevant to one's life?

Attitude/Behaviour

- Can you talk about your behaviour over the past few weeks? Have you been getting into trouble? Why?
- How can appraisal help you concentrate more during the Maths lesson?
- Talk about when you distract yourself during the lesson.
- You also say that you are not giving your best because you do not bring your notes to school. Why is this happening? Can you talk about it?
- During your last VD you said that you slept during your Maths lesson. What makes you sleep? Can you talk about this?

Reflection on Video Diaries and Interview Schedule 1 – Neville

Period – 29th February – 15th April (2 weeks Easter recess)

Emergent Themes	Reflection
The Maths lesson	Talks about an activity involving area. In a disappointed voice he said that his team lost. Does he like such competitive activities? How does he feel about them?
Attitude and behaviour	Neville says that such activities make him more interested in the lesson and focused. He felt good about it. He wanted to win at all cost and was very disappointed when his team lost. However, he finds it hard to mention how this activity actually helped him and he said it did not really help him since he already knew how to do it.
Attitude and behaviour	He says that his behaviour in the Maths lesson was good that week because he loves the subject. How does this compare to other subjects that he does not like? What is his behaviour like during those lessons? Does the fact that he likes the subject help him focus more on the lesson?
Attitude and behaviour	He says that he gets break-ins as a consequence for misbehaving but never in Maths. It would be interesting to explore why this happens. Is he engaged during the Maths lesson and thus does not feel the need to misbehave?
Relationships	Talks about 'incidents' during which other students annoy him but stops there without elaborating. He only says that such 'incidents' will pass. Can he elaborate on this? How do they annoy him? How does he feel about this?
The Maths lesson	Complains that even though he has a netbook at school, this is rarely used at school other than to play games. This is a very interesting point in my opinion. Even though the students have such technology at their disposal, this is not

	used. How does he feel about this? How could the netbook help him during the Maths lesson?
The importance of Mathematics	Neville says that Maths is all around us. We need it to get a job. Acknowledges its importance very clearly. Does this have any effect on the way he regards the subject? How does he feel about?
Attitude and behaviour	During various VD entries, Neville says that he like the majority of Maths topics and thus, does not find it difficult to behave well. What about topics he does not like? How is his behaviour during such topics?
The Maths lesson	Neville says that the lesson is 'perfect' and 'very good'. However he fails to give any further details? How is the lesson good and perfect? What happens during Neville's Maths lesson that makes him feel that it is perfect? What does he like? Can he describe a 'perfect' lesson?
1:00	Neville does not see any relevance to his life/world with regards the topic he is carrying out at the moment (probability) during his Maths lesson. He can mention that it is used in Casinos but cannot mention how it can be useful for this life. How does he feel about doing something that he regards as being useless for his daily life?
Relationships	After 3 VD entries during which Neville failed to mention anything that annoys him during the Maths lesson, he finally starts to talk about things that annoy him. Other students who stay talking to him during the lesson annoy him or other students who copy answers from his copybook. He gets very angry when this happens. Why does he feel so angry? How does he deal with it?
The Maths lesson	Mentions that one thing that he likes about the Maths lesson is the end of topic activities. But does not elaborate on this further. It would be interesting to get to know what such activities involve.

Attitude and behaviour	Says that he gets very annoyed when people ask him how his behaviour was during the lesson. Why is this so? What are his feelings on this?
Relationship	Complains when he knows something, wants to tell it to the teacher and the rest of the class, but the teacher refuses to let him share it. It makes him angry. Why does he feel this way? He talks about the 'teacher's rule' that only teachers can explain and feels that it is unfair. Why does he think this is so?
The Maths lesson	In various VD entries he talks about how much he hates doing HW. Why does he feel this way about HW? What can replace HW according to Neville?

Interview Schedule 1:

Relationships

- How much do you value your relationship with the teacher? With your classmates? Do these relationships have any effect on your performance/interest in the subject?
- Can you describe your current relationship with the teacher?
- Sometimes other students annoy you. How do they annoy you? How do you feel about this?
- Why are you angry when other students copy your work?

The Maths lesson

- During a particular VD entry you mentioned a competitive activity during which you were divided into groups. Do you like such competitive activities? Do you like to work in groups? Do you think you learn from such activities? How is your behaviour?
- During a particular VD entry you mentioned that the Maths lesson is 'perfect' and 'very good'.

- You mention that although you have a netbook, this is never used during the Maths lesson. How do you feel about this? How could it help you? What happens during the Maths lesson that makes you feel that it was perfect? What do you like? Can you describe a 'perfect' lesson?
- What about the end of topic activities? Why do you like them?
- What are your feelings about the HW you are given. Why do you feel this way?

The relevance of the Maths lesson

- On various occasions you mention that Maths is all around you. You think it is important. How do you feel about this? Does this make you more interested in the subject?
- You said that probability is not important for your life. How do you feel about doing a topic that you regard as irrelevant to you? How is your behaviour?

Attitude/Behaviour

- You say that your behaviour is good because you like most topics in the subject. How is your behaviour during topics that you do not like? During subject you do not like?
- You said that you sometimes get break-ins, but not in Maths. Why do you think this is so?

Reflection on Video Diaries and Interview Schedule 2 – Neville

Period – 11th April – 6th May

Emergent Themes	Reflection
The Maths lesson (VD 6)	Says that he doesn't like sudden changes in the topic being covered. For example he says that he doesn't like it when the teacher is doing a topic on squares and all of a sudden she starts doing a topic on triangles. Why does he dislike such changes? What annoys him? How can the teacher help him to absorb such changes better?
The Maths lesson (VD 6, 7)	Says that he doesn't like graphs and he did not enjoy any of the lessons that week. Neville is usually positive about the different topics covered in the Maths class. What is it that is bothering him with graphs?
The relevance/importance of Maths (VD 6,7)	During VD 6 is confident that Graphs can be used in his life when he grows up but during VD 7 he is less confident about it. In fact he starts to question whether graphs is actually important for his life. Why did he change his mind? How does he feel about doing something that he sees as not important for his life?
Attitude/behaviour (VD 7)	Says that he gets easily distracted because he doesn't like this topic. He ends up talking because he loses interest.
The Maths lesson (VD 7)	Says that if he were the teacher he would not do graphs in Form 2 but would do it at a later stage.

	Why is this so? What is annoying him so much about graphs?
The Maths lesson (VD 8)	Says that last week was used doing revision of material done last year. How does he feel about doing revision? Does he need it? Is his behaviour any different when compared to other lessons?
The relevance/importance of Maths (VD 8)	As opposed to graphs, he regards constructions and angles as topic that is relevant to his life. How does he feel about this? Does this have effect on his behaviour/performance in the topic?
Relationships (VD 8)	Says he feels good when he says something good in class and is praised for his effort and used as a positive example. Why is this so? How does he feel about it?
The Maths lesson (VD 8)	As opposed to graphs, Neville says that he is finding constructions interesting. Why is this so? What makes this topic interesting?
Relationships (VD 8)	Neville appreciates the fact that his teacher does not make fun of them when they ask questions and they do not feel embarrassed. Can he talk about the importance of this? Has he had negative experiences with maths teachers in the past when he asked questions?

Interview Schedule 2:

Relationships

- How do you feel when the teacher praises your effort and uses you as a positive example?
- You value the fact that the teacher does not make fun of anyone who asks questions. How do you feel about this? Did you have a negative experience in the past with regards to asking questions?

The Maths lesson

- Can you tell me of a time you enjoyed a mathematics lesson? What did you do? Which bit did you particularly enjoy?
- What do you particularly like about constructions and why do you describe the lessons as interesting?
- Can you tell me of a time when you did not enjoy the mathematics lesson? What did you do? Which bit did you particularly not enjoy?
- Why do you dislike graphs so much? Can you talk about it? Why do you think these should be done at a later stage?
- You also say that you dislike sudden changes in topics. Why is this so? How do you feel about it?
- How do you feel about doing revision? How is your behaviour during revision lessons?

The relevance of the Maths lesson

- You did not see any relevance to your life whilst doing graphs but you can see it whilst doing constructions. Can you talk about this? How does this affect your performance and behaviour?

Attitude/Behaviour

- Can you talk about an instance when you misbehave during the lesson?
What triggers such behaviour? How do you feel about it? How could the teacher help you?
- What makes you give your best during a Maths lesson?

Appendix 2: Stages 1, 2 & 3 of the IPA analysis

David – Video Journals and Interview Transcripts (12 weeks)

Transcript showing steps one and two of IPA (Smith, Flowers & Larkin, 2009)

Week 1 – Video Journal – 29/02/2016

Emergent themes (Step three)	Original Transcript	Exploratory comments (Step one and two)
Activities: No Giving responsibility to the student Intervention: Allowed to leave class if bored. Power: Teacher giving some of his power	My name is David [REDACTED]. With regards to activities. I never have during the Maths lessons. But for example, the teacher allows me to control his laptop or go outside if I get extremely bored.	Does not have activities during the lesson. <u>Why does the teacher choose not to have activities during the lesson? Is it a problem related to time or preparation? What could be the reason?</u> Given special responsibilities to make him feel useful and important. Allowed to leave class if he gets very bored.

<p>(controlling the laptop) to the student.</p>		<p><u>Can this be seen as a power struggle between the teacher and student? The student likes it when he is given control of the teacher's laptop. He feels important. A shift in power.</u></p>
<p>Relationship with the teacher: Effecting student's mood and attitude.</p> <p>Relationship with peers: distracting him, make him angry.</p> <p>Behaviour: talking, disruptive</p>	<p>I do not always like the lessons. It depends on the subject. If the teacher has a bad mood, I end up getting nervous. When we have the lesson, normally, as long as there is no one who is making me laugh, I try to really pay attention. But when there is a student who distracts me and annoys me. He makes me nervous and anxious and I lose my temper, I start to talk and I start distracting others. But when there aren't other students who distract me, I really manage to focus and pay attention to the lesson.</p>	<p>A negative mood by the teacher will affect the student's mood and attitude. It makes him nervous.</p> <p><u>Can the teacher control his mood? How important is the teacher's mood to the teaching and learning taking place in the class?</u></p> <p>Talks about a negative relationship with his peers. They distract him and make him angry. As a result it is difficult for him to focus and will lose interest in the lesson.</p> <p>Talks about negative behaviour. Talking and being disruptive.</p> <p>Talks about positive behaviour when his peers do not distract him.</p>

<p>Positive behaviour when he is not distracted.</p>		
<p>Teaching and learning: The Maths lesson as enjoyable. Maths lesson as boring as a result of getting confused and hyper. Bad behaviour: disruptive as a result of boredom. Incontrollable behaviour.</p>	<p>I think that lessons are enjoyable. But not always because I do not like all topics. For example, I do not like the graphs topic. On the other hand I like percentages, for example. Also, there were certain Maths lessons during which I got very bored. For example when I get confused or hyper. I start fooling about and disrupt the teacher, disrupt my friends and obviously we do not do well. It depends on the reason why I do this. I do not always do it. I do not do it on purpose. I do not plan on doing it. If I do it on purpose, my reaction when he kicks me out of class would not be 'but I did nothing'. But sometimes I enjoy being kicked out of class. I</p>	<p>Talks about lessons he enjoyed and others he did not. <u>Why did he enjoy certain lessons and not others? Is it possible to have all Maths lessons done in an interesting way? Does the topic determine whether a lesson is interesting or not? Should certain topics that are 'boring' be taught at secondary level? Can Maths be fun all the way?</u></p> <p>Talks about getting very bored as a result of getting confused or hyper. As a result he will disrupt the lesson.</p> <p><u>Cannot control his behaviour. Is it fair that he gets kicked out of class for doing something that is out of his control? Should someone who makes use of a wheelchair be kicked out of class if the class is not accessible?</u></p>

<p>Ineffective/inadequate consequences: being taken out of class.</p> <p>Medication to control his behaviour.</p> <p>Behaviour: Puts in an effort not to distract others but cannot pay attention.</p>	<p>like being kicked out of class because I would need to calm down. I take the 'Ritalin' that the psychologist gave me, to concentrate more during the lesson and at the moment I am taking a small dose, only 3ml. When I feel like following the lesson, I pay attention and I bring the books. Not really pay attention, but try not to disrupt others and stop the teacher. I try to behave better.</p>	<p>He does not have control on his behaviour and feel that it is unfair that he is kicked out of class.</p> <p>However, he talks about enjoying being kicked out of class. He uses it to calm down. <u>Is this an effective consequence adopted by the teacher? If he enjoys it will it serve as a deterrent to bad behaviour or the other way round?</u></p> <p><u>Paying attention for David is the same as not distracting others. Does this show that David has no interest in learning the subject but tries his best not to distract others?</u></p> <p>Takes medication to control his behaviour in class.</p>
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		Cannot really pay attention but at least he tries to make an effort not to be disruptive and distract others.
<p>Relationship with teacher: room for better understanding the state of mind and health of the students in class.</p> <p>Maslow's hierarchy</p> <p>Physically unfit for the lesson will make him exhibit negative behaviour.</p>	<p>Some times when I feel down, for example, when I have a headache, I do not feel like staying in class. I do not feel like listening to anyone because when I have a headache, it is not a mild one. When I get a headache, it is a migraine. Sometimes I had problems with the teacher, for example he kicks me out for interrupting. But he never gave me a break in. Sometimes I do not bring the HW, but sometimes I have my good excuses. For example, this is true, I feel sick, I go to school, I get a headache at school, and it continues to hurt me and I feel down. When I go home, I go to sleep and do not do the HW. For example, if I</p>	<p>Sometimes the student is not fit for the lesson. He has a migraine and this makes it impossible for him to concentrate.</p> <p><u>Can this be related to Maslow's hierarchy of needs? How can the student be in a position to learn the subject if he is not emotionally fit to do so?</u></p> <p>He has problems with the teacher when this happens.</p> <p>Talks about problems in doing HW.</p>

Problems in doing HW	have a good mood, I decide to make other students laugh, and obviously the teacher gets mad. I frustrate him, I make him start to think whether I am sane or not. When I have the mood to make teachers go mad, I do so. All right. That's all. Bye!	Sometimes he makes teacher go mad with his mood and attitude.
Relationship with teacher: teachers go mad. with makes		

Week 2 – Video Journal – 07/03/2016

Emergent themes	Original Transcript	Exploratory comments
Positive thoughts about the school. The school as helpful for students.	My name is David and I will talk about the school. My school is quite old, but it is also beautiful, in the sense that you could learn whatever you want. I received a lot from the school because all subjects are important for your life.	<i>Although old he describes the school as 'beautiful'.</i> Old referring to the physical aspect of the school. Beautiful in the sense that it helps him and offers him a good education. The school as helpful and as giving him a lot.

<p>Inadequate physical school environment.</p>	<p>I do not like all things at school. For example, in the classes or in the corridors there are tiles that are broken or the windows that are broken. It depends.</p>	<p>Talks about a school environment that is inadequate with broken windows and tiles.</p>
<p>Inadequate intervention. Inadequate school environment</p>	<p>The things that could be different are the way the teachers stop you. For example, if you are doing something wrong and they stop you or the painting on the walls. The class lighting. I personally do not like it.</p>	<p>Complains about the way he is corrected. Even though he does not go into detail to say why he dislikes it.</p> <p><u>How are teachers stopping the student? Could it be that the ways the teacher corrects her students is making the situation worse?</u></p> <p>Again complain about the physical aspect of the school.</p>
<p>Life after school: Career ambitions.</p>	<p>I think that I go to school because it is important. Without going to school you will end up doing nothing. In the sense that you will not find a job that needs knowledge learned at school and subjects learned at school.</p>	<p>The school as important as it prepares you for life after school. To give a valid contribution to the society you will live in when you grow up.</p> <p><u>The school is regarded, by the student, as preparing him to join the workforce, but should this be its only function?</u></p>

<p>Life after school: School helps you to become a social being.</p>	<p>The school helps me in the sense that it prepares me for life and that when I grow up I will be able to socialise with other people not just socialising with myself, my mother, my father and brothers.</p>	<p><u>This answers the question I posed earlier. The school also preparing students socially.</u></p> <p>The school as important for one to become a social able being in the society when one grows up.</p>
<p>HW as a cause of anxiety and stress.</p>	<p>Something that did not exactly 'destroy' me at school, but sometimes I feel that it is hard. This is when they give me a lot of HW and I am not good when it comes to doing a lot of HW. When I come to do the HW sometimes I feel eh... Confused.... I do not know why.</p>	<p>HW is having a negative effect on him. Causes him anxiety and stress.</p> <p><u>Should HW be the cause of so much concern? Should it be obligatory or voluntary?</u></p>
<p>Life after school: Preparing you for life.</p>	<p>The school prepares me for the rest of my life in the sense that it gives me the education that I need and at the same time I am able to raise up a family because without school you will not manage to teach your kids. That's it!</p>	<p>School as preparing him for life after school.</p>
<p>Relevance of Maths lesson.</p>	<p>In my life, the Mathematics lessons are preparing me for a lot of things. First of all, if</p>	<p>Talks about Maths as useful for his life.</p>

<p>Looking beyond the exam.</p> <p>Maths lesson as boring.</p>	<p>I have 1 + 1, not 1+1, similar, I will be able to do it. Even if I do not obtain a pass in my O-level, I will be able to do it. I will not end up not knowing the subject. Learning Maths is compulsory. Whether you want it or not because it is important, but sometimes I get bored during the Maths lesson. However, it is important, you will not remove it from your life because you will end up with nothing.</p>	<p>Even though most probably he will not be able to pass from his exam, he still appreciated the importance of learning the subject. It will help him with his life.</p> <p><u>Should Maths be considered as so important?</u></p>
<p>Maths as difficult.</p>	<p>If I were to remove a topic in Mathematics, it would be BIDMAS because I really feel bad about it. Or the graphs because the graphs are a bit hard to grasp for me. And I would try learning BIDMAS so that I would be able to do better in the examinations. Everything is important in Mathematics, but I regards it as difficult for me. Caw!</p>	<p>Talks about a topic he hates. <u>Why does he hate this topic so much?</u></p>

Week 3 – Video Journal – 15/03/2016

Emergent themes	Original Transcript	Exploratory comments
Relevance/irrelevance of Maths.	My name is David Cassar and I will speak about myself. At the moment we are doing sectors. The topic is not one of the topics I like. But it is important that you learn it. It is important to learn it because for example when I will have kids I will be able to help them.	In reality does not see any use of this topic for his daily life. He says he will use it to teach his children.
Teaching and learning dependent on student's mood and attitude.	The best? Not always. It depends on my mood. If I have a bad mood I will not give my best. If I have a mood that I do not pay attention, I will not give it my best. But when I decide to pay attention. I really pay attention.	It is evident here that David's attitude and mood very much determines whether he will be able to follow the lesson. <u>Is student's mood more important than the actual Maths content/delivery? Is Maths really the problem? Can a better delivery of the Maths content make a difference or does the student's mood determine his performance from an onset?</u>

Behaviour depends on mood. Behaviour changes. Incontrollable behaviour?	I do not always behave in the same manner. It depends on my mood. Whether I am hyper or not. The way I behave? It depends. I cannot even describe it. Sometimes I am a good boy. Sometimes I distract others, other times I do not. Sometimes I really distract others and get kicked out.	Mood also determines his behaviour. He knows how to behave well and what good behaviour is. But sometimes he chooses to misbehave. <u>Is it a choice? Can he control it? Or does his mood determine it?</u>
Inadequate/lack of use or resources.	In order to learn this topic in a better way, maybe videos could help. I do not know. Or Power Points? PowerPoint and afterwards we see how they work out, this type of topic? Because I haven't really understood it.	The use of visual resources can help the student understand the topic better. <u>Can these resources really help? If he says that sometimes he cannot control his behaviour, will they make any difference?</u>
Good behaviour linked to enjoyment. Bad behaviour linked to difficulty to understand.	The thing that I enjoyed most during last week was... eh. That when we started the topic I was really good. But then the worst came and I did very badly. And I did not do well.	When he was enjoying the lesson, his behaviour was good. When the 'worst' came, meaning that Maths started to become more difficult, his behaviour turned for the worse.

<p>Relationship with teacher</p> <p>Lack of positive reinforcement/reward.</p> <p>Inadequate consequences.</p> <p>Maths as annoying.</p> <p>Maths as complicated, difficult, confusing.</p>	<p>What annoyed me was that if you misbehave you get away with it. But when you behave well you get punished. That really bothers me. When you behave well you get punished. When you misbehave you get away with it. Even the subject annoys me sometimes. It is not one of my favourite subjects. Personally I do not like Maths as a subject, because it has a lot of complicated stuff and opens places. I do not like it.</p>	<p>Complains that his teacher does not notice his good behaviour, but his bad behaviour is easily noticed and he gets punished.</p> <p>Maths is not his favourite subject because he finds it complicated, difficult and confusing.</p>
<p>Easily distracted.</p> <p>Incontrollable behaviour.</p> <p>Relationship with peers: distracting.</p>	<p>I think that everything distracts me. Even if there is a chair being moved. If I am focused on the lesson, I try my best not to get distracted, but if someone tries to make the class laugh, I will laugh. I try to control myself and not laugh, but I will laugh. They tell us</p>	<p>Talks about easily being distracted, even by little things. Finds it difficult to control his behaviour if someone distracts him.</p>

	not to laugh and such stupid things, but I will laugh.	
Relationship with peers: distracting. Bad behaviour, disruptive behaviour	Sometimes I did distract my friends during the lessons. There are many ways in which I did it. For example, I do a gesture, or act the fool, or talk, or make them laugh by saying something, or I throw something; a paper plane or a squashed up paper. Yes, I know that I distract others and the teacher gets annoyed. And sometimes he kicks me out because he will need to get on with the lesson. Obviously. Yes I do distract others. Bye!	David gives a list of bad behaviours he exhibits in class that disrupt the lessons and others. <u>Is kicking students out of class an adequate consequence? Can it encourage students to 'behave badly' in order to get kicked out of class?</u>

Week 4 – Video Journal – 07/04/2016

Emergent themes	Original Transcript	Exploratory comments
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	<p>My name is David and I will do a sort of interview. What topic am I doing this week?</p> <p>The topic we are doing right now is 3-dimensional shapes.</p>	
	<p>I learnt that that for all type of questions, you have the reasoning that is different for all.</p>	
	<p>I think we are learning this topic so that we will be able to, ehm... So that we will know them. It is a topic that can do you good for your future.</p>	<p>Thinks this topic can do him good in the future, but does not give any example how.</p>
	<p>This week I did not have lessons that annoyed me, and all were good.</p>	<p><u>Could it be that this week his mood was good and this had a strong influence on his performance in the subject?</u></p>
Lack of activities	<p>We did not have any activities, I am not going to say we had and lie.</p>	
Behaviour dependent on mood.	<p>During the lesson, it depends on my mood on how I behave. If it happens that on a particular day I feel aggressive, I will also be</p>	<p>His behaviour in class depends on his mood. If he is aggressive, this will reflect his behaviour in class and he will also be aggressive.</p>

	aggressive during the lesson. But, if I feel all right on a particular day, happy, I will do well during the lesson.	<u>Is the teacher trained to deal with such instances where the student is feeling aggressive? What can the Maths teacher do in such circumstances? How realistic is it that the teacher deals with one of her student's emotions and teaches Maths to the rest of the class?</u>
Inadequate/lack of use of resources	The teacher, to teach us better, can either show us a video or for example do a PowerPoint.	David thinks that the use of visuals can help him understand the lesson better.
Easily distracted.	Nothing distracted me during the lesson. I usually get distracted on my own. Not always! This week nothing distracted me. I think I distracted others. Ok. Thank you!	David is easily distracted during the lesson.

Week 5 – Interview – 13/04/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	Once you said that when the teacher has a bad mood that means that you will be having trouble during the lesson. How much importance do you give to your relationship with the teacher?	Researcher	
	Not as much as with other teachers.	David	
	What does this mean?	Researcher	
	This means that the other teachers, I do not love them, but I have a better relationship with them as opposed with the Maths teacher.	David	<u>Does the student have a bad relationship with the teacher because of the subject he teaches? Does the nature of Mathematics make it more difficult to have a healthy student-teacher relationship?</u>
	Why do you think this is so?	Researcher	
Relationship with the teacher: negative.	Because he is not a person that understands you. Not that he does not understand you, but he is not a person that is outgoing with his students. He does not understand you well, for	David	Talks about a negative behaviour with his Maths teacher. Feels that he does not understand him.

	example, from what you are going through.		<u>Is it more difficult for the Maths teacher to build a positive relationship with his teacher? Does the vast Maths syllabus make it impossible for student-teacher interaction?</u>
	Can you give me an example?	Researcher	
Relationship with teacher: ineffective intervention.	I am hyper. And. If sometimes I am hyper [during the lesson], he bangs on my table and I get angry. To stop me he starts to shake my table and I get angry.	David	The teacher does not deal with David effectively. Inadequate intervention when David is hyper. Teacher bangs on the table and this makes the situation worse. <u>Are teacher being equipped with strategies to deal with such situations better? Does the pressure to finish the syllabus on time have an effect on the way the teacher deals with a situation in the Maths class?</u>
	And what do you do?	Researcher	
Inadequate intervention.	I tell him to stop, but I will not go on because the story would get out of hand and so on. I try to avoid.	David	Inadequate intervention can lead to unnecessary escalation of bad behaviour. However, the student avoids it.
	How would you describe your relationship with your friends?	Researcher	
Relationship with peers: positive with some, negative with others.	It depends. For example, there are students that I get along	David	

	with and there are students that I do not get along well with.		
	Can you talk more about this?	Researcher	
	The ones I get along with, in the sense, they are friends that are of the same type as me. Not exactly the same, but they do not tell on you if you say something. They are not that type. I enjoy talking to them. And then there are students that as soon as they talk, I do this [raising his eyebrows showing an annoyed look], 'look who's talking!' [Laughing].	David	
	Do you think that your relationship with the Maths teacher, affects your performance in the subject?	Researcher	
	It could be.	David	
	Can you talk more about it?	Researcher	
Relationship with teacher: teacher's mood	It depends. If the teacher has a good mood, I will enjoy the	David	If the teacher has a good mood, the student will participate and enjoy himself. If not the student will get into trouble by answering back.

has a great effect on student's behaviour.	lesson. But if he has a mood of shouting at you if you talk, I will start shouting myself and then I get into a lot of trouble and talking to.		Behaviour is very much dependent on the relationship the student has with his teacher. <u>Is the teacher's mood more important than the actual way Maths is delivered? Are relationships actually more important than the actual modes of delivery?</u>
	During a VD, you said that you are annoyed by the way the teacher stops you. Can you talk more about this?	Researcher	
Relationship with teacher: Inadequate teacher intervention. Feeling angry	He stops you by saying, 'Shut up!' [In a harsh voice]. 'If you open your mouth again, I will kick you out of class,' for example. Or else he shakes the table and I get very angry.	David	David talks about inadequate teacher intervention to deal with bad behaviour. The student says that such inadequate intervention can make things even worse because he gets very angry. <u>Is the teacher aware that he is making things worse by his intervention?</u>
	And how would you like to be corrected instead?	Researcher	
Relationship with teacher: Adequate/inadequate intervention.	Even with a look. There is a teacher, that even with a look, she makes me stop. I will realise that I am annoying her, but she	David	David compares how two different teachers deal with his bad behaviour. On one hand, one teacher manages to deal with him effectively with just one look at him, on the other hand, on teacher risks to make matters even worse.

	does not come and shake my table, tells you, 'shut up'. That way. You need to be calm with me. If the teacher is aggressive, I will become aggressive. Than the lesson will go wrong and I will start distracting others.		
	Do you find it difficult to build a good relationship with the teacher?	Researcher	
ADHD: misconceptions.	No. They say that because you are ADHD, you will find it difficult. But this does not apply for me.	David	David says that since he has ADHD he should find it difficult to build a good relationship with teachers.
	Thus, there are teachers that you get along well with?	Researcher	
Relationship with teacher: good relationship, understanding the student.	Yes, and I joke with them. They need to understand you and accept you the way you are. For example, if a teacher gets along well with me, not in the sense that she continues to joke with me, but she understands you, they will know what you have, I	David	David says that when a teacher understands him, he will be able to build a good and solid relationship with them.

	love them, not actually love them, but I will have a good relationship with them.		
	So you think that you current Maths teacher does not know that you have ADHD?	Researcher	
	No, he does not know. I do not know whether they have told him, but I have not. I will not tell him	David	
	You were very honest in you VD entries when saying that you distract others and the lesson. However, you also said that you get angry when others distract you. Can you talk more about it?	Researcher	
Behaviour: Incontrollable.	Yes [laughing]. I get angry because when I am paying attention, then the others will distract me. They distract me on purpose. I do not distract others on purpose. For example, I go in class and say 'Sir, but isn't that like this?' [Raising his hand]. For	David	He does not disrupt the lesson on purpose. He cannot help it.

<p>Relationship with peers: Gets very angry at other students who distract him.</p>	<p>example he says, 'go for break', for example today we had the test, when we finished, he told my friend, 'now go for break', I understood him that he sent him to the backyard. I told him, 'go to the backyard?' That is how I distract the lesson. I do not throw things and start banging. Not that type. Who does that on purpose to distract me annoys me. I feel like banging him on the wall.</p>		<p>Hates it when other students distract the lesson on purpose.</p>
	<p>In one VD entry you said that you get angry that when you do nothing wrong, you get into trouble, but when you do something wrong, you get away with it. Can you talk about this?</p>	<p>Researcher</p>	
	<p>For example, I spend a whole lesson playing the fool and I get away with it. No copies, no break-ins, nothing. Then I spend</p>	<p>David</p>	

	a day with the notes and writing and I am given a break in.		
	Why do you think this happens?	Researcher	
Inadequate intervention. Feeling of unfairness.	They distract me, and then I say something, I say something and I get a break in. It is unfair. Because when I distract the lesson, I get away with it and when I do not, I get into trouble. Not always. Sometimes it is the other way round.	David	<u>Can it be that the student's reputation is actually getting him into trouble?</u>
	The consequences you are mentioning, such as break ins, suspensions etc. Do you think that they are helping you?	Researcher	
	No.	David	
	Can you talk more about it?	Researcher	
Inadequate consequences.	I do not know. But they do not help me. If I am given an after school, it is for nothing. It is just one hour. I am talking about myself. There are children who burst out crying if they get an	David	David says that the consequences he was given, such as after school, will not make him behave better next time. For him getting an afterschool is not big deal. <u>What other effective interventions can be carried out with the student to help him out rather than being given an afterschool?</u>

	after school. I say, 'just one hour.' I do not know.		
	And when you get a suspension?	Researcher	
Inadequate consequences, anger, unfairness. Unjust treatment.	I cannot do anything about it. For example, last time I got a suspension because of another student. I got angry. We took a photo and he put it on Facebook. And they gave me a two-day suspension, before the holidays and he got nothing. He got an after school. I got angry because of this. Because if he had not uploaded it, even though I did not object to him taking the photo, I was posing, that is true, I admit, but he should have gotten the same consequence because I did not tell him to upload it on Facebook.	David	Talks about an incident during which he felt that he was treated unfairly. He feels angry about it. <u>Does his negative reputation make him more prone in getting serious consequences such as suspensions? Are suspensions being used by the school to get rid of him for a few days? Do suspensions really work in helping the student or are they used to give a bit of space to the school?</u>
	So you feel treated unfairly?	Researcher	
	Yes.	David	

	What consequence should you get when you do something wrong in order to learn from your mistakes?	Researcher	
Adequate consequence.	For me, it is better that he talks to me gently rather than shouting at me. This is because I will shout back and as I already told you this will lead to a lot of panic and trouble. In this manner I will understand better rather than the shouting.	David	Talks about how he expects the teacher to treat him and correct his behaviour.
	What can be given instead of the after schools and break-ins?	Researcher	
Adequate consequences/intervention.	For example, some time to stay alone. I go out of the class and stay alone. Last time, I do not know what I had told him, I was ready from the test, and he knew that I have ADHD. I had a test and I finished a quarter of an hour before. It was a three-quarter of an hour test and I finished a quarter of an hour	David	Talks about different consequences he can be given instead of the ones he is currently being given that do not work. <u>Is the student using his ADHD to excuse his behaviour?</u>

<p>Relationship with teacher: lack of communication.</p>	<p>before. And I told the teacher, 'I am going outside for a second, I will go and walk. And the teacher, I do not know, I think he heard that I said, 'I am going to the toilet' and I went for a quarter of an hour until the bell went. When I returned to class there was a lot of shouting and yelling. He told me, 'Do you know that you skived the lesson?' I told him, 'I skived the lesson?' All for nothing.</p>		<p>Talks about an incident during which there was lack of communication between the teacher and the student.</p> <p><u>The student already used this excuse of the teacher not hearing him well. Can it be that he is using this as an excuse to alter reality in his favour?</u></p>
	<p>During various VD entries, you mention that you are 'hyper'. You also mention that you take medication. Can you talk about this?</p>	<p>Researcher</p>	
<p>Medication: helps but does not cure.</p>	<p>The Ritalin is not a cure for it. It is there to help you concentrate more. That's what it is all about. To concentrate more, not to calm you, but you feel more</p>	<p>David</p>	<p>Talks about taking medication.</p> <p>The medication helps him to calm down and become less aggressive. It helps him concentrate.</p>

Medication: helps him concentrate and calm down.	calm. You do not feel that aggressive.		
	How do you feel about it?	Researcher	
	Better. It helps me.	David	
	Do you think you can control your behaviour?	Researcher	
	Yes, sometimes I can. If I have a good mood and they make me angry, I will have control. But if I have a bad mood and they make me angry, if I have the mood to fight, I will fight.	David	
	What makes you have a bad mood?	Researcher	
Relationship with peers: causing anger, frustration.	It does not come on its own. It is not like when you have a depression and so on. But, for example there is someone who is picking on you all the time, he will make me really angry. Once, we were at school during break and someone really made me	David	Talks about an incident with peers that turned aggressive.

Aggressive behaviour: fighting with peers, physical contact with peers.	angry. Do not mention my family, he mentioned my family, at first I controlled myself, but when he mentioned my departed family members, pah, pah, pah. We started to fight [laughing].		
	Do you think it is fair to be given a consequence on an action that you do not have any control on?	Researcher	
	No. Because if you did something wrong. You did something wrong. Those who do not have ADHD will get into trouble just the same.	David	
	So you do not agree on being given a concession for your ADHD?	Researcher	
ADHD: The student does not expect any special treatment.	Because David is hyper, no. I do not want it. As if I am special when compared to the others. For example, with regards to my hair, last time I cut it with zero and they told me nothing. My	David	<p><i>The student is now talking in the third person.</i></p> <p>David does not want any special treatment because he is ADHD and hyper at times. He wants to be treated like all the other students at school.</p>

	<p>friend cut it with two and he got into trouble. I told him, you can tell them about me. If you want you can ask him. I told him just tell them about me. This is not fair. Because he has darker skin, they were shouting at him and after school, and me, after cutting it with the zero, not two. I cut it with the zero and nothing, not even a look. I do not think that this is fair. No it is not fair. If I do not get into trouble it is better [laughing]. I do not see it as fair that I do not get into trouble but others do. I do not want any special treatment.</p>		<p><u>Refuses to get any special treatment because of his ADHD but previously mentions it as the factor that gets him into trouble. Is this a contradiction?</u> <u>Or is he trying to get my sympathy?</u></p>
	<p>During two VD entries you say that the Maths lesson could be better if you have a video or a PowerPoint. Can you talk more about it?</p>	<p>Researcher</p>	
<p>Inadequate/lack of use or resources.</p>	<p>This means that the explanation will not involve a lot of written</p>	<p>David</p>	<p>David says that too much written works puts him off. The teacher should use PowerPoints to reduce written work in class.</p>

Lack of visuals. Too much written work.	work. Everything written. It will be on a PowerPoint and everything is explained on a PowerPoint. Or else there will be someone who is talking. Like this I understand better.		<u>Can his condition have anything to do with him hating to write and asking for visuals?</u>
	What difference will this make?	Researcher	
Resources can help him concentrate better.	I think that things that are animated, with a PowerPoint, on a screen help me to concentrate better.	David	Use of PowerPoint can help the student perform better in his Maths lesson.
	During various VD entries, even though you say that you do not like the subject, you still admit that it is important. You say that once you have kids it is important to explain the Maths to them. Can you talk about more uses of the subject?	Researcher	
Relevance of Maths. Life after school: Career ambitions	Work. All the time. For example, in engineering. You need it. I was going there. For example, I will become a soldier. I will become a soldier. Four Ks for example.	David	Acknowledges that Maths is important for his future. It will help him in his future career ambitions.

	<p>You will tell me, 'What are they?'</p> <p>Four Ks are the same as four thousand meters. That is it. You are using it all the time for everything.</p>		
	<p>How do you feel about not liking a subject, but at the same time you think it is very important for you?</p>	Researcher	
<p>Maths as difficult. Does not like the subject because it is difficult and cannot understand it.</p>	<p>I feel confused. Confused. The fact that I need it, but at the same time I do not like it. I get confused. Confusing. The fact that you need it and at the same time I do not want it. I think that I do not like it so much because it is difficult. The more years that pass, the harder it is becoming. However, I have also regarded it as difficult, the Maths. Ever since I was young. That means that I regard it as very hard. Not very hard, but hard. For</p>	David	<p>Maths is difficult and confusing. This makes it difficult for him to like the subject.</p>

	example, angles I do well, but I do really badly in graphs.		
	What do you think makes such a difference in your performance between graphs and angles?	Researcher	
Confused as Maths gets slightly complicated. Manages simple Maths well but finds it difficult when there is more than one step involved.	Because angles, you have a triangle and then you have a line to find. I find that really easy. 180 minus the angles you have, 120 for example and you are left with 60. I have a good brain. All teachers say so. They tell me that, 'You manage to work the problem faster than I do'. But for graphs, the fact that you need to split it into two, you need to do a sort of cross, and then you need to do minus 1 and so on. That confuses me. How they fit it. I am not that certain were they need to go. The Xs and Ys.	David	David manages to understand simple Mathematical problems involving one-step calculation. However, as soon as things get slightly complex and more than one-step is involved, he will find it difficult. <u>Is the student finding difficulty with high order Mathematics? Can it be that he has a short attention span and this only allows him to work out one step problems?</u>

Week 6 – Video Journal – 20/04/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>Hello. At the moment we are doing 3 dimensional shapes. It is not one of my favourite topics but it is nice. I like it. I do not like it in the sense that I am passionate about it, but I just like it. I follow it.</p>	
<p>Irrelevance of Maths</p>	<p>What we did this week is shapes. For example, when a part of the shape is missing and we replace them in the shape. But I do not think that they are useful for me because you will not find them... If you are going to become a Mathematics teacher, yes, you will need it. But I will not become a Maths teacher and I do not think I need them.</p>	<p>Does not see any relevance of the topic being covered to his life.</p>

	I think that we are learning this topic so that when I grow up, not only you can become a Maths teacher, but also help your children. When you grow up. If you have any.	
	A lesson that I did not like this week... One of them was when we were doing the two dimensional shapes. Last week actually. Because we started this topic this week. And I did not like it because I... how can I say it? I do not like it. It is not like I want it to be.	Did not like a particular lesson but is not able to explain why. <u>Does the student not like a subject because he cannot understand it?</u>
Challenging/difficult resulting in stimulation to learn	A lesson that I liked this week is when we started 3-dimensional shapes. The best part was when we started the shapes that were difficult.	Usually, David complained about difficult topics and did not like it. This time he is saying that he liked a lesson because it was difficult. <u>Can it be that a challenging situation stimulated him to work harder?</u>
Not putting in his best effort	I am not giving the best but... I do not know why. Either sometimes I do not pay attention, but I am not giving my best.	I honest about the fact that he is not putting in his best effort.

Positive/good behaviour Relationship with teacher: good	My behaviour was not bad this week. On the contrary it was very good. No one distracted me, but I was good. I had no trouble with the teacher this week. For once!	<i>Interesting choice of words. 'For once!' he did not have trouble with his teacher.</i>
Lack/inadequate use of resource.	In order to teach this topic better, the teacher should prepare some shapes and tell us to draw them in 3d. We do the shapes.	David suggests that the teacher should use more visuals and resource during the lesson.
Relationship with peers: disruptive behaviour	What distracted me from the lesson and made me lose my attention was when someone talked to me or someone throws something. Or when they mix me up, they distract me; throw a paper at me, laugh, talk. This is what distracts me from the lesson. These types of distractions.	Gives examples on how various students distract him during the lesson.
Disruptive behaviour Incontrollable behaviour.	I did distract others during these lessons. Either by talking to others, or I decided to distract on purpose. Yes, sometimes I distract others on purpose. Sometimes I have a	Talks about having a breakdown and feeling the need to distract others.

	breakdown and I feel like distracting others for the fun of it. I do not know why I do it. That's all. Thank you. Bye.	<u>Can this 'breakdown' be caused by the boredom during the Maths lesson?</u>
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Week 7 – Video Journal – 27/04/2016

Emergent themes	Original Transcript	Exploratory comments
Maths as enjoyable	The topic we are doing now during the lessons is 3D shapes. It is nice (laughing it out). I always like these kinds of things, and with regards to the lessons, they are being good. But, I am not always paying attention. That's all.	<u>Although lessons are good, he is still does not always pay attention. Can this be attributed to ADHD?</u>
Irrelevance of Maths	This week we have learned how to find the volume of 3D shapes. Different kinds of shapes. How to split these shapes. How you find their volume. Everything. You learn how to find their mass. I think we are learning this topic, because obviously it will be in the exam.	Thinks that he is only learning this topic because it will be in his exam. Finds no other reason why he should be learning this topic.

	I do think we will be using it when I grow up unless I become an architect. Or something related to your work.	
Maths as confusing/difficult. Lack of activities	This week there were two lessons that I did not like. One of the reasons why, was because I did not have the notes. He had not printed them out for me yet. And the second reason is because, according to my opinion, this is how I see it; the lesson did not make any sense. It was not interesting. I like more the hands-on activities.	Could not understand the lesson. It did not make any sense to him. Thus, he did not like the lesson. Would like to have more hands on activities.
	One thing that I liked was when we did the first section of the notes. They make a lot of sense. The way I like it. Eh.	<u>Usually the first part of the topic is the easiest to understand. Can it be that he liked it the most because he could actually understand it well and engage with it?</u>
Not putting in his full effort.	I am not giving my best. But I'm giving it a good shot in class, but not my best... To say the truth, I do not know why. Either because I do	

<p>Maths as annoying/confusing</p>	<p>not feel up to it. Or because the lesson sometimes does not make any sense. Not that it does not make any sense really. It annoys me. I do not feel like it.</p>	<p>Again says that sometimes the Maths done in class does not make any sense. This makes it annoying and he cannot put in his full effort.</p>
<p>Mad/hyper behaviour. Drastic change in behaviour. Feeling angry will not allow him to follow the lesson. Inadequate intervention. If teacher shouts at</p>	<p>My behaviour this week was not bad, but neither was it good. It was somewhere in the middle. Sometimes I am hyper, going mad and sometimes I am good, quiet and settled. Ready for the lesson. I behave in this manner depending on a lot of factors. If I feel angry, or something has happened to me and I do not feel like it on that day. I will be angry and behave in a different manner in class. Or sometimes I would want to participate in the lessons and others distract me. That is the worst thing for me. If I am acting the fool because I am angry, I will feel angry. That means that if the teacher talks to be by raising</p>	<p><i>Describes his behaviour as mad.</i></p> <p>His behaviour changes drastically. From hyper/mad to good, quiet and settled. <u>What brings about such radical changes in behaviour?</u></p> <p>Maslow's hierarchy of needs.</p> <p>If he is angry before the lesson he will not be able to follow the lesson. His mood plays a vital part.</p>

student, the student will shout back.	his voice, I will shout back at him. I know it is not right but that is what I do.	If he is angry and the teacher shouts at him, he will shout back.
Lack of use or resources/visuals.	The teacher, to teach us this topic in a better way, can tell us to create our own 3D shapes or do a PowerPoint...	
Relationship with peers: disruptive.	What distracted me from my attention were the sounds my friends do from outside the classroom. Or when my classmates joke and make me laugh. I end up losing everything. There are many different reasons why I get distracted. Sometimes they throw something. This happens almost every time.	
Relationship with peers: disruptive.	I do think that sometimes I distract my friends. Not always, but I think so. Yes. For example I stay picking on them, or throw something at them. Yes. Sometimes I do distract others.	
	The Mathematics lessons do make sense but I also see them as a bit off. That means they	

Maths as annoying.	annoy me. In what sense. I do not feel like doing the lesson. The lesson annoys me. I get fed up. I feel like going out of class. That's it.	<u>Going out of class as a means of escaping reality?</u>
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Week 8 – Video Journal – 04/05/2016

Emergent themes	Original Transcript	Exploratory comments
	The topic we are doing now during the Mathematics lessons are the probability lessons. That means finding the probability that you get something. That is a fraction. Mhm...	
Relevance of Maths. Maths as useful.	I think that what we did this week is useful. Probability is not like three dimensions. You will find it more... useful. Even, simply to slice a pizza. To find the probability depending on the number of people, you find out how many slices to cut and to find any remains. Yes, I	The topic they are doing at the moment (probability) is more useful according to the student. Does not give a very good example of how probability can be used.

	<p>think it is useful to me because, as I already said, I think that it is useful and this week... ehm... we were doing about balancing equations...sorry not that... that is chemistry... We were doing sort of graphs...than writing heads and tails and writing the numbers of dice. For example, heads and one, H, 1, T, 1 for tails.T,1, H,1, T,2, H,2 and so on. And you find their probability.</p>	
Exam oriented.	<p>I think that we are doing this topic because we need it for our O-level; you need it a little in your life, yes. I think that is the reason, yes. This week, there wasn't a lesson that I did not like. I liked all the lessons because they were really interesting and I tried to behave in the best way possible in the classroom.</p>	<p>Thinks this topic is important because of the exam. Cannot relate it to his daily life experience.</p>
Good behaviour. Maths as fun.	<p>Yes, I liked all the probability lessons. In what sense? I was working, I was enjoying it, and I</p>	<p>Describes some instances of good behaviour during which he was working and participating in the lesson.</p>

<p>Relationship with peers: Team Work.</p>	<p>was getting involved in the subject, in the sense, of competing, no, no, not competing, ehm... I was talking to the others. Better say it in this way, because I cannot find the correct word for it. I was participating with my friends as well.</p>	<p><u>Is he referring to teamwork and collaboration?</u></p> <p><u>Is he enjoying the lesson because he understands the topic and can engage in the subject?</u></p>
<p>Giving his best.</p>	<p>Yes, I am giving my best. Not my very best, but I am giving the best I can. Ehm... Why? Because I think that it is good, and I think that it is so because I liked this subject more than others subjects, and I think that this subject is interesting.</p>	<p>Is putting in a good effort and giving the best he can.</p>
<p>Good behaviour. Relationship with teacher: teacher will be</p>	<p>My behaviour was good as I already said. And I felt good about it. And obviously the teacher will be happy and so on.</p>	<p>Again mentions that his behaviour was good during this week. According to him, this will make his teacher happy.</p>

happy with this good behaviour.		
Lack of use of resources.	The teacher can make the lessons more interesting by doing a PowerPoint. I have suggested this plenty of times during such interviews. Ehm... Even videos can help you a lot since they will make it more interesting. That's all.	Again, as for previous VD entries, David complains about the lack of use of resources and visuals. According to him this would make the lessons more interesting.
<p>Relationship with peers: Distracting, disruptive.</p> <p>Relationship with teacher: Rather than asking for help, takes control of the situation, lack of trust.</p>	<p>What distracted me was when others distracted others because that distracts me as well. I did not distract others. On the contrary, I tried to stop others. No, I do not think I distracted others. Maybe I distracted the teacher, because I was trying to stop others, but there is nothing to do about it.</p>	<p>Talks about others distracting him. This annoys him.</p> <p>Tries to stop others himself rather than telling the teacher to stop them.</p> <p><u>Shows lack of trust in the teacher? Power struggle with the teacher?</u></p>

<p>Maths as enjoyable.</p> <p>Relationship with teacher: Knows that the teachers is happy when he participates, this leads to a better relationship.</p>	<p>With regards to the Maths lessons this week, I enjoyed them more. I enjoyed the fact that the teacher and I enjoyed doing the lesson. Mhm. The teacher enjoys it more when I participate and I am part of that class. Mhm... Even when, for example, when he talks to me, he does not shout at me as when I do not obey. Yes, that's it. Thanks</p>	<p>The student knows that when he is well behaved and participates in the lesson, his teacher will be happy.</p>
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Week 9 – Interview – 10/05/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	<p>During a particular VD entry you say that you enjoy it when the teacher appreciates that you are trying to participate, he appreciates that you are trying to pay attention and instead of shouting at you, he talks to you. How do you</p>	<p>Researcher</p>	

	feel when the teacher acknowledges the fact that you are trying?		
Relationship with teacher: Importance of having a positive one.	Good. Because it is better. In the sense, mhm... not a lot of shouting and noise. Everything is calm. Everything calm, that's it.	David	The student likes it when he goes along with the teacher. This creates a calm atmosphere.
	And why do you think it cannot be always calm? Sometimes he shouts at you.	Researcher	
Relationship with teacher: Acknowledges that the teacher is a human being and can have a bad mood, students need to understand the teacher as well and help him out.	Because sometimes he is nervous because of something else that has happened before. In the sense that every teacher has a family, and in the sense. In that sense. The same way every student has problems, even the teachers have their own. That means that even we need to understand them. In the sense that if you see that the teacher is having a bad day, you do not make it worse for him. But you try to help him as well.	David	If the teacher has a bad mood before the lesson, it will increase the incidence of a clash between the student and the teacher. The student must also understand the teacher.
	Can you talk about a lesson you enjoyed?	Researcher	

<p>Maths as enjoyable.</p> <p>Relationship with the teacher: Working together with the teacher.</p>	<p>Yes, the one on probability. Mhm. That we did last week. Last Thursday. Because I did not come to school yesterday. Now we have started a new topic. But I was well behaved during the lesson and I worked with the teacher. I worked a sum with him. Not that we went well together. We went well. That means that the lesson turned out as it was supposed to, good.</p>	<p>David</p>	<p>Describes an instance during which he worked well with the teacher.</p>
	<p>But what do you like with regards to probability? You always mention in your VD entries that you like it. Why do you like it more than three dimensional shapes and areas?</p>	<p>Researcher</p>	
<p>Maths as relevant.</p> <p>Link between relevance of Maths and enjoyment of the topic.</p>	<p>Because, it is not like the three-dimensional. I do not need three-dimensional. I cannot understand why we need those. But probability, you use it all the time.</p>	<p>David</p>	<p>Enjoys the topic because he thinks it is important for his life.</p>

	Can you give me an example on how you use probability?	Researcher	
	For example, when you cut out a piece of paper. Or a pizza for example.	David	Confuses probability with fractions.
	In a VD entry you say that you like it when you have hands on activities. Can you talk more about this?	Researcher	
Hands on activities as having a calming effect. Effective use of resources.	Hands on activity. Well, since I am a bit hyper, the hands on seem to calm me down. Hands on in the sense, mhm, for the three dimensional shapes, the 3D shapes, you do the 3D shapes yourself. Not you see them on the board. You do them yourself for example. With the cardboard or something.	David	Hands on activities can help him since he is hyper. Resources can be used to make the lessons more fun. <u>Can hands on activities really calm down students with ADHD?</u>
	And how does this help you?	Researcher	
Effective use of resources.	You understand them more. Personally, I think that you understand more. For example, not	David	David gives an example of how resources can be used to help the student understand the lesson better.

	<p>all, not for me. For example for the cuboid, those who see it on the screen, for example, they will not tell you that it has six sides. All they will tell you that it has four. If you see it on a board, you will only see four. But if you mark them, like you do with the dice, you will see that there are six. Maybe the students will understand it better.</p>		
	<p>Ok. When the teacher uses a PowerPoint or a video, how do you feel about it?</p>	<p>Researcher</p>	
<p>Lack of use of resources. Use of visuals can help him focus more and understand the lesson.</p>	<p>The teacher never uses the PowerPoint. But last year there were teachers that used the PowerPoint. It is better because, in the sense that they are more, they are more interesting, with regards to the PowerPoint. You will not end up writing the whole time. That means that with regards to the notes they will be more interesting. With regards to the video,</p>	<p>David</p>	<p>Use of visuals can help him understand the lesson better and make it more interesting. Unfortunately, visuals are not used during the lesson.</p>

	not because of the sound, but you sort of see something different. Not only the teacher's method. You watch different methods, of other teachers, not only Maltese, but even foreigners. Not that it is an opportunity, because you can do it on your own, but in the sense I regard it as interesting.		
	Can you talk about a lesson that you did not like?	Researcher	
Maths as frustrating.	The two-dimensional shapes. Because I really do not like them. For example, I am always drawing them, but I will not work them out. That means that you are not going to give me a cube, no, sorry, mhm, you will not give me a box or square and I start working it out because I get frustrated. Mhm. I get really annoyed when doing this topic. During all the lessons. For example, The problem with 3D	David	<p>Maths as frustrating and annoying. Certain topics make the student nervous.</p> <p><u>Can this frustration be the result of lack of understanding of the subject?</u></p>

<p>Misbehaves to get kicked out of the lesson. Maths as boring.</p>	<p>shapes is not that big, I do not get annoyed as much as two-dimensional shapes, but for two-dimensional I get really annoyed. There were lessons that I wanted to go out, I started to do it on purpose to get out. That means that I really got bored. I wanted to go out. The teacher did not let me.</p>		<p>When bored, he misbehaves on purpose to get kicked out of the lesson. Unlike in certain instances, during which he cannot control his behaviour, this time he has full control over his behaviour and uses it to get out of the lesson.</p>
	<p>Sometimes, during the VD entries you say that the Maths lesson is so 'off' that you would want to go out. Can you talk about this?</p>	<p>Researcher</p>	
<p>Mood can have a massive effect on his performance and attitude towards the subject.</p>	<p>I am bored. Sometimes I feel destroyed as well. I do not feel like doing anything. For example, sometimes he tells me to sleep, but I do not feel like sleeping. I tell him I want to go out. I feel bad, sort of destroyed, I feel sort of having coke. Not in that sense. But sort of. Do you understand? Really sad.</p>	<p>David</p>	<p>Sometimes he does not feel like a lesson. He feels destroyed. This is not caused by the Maths lesson, but will certainly have a huge effect on his behaviour during the lesson. Maslow's hierarchy of needs.</p>

	So he does not let you out of class. Do you think this is right?	Researcher	
	To tell you the truth. I do not know.	David	
	If he were to let you out. Would you calm yourself?	Researcher	
<p>Going out of class to calm down.</p> <p>Relationship with teacher: lack of communication, ineffective intervention.</p>	<p>Yes, I think so. When he used to kick me out of class and I did not tell him I feel like going out, for example, yes. I used to sort of calm down. Because, even when my friends make me angry, I tell him, 'Can I go for a second outside, until I calm down'? He tells me no. Once, I was during a test and I had finished. I think it was about graphs. I am not certain. I had finished it. And the teacher, he was still Mr. Eric, when this happened, I told him, 'Can I go out for a second to go for a walk round the school'. He told me, 'Ok'. According to what I know, I told him that I was going out. When I returned</p>	David	<p>Going out of class can be an effective solution to David's behaviour. According to him this lets him calm down.</p> <p><u>Getting kicked out of class as a way of coping with his frustrations during the Maths lesson? Escapism?</u></p> <p>Describes an incident during which lack of communication between him and the teacher led to a misunderstanding. This could have easily been avoided with better communication.</p>

	<p>back, he started screaming and yelling, Ms. Nadia came along, she told me, 'Where did you go?' I told her that I went for a walk round the school; that is what I had told him. She told me, 'No'. She started screaming and told me that the teacher told her that you told him that you were going to the toilet and I did not go to the toilet. I got angry and told her, 'But I did not tell him that I was going to the toilet.' Sometimes when I am right, even though I might have told him that, I do not know, but I told her, 'Ok then, you are right.' When I get angry that is what I do. I lose control. And sometimes it is better that I say, 'Ok, you are right.' Rather than letting things get out of hand. Because there will be a lot of yelling that it is not true, and I lose control. I start</p>		
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	yelling, I lose control and I would not know what I am doing.		
	If you were given a permission to go out. For example, being given permission to go out once during the lesson. Will that help you?	Researcher	
	No. It is better that I go out for three minutes. Rather than going out for a whole lesson.	David	
	Yes, that it what I am telling you.	Researcher	
	Oh, so I it not like going out for a whole lesson?	David	
	No, for example, you will have a paper that tell you that during the Maths lesson you can go out for three minutes. Will that help you?	Researcher	
Empowering the students: Suggesting intervention strategies that could help him out.	But not all the time. For example, when the teacher tells me, for example, today I am not behaving well, he tells me to go out. Not when I am participating in the lesson, he tells me to go out. Because like that I would be losing out.	David	<p>The student is discussing and suggesting what can be done to help him out when he is misbehaving. This could be an effective intervention strategy.</p> <p>The student is being empowered to choose ways in which he could be helped.</p>

	You can be given the choice when to go out.	Researcher	
	No. I do not accept the fact that I chose myself. Because, no. I do not want to choose myself. If the teacher sees that today I am not behaving well, he tells me, 'Go out for a second until you calm down.' And I would go out. But I do not want to choose myself when to go out. If, in the sense, the teacher does not notice since I will be keeping all to myself, I will tell him myself to go out. But not in the sense, if today I do not feel like a lesson, I go out.	David	
	How do you feel that you are not trusted to go out?	Researcher	
Relationship with teacher: lack of trusts leads to anger.	Mhm... Mhm... Sometimes I get angry. Sometimes, I feel sad. Sometimes I am sad and become more aggressive. I become aggressive sometimes, not always. Sometimes I start throwing things. Not chairs, a rubber for	David	When his teacher does not trust him he feels angry and frustrated. <i>David chooses some strong words to describe his feelings such as sad and aggressive.</i>

Feelings: frustrated.	Anger,	example. I start throwing things. A piece of paper, a rubber. Something. Scissors no [laughing].		
		Can you describe it when you behave badly?	Researcher	
		In what sense? When I am aggressive?	David	
		Instances when you misbehave.	Researcher	
		When I am aggressive or when I am sad?	David	
		You can talk about both.	Researcher	
Feeling sad.		When I am sad, I would want to do nothing. I would want to put myself like this on the table [putting his head on the table] and just stay like this. But for example, I am not talking about Maths now, the Maltese or Chemistry teacher, tell me, 'But you cannot not do anything.' But then I tell them, 'But I do not feel like a lesson.' It is better like this rather than a lot of noise and I stay distracting others. Because, for example, when I would not to	David	Again, Maths is not the problem here. When he feels sad, his feelings will not allow him to focus on the lesson and focus. <u>What is bringing about this sadness? The subject or something prior to the lesson?</u> Maslow's Hierarchy of needs. <u>Can the student be expected to learn a subject if he feels sad and not in a position to learn?</u>
Relationship with teacher: The teacher needs to understand that the student is not in a position to do a lesson.				

	<p>distract others, I stay quiet. But then, do not tell me to work, because I will start to distract others. Last time this happened with the Chemistry teacher. I did not feel like a lesson, because I did not drop Chemistry because even Mr. Alex had told me, this is not long ago, even Mr. Alex told me, and I did not drop it because I cannot drop it. If we could do it, my friend would have already dropped it. I am not talking about myself, I am not, not like other students. If other students are given that option they will drop the subject at once. They would not tell their mothers, because I tell you that they would phone instantly. In the sense, that is the sense of it. I told my mother, but at the same time I told myself that I still do not want to drop it.</p>		<p>How the student is feeling before the lesson is very important. If he is feeling sad, the student will not be in a receptive position to do any subject. Taking care of students' feelings comes before any academics carried out in class.</p> <p>This brings to mind Maslow's hierarchy of needs.</p>
	<p>Why do you feel sad sometimes?</p>	<p>Researcher</p>	

	Even the subject. Because I do not like the subject. I am not talking about the Maths. You need Maths. If you do not like it, deal with it; it will always be there. But for example, Chemistry, if you do not like it, and you do not need it, I get more frustrated that I have to learn it as well.	David	<u>Can the sadness be the result of the lack of understanding of the subject?</u>
	Now talk about when you are aggressive.	Researcher	
Aggressive behaviour. Shouting at the teacher. Feeling that someone is inside of him: Uncontrollable behaviour.	When I am aggressive, I start shouting, sometimes even with the teachers. Whoever talks to me, I will snap at him. I will not talk to him, 'What do you want?' but 'What the hell do you want?' That's it. Mhm... I feel like there is someone inside of me...	David	David describes some aggressive behaviour he exhibits at schools. He describes himself as being 'possessed' by someone inside of him. This is an example of uncontrollable behaviour. <u>Is this a way of letting out his frustration?</u>
	And what brings about an aggressive attitude?	Researcher	
Relationship with peers: Aggressive behaviour	Either, someone...I have a trigger. When someone starts to annoy me, I will be, I will be	David	Other students trigger aggressive behaviour. When other students annoy him, he will become aggressive.

triggered by other students annoying him.	normal, but when they make my trigger go, sort of making my automatic circuit breaker go, then I will not reason things out anymore.		
	What make your trigger go?	Researcher	
	Not in that sense. I think you understood it. Mhm... When they start annoying you. Do you understand?	David	
	Who annoys you?	Researcher	
	My friends. Or even teachers sometimes.	David	
	How can the teacher annoy you?	Researcher	
	For example, when I am a bit sad, like it happened when we were going to the outing. When we were going to the outing, it rained, and we did not go. Because, we were going to the archery, and even though we were supposed to be on tarmac, it was on soil. I was angry that day, and did not want to do anything. In the sense, we only had two	David	<p>Unplanned even, such as the cancellation of an event because of rain, can trigger aggressive behaviour.</p> <p><u>Can he control himself when unfortunate/bad things happen to him? Is this a lack of skill?</u></p>

<p>Aggressive behaviour.</p> <p>Relationship with teacher: appreciates it when teachers understand him.</p>	<p>lessons, three actually, but the other one we did not need it. Because we were watching a video, The Merchant of Venice, for English, then, in the sense, I started getting angry and on the same day we had Chemistry and I did not want to do anything. Whoever talked to me, I shouted at him back. Whoever annoyed me, I would have grabbed him with his chair and made him fall with it. I wanted to do nothing. I said that I better go home. Then, Mr. Godwin told me, 'Calm down'. Because for example, Mr. Godwin, I like him, he is not like other teachers, Mr. Godwin sort of understands you. Because, he was like us when he was young. He is not that type of teacher that if you talk he will give you a pink sheet. It happened to me, that because I talked I got a pink sheet. Or because I</p>		<p>Describes an incident of aggressive behaviour.</p> <p>Notes it when a teacher understands him.</p> <p><u>How come certain teachers understand him and manage to get along well with him and others have a difficulty to get along well with him? Is it a lack teacher training in dealing with students that have challenging behaviour?</u></p>
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	constantly move during the lesson, I get in trouble, a break in. I haven't gotten a break in, since... During the last term I never got one; that means from the end of the first term up till today, maybe I got one break in. But form than backwards, I haven't gotten many more. But I got more conducts and pink sheets.		
	What can help you to achieve your best in the subject?	Researcher	
Relationship with the teacher: Thinks that one-to-one lessons can help him.	In Maths... mhm... Sometimes I say that I'd better have one-to-one. Sometimes that's what I say. Yes. Better one-to-one rather than with the class.	David	The student thinks that one-to-one lessons can help him.
	Do you think that if you are alone with a teacher...?	Researcher	
	Or LSA. For example.	David	
	And how can this help you?	Researcher	

<p>Relationship with peers: Isolating himself will help him focus.</p> <p>Acknowledges that he easily becomes aggressive and isolating him will keep him out of trouble.</p>	<p>Because no one will annoy you. Nobody will annoy you. You will annoy no one yourself. When something happens you can talk to him. Or if you say something, 'He has a bad mood today.' For example. And I get angry. Or someone comes, knowing that I have a bad mood, and he says, 'Look at this, he is like a tractor today.' I will tell him, 'Do not even start.' A lot of talking. The teacher will tell me to stay quiet. I will tell him, 'He started' In that sense. He started, I will stay quiet but he started. He has to shut up not me. And sometimes I really feel like insulting my friends, that is, offensive words, but I just say them in my heart. It is better, like that. But when I want to say something, I say it. But when I am at school, because at school you easily get into trouble. I say that it is better</p>	<p>David</p>	<p>Having one-to-one lessons will isolate him from his friends and he will have a lesser chance of becoming aggressive because of the interaction with his peers.</p> <p><u>The student prefers insulating himself in order to avoid trouble. Can this be seen as sort of escapism? Escaping from the rest of the class to deal with his 'uncontrollable' challenging behaviour?</u></p>
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	<p>that I just say it in my heart. Rather than stay talking. That is, not even during break. Because if there is someone and goes to tell that I said it, it is the same. Sometimes they even butt in because outside of school I am without a uniform. Sometimes they butt it, so imagine at school...I think that it is better one-to-one. No one will annoy you. You annoy no one and distract no one. I think that the teacher will be more concentrated. I think he will appreciate my best effort more.</p>		
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Week 10 – Video Journal – 18/05/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>Ok. Let's go. The topic we are doing right now is probability... What we did right now is finding the probability of getting something or</p>	

	another. That means, mhm, for example heads and tails.	
Relevance of Maths Connects the topic with real life.	I think I do need it. I think I need Probability that is for my personal life, than you will need it if you can become a teacher. We are learning this topic, like all other topics, to know it and to be able to use it for life.	Thinks that probability is relevant for his life. However, he does not give an example on how this could be so.
	Mhm. With regards to a lesson I did not like, there wasn't. But neither were there lessons that I liked as had happened last week.	
	There were lessons I enjoyed and there were lessons that were not the most exciting for me. But, I do not think this topic is bad.	
Lack of use of resources.	To teach this topic better, according to my personal thoughts, I do not know what one can do. Maybe a PowerPoint or something. I do not now.	Again the student says that the use of visuals can help him.

<p>Relationship with peers: friends distracting him.</p> <p>Bad behaviour: fooling about.</p> <p>Relationship with teacher: Inadequate intervention.</p>	<p>Yes I got distracted. A lot of things distracted me from paying attention. These included my friends as always, mhm, my friends, the other kids that is, that throw things like I have sometimes said. I did distract others because sometimes I stay fooling about. I am hyper and start fooling about during the lesson. The teachers make a lot of panic and noise about it.</p>	<p><i>Friends distract him 'as always'. The use of the phrase 'as always' highlights the fact that this is recurring throughout the Maths lessons.</i></p> <p><u>Seems not able to get along well with his classmates. Can his condition be a reason for this?</u></p> <p><i>Describes the teacher's intervention as 'a lot of panic and noise'. Highlighting the inadequateness of such intervention.</i></p>
	<p>Yes, this week there were things that I did not like. Not with regards to the lessons. It is about things that have to do with the subject. There are things that are a bit babyish and even boring.</p>	<p><u>Sometimes things seem too hard and others they are seen as babyish. Is this a problem of finding suitable material for him?</u></p>
<p>Behaviour depending on his mood.</p>	<p>How did I behave? The way I behave is not always the same. Like I have always said, it depends on my mood on the day. It depends whether I am happy, I am sad, I am aggressive.</p>	<p>His mood and feeling determine his behaviour in class. Hence, his performance in the subject.</p>

Feelings determining behaviour	It always depends on this. That means, if I tell you that yesterday I was good, it does not mean that today I will be good.	
Feelings have strong influence on his behaviour and performance during the lesson.	The way I feel is linked to the way I am. I react to the lesson. For example when I am aggressive, I do not feel good, I feel as if I lost control, I am not going to do anything, better not. When, for example I am sad, I do not feel like doing anything, I just put my head like this (putting his head on the table). That's all.	When the student feels sad, aggressive he will not be in the mood to do the lesson. Again, this brings in mind Maslow's hierarchy of needs. <u>Emotions are more important than the actual delivery of the lesson?</u>
	With regards to the Maths lessons. It is not the best type topic. It was not bad, but not the best topic. That's all.	

Week 11 – Video Journal – 25/05/2016

Emergent themes	Original Transcript	Exploratory comments
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<p>Irrelevance of Maths: not useful</p>	<p>So, let's go. The topic we are doing at the moment during the Mathematics lesson is ratios. I do not think that what we did this week is useful to me. No, not in the sense that you do not need it, as a topic you are not going to use if for work. It depends, if you are going to become a Maths teacher you need it. But you are not going to become, for example, a chef or something else, chef, manager, something like that, and use this topic. I do not think that it is useful for me.</p>	<p>Does not see the relevance of ratios in his life. Thinks that it is only useful if one wants to become a Maths teacher. According to him it is irrelevant to chefs. However, in reality ratios is pretty much useful to chefs whilst preparing quantities of ingredients. <u>How come that the students is not able to link ratios with its use in real life? Are students being helped to link the topic with real life during the lesson? Are examples related to real life being used?</u></p>
<p>Exam oriented. Irrelevance of Maths: only important for the exam.</p>	<p>I think, no not think, we are doing this topic because of the syllabus we are doing at the moment for the exam. A lesson that I did not like this week was two days ago when I was in class and a boy was insulting me and whenever he turned he was laughing. And, at</p>	<p>Doing the topic only because it will be asked for the exam. Sees no relevance to his daily life experience.</p> <p>Describes an incident during which he and his peer insulted each other.</p>

<p>Relationship with peers: Aggressive, insulting, disruptive,</p>	<p>the end of the lesson he told me to go with my mother. And I told him a rude word. I told him a rude word. I offended his sister. The first thing he told me to go with my mother, the second thing, I did nothing to him. That's all.</p>	<p><u>Relationship with peers seems to be more of a worry to him rather than the actual Maths. Can it be that he gave up on the subject or is it because these students are really hampering his learning?</u></p>
<p>Relationship with the teacher: unfair treatment, difficult. Inadequate intervention</p>	<p>This week, even though I am sad to say it, there were no lessons that I liked. Every lesson I was getting a consequence. It seemed that something happened to him and he was getting it out on me. I do not know if this is true but there was not lesson that I liked. This is because during this week's lessons I kept getting punished, he was always saying that he will take me to the Brother (director) and it was not true. Pink sheets. He was going to give me another pink sheet and an after school. But afterwards he did not give it to</p>	<p>Describes instances of a negative relationship with his teacher. Teacher 'threatens' him that he will take him to the school director and give him an afterschool. Thinks that teacher's bad mood made him act like that and he did not deserve it: <i>'It seemed that something happened to him and he was getting it out on me'</i></p>

	me. But later he gave me a pink sheet for saying those words.	
Relationship with teacher has a great effect on his performance and attitude towards the Maths lesson.	Telling the truth, telling the truth, I do not think I am giving my best. Or I do not think that I can do anything better to improve and do my best. This week for sure, I did not give my best. They weren't, I did not like these lessons. Not at all. This is because of the teacher. He seemed like, even though it is not true, but sometimes, even though he is really cool, but this week he was strange, if you talk to him, he shouts at you.	<p>This week, due to the fact that he was not getting along with his teacher, he did not perform well during the Maths lesson.</p> <p>The relationship with the teacher has a great effect on his performance in the subject. The student notices that something was wrong this week with regards to his relationship with his teacher.</p> <p><u>Can it be that he is venting out his frustration at the teacher?</u></p>
Relationship with peers: his peers have a great influence on his behaviour.	I behave according how my friends treat me. Mhm. I am not going to fight for nothing. However, when thinking about something that happened in the past, for example, if someone offends me by mentioning by	His peers in class can determine his mood. If triggered he will become offensive.

<p>Peers make him aggressive is they offend him</p>	<p>departed loved one, I will become aggressive. I am not going to become aggressive only because you will tell me that I am funny or if you joke with me. I am not that type.</p>	
<p>Feelings: constantly changing. Aggressive behaviour.</p>	<p>The way I feel is not always the same. Sometimes when I am aggressive, I feel good that I am aggressive, sometimes I feel bad, and it is not always the same. Sometimes I feel exhausted; I do not feel like doing anything, mhm. If the teacher talks to me, either I do not talk to him back or shout at him back.</p>	
	<p>I do not know what the teacher can do to teach this topic better. I did not like this topic at all. Out of all the topics, this is the topic that I liked the least from all the topics this year.</p>	
<p>Relationship with peers: Disruptive, distracting.</p>	<p>What distracted me from the lesson are my friends. My friends distracted me a lot from</p>	<p><u>Can it be that he is blaming his friends to avoid taking responsibility for his actions?</u></p>

	<p>the lessons. And the pink sheet that I got because of my friend. A friend that I always fight with but on that day he told me that for nothing and I got angry. Mhm. I think I distracted others during the lessons.</p>	
<p>Inadequate consequence/intervention. Unjust treatment. Was going to explode.</p>	<p>I need to say some more things. One of them is that even though I have said it, and the teacher heard it, but later the teacher did not hear the other person and gave the consequence only to me. This is because, yesterday, when they gave me the pink sheet, I was going to explode. I did not explode to be respectful to the teacher who was doing the lesson. Because, I would have gotten out my frustration. I did this (covering his face) and stayed on the table like this.</p>	<p>Thinks he was treated unfairly and 'was going to explode'. Unjust treatment triggers aggressive behaviour.</p> <p><u>Can it be that he always gets all the blame because of his reputation?</u></p>
	<p>With regards to the topic. According to me. Even though some people might say, 'Wow,</p>	

	<p>this is the most beautiful topic'. And I would do this (doing an astonished face). I am telling you. That's all. I did not like this week's lessons at all. And I still have one week to go. I will keep on complaining. There's nothing to do about it. Yesterday, I wanted to go out. The teacher did not let me. Sometimes, not yesterday, on Tuesday, no Monday, on Monday I started doing it on purpose, maybe he throws me out. But he did not throw me out and I started getting angry. That's all. Caw.</p>	
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Week 12 – Video Journal – 01/06/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>The topic we are doing at the moment (laughing) is almost nothing. This is because</p>	

<p>Irrelevance of Maths.</p>	<p>we almost finished the whole syllabus. Only a little bit is left, that means we are going to start a revision of what we did. Mhm. I do not think that what we did this week was useful. Mhm. I think you will not use it, as I always say, if you will become a teacher, you will use it. But I, for example, for the work that I would like to do, it is not useful.</p>	
	<p>Why do I think we are doing this topic? This is because this is part of the syllabus and we need to do it for the exam. This topic is good to know and so on. But I will not use it.</p>	
	<p>A lesson that I did not like this week.... I did not like all the three lessons that we had this week. Because they were not nice. Personally, it was a topic that did not make any sense. I forgot what it is named. Why? Because is it not nice. It is true that I do not even know what it</p>	<p>Cannot remember what the name of the topic is.</p>

	is named. I cannot remember what it was named. As I already said there were not lessons that I liked. That means that I cannot say any more other than that I did not like them.	
	I do not think I did my best, since I did not like this topic, I could not give my best.	Did not like his topic and thus did not give his best.
Behaviour is better if he likes the topic.	My behaviour this week was normal. Normal. Because since I did not like it, I did not have the same behaviour as when we were doing percentages. I enjoyed doing them, I worked with my teacher and so on.	
	What can the teacher do to make this topic better? I say, nothing. I do not know what he can do. I do like this topic. If I do not like the topic, I can do nothing and not even the teacher. That's it.	

	<p>What distracted me from the lessons? There wasn't any balance between the teacher and me. There was nothing. That means, I did not enjoy the topic we did this week. What distracted me from the lesson; my friends as always. Yes, I did distract others, because students those who felt that they needed to do this topic, I did not feel the same and yes I did distract others.</p>	
	<p>There is something else I would like to say. Since, this is the last time I am doing this type of interview, mhm, I would like to say thank you to the teacher for doing them. This is because this helped me as well. In what sense? Mentally. That is even during lessons I was behaving better. Mhm. I do not make other people laugh and distract others so much anymore. Because these recordings made me</p>	<p>The VD entries made him reflect. This reflection made him think about his behaviour during the lesson and according to him, his behaviour improved.</p>

	<p>reflect. I would like to say a big thank you to the teacher for giving me the opportunity to do these sorts of recordings and that's all. Thank you.</p>	<p><u>Can talking and reflecting on one's behaviour help you improve it?</u></p>
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Kevin – Video Journals and Interview Transcripts (12 weeks)

Transcript showing steps one and two of IPA (Smith, Flowers & Larkin, 2009)

Week 1 – Video Journal – 29/02/2016

Emergent themes (Step three)	Original Transcript	Exploratory comments (Step one and two)
<p>Perceived performance in the subject.</p> <p>Relationship with the teacher: Aggressive, conflict, intolerable change.</p>	<p>I am Kevin [REDACTED] I will talk about my Maths lesson. I do not particularly like Maths but I am all right in it. I do not have a good relationship with the teacher. Last time I insulted him. I do not like the Maths lesson because the teacher has changed and I do not feel comfortable with the new teacher. (00:00:00.0 - 00:00:44.0)</p>	<p><u>Introduces himself as not being good in Maths from the start. Can this show his low self-esteem in the subject?</u></p> <p>Does not have a good relationship with the teacher. Talks about not being comfortable (intolerable change, unbearable, disturbing) with the change in teacher during the year. Links an act of misbehaviour with his negative relationship with the teacher.</p>

<p>The Maths lesson: More fun. Power struggle</p>	<p>If I were the teacher I would make the lessons more fun. The teacher opts for basic lessons rather than fun lessons. I do not like the lesson because he does not make the lessons enjoyable. (00:00:44.0 - 00:00:57.1)</p>	<p><u>Is there a power struggle here?</u> Puts himself in the teacher's boots. Talks about a 'basic' lesson and not enjoyable.</p>
<p>Relationship with peers: Peer tutoring. Relationship with the teacher: Aggressive, conflict.</p>	<p>I used to sit near a student and he used to help me a lot. Last week, during the lesson I insulted the teacher. I did not enjoy it because I got into trouble later. (00:01:09.9 - 00:01:25.4)</p>	<p>Enjoys peer support. Re mentions the incident he had with the teacher.</p>
<p>Ineffective consequences Relationship with teacher: aggressive, conflict, negative feelings.</p>	<p>Last week I got a break in and I did not go. I did not bring the HW. I fought with the first term teacher and I did not feel good about it. I did not feel useful for the lesson. (00:01:36.4 - 00:02:15.5)</p>	<p><u>Is not going to the break-in given by the teacher a sign of rebellion by the student? Is the student showing that he is in control? Another case of power struggle?</u> Feels disengaged and 'useless' during the Maths lesson.</p>

<p>Activities – irrelevant, boring</p> <p>Ineffective teaching</p>	<p>We had activities, but were stupid. Such that no one enjoys himself doing them. I did not behave properly during the lesson for that activity. I felt that I learnt something from doing it, but I did not particularly like it. It was useful and good. It was good for me. I felt good. No not really. I did not feel good during the lesson. I would have changed, with regards to Friday's lesson, the way in which he (the teacher) teaches us. On that day he did not teach us well. (00:02:15.5 - 00:03:43.0)</p>	<p><u>The student constantly criticizes the work done by his teacher. Can there be more to this rather than simple criticism?</u></p> <p>Links his behaviour to the type of activity done in class. Since the activity was not of a good standard according to him, his behaviour was not good.</p> <p>Hesitant. Finding it difficult to articulate his feeling towards this activity. Even though he did not like it, he felt that he learnt something by doing it. Is he getting confused in differentiating between enjoying the activity and actually learning something by doing it?</p> <p>Comments about the teacher way of teaching and judges it negatively. <u>Is this a personal attack on the teacher deriving from the negative relationship they have?</u></p>
<p>Relationship with the teacher: a changing relationship from</p>	<p>My relationship with the first teacher was not good. Because we had a teacher before this one. However, during his last lessons, it was good, I used to pay attention and follow</p>	<p>Again, talks about his relationship with the teacher.</p>

<p>negative to the positive.</p>	<p>the teacher. Thus, it went well with that teacher. Now, because we changed the teacher, I do not feel good about it. (00:03:43.0 - 00:04:07.9)</p>	<p>Talks emotionally on how he managed to build a good relationship with his previous teacher after some time. Links his good relationship with the teacher with being attentive and a good in behaviour.</p> <p>Links the change in teacher with a feeling of negativity.</p> <p><u>Can this change in teacher be the cause of such conflict with his current teacher? Is it a way of expressing his anger/sorrow after having his previous teacher replaced?</u></p>
<p>The Maths lesson: boring and lacking stimulation.</p>	<p>I do not usually manage to focus during the lesson. This happens particularly during the Maths lesson because I do not like the subject. But if the lessons were more enjoyable, like I said at the start, I would enjoy the lessons more. (00:04:07.9 - 00:04:22.4)</p>	<p>Links his disinterest towards the subject with not being able to focus.</p> <p><u>Can it be that the student finds it difficult to understand the subject and is hiding this by saying that he wants more enjoyable lessons?</u></p>

Week 2 – Video Journal – 08/03/2016

Emergent themes	Original Transcript	Exploratory comments
The impersonal school environment.	Hello my name is Kevin Aquilina and today I will talk a bit about my school. The school is big...a lot. It is nice and a little old...hmmm... It has...hmmm... It has a lot of different things. hmm...It is big as I already told you...It is very old and there are other schools like it. It has two grounds and it has more than 30 classes...A lot of things like this. (00:00:00.0 - 00:01:04.1)	Emphasis on the fact that the school is big and has a lot of classes. Is he feeling a lack of personal attention and feeling as one of the many students?
School as unhelpful for the student	The school is very good, but it does not help me because I do not like the school. And I think that I need to go to school because I am	Links not liking school to not getting any help by the school. <u>The school does not help him because he cannot understand the subject?</u>

Life after school: Career ambitions.	doing a subject called hospitality and I am trying really hard because I want to become a chef. (00:00:56.1 - 00:01:28.2)	Links his effort in a particular subject to the fact that this subject is directly related to the profession he wants to do once out of school. This motivates him and he sees this subject as worth doing and worth going to school for.
The school environment: old and unattractive.	If I were the school director, I would change the way the classes are. I would refurbish them and make more nice things in them. I would pay for the necessary changes to be straight to the point. This is because I have a feeling that the school needs a good refurbishment. (00:01:28.2 - 00:02:05.2)	Talks about the need to have a better physical environment at school.
Relationship with peers: positive and helpful Ineffective and inadequate consequences	When reflecting about this school. Firstly, I enjoy it. Secondly, I meet my friends. I learn and it helps me a lot. Sometimes it helps me. But sometimes it destroys me a lot. For example, I have a lot of break-ins, after schools, suspensions and so on. Thus, I dislike it because I hate writing. The rest is ok. (00:02:05.2 - 00:03:03.8)	Even though earlier he says that he did not like school. He is now saying that he enjoys it. He is contradicting himself. This contradiction is emphasised further here. He has mixed feeling whether the schools helps him or not. In certain circumstances it does help him, but in other it is destroying him. Mentions several consequences in connection with him feeling destroyed by the school. These consequences seem to be

		<p>inadequate and not helpful. Can other interventions be used rather than the consequences mentioned here?</p> <p><u>Are the consequences being given causing more harm than benefits?</u></p>
	<p>I would like to have successfully learnt Hospitality by the time school finishes. I feel good in the subject, but I am finding it difficult because this year it is not like last year. Last year it was about cooking. But now I am not doing well. (00:03:03.8 - 00:03:39.1)</p>	<p>He has something to look forward to and a set goal. Feels and talks positively about it.</p> <p><u>Can it be that the student is good at doing things by hand (cooking) but finds it difficult when it comes to writing? Is writing hindering his progress?</u></p>
<p>Life after school: career ambition.</p>	<p>The school is preparing me to become a mature boy, happy, with a good brain and I will have some things that I can use when I grow up at least. I will be able to find a good job. The more I learn the more I will be able to find a job. (00:03:39.1 - 00:04:20.1)</p>	<p>Is able to acknowledge that the school is not only preparing him in an academic sense but also in a pastoral sense.</p>

Irrelevance of Mathematics.	Maths is good for me, but it is not that important. I will have to drop it in the future, but as a subject I will use it when I grow up. As I already said, you can use everything. I will not drop it now because as a subject it is very good for me. (00:04:20.1 - 00:04:56.8)	Is finding it very difficult to articulate his feeling towards the subject. Whilst reading this comment I feel that a lot of mixed feelings are coming through. Although, he acknowledges that it will be useful when he grows up, he talks about dropping the subject in the future (once he finished secondary school and he will be free to do so).
The Maths lesson: annoying and confusing.	There is one topic that annoys me in Maths. The algebra. That topic really annoys me because it has a lot of Xs and Ys. And they get me confused. (00:04:56.8 - 00:05:12.7)	Talks about getting confused during the Maths lesson. It seems that he cannot understand the Algebra topic and this annoys him and confuses him.

Week 3 – Video Journal – 16/03/2016

Emergent themes	Original Transcript	Exploratory comments
Irrelevance of Maths	At the moment we are doing the angle topics. At the moment... According to my opinion they are quite useless, the angles...	Questions the usefulness of what is being done in the Maths lesson. Could it be that he is finding it difficult to understand the topic/subject and thus plays down its importance to him? A sort of auto defence mechanism not to make him feel bad about not understanding. This can be explored further.

	and I do not know why we are doing this topic. Eh. (00:00:00.0 - 00:00:07.8)	
	... I am not doing my best. But I try because I do not like the subject, but angles do not annoy me. (00:00:29.9 - 00:00:46.9)	<u>Not doing his best because he thinks they are useless?</u>
Behaviour: Improvement, promoting optimism. Maths lesson as enjoying. Relationships: Peer pressure.	At the moment I am behaving well, but I am doing badly, I need to do well. I am enjoying myself during these lessons. I behave well because I would like to try and learn. In the past I did not make any effort, and did not try, but at the moment I am learning a bit. I feel good that I am behaving in this manner because I will learn and when I grow up I will find a good job. I am doing the right thing according to myself. I do not care what others do. (00:00:43.8 - 00:01:00.7)	Shifting the responsibility of underperforming in the subject from himself. He says he is behaving well but still doing bad... <u>Did he behave badly in the past to look good in front of others? Peer pressure?</u>

<p>Preparation of Maths activities: Enjoyable and interesting lessons.</p>	<p>If I were to make a suggestion, in order to learn this topic and everything else, I would prepare some sort of Maths games etc. for this topic. ... At the moment the most enjoyable thing about Maths, the most enjoyable thing this week was last Tuesday's because it was fun. All the class enjoyed it and the Maths teacher did a nice lesson. That is, not like the usual lessons on the board etc. He prepared some games. (00:01:39.9 - 00:03:04.3)</p>	<p>Talks about doing Maths games. He sees them as enjoyable.</p> <p><u>Suddenly there seems to be a better relationship with the teacher and Kevin is more positive about the lesson. Can the student-teacher relationship have so much importance on the student's performance and attitude towards the subject?</u></p>
<p>The Maths lessons as annoying and confusing when student does not understand and enjoyable and</p>	<p>Sometimes, the angles are annoying me because I find them difficult. However, when I understand them, I find them enjoyable and I am all right. I feel comfortable etc. (00:03:04.3 - 00:03:18.9)</p>	<p>Admits that he finds angles difficult and enjoys it when he understands them.</p> <p><u>Could it be that the fact that he is finding it difficult to understand the subject is proving to be a barrier for him to enjoy/ behave?</u></p> <p><u>Talks about being emotionally better when he understand the lesson: feels comfortable and all right. This makes me think about the emotional stress this</u></p>

interesting when the student understands.		<u>student is exposed to when he does not understand the lesson. Could this lead to: playing it cool, misbehaving, passiveness, etc.?</u>
Relationship with peers as distracting	... I am distracted during lessons. There is a boy and he distracts me etc. It could be that I distract others, but if I did so, I did not do it on purpose. This is because I do not like distracting others. I do not mind when I do not pay attention, but I do not wish to distract others. So I try as hard as possible not to distract others. I also enjoyed the last	Says that he does not distract others on purpose. Likes it when there is quiet. Links this with a good lesson.
Relationships with peers: teamwork	lesson we had because we were quiet and we did a good lesson. The teacher was good as well. We were united as a group and we learned well. (00:03:18.9 - 00:04:28.2)	Also, talks positively about teamwork.

Week 4 – Video Journal – 07/04/2016

Emergent themes	Original Transcript	Exploratory comments
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<p>Irrelevance of Maths</p>	<p>At the moment we are doing a topic that one needs, but does not really need. In a lot of things you will need it, but in a lot of other things you will not really need it. Because in Mathematics, not everything we do is useful, in my opinion. In my opinion it is not really useful. But if you want to become a Maths teacher, you will need it. I do not think it is useful to me. I do not really pay attention, but for the rest I do everything. Because I would want to pay attention and not distract others. (00:00:02.3 - 00:00:50.4)</p>	<p>Again talks about the usefulness and relevance to what is being carried out in class.</p> <p>Only sees Maths important for those who want to become a Maths teacher. Is not able to connect it in any way with his life experiences. As a Maths teacher this is worrying and annoying to me. <u>How can it be that he only sees Maths as important for prospective Maths teachers?</u></p>
<p>Irrelevance of Maths</p>	<p>At the moment we are learning quadrilaterals. We are learning parallelograms. To be honest, I do not know why we are doing this topic. However, as I already said, Maths is something that you</p>	<p>‘Maths is something that you need for the exam’, this phrase is worrying. Kevin is only seeing the relevance of the subject vis-à-vis the exam.</p>

	need for the exam, but you do not actually need. (00:00:50.4 - 00:01:38.2)	<u>Can it be that he is reducing Maths' importance to make it less worrying to him that he does not understand it?</u>
Relationships with teacher: conflict	During yesterday's lesson we were doing well, but as the lesson progressed things started getting worse. That is, the teacher was shouting at the other students. Because during the Maths lesson I like to pay attention, because I would like to learn it to get my o level. (00:01:38.2 - 00:01:38.3)	Talks negatively about the teacher shouting in class.
	I did not really like yesterday's lesson. I did not like it. I do not know what could have been done better. (00:02:03.8 - 00:02:23.5)	
Preparation of Maths activities: enjoyable and interesting	I liked Monday's lesson. It was like a Mathematical game, but not only Maths. We had Maths, angles, plus, minus, times, division and many other types. We were playing this game and we really enjoyed it.	Kevin likes lessons that are presented as games. However, from his description it seems that the game he is referring to has nothing to do with the topic being covered. This game he is referring to seems to be a general Maths game using basic concepts of addition/subtraction/multiplication/division and has no connection to the topic being covered other than very basic. <u>Could it be that</u>

	That means that I liked the lesson. (00:02:23.5 - 00:03:04.7)	<u>Kevin is finding this enjoyable because basic mathematical concepts are being covered rather than the harder Maths topics related to his year group?</u>
Lack of motivation	At the moment I am not giving my best during all the lessons. But I try to give my best as much as possible. Because as I said before I need it. As I said before, I need it, but not really need it. (00:03:04.7 - 00:03:35.1)	Finds it difficult to motivate himself to do his best, because he sees no practical use to the material being carried out in class.
Relationships with peers: distracting	However, sometimes children distract me. They talk; shout, and they annoy me. Because you try to pay attention, but they do not allow you to cooperate. There are a lot of students in class who stay talking to you and annoy you. That is why I do not always pay attention. (00:03:35.1 - 00:04:04.6)	Talks negatively about other students trying to distract him and annoy him. Gives the impression of a good boy trying to understand the lesson. <u>Can it be that he is putting the blame on his friends for not paying attention?</u>
Behaviour: distracting others, effort for good behaviour.	I sometimes, also, distract others but not really distract, distract. I try to pay attention as much as possible and not distract others. I try my best. But sometimes there are lessons	Here he admits that he distracts others. Even though he is not too convinced about it.

<p>Lack of motivation.</p> <p>The Maths lesson: boring and lacking simulation.</p>	<p>during which I do not feel like. I distract others and as a consequence I think I start to annoy others. I annoy other students. So I think that I annoy other students. (00:04:04.6 - 00:04:43.4)</p>	<p>When he is not in the mood, he is more prone to distracting others and the lesson.</p>
<p>Relationships with peers: distracting.</p> <p>Distracting and revengeful behaviour.</p>	<p>Even they annoy me. I think that they should not stay distracting others if the others want to pay attention. So I do the same to them. I do not feel angry towards them, because I do the same thing. And they do it to me. I feel sad that they do it to me. (00:04:43.4 - 00:05:11.8)</p>	<p><u>Kevin wants to get even with those who distract him by distracting them back. Gets even with them. What about the role of the teacher here? How come he does not ask the teacher to intervene, but feels that the right way to go about it is by getting even?</u></p> <p><u>Taking matters into his own hands by getting even. Does this show lack of trust in the teacher and school system? Or is it just an excuse to cover up his misbehaviour?</u></p>
<p>Irrelevance of Maths.</p>	<p>I would like to learn this topic. I do not wish to learn it. Ok, I would like to learn it because it is Maths, but I do not see it useful. Maths annoys me, so I keep my safe distance from the subject. But I still enjoy learning it,</p>	<p>Contradicts himself. Has mixed feelings with regards to the learning of the topic. This could be seen as a contradiction. However, again, he is struggling to come to terms on why he is learning such a topic and how this could be useful to him.</p>

	because it is useful and I know I will need it when I grow up. (00:05:35.0 - 00:06:07.1)	Imagining that Maths will be useful when he grows up, but does not really know how and why.
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Week 5 – Interview – 13/04/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	During the VD entries that I saw, you mention on a number of occasions your relationship with the Maths teacher. You said that your relationship with your previous teacher started on the wrong foot but then it got better. However, now with the new Maths teacher things seem to have gotten bad again. Can you tell me something about your relationship with your teacher? The Maths teacher in	Researcher	

	this case. (00:00:00.0 - 00:00:30.4)		
The importance of a good relationships with the teacher.	I enjoy it when I have a good relationship with my teacher because it will be better... how can I explain this? You will enjoy it better when you have the teacher on board with you. (00:00:30.4 - 00:01:01.2)	Kevin	Kevin talks about the importance of having positive teacher relationship with the teacher.
	What does that mean? (00:01:01.2 - 00:01:01.3)	Researcher	
A good student-teacher relationship is positive.	Because when the teacher treats you good and so one, you will have more confidence and so on with the teacher. (00:01:01.2 - 00:01:16.1)	Kevin	
	How does this influence your performance in this subject? (00:01:16.1 - 00:01:16.2)	Researcher	
	No, it does not really affect me. (00:01:16.1 - 00:01:30.0)	Kevin	
	So your behaviour is not different with a teacher with	Researcher	

	whom you have a positive relationship and another with whom you have a negative relationship? (00:01:30.0 - 00:01:40.0)		
	Yes but, not always. (00:01:40.0 - 00:01:44.6)	Kevin	
	What do you mean 'not always'? (00:01:44.6 - 00:01:44.7)	Researcher	
	Sometimes it does change the way you relate to the teacher. (00:01:44.6 - 00:01:51.1)	Kevin	
	Can you elaborate further? If you have a negative relationship with a teacher, how will you relate to this teacher? (00:01:51.1 - 00:01:57.2)	Researcher	
Annoyance leads to bad behaviour.	I will try to do my best, but if I get annoyed I will start distracting others and so on. (00:01:57.2 - 00:02:03.4)	Kevin	

	And if you have a positive relationship with a teacher? (00:02:03.4 - 00:02:08.5)	Researcher	
	All will be right. (00:02:08.5 - 00:02:11.1)	Kevin	A positive relationship with the teacher can lead to a better relationship with the subject. Student will try harder to please the teacher.
	Can you tell me something about your relationship with your classmates? The ones that sit next to you or behind? (00:02:11.0 - 00:02:17.3)	Researcher	
	No, I do not really talk to them, because I am not their friend. (00:02:17.3 - 00:02:27.6)	Kevin	Kevin has not friends in class.
	Can you describe your relationship with your Maths teacher? (00:02:27.6 - 00:02:35.2)	Researcher	
A changing relationship with the teacher. From an intolerable change in teacher characterized by conflict and aggressive	Good. I am relating well with him. At first, as I have told you, it was not well, but now it is fine. (00:02:35.2 - 00:02:43.2)	Kevin	Talks about a positive relationship with his Maths teacher. <u>Are relationships more important than the actual content delivery?</u>

behaviour to a positive one.			
	So as for your previous teacher, you start on the wrong foot but it gets better over time? (00:02:43.2 - 00:02:55.2)	Researcher	
	(Nods) (00:02:55.2 - 00:02:55.3)	Kevin	Kevin takes time to build a positive relationship with his teacher. He had a difficult start with both of his Maths teachers this year, but after some time he managed to bond with them and build a good relationship.
	Why do you think this happens? (00:02:55.2 - 00:02:55.3)	Researcher	
	I do not know why. (00:02:57.7 - 00:03:01.2)	Kevin	
	During a particular VD entry you referred to an episode during which the teacher was shouting at your classmate. How did you feel about this? (00:03:01.2 - 00:03:07.7)	Researcher	
Relationship with teacher as aggressive.	I felt bad about it. (00:03:07.7 - 00:03:15.6)	Kevin	
	Why? (00:03:15.6 - 00:03:15.7)	Researcher	

	Because I was involved. I felt guilty. (00:03:15.6 - 00:03:20.1)	Kevin	
	If he shouts at you, how would you feel? (00:03:20.1 - 00:03:21.1)	Researcher	
Standing up for peers.	Even worse. Not really. I prefer that he shouts at me if it is my fault, rather than at my friends. I still feel a bit that way. (00:03:21.1 - 00:03:33.1)	Kevin	Feels guilty for getting one of his classmates in trouble when it was really his fault. <u>Is shouting really necessary in class? What benefits will this bring?</u>
	What does 'that way' mean? (00:03:33.1 - 00:03:33.2)	Researcher	
	That means I feel guilty. I prefer getting the blame myself for something I did rather than my friends getting the blame. (00:03:33.1 - 00:03:56.3)	Kevin	
	Do you find it difficult to build a good relationship with your teacher? (00:03:56.3 - 00:03:59.6)	Researcher	

<p>An improving relationship with the teacher.</p>	<p>Not really. With this teacher, slowly, slowly, I am building a positive relationship. It is always the same for me. At first I start negatively, but then it gets positive. (00:03:59.6 - 00:04:18.0)</p>	<p>Kevin</p>	<p><u>Would a better handing over make it possible for this transition to happen in a smoother way?</u></p>
	<p>In a VD entry you said that once you 'insulted' the teacher. Can you describe this incident? (00:04:18.0 - 00:04:38.0)</p>	<p>Researcher</p>	
<p>Relationship with teacher: Aggressive, conflict.</p>	<p>Eh, Yes. Because I was sick on a particular day and he gave us the notes. After I asked the teacher to give me the notes, he told me to go up with him to the staffroom after the lesson. And I forgot to go up. I forgot again on another day, and I asked him whether it was a problem for him to get them for me. He did not get them for me, I did like this (shaking his head) and I told</p>	<p>Kevin</p>	<p><u>Does Kevin have a problem with respecting boundaries? He spoke to his teacher, the same way he would speak to his peer. Is this his way of challenging authority? Can it be seen as a power struggle? Who is in control? Who gives the orders in class?</u></p>

	him, 'lazy'. (00:04:38.0 - 00:05:09.3)		
	How did you feel? (00:05:09.3 - 00:05:09.4)	Researcher	
Relationship with teacher: negative feelings.	I felt sad because he did not get them for me. (00:05:09.3 - 00:05:09.4)	Kevin	Feeling sad triggered Kevin in calling his teacher lazy. Lack of communication with the teacher triggered a rather serious incident with the teacher.
	And what did you tell him? (00:05:18.5 - 00:05:19.5)	Researcher	
	I told him, 'lazy'. (00:05:19.5 - 00:05:23.7)	Kevin	
	What are your feelings about this incident? (00:05:23.7 - 00:05:23.8)	Researcher	
Behaviour: admitting when one is wrong.	I do not feel angry good about it, because it was my entire fault. Because I was also lazy that I did not go up for them. (00:05:23.7 - 00:05:39.0)	Kevin	Again, Kevin has no difficulty in admitting when he is wrong and feeling sorry about it when reflecting about it. He clearly wasn't able to do this with the teacher in the moment.
	Do you feel that sometimes you cannot control your actions? (00:05:39.0 - 00:05:39.1)	Researcher	

Incontrollable behaviour	Sometimes. (00:05:39.0 - 00:05:44.9)	Kevin	
	Does this happen a lot of time? Or was it an isolated incident. (00:05:44.9 - 00:05:45.0)	Researcher	
	It does not happen a lot with the teachers. (00:05:44.9 - 00:05:49.9)	Kevin	
	With the teachers it does not happen frequently... so with whom does it happen? (00:05:49.9 - 00:05:51.2)	Researcher	
	With other kids. (00:05:51.2 - 00:05:51.7)	Kevin	
	With your friends? (00:05:51.7 - 00:06:00.7)	Researcher	
Relationship with peers: conflicts	Yes, but just insults (laughing). (00:06:00.7 - 00:06:03.5)	Kevin	Usually, manages to control himself with his teachers with regards to insulting comments. However, with his friends this is a common recurrence. Thus, it is not surprising that there was transference in his behaviour with his friends to his behaviour with his teacher.
	During a particular VD you said that you feel sad when someone	Researcher	

	distracts you. (00:06:03.5 - 00:06:11.9)		
Relationship with peers as distracting. Getting back to peers by distracting them.	Yes, I try to pay attention, and then they distract me. So when they are paying attention and I am not, I distract them. (00:06:11.9 - 00:06:14.7)	Kevin	Again talks about a culture of getting back using the same medicine. The teacher is bypassed here.
	So you get even? (00:06:41.5 - 00:06:41.6)	Researcher	
	Yes. (00:06:41.5 - 00:06:41.6)	Kevin	
	Do you try to get the teacher involved to solve the issue? (00:06:41.5 - 00:06:42.8)	Researcher	
Relationship with teacher: lack of trust. Power struggle	No, I take care of it myself. I leave the teacher out of it to avoid trouble. (00:06:42.8 - 00:06:50.0)	Kevin	Confirms the culture of 'bypassing' the teacher and taking care of business himself. <u>Can it be that he doesn't want to look weak by reporting others?</u>
	You said that 'basic' lessons and lessons on the board annoy you... (00:07:04.8 - 00:07:19.9)	Researcher	
The Maths lesson as enjoyable	Yes, I enjoy it more when we do something that isn't done every day. (00:07:19.9 - 00:07:23.0)	Kevin	Gets bored of having the same type of lesson every day. Likes it when something out of the common routine is done during the lesson.

	You mention games. Once you mentioned a game with division, multiplication, etc. Why do you enjoy such activities? (00:07:23.0 - 00:07:34.1)	Researcher	
Preparation of Maths activities: enjoyable and interesting lessons.	Because a game is not like a lesson. It is more like a game. That means you are playing with your friends. (00:07:34.1 - 00:07:45.8)	Kevin	Finds it helpful when the Maths lesson is presented in a playful game. Can this always be possible?
	Do you think you learn during such games? (00:07:45.8 - 00:07:48.2)	Researcher	
	Yes, but not always. (00:07:48.2 - 00:07:51.5)	Kevin	
	Why not? When is it that you think you are learning something new and when do you think it is useless? (00:07:51.5 - 00:07:53.2)	Researcher	
Relevant vs. irrelevant activities.	Sometimes they are good games involving Maths and so on, but other times the games do not	Kevin	One has to explore the connectedness of these games to the actual maths lesson. Are they simple fillers? Or are they a part of the lesson? What benefits are the students getting?

	make any sense. They tell you that they are Mathematical, but it involves driving etc. (00:07:53.2 - 00:08:11.4)		Kevin is honest when saying that sometimes these games do not make any sense.
	When do you regard a good activity as being good and when is it bad? (00:08:11.4 - 00:08:22.3)	Researcher	
Successful vs. unsuccessful Maths activities	An activity can be good when it makes students more interested, and thus we learn more. It is bad, when other students take over, start talking etc. (00:08:22.3 - 00:08:42.3)	Kevin	Kevin here gives a description of what makes a good activity. Links interesting with learning more.
	So you like it when the class is quiet? (00:08:42.3 - 00:08:55.7)	Researcher	
Importance of a quiet classroom environment	Basically all the class, not all, some of them not, stay talking and do not pay attention. As if they are the only students in class. This annoys me. (00:08:55.7 - 00:09:19.2)	Kevin	Classroom environment is important for Kevin to be able to learn.

	You mention that you find the Hospitality lessons interesting and important, but fail to see the importance of Maths in your life... except for the exams. How is Hospitality different from Maths? (00:09:19.2 - 00:09:40.7)	Researcher	
Life after school: career and ambitions. Irrelevance of Maths.	Because I want to become a chef when I grow up, and Maths isn't really relevant to what I want to do. (00:09:40.7 - 00:09:52.8)	Kevin	Likes another subject because he sees it as relevant and useful for his future. Links it with his future career. <u>What if Maths was linked to his future career, could it become more interesting?</u> <u>Maths can be very relevant to a chef. How is it that the student is finding Maths as irrelevant? Has it got to do with the way it is being taught?</u>
	On various occasions you say that Maths is important, but not really important. It is important for the exam but not for your life. How do you feel about doing a lesson everyday on a subject that you do not regards	Researcher	

	as important? (00:09:52.8 - 00:10:11.9)		
Feeling of frustration towards the Maths lesson.	I feel helpless about it, since I will not need it. (00:10:11.9 - 00:10:24.1)	Kevin	
	What do you mean by helpless? (00:10:24.1 - 00:10:24.2)	Researcher	
Ineffective teaching/learning. The Maths lesson as confusing.	I do not really understand Maths. (00:10:24.1 - 00:10:37.3)	Kevin	Feels helpless about the subject and cannot understand it. Kevin sounds frustrating. <u>Can all the problems associated with Maths be due to the fact that he does not understand the subject?</u>
	How do you feel about it? (00:10:37.3 - 00:10:37.4)	Researcher	
Feelings of frustration towards the Maths lesson.	Not always the same. Sometimes I feel frustrated. But the lesson is not always the same. (00:10:37.3 - 00:10:56.8)	Kevin	<u>How is Kevin letting out this frustration? Can it be that acting up and misbehaviour is a way of 'coping' with such frustration?</u>
	You mention a number of Maths topics that you do not feel important for you such as Angles, but yet you still have to attend class. How do you feel	Researcher	

	about this? (00:10:56.8 - 00:10:56.9)		
The Maths lessons as annoying and confusing. Irrelevance of Maths.	I feel sad. It does not make any sense. Because they will be of no use to me. Not all. For example, algebra will never be useful. Not for all professions at least. (00:10:56.8 - 00:11:22.9)	Kevin	Kevin talks about negative emotions such as sadness and frustration about having to attend the Maths lesson.
	You mentioned in the VD that you felt that school is destroying you when you are given break-ins, after schools and suspensions. Can you say a little bit more about that? (00:12:08.3 - 00:12:27.4)	Researcher	
Behaviour improvement	Because before I used to act up. I used to distract lessons a lot. I used to annoy other kids. But now no. (00:12:27.4 - 00:12:27.5)	Kevin	A change in behaviour can be observed here.
	How did you feel about getting break-ins, suspensions and after schools? (00:12:54.3 - 00:12:59.9)	Researcher	

Ineffective consequences/intervention	I used to feel bad about it. I was doing bad things, making my friends laugh about it, and I would get the consequence. I feel that it did not make any sense. (00:12:59.9 - 00:13:10.4)	Kevin	
	Did you feel treated unfairly? (00:13:10.4 - 00:13:10.5)	Researcher	
Admitting when he is wrong.	No, I deserved it. At the time I did not feel like this, but now looking back at it, I do. (00:13:27.8 - 00:13:35.3)	Kevin	Again this is after the event took place, 'on reflection'.
	Did you think other consequences could have been given? (00:13:35.3 - 00:13:39.5)	Researcher	
Ineffective consequences/intervention	Instead of staying out of class and writing next to the office, I could have remained out of class, but next to the door with the desk, but still followed the lesson. (00:13:39.5 - 00:14:13.9)	Kevin	Even though when looking back, Kevin says he deserved to be punished, he argues that the type of consequences he got did not make any sense.
	So you would have preferred if you followed the lesson just the	Research	

	same. And what about the suspension? How did you feel about staying at home? (00:14:13.9 - 00:14:14.0)		
Ineffective consequences/intervention.	I would have preferred coming sometime on a Saturday. Something similar to that arrangement for example. And not missing school. (00:14:13.9 - 00:14:28.6)	Kevin	Prefers coming to school on a Saturday rather than being taken out of class or being suspended from school. This is very interesting, in the sense that usually students would want to miss school or stay out of class. However, even though Kevin feels frustrated at times, he still wants to be able to attend the lessons. <u>Does a suspension from school actually solve the problem or only just postpone it?</u>
	Sometimes you said that your behaviour is good and you are engaged in the lesson. However, you also admit that other times you misbehave and distract others. What do you think makes this happen? (00:14:28.6 - 00:14:48.5)	Researcher	
Not liking school leads to negative behaviour.	Because I do not like school a lot. That is why I have a lot of mood swings. (00:14:48.5- 00:15:09.5)	Kevin	Links his negative behaviour with the fact that he does not like school.

	How can the teachers make school more enjoyable? (00:15:09.5 - 00:15:09.6)	Researcher	
Preparation of Maths activities: enjoyable and interesting lessons.	As I told you. I like lessons during which games are played. They can prepare games. More creative lessons etc. (00:15:09.5 - 00:15:18.1)	Kevin	Again, Kevin says that games can make the lessons more interesting.
	How do you feel before a Maths lesson? (00:15:40.7 - 00:15:40.8)	Researcher	
Negative feelings towards the Maths lesson.	... oh no Maths... Not always. Sometimes I feel like it, other I do not feel like a Maths lesson. (00:15:40.7 - 00:16:12.4)	Kevin	It is worrying that sometimes Kevin does not feel like having a Maths lesson from the start. This will undoubtedly have a negative effect on his performance during the lesson.

Week 6 – Video Journal – 21/04/2016

Emergent themes	Original Transcript	Exploratory comments
Disruptive behaviour.	At the moment we are doing angles and we have just finished them today. This week we did a lot of things. A lot of different things. The	

<p>Relationship with the teacher: conflict, aggressive</p> <p>Inadequate classroom environment for learning.</p>	<p>topic was the same. But we did a lot of games... Today, the teacher stopped the lesson, for the last 15 minutes. He was very angry. Everybody was talking etc. They did wrong obviously. Because we are supposed to learn not be naughty. (00:00:00.0 - 00:01:07.8)</p>	<p>Admits that he is supposed to follow the lesson and not talk.</p>
<p>Relationship with teacher: conflict, aggressive</p>	<p>This topic is difficult, but easy. Difficult, easy. It is difficult and easy at the same time. It is not always the same. It is funnier. They make the teacher very angry, they act deviant and it is not right for the teacher. So I stay one step back, because it is wrong to stop his lesson when he is trying to teach us. It is not worth doing bad things. Thus, he is trying to teach us in different ways and as he tells us, he does not like the fact that we are behaving badly. (00:01:07.8 - 00:01:58.4)</p>	<p>It seems that Kevin understands parts of the lesson (easy), but finds it difficult to understand other parts (difficult).</p> <p>Kevin dislikes it when other students distract the lesson.</p> <p><u>The relationship with his teacher has drastically changed. At first it was confrontational but now the student seems to be caring towards his teacher.</u></p> <p><u>What brought about such a change?</u></p>

<p>The Maths lesson as boring and lacking stimulation.</p> <p>Relationship with teacher: conflict</p> <p>Ineffective teaching.</p> <p>Inadequate consequences.</p> <p>Admitting when he is wrong.</p>	<p>A lesson that I did not like was today. This is because the lesson was boring. Thus, the children in class were shouting etc. and thus, during the last 10 minutes we did nothing. This is bad for the teacher because his effort in preparing a lesson was in vain. He told us that he was not going to do the last question he prepared. Since we did not behave well, he told us that he was not going to do the last page of the topic and we will start the new topic tomorrow. This will not make any difference to the teacher. However, one can say that it is our fault. (00:02:14.8 - 00:02:45.7)</p>	<p>Links a boring lesson with disruptive behaviour from students. When lesson is boring students in class will misbehave.</p> <p>It does seem interesting when these two themes seem to be associated – emerge in relation to each other.</p> <p><u>The teacher seems to be ‘punishing’ all the class and not differentiated between those who behaved badly and those who tried to follow the lesson.</u></p> <p><u>Are these sort of sweeping punishments beneficial? Do they cause more harm?</u></p>
<p>Preparation of Maths activities: enjoyable</p>	<p>The most enjoyable lesson was last Monday's lesson. Because as I told you, we played a lot of games on Monday and there was a very</p>	<p>Again, it is very evident that Kevin is motivated to learn and learns when games are integrated in the lesson.</p>

<p>and interesting lessons. Effective teaching/learning.</p>	<p>good game. Thus, we did not get bored. We enjoyed it. The best part was when the teacher started talking about the lesson. Thus we enjoyed it, during the lesson, the lesson was good but some parts annoyed me. But this was the best lesson of the week. During this lesson I enjoyed myself. (00:03:05.1 - 00:03:05.2)</p>	<p><u>Are these games serving as an alienation for the student from the problems he has to understand the subject?</u></p>
<p>Negative behaviour Annoying lessons leading to negative behaviour. Responsibility leads to positive behaviour and feelings.</p>	<p>I am doing my best, but not during all the lessons. This is because sometimes I act deviant; sometimes I annoy the teacher etc. Sometimes I do behave well. But not always. But sometimes I get annoyed, and at the moment since I have my hand broken, my finger actually, the teacher has allowed me to erase the white board. I enjoyed this and I was not annoyed. I enjoyed it, an adventure. (00:04:08.2 - 00:05:01.3)</p>	<p>Getting annoyed does not help him to behave well.</p> <p><u>Get annoyed or does not understand the lesson and gets disinterested?</u></p> <p>Being given responsibilities, such as cleaning the board, makes him feel responsible and appreciated.</p>

	The teacher cannot do anything to improve the lessons. As I already said the games were prepared. I told the teacher and he prepared games. So the lesson was enjoyable. I liked it a lot. (00:05:01.3 - 00:05:31.5)	
Relationship with peers as distracting. Distracting behaviour.	There were a few lessons, today's lesson included, during which I stayed talking to another student during the lesson. Thus, the teacher did not like this. Thus, I distracted others because I stayed talking... (00:05:31.5 - 00:06:08.1)	Acknowledges that when he talks to his friends he distracts the teacher.

Week 7 – Video Journal – 27/04/2016

Emergent themes	Original Transcript	Exploratory comments
The Maths lesson as enjoyable	At the moment we are doing... angles. Like we were doing. We are having more type of games, nicer lesson, and more enjoyable	<u>Kevin acknowledges the improvement in the lessons. Lessons are having more games. What brought about this change?</u>

<p>Relationship with teacher: Dialogue, positive communication, student empowerment</p>	<p>lessons. Because I spoke to the teacher and he is doing them better. He is doing as I told him. Lessons with... with games etc. And with regards to the Mathematics lessons we are having lots of fun. Now I am learning a lot during these lessons. They are helping me a lot because I understand with games etc. That means I am a slow learner. That means I am not able to learn well if I do not play with things during lessons etc. (00:00:00.0 - 00:00:13.4)</p>	<p>It seems that Kevin has spoken to his teacher and asked him to do more games during the Maths lesson. <u>Could it be that during the VD entries Kevin reflected on his learning, and this led him to ask the teacher to do more activities that he liked?</u></p> <p><u>Student feeling more powerful that he influenced what the teacher does during the lesson?</u></p> <p>It is also good to notice that the teacher listened to Kevin and tried to adapt the lessons accordingly.</p> <p>Kevin says that he is now learning a lot. The games are giving him time to assimilate the new material.</p>
<p>Irrelevance of Maths</p>	<p>As I said I find angles useful. I find it useful but not always. Sometimes I regard it as useless and a waste of time. (00:01:21.3 - 00:01:41.8)</p>	<p>He contradicts himself. Again, mixed feeling about the use this topic can be in his life.</p>
<p>Irrelevance of Maths</p>	<p>This topic, for me, counts for nothing. Because I need more basic things. That means I will</p>	<p>Kevin talks about needing to learn the more basic things during the Maths lesson. Material that he sees useful for his everyday life.</p>

	need it, but not for my everyday life. That means something like this. (00:01:41.8 - 00:01:41.9)	
Unsuccessful activity	This week I did not like the lesson on Monday. This is because the teacher did a game, but did not continue taking it seriously. Not that he did not take it seriously; he did not do it with games. I got slightly annoyed. Thus, I was passive and did not take part in the lesson. (00:02:03.2 - 00:02:21.9)	As a sign of protest he did not take part in the lesson.
The Maths lesson as enjoyable.	The lesson that I liked was yesterday's lesson. We enjoyed it because the teacher did more games etc. That means that we enjoyed it more. (00:02:52.1 - 00:03:15.3)	
The Maths lesson as boring and annoying vs. the Maths lesson as	I am doing my best, but not always. Because as I told you, sometimes we do nice lessons and other times we do boring lessons. Thus, I do not always pay attention. When I do not enjoy	Links enjoyment with understanding of the lesson.

enjoyable and stimulating	the lesson, I find it difficult. But for the rest all is good. (00:03:15.3 - 00:03:41.1)	
Positive behaviour linked to enjoyable lessons. Negative behaviour linked to boring lessons	This week, on Monday I did quite well, but I was a bit disruptive. But, yesterday I did not get annoyed. I enjoyed it. I behave like this because, because if I do not enjoy it I misbehave. This is because I get annoyed and I end up misbehaving. If I like the lesson I behave well. I do not feel good about it because it is not fair that when I do not like the lesson I misbehave and when I like it I behave well. I should behave well always. I feel really bad about it but I end up doing it anyway. (00:03:41.1 - 00:04:52.6)	Links enjoyment with good behaviour. Lack of enjoyment with bad behaviour. Annoying lessons leads to misbehaviour. Cannot not help controlling his disruptive behaviour when the lesson is boring.
Successful vs. unsuccessful activities	At the moment the teacher is doing the same games. He can change the games a bit. Because always the same games are a bit boring. For example, yesterday was ok, he	Repetitive activities/games can become boring.

	<p>changed the game, but only one. But by changing only one game, will not make a big difference, you will still end up with the same games. And we do not really enjoy it. (00:04:52.6 - 00:05:37.8)</p>	
<p>Relationship with peers: distracting, getting back.</p>	<p>My friends distract me a lot. We talk with each other. We talk a lot etc. The teacher starts getting angry etc. After, when I get annoyed, I start distracting them myself. I cannot be blamed for this, the same way as they annoy me, I annoy them that is it. (00:05:37.8 - 00:06:05.5)</p>	<p>Again, if the students get annoyed, he will get distracted from the lesson and distract himself and others.</p> <p><u>Again, taking the law in his own hands? Those this show lack of trust in his teacher?</u></p>

Week 8 – Video Journal – 04/05/2016

Emergent themes	Original Transcript	Exploratory comments
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<p>The Maths lesson as enjoyable and stimulating.</p>	<p>Mhm, at the moment we are doing the Algebra. I like the subject a lot so I am more focused and I am more active during the lesson. I learn a lot about them, mhm and now we are doing new types, heads and tails, mhm, I do not exactly, but they are in boxes, I do not really know what they are called. But they are in boxes and there will be numbers. For example 1.2 or 1/2. Mhm., 1/2, 1/4, 1/5, like this (making a gesture with his hands). At the moment I like these a lot. As a topic I like it a lot. (00:00:00.0 - 00:00:51.8)</p>	<p>Likes the topic being covered so he is more 'focused' and 'active'.</p> <p>Talks about Algebra but is describing the Probability topic.</p> <p><u>Probability is less demanding than the other topics covered and less abstract.</u></p> <p><u>Can it be that since it is easier, he is able to understand it better and thus enjoy it better?</u></p>
<p>Irrelevance of Maths.</p>	<p>I do not exactly know why we are doing this topic because as I see it, it has no use for no one. Or else, not that it is useless for everybody; it can be used for things that are advanced a lot. But for the basic things and so on, it is of no use. That means we are doing it</p>	<p>Again Kevin sees no use in this topic and no connection to his daily life experiences.</p>

	<p>for nothing with regards to myself. Except for those who need it. I do not need it as a subject, not even angles I do not see any use to them. Except if you work in constructions and so on. They are of no use. (00:01:14.0 - 00:01:41.1)</p>	<p><u>Can it be that the teacher needs to give out more examples connected to real life during the Maths lesson? Student are not able to make connections between topics being covered and his life experience.</u></p>
<p>The Maths lesson as enjoyable and stimulating.</p>	<p>Mhm ... the lesson that I enjoyed the most, mhm... was today's lesson. This is because it was a beautiful lesson and with regards to different types of, of Algebra, it was not bad. But because it is of no use to me, I do not agree with it, thus I pay attention, but sometimes I do not. However, I do not disrupt the lesson. Only once I did not pay attention, that is the truth, but I did not get fed up listening to the lesson. (00:02:20.1 - 00:03:24.1)</p>	<p>Very superficial on why he enjoyed the lesson. Mentioning that it was beautiful without mentioning what took place during the lesson and why he describes it as beautiful.</p> <p>Finds is difficult to commit himself to something that he feel is useless to him.</p>
<p>The Maths lesson as confusing.</p>	<p>The part that I liked the most was that about heads and tails. I liked it, but I could not understand it, I couldn't understand it. Not</p>	<p>Enjoyed an activity during the lesson, but could not understand it.</p>

	even the slightest of idea. I could not understand, nothing. (00:03:24.1 - 00:03:55.2)	Emphasizing that he could not understand with repetition of 'I couldn't understand it'. <u>Does this show frustration?</u> Kevin is sad that he could not understand it.
Ineffective teaching. The Maths lesson as confusing.	... I am giving my best. That is the truth. But not always. This means that. Yes, I am giving my best, yes, but I am not really, really... I am not capable of understanding the maths lesson. I like it; I pay attention during the lesson. Ok, I did not really pay attention, but I enjoyed listening to it. (00:03:55.2 - 00:03:55.3)	It seems that the material being carried out in class is above Kevin's current ability. He finds it difficult to engage. He does not pay attention but listens to the lesson. This shows that Kevin does not understand the lesson but is only a spectator. <u>Is this a sign of giving up?</u>
Behaviour improvement and promoting optimism Relationship with the teacher: positive and	Mhm... This week, I did not behave badly. This means that I did well, I got along with the teacher. This means that even the teacher liked the way I behaved and so on. That means that even I am enjoying the fact that I am well behaved. When you are well behaved, you do	Acknowledges the fact that when he behaves well the teacher notices this and they get along together.

acknowledging positive behaviour.	not just do it for yourself, you do it to learn and to be better at school and so on. (00:04:57.1 - 00:05:04.7)	Links good behaviour to learning.
Effective teaching	I do not think the teacher should change anything from what she is doing. This is because with regards to, with regards to, how he is doing the lesson, I like it a lot. I like it. They are good lessons. I am enjoying listening to them and so on. (00:05:52.7 - 00:06:31.9)	He enjoys 'listening' to the lessons. Can it be that he does not understand the topic being covered and just listens to the lesson?
Relationships with the teacher: positive Positive behaviour	I do not think that I distracted the lesson because I was quiet. Even yesterday, and so on, but also today I was well behaved. I did not come on Friday. On Wednesday, I got a long with the teacher as well. Thus ...That's it. (00:06:31.9 - 00:06:57.1)	On a number of occasions Kevin speak about getting along with the teacher. This shows that it is important to him.

Week 9 – Interview – 09/05/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	Ok Kevin. Once, during a video diary, you said that the teacher, since you had your finger broken, allowed you to clean the board. How did you feel? (00:00:00.0 - 00:00:12.9)	Researcher	
Relationship with the teacher: positive, improving	I felt a bit... like this... mhm... what can I say? I was one with the teacher. He was all right with me, more than he usually is and so on. (00:00:12.9 - 00:00:13.0)	Kevin	Kevin felt good about being given a responsibility. He could do something to help his teacher and felt good about it. Kevin feels weak in Maths and does not understand the subject, but now he is being given the opportunity to help the teacher in another way. <u>The student likes power? Reducing the power struggle with the teacher by giving him some power?</u>
	And you felt... (00:00:40.4 - 00:00:40.5)	Researcher	
Feeling confident	... How can I say it...? Confident. More confident with the teacher. (00:00:40.4 - 00:00:40.5)	Kevin	This feeling of confidence might be arising by the fact that Kevin is feeling helpful. Usually, since he does not understand he does not feel of any use to the teacher.

	You said that you had a good behaviour and your teacher noticed this. (00:00:58.9 - 00:01:06.5)	Researcher	
	Yes. (00:01:06.5 - 00:01:06.6)	Kevin	
	Can you tell me about this? (00:01:06.5 - 00:01:06.6)	Researcher	
Relationship with the teacher: acknowledging positive behaviour.	Instead of talking and so on. I went towards the front of the class and so on. And I felt more close to the teacher. That means we talked to each other. Not like before, when he used to only shout at me. (00:01:10.4 - 00:01:35.5)	Kevin	The student moved towards the front of the class and exhibits good behaviour. Acknowledges that the teacher is treating him in a different manner given that he has been behaving better. <u>Shouting at student making things worse?</u>
	You also mention, that you talked to the teacher and told him what activities you like during the Maths lesson. For example that you like games. What made you talk to the teacher? (00:01:35.5 - 00:01:46.6)	Researcher	

Relationship with the teacher: positive, communication, empowering the student.	I talked to him. I told him to try and do more games and so on during the lesson. I talked to him and he did two games. (00:01:46.6 - 00:02:01.7)	Kevin	Feeling of student empowerment. The teacher listened to his needs and acted upon them.
	How did you feel about this? (00:02:01.7 - 00:02:02.9)	Researcher	
Student empowerment	I enjoyed it that he listened to me. (00:02:02.9 - 00:02:06.5)	Kevin	Teacher listening to the student. Empowering the student. <u>Giving power to student decreases student-teacher power struggle?</u>
	Did this affect the way that you behaved? (00:02:06.5 - 00:02:10.8)	Researcher	
	Yes it did. (00:02:10.8 - 00:02:13.7)	Kevin	
	Can you say something more about it? (00:02:13.7 - 00:02:13.8)	Researcher	
The Maths lesson as enjoyable and stimulating	It had a positive effect. The lessons were more fun and I was more focused on the lesson. (00:02:19.0 - 00:02:21.8)	Kevin	Kevin feels that the teacher adapted to his needs. This had a positive result on his behaviour.

	Do you think you did better in your Maths? In the sense, did you understand the subject better? (00:02:21.8 - 00:02:23.3)	Researcher	
	Yes. (00:02:23.3 - 00:02:23.4)	Kevin	
	Ok. Did this reflect in the tests? (00:02:32.2 - 00:02:37.3)	Researcher	
	No... We didn't do a test yet. (00:02:37.3 - 00:02:39.2)	Kevin	
	You mention a lot that you like games, during the Maths lessons. Can you describe one of these games? (00:02:39.2 - 00:02:48.3)	Researcher	
The Maths lessons: Activities	Yes, there was one...mhm. With cars. For example you are in a race and if you guess, for example, 3 times 6, it drives. The more you guess. The faster the car will go. (00:02:48.3 - 00:02:48.4)	Kevin	It seems that the games used during the lessons are not connected to the actual topic being carried out. They are just fillers with basic Maths concepts like addition and multiplication. <u>Can it be that Kevin likes these games because they contain basic Maths that he can understand and work with? Maths that is more suitable for his cognitive capacity?</u>

			<u>Can the behaviour problems be the result of doing Maths that is above him?</u>
	Is this done on the projector on the board? (00:03:10.6 - 00:03:10.7)	Researcher.	
	Yes. It is on the projector and he asks us one by one. (00:03:10.6 - 00:03:15.4)	Kevin	
	Is it linked to the topic you are doing? (00:03:18.6 - 00:03:18.7)	Researcher	
	Yes it is. (00:03:21.0 - 00:03:23.8)	Kevin	Even though Kevin says it is linked, I still doubt they are.
	Can you describe the games you did during the Areas? (00:03:23.8 - 00:03:26.5)	Researcher	
	No. We did not do any games. (00:03:26.5 - 00:03:27.2)	Kevin	
	In what topics did you do games? (00:03:27.2 - 00:03:27.3)	Researcher	

The Maths lesson: Activities	Actually, the games were sort of apart. Because up till now we had areas, angles and so on. (00:03:28.1 - 00:03:38.9)	Kevin	Here, Kevin confirms my earlier thought. <u>Are the games used by the teacher just a time fillers?</u>
	So the games were only on multiplication sums? (00:03:38.9 - 00:03:40.0)	Researcher	
	Yes. (00:03:40.0 - 00:03:40.1)	Kevin	
	You say that you like probability. Can you talk more about this? (00:03:47.0 - 00:03:48.4)	Researcher	
	It seems different from other topics. (00:03:48.4 - 00:04:01.1)	Kevin	Probability is different from other topics. This statement is interesting.
	What is different? (00:04:01.1 - 00:04:02.1)	Researcher	
	I do not know how to explain it... (00:04:02.1 - 00:04:07.8)	Kevin	
	Ok. You said that you disliked topics such as areas and volumes, but liked probability. What is different? How are they different from each other? (00:04:07.8 - 00:04:09.4)	Researcher	

Easier and more accessible Maths	They are not the same, in the sense, that you do not need to stay looking for this and that. You only need to think a little. I felt that it was easier. (00:04:09.4 - 00:04:09.5)	Kevin	It seems that in actual fact Kevin likes topics that he can understand. He dislikes topics that are too complex for him but enjoys topics he can understand. Choosing the appropriate material for the student is important. How can this be achieved in a class of 26 students? <u>Is it a problem of the level of Mathematics being covered?</u>
	You describe an activity about heads and tails. A game using heads and tails... (00:04:24.3 - 00:04:32.2)	Researcher	
	Yes. But I do not know what it is exactly. (00:04:32.2 - 00:04:32.3)	Kevin	
	Yes, and you said that you did not understand it. (00:04:35.0 - 00:04:35.1)	Researcher	
The Maths lesson as confusing.	No, because it was not a game. They are heads tails, heads tails, there was a line, heads, heads, tails, heads... I did not understand it. (00:04:35.0 - 00:04:51.0)	Kevin	

	Why do you think you did not understand it? (00:04:52.5 - 00:04:57.1)	Researcher	
	I could not understand it (shaking his head). Nothing. (00:04:09.5 - 00:05:02.0)	Kevin	
	Did you try and ask your teacher about it? (00:05:02.0 - 00:05:03.1)	Researcher	
Relationship with teacher: lack of trust	No, not really. (00:05:03.1 - 00:05:05.5)	Kevin	Did not ask his teacher when he did not understand a concept. Can this be because he gave up on the subject?
	During various occasions in your video diaries, you mention that the things you are doing in class are useless for your life... (00:05:05.5 - 00:05:21.4)	Researcher	
	Yes. Because angles and so on. I do not see any use to them in my life. (00:05:21.4 - 00:05:24.0)	Kevin	
	Once you said that you better do 'basic things' rather than angles, can you tell me what you	Researcher	

	understand by 'basic things'? (00:05:24.0 - 00:05:34.5)		
Relevant Maths: easier and accessible. Life after school	No, this means that we do more... because in your life, you will have plus, minus, divisions... you will not have angles or something similar. You will only need times and so on. (00:05:34.5 - 00:05:55.1)	Kevin	<u>Are these the things he can understand and engage with?</u>
	Can you give me an example on how these can help you in your life? (00:05:55.1 - 00:05:59.0)	Researcher	
Relevant and useful Maths	For example for doing the bills. You own a company and you calculate how much you are giving to the workers. (00:05:59.0 - 00:06:10.8)	Kevin	Can only associate basic Maths with his life experiences.
	On one occasion you describe a lesson, that for some reason had a lot of disruptive behaviours and the teacher had to stop it in the last ten/fifteen minutes. Can you talk about this? (00:06:10.8 - 00:06:23.8)	Researcher	

	Very bad. (00:06:23.8 - 00:06:27.9)	Kevin	
	Why? (00:06:27.9 - 00:06:28.0)	Researcher	
Negative and disruptive behaviour	I was one of them. Not as much as the others. But I felt guilty. (00:06:33.8 - 00:06:39.0)	Kevin	Feels guilty about his negative behaviour.
	Do you think the teacher could have done something different? (00:06:39.0 - 00:06:39.1)	Researcher	
Ineffective consequences	At that time. No. Because he had already shouted at them and so on. (00:06:44.5 - 00:06:53.6)	Kevin	
	Ok. You talk about playing it cool and being deviant at times. Can you talk more about it? (00:06:53.6 - 00:06:53.7)	Researcher	
Deviant and challenging behaviour	Yes exactly. I stay playing it up. I stand up from my place. I talk to the teacher disrespectfully, 'Hi Sir' and so on. I stay talking during the lesson. I disrupt others as well. (00:07:01.4 - 00:07:28.3)	Kevin	Kevin is describing this negative behaviour here. <u>Can this behaviour be the result of his lack of understanding of the subject? Is this his reaction at being asked to do things he does not understand?</u>

	And why do you behave like this during some lessons? (00:07:28.3 - 00:07:29.8)	Researcher	
Relationship with the teacher: confrontational, aggressive The Maths lesson as boring and lacking simulation Deviant and Challenging behaviour	Because, the teacher is moody. He gets easily angry with the some students and so on. And then he comes during the lesson and he is sort of like this. Boring. We do not do a lesson. Not that we do not do a lesson, mhm, we are not so like this during the lesson. We do not pay attention. Everybody will be all over the place. (00:07:29.8 - 00:08:05.5)	Kevin	Links the teacher's mood to bad behaviour from the students. If the teacher is perceived as having a bad mood and boring the students will not behave well.
	And when you do games. Does this behaviour occur? (00:08:05.5 - 00:08:08.2)	Researcher	
	Mhm... No. (00:08:08.2 - 00:08:08.3)	Kevin	
	Can you describe your behaviour during games? (00:08:12.8 - 00:08:12.9)	Researcher	

<p>The Maths lesson as enjoyable.</p> <p>Preparation of Maths activities: enjoyable and interesting.</p> <p>Positive behaviour</p>	<p>My behaviour is good. Because during games who wants to participate can do so and who doesn't want can do so. And I participate. Ok. (00:08:15.1 - 00:08:27.1)</p>	<p>Kevin</p>	<p>When Kevin is engaged in the lesson his behaviour will be good.</p> <p><u>Is the level of Mathematics done during games of a lower level?</u></p>
	<p>Once you said that you are a slow learner. What do you understand by this? (00:08:27.1 - 00:08:31.8)</p>	<p>Researcher</p>	
<p>The Maths lesson as annoying and frustrating.</p>	<p>I take a long time to understand... I take a long time to understand. For example, this topic that I talked about, head and tails and so on, nothing, nothing, I understood. (00:08:31.8 - 00:08:47.3)</p>	<p>Kevin</p>	<p>Kevin is self-aware of his slow learning style. He requires time to assimilate new things. But is he being given this opportunity?</p> <p>Emphasizing that he could not understand with repetition of 'nothing'.</p> <p>Again a feeling of frustration when admitting that he did not understand anything.</p>

	And how do you feel about this? (00:08:47.3 - 00:08:53.9)	Researcher	
Negative feelings associated with the Maths lesson.	I feel bad about it. It is my fault because before I did not pay attention. Since I did not pay attention before, it is having an effect now. (00:08:53.9 - 00:09:15.5)	Kevin	Kevin blames the fact that he does not understand on himself, because he did not pay attention before. But can he be blamed for his lack of understanding of the topic? Does he need some sort of support to catch up with the rest?
	How can the teacher help you? (00:09:15.5 - 00:09:15.6)	Researcher	
	He can explain them to me twice. (00:09:19.0 - 00:09:27.3)	Kevin	
	Do you ask to have things explained twice? (00:09:27.3 - 00:09:27.4)	Researcher	
	Yes. (00:09:28.4 - 00:09:29.3)	Kevin	
	Does the teacher do it? (00:09:29.3 - 00:09:29.4)	Researcher	
	Yes (00:09:31.0 - 00:09:31.1)	Kevin	

Week 10 – Video Journal – 18/05/2016

Emergent themes	Original Transcript	Exploratory comments
<p>Effective teaching/learning.</p> <p>Relationship with peers: copying work.</p>	<p>So right now we are doing radius... mhm... As a topic, it is not so difficult. I am not finding myself comfortable how we are working and I am finding it a bit hard. Mhm... This week I have learnt a lot about these things... radius, angles, I have learnt all sorts of things this week. I enjoyed that...I tried to understand and I managed. So, I am trying to get myself more involved. We had a test. I did not do well in it. I was during the test, and since we are currently with half days, he gave us today's lesson and ten minutes from the other one. So, last time he gave us the test I did nothing, absolutely nothing, the first time he gave us the test. Then when he gave it to us the next</p>	<p>Again finding the topic difficult.</p> <p>Trying his best to understand. Hence, is able to get more involved.</p> <p>Seems totally lost in the subject. Copied during the test from another student. However, he totally does not know what he was copying. When the teacher</p>

	<p>day, I stayed behind someone good, who understands and so on, and I did x times... no all over $360 = \pi r^2$. He asked me 'what is this?' I told him 'I do not know' and he re asked me 'but what is it?' I told him, 'because this is what Andre wrote'. So he talked to the miss and I still do not know what I will be getting as a consequence. (00:00:00.0 - 00:01:47.0)</p>	<p>asked him about it, he could not explain what he copied. This shows that Kevin does totally not understand the Maths being carried out in class.</p> <p><u>Does copying other people's work show how lost he is in the subject?</u></p>
<p>Relevant Maths. Life after school: career ambition.</p>	<p>At the moment for this this topic, I can find some use for it. Because, for example, I want to become a chef, and you need to find out how large things are to be done. Their radius for example, so it is a good topic. (00:02:24.6 - 00:02:59.9)</p>	<p>At least he is managing to link this topic with his desired future career. How come this did not happen before in previous topics? It is very easy to link different Maths topics to the culinary world.</p>
<p>The Maths lesson as enjoyable.</p>	<p>This week, yesterday, no on Monday, we laughed during the lesson because we enjoyed it. So I liked it. At first we were doing the test,</p>	<p>Talks about enjoying a lesson only because the students were given 10 minutes of free time.</p>

	than he gave us the last ten minutes free. So we didn't get bored. (00:02:59.9 - 00:03:37.4)	
The Maths lesson as enjoyable and stimulating.	These last two days I did my best. Yes. This is because, as I have already told you, I like these lesson, radius and so on. Even as a lesson, the type of topic and so on. I like this topic so I give extra attention. (00:03:46.1 - 00:04:11.4)	Since he likes this topic he is giving it some extra attention. <u>Could it be that since he is linking it with being a chef, he is trying harder?</u>
The Maths lesson as enjoyable Positive Behaviour Deviant and challenging behaviour	I like this topic a lot. So, I do not act deviant and so on. Ok, it is true that yesterday I acted deviant since I did that thing. And... And... Yes I did distract others because I made them laugh, but for the rest all is well. All is well. And others, others, others... did not distract me. No they did not. (00:04:11.4 - 00:04:37.5)	His behaviour is good because he likes the topic. Links liking the topic with good behaviour.
Relationships with peers: copying work.	Something else. Because, from the person I copied, there was another one who was trying to copy from the person I copied, he was telling him to give him the answer. I told him,	

	'Don't you dare tell him because I will tell the teacher immediately.' (00:05:18.3 - 00:05:46.1)	
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Week 11 – Video Journal – 25/05/2016

Emergent themes	Original Transcript	Exploratory comments
<p>The Maths lesson as enjoyable and stimulating.</p> <p>Preparation of Maths activities: enjoyable and interesting lessons.</p>	<p>At the moment we are doing revision about angles, mhm... ratios and ... shapes. Mhm... I am liking the lessons because they are fun, enjoyable and so on, and therefore it is more like... more like... it gets you more interested.</p> <p>You enjoy yourself during the lesson and so we pay a lot of attention, we enjoy it. Mhm, the lessons are enjoyable as I told you and the teacher does something, I do not know what they call it exactly, it is a type of game and</p>	<p>Linking fun and enjoyable lessons with interest in the subject.</p> <p>Activities make the lesson more enjoyable and this increases student participation.</p>

	<p>everybody participates in it. Thus we enjoy it. (00:00:00.0 - 00:01:30.3)</p>	
<p>The Maths lesson as enjoyable and stimulating, promoting participation.</p>	<p>The lesson that I enjoyed the most is the one we did two days ago. Because it was... the lesson we had two days ago was not a revision, we concluded the topic two days ago, on Monday. We were doing ratios and it was a good lesson. We enjoyed it and we participated in everything. It was a game. Mhm... We were good. We learned well. We did not stay chatting around during the lesson and no on distracted. I did not distract others. All right. (00:01:30.3 - 00:02:17.7)</p>	<p>Kevin often talks in the 'we' rather than the 'I'. It seems that his classmates easily influence him. In the sense that if he sees that his classmates are interested and participating in the lesson, he gets involved as well. On the other hand, if his classmates are misbehaving he joins them. This can be seen in various instances.</p>
	<p>Yesterday. Yesterday's lesson was a bit so and so (shaking his head)... not enjoyable, but still, still, we did not get bored and participated. But it was not like a game. That is, the teacher delivered a normal lesson and everybody got</p>	

	involved and with regards to the lesson we enjoyed it and so everybody participated and enjoyed it. (00:02:37.4 - 00:03:25.5)	
Negative behaviour Ineffective teaching	Today we did a lesson laughing. That is it. Because the teacher needed to do something and came late for the lesson. So, at first we did not have a lesson, then he came and we did a revision. We enjoyed it, we had a laugh. I am doing my best because the exams are approaching and we need to be concentrated. Thus, I am more focused on the lesson. (00:03:25.5 - 00:04:26.6)	Not sure whether he enjoyed it because he enjoyed the Maths or whether he enjoyed it because he was having a laugh with his friends. Exams are motivating him to give his best. Can this be regarded as positive or is it fear of the exam?
Exam fever	...mhm. With regards to these three topics, I am taking them seriously. I have been taking these last 5 lessons really seriously, everybody is focused and thus everybody goes to the lesson on time. Because previously, not everyone used to go in the lesson, sometimes.	Does this mean that he did not take the previous lessons during the year seriously?

	At the moment everybody is paying attention because of the exams. Everybody is doing the right things and so on. (00:04:26.6 - 00:05:14.9)	
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Week 12 – Video Journal – 01/06/2016

Emergent themes	Original Transcript	Exploratory comments
Exam fever	At the moment we are doing ratios. Mhm. We are doing it as revision. We are doing a lot of revision, so that we do well in the exams because as you know the exams are fast approaching. Mhm. Hard exams are coming now. This year will be harder. We have more subjects to do. With regards to Mathematics, it will be very hard. (00:00:00.0 - 00:00:36.9)	Seems that he is terrified by the upcoming exams.
	It is already hard, so it will be harder. Mhm. I have learnt a lot about ratios, we are doing a	

	<p>lot and a lot of revision so that everybody does well. It is useful to me because if we do not study and do revision... the possibility is that I do not pass, a large possibility. Since it is a difficult subject. Mhm. It is nice as a topic but I do not see it... It is useful, useful. But it is not really good, I see it more as something that I have to learn. (00:00:36.9 - 00:01:54.6)</p>	
<p>Ineffective teaching Negative and disruptive behaviour</p>	<p>The lesson that I did not like the most was of Tuesday, yesterday, yes. This is because it was a disgusting lesson. It was really disgusting. We had just started it. Everybody was trying to look for the notes and it was all for nothing. No one paid attention, they were trying to distract others and so on. (00:01:54.6 - 00:02:47.7)</p>	<p>Disgusted by the bad behaviour of the other students. He manages to point out bad behaviour and does not approve of it.</p>
<p>Irrelevance of Maths.</p>	<p>I liked today's lesson. I liked it. It was a nice lesson. I like ratios, I do not really need it as I have already said but I try to give my best or</p>	

Successful activities.	Maths	else I will not pass. The best part was when we approached the end of the lesson. This because he started to do some sort of games, from his mind. He was not getting them from magazines and so on. (00:02:47.7 - 00:03:48.0)	
Good behaviour: Improvement promoting optimism. Feeling good		Good. I was very well behaved. Mhm. I feel good like this because I am doing better. I feel that I am doing better. I hope that this continues. I am doing really well. (00:03:48.0 - 00:04:12.2)	Feels better when he is well behaved and he hopes that this will continue. It seems that being good or bad during the lesson is not totally under his control. He hopes that he will continue to behave better, but is not able to definitely guarantee that it will happen.
Effective teaching		There is nothing that the teacher can do, because with regards to the lessons, he is doing them well and good. (00:04:12.2 - 00:04:33.7)	
Distracting behaviour.		There were some children who tried to distract, but only a little. The teacher stopped them and they stopped. But then they	

	continue and they stop again. Two times till now. (00:04:33.7 - 00:04:53.0)	
Positive behaviour Exams fever	I, I did not distract others because I am trying to pay attention as much as possible. We have just done the revision and last year's mental. Since I am doing my best and I am trying as much as possible to pass. I have done the best I could and thus I feel that I did well. (00:04:53.0 - 00:05:36.1)	It seems that since he is oriented towards doing well in this exams he is finding the motivation to try his best and behave well during the lesson.

Manuel – Video Journals and Interview Transcripts (12 weeks)

Transcript showing steps one and two of IPA (Smith, Flowers & Larkin, 2009)

Week 1 – Video Journal – 01/03/2016

Emergent themes (Step three)	Original Transcript	Exploratory comments (Step one and two)
<p>The Maths lesson as enjoyable.</p> <p>Positive reinforcement.</p> <p>Good behaviour linked to enjoyment of the lesson.</p>	<p>Last week we had a Maths lesson and I really enjoyed it. The teacher gave us a sweet for every right answer we got. My behaviour was good because I was enjoying it and I understood the topic more because I was given sweets. It was useful because I learnt a lot and I felt very good because he was giving us sweets and I understood more. The lesson was enjoyable. My friends were helping me. I was enjoying the lesson and the teacher</p>	<p><u>Was he really enjoying the Maths or the sweet being given? Can positive reinforcement be more important than the actual lesson content?</u></p> <p>Since Manuel was enjoying the lesson, his behaviour was good. A direct link between good behaviour and lesson enjoyment.</p>

<p>Relationship with peers: helping, positive, peer-tutoring.</p> <p>Good behaviour.</p> <p>Disrupting behaviour.</p> <p>Good relationship with the teacher.</p> <p>Example of bad behaviour.</p>	<p>helped me a lot and my behaviour was very good. I did not talk and did no disrupt the lesson. The teacher helps me a lot. We never fight. Sometimes my friend, my neighbour, Braydon disrupts me and he annoys me because I want to pay attention. I never had problems with the teacher, not even this week. But once Braydon threw a paper at me and I said a rude word. The teacher blamed me and I got in trouble. He gave me a break in and I ended up in front of Ms. Nadia. I always do my HW. I love the Maths lesson because now I started to enjoy it and our teacher is cool because he is all right. For example, he brings sweet and they are good.</p> <p>(00:00:07.0 - 00:02:52.2)</p>	<p><u>How can the sweets help the student understand more? Maybe be was more focused because he wanted to get the 'prize' for his effort? The sweets as motivators?</u></p> <p>Friends helping him out. Peer tutoring.</p> <p>Describing an incident of bad behaviour.</p> <p><i>Repeating that his teacher gives him sweets. This repetition shows how much he appreciates it and the effect it is having on his behaviour and attitude.</i></p>
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<p>HW as boring, a burden.</p> <p>Relationship with teacher: Does HW out of respect.</p>	<p>I do not do the HW because I do not feel like it or because I end playing with my friends on my PlayStation. Not because I do not want to do it, but because I get bored doing HW during my free time. But you have to do your HW. Our teacher is really friendly, so you cannot tell him, 'I did not do the HW because I did not feel like it.' (00:02:52.2 - 00:03:26.2)</p>	<p>Has a problem to do HW. Ends up in trouble for not doing it. Finds more interesting things to do after school.</p> <p>HW is regarded as boring. Playing the PlayStation is definitely more interesting for Manuel.</p> <p>Does the HW out of respect towards his teacher. Maths has nothing to do with it here. It is all about relationships.</p>
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Week 2 – Video Journal – 08/03/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>Our school has a lot of students. Form 1...Grade 3, Grade 4, Grade 5, Grade 6, Form 1, Form 2, Form 3, Form 4 and Form 5. There are a lot of students. Here you can make a lot of friends, because the children that attend</p>	<p>Describes his school as being big.</p> <p>Positive about his chances of making friends at school.</p>

<p>Good relationship with peers at school.</p>	<p>this school are 'all right' (good). All my friends are from this school. I have no friends from outside this school. Maybe a few from football practice, but they are all from this school. (00:00:00.0 - 00:00:49.2)</p>	
<p>School as to rigid and strict.</p> <p>Effective teaching</p> <p>Ineffective consequences and intervention</p>	<p>Our School is strict. A lot. For example, with regards to the hair, how you dress and everything. Even for example the shoes. It has to be strictly white because of the grounds. There are a lot of teachers in our schools that teach well. But they are really strict. They have their own rules and if we do something wrong they definitely need to shout at us, or something similar. (00:00:49.2 - 00:01:27.3)</p>	<p>Manuel is describing the school as too strict. It has a strict dress policy. Does not seem to like this.</p> <p><u>Is emphasizing on the word strict. Is Manuel feeling the lack of freedom? Is he feeling cornered?</u></p> <p>Every teacher has his own rules. This shows a lack of consistency and uniformity.</p> <p>Shouting as a consequence. <u>Why do teacher 'need to shout at us'?</u></p>
	<p>If I were to make something different, maybe more 'nice' lessons. For example, for PE we</p>	

	<p>only have one lesson. The fact that we only have PE once a month bothers me. For example, last year, we had three times per week. I used to enjoy it. Now we have once a week and I got fed up with it. (00:01:27.3 - 00:01:59.7)</p>	
<p>Life after school: career ambitions.</p>	<p>I go to school to learn. Hmm. To have a future. I would like to have a future in business and learn Mathematics, English and Maltese. This is because for business you need them. Hmm. (00:01:59.7 - 00:02:27.3)</p>	<p>Has the right mind set for going to school. Is pretty clear on what he expects to get out of school.</p>
<p>School as helpful. School as disciplining students.</p>	<p>The school helps me in everything. To discipline me. I do not care about it. But it still helps me in self-discipline. And it does not have a negative effect on me. This is because it helps me more. Sometimes I let go. I do not care about it. But it still helps me. (00:02:27.3 - 00:02:57.3)</p>	<p>School helps him to be more disciplined.</p> <p><u>Letting go as a sign of giving up?</u></p>

<p>Life after school: career ambitions.</p> <p>School as preparation for the world of work.</p>	<p>I would like to receive a lot of things from school. My friends and the subjects for my future. For business. So that I have a good future and I will be successful. The schools prepares me in business because I chose a lot of subject that prepare me as a disciplined person and follow the rules and to be better in my daily life. (00:02:57.3 - 00:03:48.4)</p>	<p>Again, Manuel regards the school as preparing him for the world of work. Both the academics and the non-academics such as discipline at school will prepare him to be able to join the world of work in the future.</p> <p>Very set on what he wants out of school and what he wants to do after school.</p> <p><u>Talks a lot about being a disciplined person and having self-discipline. Is he mirroring what he is being told by his teachers or does he really feel this way?</u></p>
<p>Relevance of Maths</p> <p>Life after school: career ambitions.</p> <p>Maths as annoying.</p>	<p>The Mathematics lesson will prepare me for everything. Because you need Maths for everything. But I will use it for business. Because I want to become a businessman like my father. It is important to learn Mathematics because I will need it, but sometimes I put it aside because I do not like it. But I like it a bit sometimes. It depends on the teacher. The subject prepares me for life. For business and everything. I think it is</p>	<p>Again, regards Maths as useful because it will help him become a businessman.</p> <p><u>The student knows what he wants out of the subject. Can this lead him to put aside topics that he thinks are not related to his future ambitions?</u></p> <p>Even though he acknowledges the importance of Maths, he admits that he does not like it and puts it aside at time.</p>

<p>Relevance of Maths.</p>	<p>important to learn Mathematics because it teaches you a lot of things. For example, if it weren't for Maths when I was younger, I wouldn't have got to know 1+1 and other simple things. You need it! (00:03:48.4 - 00:04:55.5)</p>	
<p>Irrelevance of Maths. Maths as annoying.</p>	<p>Over the years the topic I did not like the most in Mathematics was Algebra. I would remove Algebra because you do not need it in Maths. Not even for business. Nothing. You do not need Algebra. I would remove it because it is there for nothing. It will not make any difference. (00:04:55.5 - 00:05:19.3)</p>	<p>Speaks about his disliking for Algebra.</p> <p>Does not see any connectedness of Algebra with his future ambitions.</p> <p>Seems that Manuel will only regards as important those topics that he thinks are directly related to his future career ambitions.</p>

Emergent themes	Original Transcript	Exploratory comments
<p>Irrelevance of Maths</p> <p>Maths lesson as annoying</p>	<p>Right now we are doing the Angles in Maths. I think that we are doing it. I do not really know why. It annoys me a little bit because you do not need angles in your life. I want business. I do not need angles for business. (00:00:00.0 - 00:00:28.4)</p>	<p>Cannot relate this topic to his career ambitions. Thus, he is annoyed and does not see any relevance in doing the topic.</p> <p><u>Can all topics be directly related to the career ambitions of all the students in class?</u></p>
<p>Relationship with peers: distracted by friends.</p> <p>Irrelevance of Maths.</p>	<p>I am doing my best. Today we have a test. But in the special HW that we are given I got about an 80%. That is the best I can do and sometimes my friend distract me during the lesson, but I still enjoy the lesson. This is because I do not need angles in life. I do not like it. I prefer Mathematics for business and similar. (00:00:28.4 - 00:01:15.4)</p>	<p>His friends distract him during the lesson.</p>
<p>Demand for positive reinforcement.</p>	<p>For the teacher to make the lessons more exciting he should give us a quiz and every</p>	<p>Wants the lesson to take the form of a quiz. This will make it more 'exciting' according to the student.</p>

	<p>question I get right she can give us a sweet.</p> <p>Or he can give us an appraisal. Because only like that we will work. We want rewards not working for nothing. Everyone works like that. (00:01:15.4 - 00:01:39.9)</p>	<p>Demands that positive reinforcement is used during the lesson.</p> <p><u>Is positive reinforcement as important as lesson content and delivery?</u></p>
<p>Relationship with teacher: positive student-teacher relationship.</p>	<p>The best part of the lesson is that the teacher starts laughing with us. He jokes a lot. But we still managed to do the lesson. Still I did not like the lesson. This is because I do not like angles and I do not need it for life and when I grow up. (00:01:39.9 - 00:01:40.0)</p>	<p>Likes it when the teacher jokes with them. A good student-teacher relationship can help to foster a positive classroom environment.</p> <p><u>Can a positive student-teacher relationship reduce instances of bad behaviour?</u></p>
<p>Relationship with peers: distracting.</p> <p>Negative, disruptive behaviour</p>	<p>I sit near Braydon Farrugia and he distracts me a lot. This is because we stay talking together and we distract each other. We do not do the assigned work, even though sometimes I do it. (00:02:05.4 - 00:02:22.3)</p>	<p>It is evident here that the interactions he has during the Maths lesson with his friend are not beneficial. On the contrary, they distract each other and do not do the assigned work.</p> <p><u>He always mentions that he sits next to the same student and they distract each other. Why is it that simple immediate intervention, such as changing places, used by the teacher?</u></p>

<p>The Maths lesson as annoying.</p> <p>Disruptive behaviour.</p> <p>Negative relationship with peers.</p> <p>Various examples of bad behaviour.</p> <p>He dislikes the topic thus is more inclined to bad behaviour.</p>	<p>The fact that we do not need angles when I grow up annoys me. That is why it annoys me. And Braydon distract me the most, even I distract him. But in reality, it is more together that we distract the lesson. This is because we stay talking together. We stay playing. For example, we throw things to each other. Paper pallets most of the time. Because I do not like this topic we are doing because it is hard. With the degrees and so on. But I still have to do it. But it annoys me a lot because I do not need it in life. I am giving my best. Today we have the test. But as I said before, the teacher can make Maths more interesting and exciting by bringing sweets and giving us appraisal with every question we get right. Only like that will I get</p>	<p>He cannot find any relevance between angles and his future career ambitions.</p> <p><u>Can the teacher use more real life examples during the lesson to make explicit the relationship of this topic with real life?</u></p> <p>He distracts the lesson together with his friend.</p> <p>Here Manuel describes various instances of bad behaviour.</p> <p>The fact that he does not like the lesson does not help him to stay out of trouble.</p>
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	excited for the Maths lesson. (00:02:22.3 - 00:03:49.5).	
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Week 4 – Video Journal – 07/04/2016

Emergent themes	Original Transcript	Exploratory comments
Maths as annoying and confusing.	At the moment we are doing the topic on two-dimensional shapes in Mathematics. I do not like it because I do not understand it a lot. We need to find the area and perimeter. Two-dimensional shapes, and after this we will have three-dimensional shapes. (00:00:03.2 - 00:00:26.0)	Manuel does not understand the lesson. He does not like the Maths being done in class.
Maths as irrelevant.	This week I have learned about two-dimensional shapes because I did not know anything about them. We never did them at school. But I do not think I need it. In reality I think that nobody needs it. Not even to	Cannot associate any uses to the topic being carried out in class. <u>How can it be that he finds not relationship with the architect's work and two-dimensional shapes? Can this show that Maths is being taught in an abstract manner with no connection to real life?</u>

	<p>become an architect, one does not need two or three-dimensional shapes. I do not know why we are doing this topic, maybe to be able to find the perimeter, area and other things related to shapes. (00:00:26.0 - 00:01:14.5)</p>	
	<p>The lesson that I did not like the most this week was the Chemistry lesson. I really get annoyed during the Chemistry lesson. And I do not need Chemistry when I grow up, and it annoys me a lot. It requires a lot of work etc. (00:01:14.5 - 00:01:14.6)</p>	
<p>Not finding the motivation to do his best. Maths as annoying.</p>	<p>I do not think I am doing my best in Maths. This is because this topic is really annoying me. It really annoys me. This topic about two-dimensional shapes. Thus, I am not doing my best. During the lesson I stay talking with my friend. I behave in this way</p>	<p>Is very honest to admit that he is not giving his best during the Maths lessons. The fact that he finds the topic annoying is directly linked to the fact that is not giving his best.</p>

<p>Relationship with peers: distracting.</p> <p>Annoying lesson leads to misbehaviour.</p>	<p>because I really do not like this lesson. Had it been another topic, one that I like, I would pay attention. But the two-dimensional topic really annoys me. (00:01:36.3 - 00:02:31.9)</p>	<p>The lessons are annoying, this leads Manuel to misbehave.</p>
<p>Maths as annoying.</p>	<p>I do not know what the teacher could do to teach this topic better. No one likes this topic. In our class no one pays attention. No one does the HW because this topic annoys everyone. No one likes it. (00:02:31.9 - 00:02:53.5)</p>	<p>Using the collective: 'No one likes'. <u>Is he justifying his behaviour by saying that all student in this class behave the same? Can this be dangerous?</u></p>
<p>Maths as irrelevant.</p>	<p>Nothing distracted me. What distracted me was that I do not like this topic. I do not think I distracted others because others were also talking. I am not to blame. Everyone gets bored during this lesson. I do not know why we need two-dimensional shapes. (00:02:53.5 - 00:03:28.7)</p>	<p><u>Again saying that he did not distract others because the others were talking. Is he trying to shift the blame/responsibility on others instead of accepting that he needs to improve his behaviour?</u></p>

<p>Maths lesson as annoying.</p>	<p>This week Maths did not bother me, but Chemistry did. Because Chemistry really annoys me. The teacher gives you a lot of HW. It bothers me. Two-dimensional shapes and then three-dimensional shapes. I do not know why we do them. They really annoy me! (00:03:28.7 - 00:04:04.7)</p>	<p><u>Can this repetition of not needing 2D and 3D shapes result from the frustration that he does not understand the topics? Can it be that he saw no connection between the topic and his future ambitions, and thus did not even try to understand it?</u></p>
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Week 5 – Interview – 15/04/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	<p>Manuel, what can you tell me about your relationship with the Maths teacher?</p>	<p>Researcher</p>	
<p>Relationship with teacher: Good. Student seems to love and respect his teacher.</p>	<p>My relationship with the teacher is good. Mhm. We joke a lot. For example, when we have games, he comes to watch us. If I do not do a HW, he always tells me to re do it and does not give me a break in like normal teachers or</p>	<p>Manuel</p>	<p>Manuel talks about a positive relationship with his teacher. The teacher goes out of his way (attends football matches during break) to build a positive relationship with his students and the student appreciates this.</p> <p><u>Are student-teacher relationships more important than the delivery of the Maths lesson? What makes a student-teacher relationship good? How much should the teacher get involved with his/her students? Does a good</u></p>

		whatever. That means that we have a good relationship. We get along together well. In football for example, we support the same team.		<u>relationship actually improve performance in the subject? Or does it only improve behaviour and respect towards the teacher?</u>
		What difference does this positive relationship make with regards to your performance in the subject?	Researcher	
Relationship with teacher: open communication.		I am more confident in Maths. If I have any problems, I always tell him to help me out.	Manuel	The student is comfortable to ask questions to his teacher. <u>How does a positive relationship between the student and teacher increase confidence in the subject? How could this be so?</u>
		What can you tell me about your relationship with your peers during the Maths lesson?	Researcher	
		I only have one friend. We are very good friends. We go out together on Saturdays and we have been friends since we were in St. [redacted]'s [Kindergarten]. That means that we have been together for a long time.	Manuel	

	Do you sit next to him during the lesson?	Researcher	
	Yes.	Manuel	
	Do you distract each other?	Researcher	
	No, not even a bit.	Manuel	Even though in previous VD entries he said that they distract each other, here he is saying the contrary.
	So you do not talk to each other?	Researcher	
	Yes we do, but we do not distract. For example, I tell him, 'In Maths, I want to pay attention today,' and he lets me.	Manuel	
	How do you feel when others distract you? For example talking out of turns, passing silly comments...	Researcher	
Relationship with peers: distracting.	I cannot say anything because sometimes I do it myself. I get annoyed a bit when this happens.	Manuel	He cannot complain about being distracted since he does it himself. At least he is honest about this.
	Can you talk about when you distract the class yourself?	Researcher	
Relationship with peers: distracting.	For example, there is a student next to me, I grab the biro, and	Manuel	Gives an example on how he distracts others.

Behaviour: disruptive	pinch him in his arm with it. As a joke.		<u>Does this behaviour occur due to boredom, disengagement?</u>
	And why do you do it?	Researcher	
Reasons for misbehaviour.	To have a laugh.	Manuel	He disrupts others to have a laugh. <u>Can boredom lead him to this?</u>
	Can you talk about a Maths lesson that you enjoyed?	Researcher	
The Maths lesson as enjoyable when he understands.	When I really understood a subject.	Manuel	Manuel enjoys it when he understands. This is in contrast to the times he disliked the Maths lesson because he could not understand. <u>Does lack of understanding of the subject lead him to misbehave?</u>
	What did you do during the lesson?	Researcher	
	Pythagoras	Manuel	
	Was there something in particular that you liked?	Researcher	
Maths as enjoyable. Understanding leads to participation. Feeling good.	Nothing really. Because I understood them and I was participating during the lesson. I felt good about it, during Pythagoras.	Manuel	Manuel understood Pythagoras and thus he enjoyed the lesson and could participate. He felt good about this. <u>Understanding leads to more student participation? Understanding the content makes the student feel good, so does not understanding cause frustration?</u>
	So you felt good because you understood?	Researcher	

Understanding of Maths linked with feeling good.	Exactly.	Manuel	
	Was the teacher doing anything different in particular from previous lessons?	Researcher	
	No.	Manuel	
	He did not do any activity or a different form of classwork?	Researcher	
	No.	Manuel	
	So you enjoyed it because you understood?	Researcher	
	Yes.	Manuel	<u>Is choosing the right level of Mathematics content more important than the actual lesson delivery?</u>
	During various VD entries you say that you want to go into business, and you also say that Maths can help you in this. How?	Researcher	
Relevance of Maths	In everything really. To manage the money. Do the accounts. Instead of having an accountant, you do your own accounts. You	Manuel	Manuel gives various examples on how Maths can help him in his future career ambition.

	manage your own money. You sum up what you need to pay.		
	And how do you feel that it is helping you?	Researcher	
	In a lot of subjects, I do not think it helps me. But I feel that when I grow up, I will be more accurate. When I will pay out and so on.	Manuel	
	For example, does Chemistry help you?	Researcher	
	Not even a bit.	Manuel	
	And Maths helps you?	Researcher	
	Yes.	Manuel	
	What is the difference in the way you feel about Chemistry and Maths	Researcher	
	I do not like Chemistry, and I do not pay attention. And for Maths, I sometimes pay attention.	Manuel	
	Ok. Sometimes?	Researcher	

Irrelevance of Maths	Because there are a lot of topics that are not good for business.	Manuel	Manuel only pays attention to the lesson when he thinks that the topic being covered is related to his future career ambition. <u>Can the Maths covered in class be made more relevant to one's life experience and ambitions?</u>
	During the VD entries you used to say that you were doing angles, however you did not know why you were doing such a topic, you were doing algebra but you did not know why you were doing it. They are not important. How do you feel during those lessons? Doing things that you do not deem as important for your life?	Researcher	
Maths as a waste of time	That I am in class for nothing.	Manuel	
	And how is your behaviour?	Researcher	
	I stay talking with my friend a lot.	Manuel	When student feels that the lesson is irrelevant to him, his behaviour is not good.
	So if you are doing percentages that you need for business... Can you tell me how you need it?	Researcher	
	For profit etc.	Manuel	

	Good. So if you are doing profit that you need for business and you are doing angles that you do not need for business, how does your behaviour compare whilst doing the two topics?	Researcher	
Irrelevance of Maths. Inattentive.	I do not take part in the lesson. I stay watching the PowerPoint and so on, but I do not write.	Manuel	Shuts himself up when doing topics that are not related to his future ambitions. <u>Is relevance of the lesson more important than the actual lesson delivery/activities?</u>
	And in the lesson that you feel that are useful?	Researcher	
Active participation. Good behaviour. Maths as relevant.	I take part in the lesson. I write, I understand, and if I do not understand something, I ask the teacher.	Manuel	Actively participates in lessons that he thinks are important for his future career ambitions. A stark contrast to his behaviour during lessons that he does not like. Relevance of lesson to his future as crucial for his engagement in the lesson.
	So you are interested in the lesson?	Researcher	
	Yes.	Manuel	
	Once, whilst talking about the school, you said that here they are really strict. With regards to the uniform, the shoes, haircut.	Researcher	

	Do you dislike being in such a rigid environment?		
	No, not really. Those are the rules.	Manuel	
	Do you think they are important?	Researcher	
Importance of rules.	They are important so that when you grow up you are disciplined.	Manuel	Acknowledges the importance of rules.
	Do they annoy you in anyway?	Researcher	
	What annoys me is the hairstyle. Because during the weekend, I like to go out and I do not like this hairstyle for example. That is why I get annoyed.	Manuel	
	What do you think about break ins, after schools and suspensions?	Researcher	
Effective consequences	They are good for discipline.	Manuel	
	Did you ever receive one?	Researcher	
	Yes.	Manuel	
	How did you feel about it?	Researcher	
Effective consequences	I will not do it again because I really hate being suspended.	Manuel	Manuel says that the consequence he was given will keep him away from doing the same offence again.

	And now it will be put in my school leaving. And it will be more difficult to find a job and so on.		
	Do you think you learn from these consequences?	Researcher	
	Yes you learn.	Manuel	
	What did you learn?	Researcher	
Effective consequences	For example, with regards to fighting, I do not fight anymore. That's it.	Manuel	He does not fight anymore before the consequences he was given were effective.
	And why did you fight before?	Researcher	
Relationship with peers: fighting, bullying.	Because I was not afraid of getting a suspension and so on. They used to pick on me as well.	Manuel	
	And now?	Researcher	
	I do not fight anymore.	Manuel	
	Because they do not pick on you anymore or because you are afraid of getting a suspension?	Researcher	
	Sort of both.	Manuel	<u>Consequences as instilling fear in students?</u>
	During a particular VD entry you say that you said a bad word in	Researcher	

	front of the teacher. Can you talk about it?		
Relationship with peers: distracting. Behaviour: deviant, uncontrollable. Relationship with the teacher: aggressive, conflict, confrontational.	We always pick on each other and so on. And he was throwing papers. The teacher turned and he saw the paper flying and he thought that it was me that threw it. He told me to go in front of the Head of School, I got angry and I said a rude word in a low voice and he heard me.	Manuel	Even though during various VD entries and previously in this interview Manuel always talked about a positive and healthy relationship with his teacher, here we see the exact opposite. For the first time he talks about aggressive behaviour towards his teacher and impulsive behaviour during which he says a rude word to his teacher. <u>Perception of unfair/unjust treatment as a catalyst for deviant behaviour?</u>
	Before saying the rude word, how did you feel? Why did you feel the need to say the rude word?	Researcher	
Feeling of anger triggering bad behaviour. Injustice leads to anger that leads to bad behaviour.	I was angry. Because it was not me that threw the paper.	Manuel	Manuel felt that it was unfair that he got the blame. Thus he got angry and exhibited negative behaviour. <u>Perception of unfair/unjust treatment as making student angry? Anger as an uncontrollable behaviour?</u>
	What did you feel at the time?	Researcher	

	I am going to get into trouble for nothing. Because when you go to the brother [Headmaster], you always get a consequence.	Manuel	
	And afterwards, how did you feel?	Researcher	
	I felt guilty. Since I said it, I was getting more into trouble. And if I had done nothing, I will now still get into trouble.	Manuel	
	Can you talk about your behaviour during the Maths lessons?	Researcher	
Behaviour as depended on topic being covered.	Sometimes it is good, other times it is bad. It depends on the topic being covered.	Manuel	His behaviour is dependent on the topic being covered. <u>Does the topic being covered have such a great impact on student behaviour?</u>
	During a VD entry you say that you like activities when he gives you sweets and appraisals. Can you talk more about it?	Researcher	
Effective positive reinforcement.	Because now with the appraisals, we are in a competition and we can go for	Manuel	Again, talks very positively with regards to positive reinforcements and rewards. He is motivated to work more.

Motivation to work.	an outing. With the appraisals. And I enjoy it more and participate more during the lesson because if you do this you take something back.		<u>Are positive reinforcement and a rewards system more effective than consequences?</u>
	Apart from getting appraisals, do you feel you are doing better in Maths?	Researcher	
Motivation to work is increased as a result of positive reinforcement and rewards.	It's more about appraisals. I will participate more during the lesson. For example, during angles, he told us that if we do well he would give us an appraisal. I will participate a little bit more in it. Still not that much.	Manuel	Manuel is motivated more if there is something to gain from doing the work. A rewards system is very effective with Manuel.

Week 6 – Video Journal – 20/04/2016

Emergent themes	Original Transcript	Exploratory comments
	At moment we are doing three-dimensional shapes in the Mathematics lessons. Because	

<p>Irrelevance of Maths</p> <p>Maths as annoying and boring.</p>	<p>last week we had two-dimensional shapes and now we started the three-dimensional. I have learnt nothing new this week because they are the same as the two-dimensional and I do not know why we are learning them. I think that I do not need two and three dimensional, not even for business or other things. Maybe for an architect? I do not really know. (00:00:00.0 - 00:00:46.8)</p>	<p>Does not know why they are doing the current topic.</p> <p><u>Lack of relevance to real life makes the topic being learned less interesting.</u></p> <p><u>Lack of interest, lesser chance of engaging with the topic and understanding it?</u></p>
	<p>I did not like the Chemistry lesson because she gives us a lot of work. The teacher annoys me a lot. I really do not like the subject. Maybe I enjoy experiments, for the rest I do not enjoy it. (00:00:46.8 - 00:00:46.9)</p>	
	<p>The most lesson I liked this week was Hospitality/cooking because now we are doing cooking competitions. For example competition on who makes the tastiest cake.</p>	

	We try it; everybody in class tries it because we are only 10 in class in Hospitality. (00:01:21.6 - 00:01:21.7)	
Maths as difficult. Maths as confusing and annoying.	In Maths I am giving by best because I like 2 dimensional/3 dimensional. I understand the topic a bit, but I do not really enjoy it because I do not need it. (00:01:56.5 - 00:02:02.6)	Does not enjoy the lesson because he does not think he needs it for his future. Doesn't really understand the topic. <u>Relevance to real life effects student's enjoyment during the lesson?</u>
Good/positive behaviour	My behaviour this week is good. I did nothing wrong this week. I did not get a break in. Nothing. During the Mathematics lessons I am well behaved and I am enjoying it. I meet my friends and stay with them. (00:02:09.6 - 00:02:40.4)	Manuel talks about some good and positive behaviour.
	I do not think the teacher can do anything better to teach the topic better because nobody likes this topic. Thus, he can do nothing. Maybe he can give appraisals, a bit	

Positive reinforcement/rewards	more appraisal. But for the rest nothing. (00:02:40.4 - 00:02:57.3)	Talks about giving rewards as a way of teaching the subject better. But in reality this is about motivation. Giving rewards will incentivize students to work harder but it does not mean that the topic is delivered better.
Behaviour: distracting, disruptive Peer relationships: distracting each other.	Nothing distracted me. I distract myself because I do not like 3 dimensional shapes. Thus, maybe I distracted someone else. Maybe my friends. But I do not think so because he doesn't like this Maths topic as well. (00:02:57.3 - 00:03:27.2)	
Relevance of Maths. Attention to lesson related to connection to	I would like to say that during Maths they should do things that one needs and not things that are not useful. For example, we do not need Algebra when we grow up. We will need Accounts etc. Topics like 3- dimensional shapes etc. annoy me because we do not need them when we grow up. I do not even think one needs it if he is an architect. You do not need algebra to be an architect or something	Manuel thinks that Maths should only be about useful things related to one's life. Finds it hard to connect certain topics to his life experiences.

student's future ambitions.	similar. Thus, we do not need it when we grow up. Thus, I get bored during the Maths lesson. However, sometimes there are other topics that I am good at because I need them when I grow up. So I pay attention. (00:03:27.2 - 00:04:17.2)	Manuel finds it hard to study Maths that he does not regard as relevant to his future ambitions. Pays attention only when he thinks the topic being covered is related to his future.
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Week 7 – Video Journal – 28/04/2016

Emergent themes	Original Transcript	Exploratory comments
Revision as refreshing memory. Irrelevance of Maths	At the moment during the Mathematics lessons we are doing... just a second. We finished three-dimensional shapes and we started a new topic... Let me remember. Yes. Probability. We are doing probability... I like it a bit. Not that much. This week I have learned nothing. Because at the moment we are doing last year's revision. I do not think this is useful	Does not think he learns anything during revision. He considers it as refreshing one's memory.

	<p>for me. I do not know why we are doing this topic. Maybe for Mathematics o level, but when I grow up I do not think I will need it. (00:00:00.0 - 00:01:06.2)</p>	<p>Does not see any relevance with the topic being currently carried out and his future.</p> <p>What sense does it make to do something for the exam when it has no relevance to the student's life?</p>
	<p>I really dislike Chemistry and Physics. But more Chemistry because she is always giving us lab reports and they bother me. Always the same. If we do not do them she shouts at me and I really do not like this. (00:01:06.2 - 00:01:45.7)</p>	
	<p>A lesson I liked this week is the PE lesson, because he told us that we could do whatever we wanted. If not football, basketball. He set up a football match and that is the most enjoyable lesson this week. I liked because we could do whatever we wanted. (00:01:45.7 - 00:01:45.8)</p>	

<p>Poor Motivation/not giving one's best because he does not like the lesson.</p>	<p>In the Maths lesson, I do not think I am giving the best I can, because I do not like this Probability topic. (00:02:09.0 - 00:02:18.1)</p>	<p>Does not like this topic, thus he finds it difficult to give his best.</p> <p><u>Likeness towards the topic is directly related to effort?</u></p>
<p>Good behaviour. Lack of consequences related to good behaviour.</p>	<p>This week my behaviour was good. I did not get anything. I am not getting any serious consequences, so that means that I am good. (00:02:18.1 - 00:02:37.2)</p>	<p>Talks about positive/good behaviour.</p> <p>Measures his behaviour according to what consequences he receives. No consequences mean good behaviour according to Manuel. <u>But is his behaviour good or is he managing to get away with it?</u></p>
<p>Inadequate/lack of resources. Relevance of Maths.</p>	<p>The teacher can do nothing. Maybe she could bring some props to do better lessons. Maybe she could show us how probability happens in reality. (00:02:37.2 - 00:02:49.4)</p>	<p>Manuel complains about the lack of use of resources and suggests that more resources are used during the lesson. According to Manuel, this will make the lesson better.</p>
	<p>Nothing distracted my attention this week. Not even the person sitting next to me distracted me. (00:02:49.4 - 00:02:59.7)</p>	
	<p>Today we have a Maths test and tomorrow we do not have a Maths lesson because the</p>	

	<p>teacher told us that he would not come to school. Today we have the 2-dimensional and 3-dimensional shapes test. I will see how it goes. That is all I have to say. (00:02:59.7 - 00:03:24.5)</p>	
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Week 8 – Video Journal – 04/05/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>At the moment during the Mathematics lessons we are doing Probability. Mhm, this week I have learned nothing because we are doing last year's revision, but now, in the next lesson, we are going to start, mhm, what do you call it? The things we need for this year. (00:00:00.0 - 00:00:26.8)</p>	
Irrelevance of Maths.	<p>Mhm, I do not know why we are doing this topic because I do not think we need it. Talking</p>	

	<p>about myself, I do not need it, but I do not think the others need it as well. Mhm, this week I liked the lesson, I think of last Monday, no, on Monday we did not have school. This week I did not like anything. With regards to the Maths lesson. Because we are still doing on Probability. (00:00:26.4 - 00:00:29.0)</p>	<p>Manuel has a habit of justifying himself by saying that even his friends think the same as he does.</p>
<p>Maths as annoying. Did not like the subject linked with no enjoyment. Lack of interest towards the subject linked to lack of motivation.</p>	<p>Mhm, mhm, I did not like yesterday's lesson, because I do not like probability. That is why I did not enjoy doing the lesson. I do not think I am giving my best because I do not bring the notes. Thus, I do not think I am giving my best. (00:01:03.6 - 00:01:29.9)</p>	<p>Does not like the topic currently being done during the Maths lesson. Thus, he does not enjoy the lesson and does not do his best.</p>
<p>Behaviour: Sleeping during the lesson. No interest in the Maths lesson.</p>	<p>Mhm, my behaviour is not bad. Because during the Maths lesson I am sleeping mostly.</p>	<p>Manuel says he is sleeping during the lesson and thus he does nothing wrong. <u>But isn't sleeping during the lesson something wrong in itself? Sleeping as a way of escaping from reality?</u></p>

Sleeping will keep him out of trouble.	Thus, I am doing nothing wrong. (00:01:29.9 - 00:01:43.9)	Shuts himself and avoids getting into trouble by sleeping through it.
Inadequate/no use of resources during the lesson. Using resources will help students focus.	Mhm, to teach the subject better the teacher should bring along some props. This is because the children will enjoy it more when the teacher brings along some props and so on. This is because they will focus better and they will follow the lesson and so on. (00:01:43.9 - 00:02:03.0)	Again complains about the lack of use of resources by his teacher. Thinks that resources can help him focus better and perform better in the subject.
Does not like the topic so he does not enjoy the lesson. Behaviour: Sleeping to avoid trouble.	Mhm, what distracted me was nothing almost. I do not like the topic that is why I am not enjoying it. But I do not think I distracted someone else because I sleep, so I do not disrupt others. (00:02:03.0 - 00:02:31.7)	Does not like the lesson and thus does not enjoy the lesson. These are linked. Again, sleeps through the lesson to avoid getting into trouble and not to distract others. <u>Is this a defence mechanism against getting into trouble?</u> <u>Sleeping not to get in trouble?</u>
	I cannot say anything with regards to the Maths lesson, because there is nothing one	

	can say. Mhm, I do not like probability. That's all. (00:02:31.7 - 00:02:38.7)	
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Week 9 – Interview – 10/05/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
	Can you talk about a Maths lesson that you liked?	Researcher	
	Mhm... I think the one we are doing right now. About, Ratio. We are doing Ratio at the moment. We are enjoying it.	Manuel	
	Why are you enjoying it?	Researcher	
	Because it is like... The teacher gives us a lot of situations that are funny sometimes.	Manuel	<u>Connecting to real life situations makes maths more interesting?</u>
	Can you describe one?	Researcher	
Examples connected to real life. Relevance of Maths.	Mhm. I do not know. For example, for probability, he used to say probability that Sliema win the league. He makes us laugh. And	Manuel	Whenever the teacher uses real life examples to explain the lesson content, the student seems to enjoy and engage with the lesson more.

Relationship with teacher: positive.	for ratio... I forgot. But sometimes he really makes us laugh		<u>Why isn't this done more often in the Maths classroom?</u>
	During various VD entries you say that if the teacher were to use props it would be better. What are these props you mention?	Researcher	
Use of resources during the lesson linked to better understanding.	To understand better. For example, probability, he brings a dice so that we get to know better. We see it in a real context. So like that we understand better.	Manuel	The student says that if the teacher were to bring along some resources, he would understand the lesson better.
	And how can this help you?	Researcher	
	You enjoy yourself more. For example, when he brings things I enjoy myself more.	Manuel	
	Why?	Researcher	
Use of resources during the Maths lesson. Linked with fun and better understanding.	I do not know. For example, looking at the notes is not fun, but if he brings things to watch as well, I will have fun. And you understand more.	Manuel	Resources can make the lesson more fun and interesting. <u>Can resources make the lesson more fun and interesting?</u> <u>Why doesn't the teacher do this more often?</u>

	Can you talk about a lesson that you did not like? Or lessons?	Researcher	
	Maths lessons?	Manuel	
	Yes, Maths lessons	Researcher	
	2-dimensional, 3-dimensional shapes.	Manuel	
	And why did they annoy you a lot?	Researcher	
Irrelevance of Maths. Maths as annoying. Hate towards Maths.	I do not see why we need them. And, they really annoy me. The shapes, the pi, and so on. I really hate them.	Manuel	Talks about a topic he dislikes and his feeling towards such a topic. He hates it. <i>Uses strong words to describe his feelings towards the subject.</i> <u>Could the teacher have linked this topic to real life situations to make it as interesting as the others?</u>
	Ok. During your VD entries you said that probability is really annoying you...	Researcher	
Relationship with teacher: Can be crucial for learning. Fun vs. Annoying dependent on	It depends. Sometimes he makes us laugh. Mhm. He makes it fun. But sometimes it annoys me a lot.	Manuel	Interest towards subject depends on the way the teacher presents it. The same subject can be fun or annoying depending on how the teachers goes about in teaching it.

how the teacher presents it.			
	Why does it annoy you a lot?	Researcher	
Irrelevance of Maths	Because I will not use it when I grow up for example.	Manuel	
	Yes, let us talk about this. You say that, on a number of occasions that you get bored doing things that are irrelevant with regards to what you want to become when you grow up. On one occasions you say that it is better that you do things that you need. What needs to be done during the Maths lesson?	Researcher	
Making Maths relevant.	For example, from Form 1 onwards, they say, for example, who wants to do that subject and so on. They see and they split Maths for different students. For example, I will have Maths for business.	Manuel	Talking about having only those topics that one needs for his future. <u>Can this actually be done?</u> The subject caters for the students need rather than the student catering for the subject.

	And what topics do you think are important?	Researcher	
	Percentages. More revisions and so on. More, more things that are related to business. Not for example Algebra, that we do not need and so on.	Manuel	<u>If the Maths content is related to students' needs. Can behaviour, engagement and performance in the subject improve?</u>
	And if you would be given more topics that are related to business, how would your attitude towards the subject change?	Researcher	
Relevance of topic will increase student attention.	I would be more attentive.	Manuel	
	Can you talk about your behaviour during these past few weeks?	Researcher	
	I am not distracting other students and so on. Up till now I did not distract or anything else.	Manuel	
	During the VD entries you mentioned that you are not being given big consequences. You	Researcher	

	used to, but no longer do. To what do you contribute this change in behaviour?		
Behaviour: improvements promoting optimism.	I am avoiding trouble. For example, a lot of my friends stay throwing oranges and I no longer go with them because I do not want to get into trouble.	Manuel	Talks about avoiding getting into trouble lately. This shows an improvement in behaviour.
	What brought about this change?	Researcher	
	Because, the school leaving will have all the things you did. And so, I better stop it.	Manuel	
	During a VD entry you say that appraisals could help you. Why do you think being given appraisals by the teacher can help?	Researcher	
Positive reinforcement/rewards linked with more attention	Because, for example, he tells you, 'If you pay attention, if you pay attention, I will give you an appraisal.' You will pay more, more attention, because you know that you will be given something. That you did something.	Manuel	Talks about being more motivated to learn and paying more attention if he is given a reward for it. <u>Doing something to get something back, is this good?</u>

	That is, you put your mind to it and after the lesson you have something for it. At least.		
	And what do you think about conducts?	Researcher	
Ineffective/inadequate consequences.	Mhm. Whoever is not good will receive them. But I do not think they carry a big consequence. If you have a lot you will have a consequence, but one every so often is not bad.	Manuel	Isn't really worried about getting a consequence for his bad behaviour. Seems to be more motivated in doing good to get a reward.
	What do you prefer, being given appraisal to work or being given a conduct when you do not work?	Researcher	
	Appraisal when you work.	Manuel	<u>Using a rewards system better than using consequences?</u>
	And why?	Researcher	
	Because a conduct when you do not work, makes no sense. For example when you do not do you HW, you are given a conduct. But if you do not work, you are losing out. But if you	Manuel	

	work, at least you are given something. You work and do your HW.		
	Sometimes you say that you distract yourself. Not that others distract you or you distract others. Can you talk about this?	Researcher	
Behaviour: examples of bad behaviour	Mhm. I sometimes get a rubber band and stay doing paper pellets, when I do not feel like a lesson. Or sleep. When I do not feel like a lesson.	Manuel	When he is annoyed he will end up doing bad things out of boredom. Sometimes he even sleeps.
	Why do you sleep?	Researcher	
Behaviour: Sleeping as shutting down.	Either because I feel sleepy, or I really will not want the subject. It annoys me.	Manuel	Sleeps during the lesson to shut down. <u>Sleeping as escaping reality?</u>
	So if a topic really annoys you, you prefer to sleep through the lesson?	Researcher	
	[Nods]	Manuel	
	Do you get into trouble for sleeping?	Researcher	
Sleeping as keeping him out of trouble.	It depends. I do not distract others for sure.	Manuel	Sleeping will not get him into trouble because he will not distract others.

			<u>Sleeping as keeping him out of trouble?</u>
	You also say that you are not doing your best because you are not even bringing the notes. Why are you finding it difficult to bring the notes with you?	Researcher	
	Either because I forget them, because when I do the timetable, I put the things I do not need in the desk, I have... drawers. I put them there and in the morning I forget that I need it.	Manuel	
	Do you find it more difficult to follow the lesson without the notes?	Researcher	
Effective use of resources.	No, I still participate in the lesson because there is a projector and he does the notes on the projector. That means that it does not make any difference.	Manuel	Projector helps him follow the lesson whenever he forget to bring along the notes.

Week 10 – Video Journal – 18/05/2016

Emergent themes	Original Transcript	Exploratory comments
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Irrelevance of Maths	At the moment the topic we are doing, we are doing in Maths, Mathematics, is ratio. It is something new to us because we did not do it last year. Mhm. This year I have learned about ratios. I do not think that, maybe, maybe it is useful just a little bit. But I do not think so. Mhm. I do not know why we are doing this topic. Maybe we need it. But I do not know what is useful about ratios. (00:00:03.7 - 00:00:49.2)	<p>Again finding it difficult to see how this topic will help him in the future. Manuel is very much oriented towards his future and always measures the importance of a topic according to how much it will help him in the future.</p> <p><u>How could it be that the student is not connecting ratios to his ambitions and real life experiences? How can the teacher connect the Maths lesson better to real life?</u></p>
<p>HW as a source of discomfort.</p> <p>Teaching and learning: Maths as difficult and confusing. Did not understand.</p>	This week, a Mathematics lesson that I liked is yesterday's lesson because he did not give us any HW and we almost finished the notes. And he did not give us HW. The lesson that I did not like was last Monday. When he told us about the new notes about ratios. I did not like it because I could not understand. (00:00:44.5 - 00:01:28.2)	<p><i>Repeated two times that he was not given HW.</i></p> <p>Did not like the lesson because he could not understand.</p> <p><u>Understanding as vital for the student to enjoy the lesson?</u></p>

<p>Maths as difficult and confusing.</p> <p>Relationship with teacher: helpful and caring.</p>	<p>I think I am doing my best in it, even though I do not understand. However, if I tell the teacher that I do not understand, he will come and help me. (00:01:28.2 - 00:01:45.5)</p>	<p>He is doing his best event though he does not understand.</p> <p>The teacher helps him if he asks for help. <u>But does he ask for it?</u></p>
<p>Good behaviour.</p>	<p>The behaviour is good, I am not talking and I am focusing on the lesson. I do not know why I need ratios, but since it is something new... (00:01:45.5 - 00:02:07.9)</p>	
	<p>I do not know what the teacher can do to give a better lesson. I really do not know. Either... Really I do not know what he can do to make the topic more interesting. (00:02:07.9 - 00:02:14.6)</p>	
<p>Relationship with peers: Distracting him from paying attention.</p>	<p>During the lesson... I got distracted... My friend distracted me. This is because he was talking about the PlayStation and so on and I got distracted. I ended up talking to him. I got</p>	<p>Once more, Manuel is talking about a negative consequence of his relationship with his peers. He talks to them and they distract each other.</p>

	in trouble myself but ... (00:02:14.6 - 00:02:14.7)	
	Mhm... There is nothing I can say about the Maths lesson. We are doing another topic that maybe is useful, but I do not know why we need it. I do not particularly like it, but it is something new. This is the last chapter so we will start the revision for the exams, the annuals. That's all. (00:02:53.9 - 00:03:31.0)	

Week 11 – Video Journal – 25/05/2016

Emergent themes	Original Transcript	Exploratory comments
Revision as preparation for exam.	At the moment in Mathematics we are doing past paper revision work. At the moment we started the mental because the teacher tells us that we need to work hard on them. For example, yesterday we did a mental, I arrived	Revision in preparation for the annual examination is underway during the Maths lesson.

<p>Lessons are exam oriented.</p>	<p>till half of it and the time was over, because we have 20 minutes. And so we need to get used to them and we are working on them. (00:00:00.0 - 00:00:22.7)</p>	<p>The lessons are now in preparation for the exam. No new topics are being covered. <u>Too much focus on the exam? Should students be 'prepared for the exam'?</u> <u>Is this a waste of time?</u></p>
<p>The Maths lesson as drilling for the exam.</p>	<p>This week I have learned nothing. Just getting used to the mental. We are doing this to get used to it, to time ourselves, to be quicker, because we only have 20 minutes. (00:00:27.3 - 00:00:52.0)</p>	
	<p>This week I liked all the lessons. Because, for example we finished the mental and we continued the film we were watching. Because we started a film with the teacher and he tells us when we finish the mental we can continue the film we are doing. This means that this week I like nothing, because the lessons were of this sort, watching a film after the mental. (00:00:52.0 - 00:01:13.8)</p>	

<p>Giving his best.</p> <p>Relationship with teacher: positive, encouragement</p> <p>Good behaviour.</p>	<p>Yes, I am giving my best. For example, yesterday I did very well, the teacher himself told me. He told me that if I continue like this, mhm, I will pass. Mhm... My behaviour was good this week. I did not distract others or anything else. We are doing mentals. We are not doing something new. (00:01:37.8 - 00:02:14.0)</p>	
	<p>The teacher can do nothing to help us learn better. This is because, for example, he tells us that if you hurry we can continue watching the film. Everybody has to focus, hurry and finish. Thus, we continue watching the film. Thus, he is doing the right thing. (00:02:14.0 - 00:02:31.0)</p>	
	<p>This week nothing distracted my attention. I was good. I was good this week. Mhm... There is nothing I can say... that's all...we are doing</p>	

	mental past papers and so on. (00:02:31.0 - 00:02:55.7)	
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Week 12 – Video Journal – 01/06/2016

Emergent themes	Original Transcript	Exploratory comments
Revision in preparation for the exam.	At the moment during Maths, we are doing nothing new. We are just doing past papers for this year. We finished the mental past papers and we have started the ones in which you can use the calculator. We started it as well. This week I have learned nothing; everything is the same. Only revision. We are doing this so that we get used to the exam. So that we feel, like, sort of getting used to the exam. We do not get a surprise and so on. And that is why we do a revision. (00:00:00.0 - 00:00:56.7)	<u>Learning nothing new. Is this 'sacrifice' worth it to prepare students for the exam?</u>

	<p>Mhm. A lesson that I did not like this week is when we started the exam past paper. Because it was really hard and he told us that we need to do it all in one lesson and the rest for HW, but it was really hard and that is why I need to study Maths. (00:00:56.7 - 00:01:21.8)</p>	
	<p>What I liked is today's lesson. Because after finishing the past paper we started, continued watching the film. Because during the tutor's period we started watching a film and we continued it today. Mhm. I think I am doing my best because I need to do well during in the exam, so that I have a good summer without extra work. I hate doing extra work so I have to get a pass. (00:01:25.9 - 00:01:43.2)</p>	
Reward	<p>Mhm. This week my behaviour was slightly good. Because he told us if we do the past paper, we watch a film. Everybody started to</p>	<p>The class watch a film if they finish the assigned work quickly. <u>Will this encourage work of poor standard, done in a hurry?</u></p>

	<p>hurry to watch the film. The teacher can do nothing to teach this topic better. Because, for example, he told us, we will watch a film if we finish the past paper quickly. This is enough. This is because everybody will be focused and will finish it quickly. (00:02:04.6 - 00:02:38.6)</p>	<p><u>Is watching a film during the Maths lesson time the correct type of reward to give?</u></p>
	<p>Nothing distracted me from the lesson. I was alone. Everyone was alone. We were seating in single file. Nobody distracted me. Everyone on his own. (00:02:38.6 - 00:02:51.9)</p>	
	<p>There is nothing more I can say about the Maths lesson. I study for the exam. That is it. (00:02:51.9 - 00:02:52.0)</p>	

Neville – Video Journals and Interview Transcripts (12 weeks)

Transcript showing steps one and two of IPA (Smith, Flowers & Larkin, 2009)

Week 1 – Video Journal – 24/02/2016

Emergent themes (Step three)	Original Transcript	Exploratory comments (Step one and two)
<p>Activities: Collaboration vs competitive, enjoyable and interesting.</p> <p>Behavior: Motivation to win.</p>	<p>So So... What activities did I have in the Maths lessons? Ok. Why? Yes...This week we had a lesson... no not really a lesson, an activity on ... Wait...This week. We had a sort of activity in which we had to, for example get a piece of paper, like this, and for example, this is 29 cm and this is 21 cm, and we had to find which had the biggest volume if we do a cylinder. For example, this one is 7cm, even though it is not and this one, the</p>	<p><i>Hesitant repetitions.</i> Trying hard to recall the activity done in class</p> <p>Neville is describing an activity carried out in class. By the intense way he describes it and the tonality in his voice, it seems that he liked it.</p> <p>Describes and activity during which inquiry based learning was used. Students are prompted to do activities during which they inquire about various Mathematics concepts. <u>Can this way of teaching be more fruitful? Does it increase student engagement? Improve students' behaviour?</u></p>

	<p>other one, we had to cut it, we had to have two circles and we had to find the largest. If I am not mistaken the bigger one was 8.47 cm cubed... something like that... but we lost and the miss gave the winning team some chocolate. Two groups won.</p>	<p><i>By the tone of his voice Neville is disappointed that he lost.</i></p> <p>Here we see group work during which the students worked together to solve a problem. But also competition between groups. <u>Did this increase motivation? Is competition healthy in the classroom? Should we, as teachers, emphasis more on collaboration and working together?</u></p>
<p>Activity: enjoyable, interesting, and competitive.</p> <p>Behavior: linking good behaviour to interesting lessons.</p> <p>Feeling of disappointment and</p>	<p>The behaviour... hmmm... My behaviour... I felt that my behaviour was ok. I did not feel that I had a bad behaviour, but not even very good behaviour. But with regards to behaviour we can say that I was really interested. That is, I wanted to win a lot... I wanted to win a lot a lot! I felt really... really concentrated and I wanted to win a lot and even though we found the answer, the miss told us that it was bad, and I do not know what happened. And I am not going to say</p>	<p><i>Hesitant repetitions to describe his behaviour.</i> This could be due to some degree of reflection.</p> <p>Judging by his own yardstick his behaviour was good. <u>But is his 'good', good enough?</u></p> <p><u>Did the nature of this activity help him to have better behaviour?</u></p> <p>Links behaviour to his interest. The fact that it was interesting does not make his behaviour and issue.</p> <p><i>Repeats 'to win a lot' to show his determination to win.</i> This shows the atmosphere of competition created in class. However, it also shoes the determination of the student to do well and participate.</p>

<p>anger related to the competitiveness of the activity.</p>	<p>what happened because I will start screaming in this room. All right!</p>	<p>Still emotional when describing that he lost.</p>
<p>Activity as reinforcement of an already learned concept. Enjoyable and fun. The Maths lesson as enjoyable and fun. Motivating.</p>	<p>How did this help me to understand the topic? Hmm... I do not know. I do not know. It didn't really help me because I already knew how to do it. Was it useful? Yes. It was useful. We enjoyed it. All the class started to celebrate and I felt really good about it. I did not feel bad at all. It was good.</p>	<p>Describes it as useful because he enjoyed it. This can be seen as reinforcement to an already learned concept. This activity as reinforcement of a previously learned concept. <u>But could the same approach be used to teach new material?</u> Even though previously, the way he described it, he seems to have felt bad about losing. He finally says that he did not feel bad about it.</p>
<p>The Maths lesson: Feels good when he understand, feels bad when he does not understand.</p>	<p>What parts of the lesson were enjoyable? The part in which I felt the good was algebra. I really like algebra in Form 1 and Form 2. I am really good in it. But till now formulae I am not good in it. I am weak.</p>	<p><u>Understanding as directly linked to enjoyment? If one cannot understand the lesson, one cannot enjoy it.</u> <i>The tonality of his voice shows that he is sad that he did not understand a concept.</i></p>

<p>The Maths lesson: HW causes distress.</p>	<p>If I were the teacher. The only thing I would change, maybe, I would give HW to students on alternate days not every day. Because sometimes she gives us a lot of HW. For example in the HW she gives us one problem and at the end of the lesson she give us a problem, a question. An interesting question. Or else at the end of the topic. Like our miss does and we really enjoy it.</p>	<p>Seems worried by the amount of HW he is given and this worries him and causes some distress.</p> <p>Gives out suggestions on how HW can be given.</p>
<p>Good behaviour linked to him liking the subject.</p> <p>Maths as complicated.</p>	<p>Now... According to me, my behaviour was good during the lessons. Because I like Maths a lot. But I think that certain things are too complicated. For example formulae. Till now I found formulae to be the hardest. Even though some people say they are easy, but then they change their minds.</p>	<p>His behaviour was good because he likes the subject. <u>But what happens during subject he does not like? Does his behaviour change?</u></p> <p><u>Do complicated and difficult to understand concepts increase the chances of deviant behaviour?</u></p>
	<p>What helped me focus during the Maths lessons? To focus... I was helped by the fact</p>	<p>Interesting lessons help him focus and pay attention.</p>

<p>The Maths lesson, teaching and learning: Interesting lessons help him focus.</p>	<p>that I was interested in the lesson because I love it a lot. And even the fact that I get high grades. In the half yearly I got 81 because I like Maths.</p>	<p>Getting high grades motivate him to focus and pay attention. A strong link between interest and focusing.</p>
<p>Positive student-teacher relationship.</p>	<p>Did you have any problems with your teacher this week? This week? I think I got a break in. No. Break in for Maths no, never. Did I have any problems with the teacher this week? With the teacher personally, no. I do not think so, no. No HW presented because I would have only done the answers, but the questions I do not do them. I have the calculator; I use it and write the answer that comes on my calculator. For example I write $1 + 1$ on the calculator and it comes 2. And on the copybook I write only 2 and I do not write $1 + 1 = 2$. I do it as a short cut immediately. That gets my marks reduced.</p>	<p>Seems to have a good relationship with the teacher.</p>

	<p>About two marks for that. Something of the sort. Breaks in no. Nothing. No problems this week. I had a break in....No, no, nothing... not the break in. The HW was a problem because I did not write the question as I told you.</p>	
<p>Dealing well with external distractions.</p>	<p>Incidents? Sometimes there are students for example that annoy me. But that is ok. It will pass. That is the end I think. I am switching off the camera.</p>	<p>Seems to be able to deal well with external distractions and shuts them out.</p>

Week 2 – Video Journal – 02/03/2016

Emergent themes	Original Transcript	Exploratory comments
Positive relationship with the school.	So talking about my school. So. [REDACTED] College. It is quite big. There is the primary section as well. I have friends there. Quite a few. And I like it as a school.	Speaks positively about the school.
A positive learning experience.	Describing it... I already mentioned a few points. Another point that I would like to make. It is very big and the playing fields are very big and it is old. But it does not bother me at all. I think that the school is well built and how lessons are delivered.	Talks positively about his learning experience.
Teaching and learning, The Maths lessons: technological recourses are not used.	What could be different and why? Maybe next time the students are not given a netbook. This is because I never used the netbook. Never, never, never. But I used it to translate, to help me out in French. And	Is critical on how technology is used in class. Only uses it for a superfluous thing such as translating but not for learning. <u>Why is it that the teacher is not using such a powerful tool such as a netbook?</u>

	sometimes I used it to play games. But very little. I do not why this happened.	
	Another one. I would change the... What is it called? No. Nothing. I do not have more things to change. That's all. The netbooks issue only.	<i>Hesitant.</i> It seems that there is something else that annoys him in school but is not able to describe it.
Teaching and learning: The school as the place where learning takes place.	Why do I go to school? Obviously I go to school to learn. Because when I was born I was not an intelligent boy. I was not a genius. So you need strength in your brains.	Associates school with learning. This is positive. Goes to school to learn.
Positive relationship with school: It helps him to learn.	The school. Sometimes it helps me. Other times it does not. It helps me when I learn. When I am learning for example the computer. When I learn it helps me a lot.	School helps him to learn.
Positive relationship with the school.	I think nothing really destroys me at school. Nothing. Nothing.	Has no negative feeling about his school. <i>Repetitions to underline the fact.</i>

	<p>What are my expectations from my school?</p> <p>Hmm... If I had to.... I do not know. Not even an idea. No idea.</p>	
Life after school	<p>How is the school preparing me for my life?</p> <p>It is teaching me so that when I grow up I find a job that I like. And I pass.</p>	<p>Sees school as preparation for his future career.</p> <p><u>Is the school only there to prepare you for your future job? Can he think of other ways the school can help him?</u></p>
Relevance of Maths	<p>We all know that we need Mathematics. Maths is all around us. Even this (pointing to a painting behind him). The area of the painting is Maths. Even this camera. The area of the camera is Maths. Thus, we need Maths.</p>	<p>Appreciates that Maths is useful in his daily life and sees connections between Maths done in class and his surroundings.</p> <p><u>Are these examples valid enough?</u></p>
<p>Relevance of Maths</p> <p>Life after school – Career ambitions</p>	<p>Do you I think it is important to learn Maths?</p> <p>Yes. I think that Maths is the most important lessons. This is because there is a lot of Maths in the world. Even the jobs. They will tell you that you require Maths or else something similar. Even a cashier. Obviously</p>	<p>Is convinced about Maths' importance for his life.</p> <p><u>Is he saying so because he was led to believe so or is he trying to look smart?</u></p> <p><u>Or does he really mean it? Is Maths such a powerful social filter?</u></p>

	a cashier. For example an architect. You need a lot of Maths.	
	Is there a topic I would remove from Maths? Hmmm. I do not think so. There is no topic I would remove. No, there isn't. Because I like all the topics. I know that during the last video I had said that I did not like formulae. But now I have understood it. I understood it. What bothers me is when they invent something. Ok. I am ready.	

Week 3 – Video Journal – 16/03/2016

Emergent themes	Original Transcript	Exploratory comments
	Right now we are doing probability. Yes we are doing probability. Why do I think we are doing this topic? To find out the percentage that something happens. For example, the	

	sun will rise tomorrow. For example there is 80% chance. For example.	
The Maths lesson as interesting and enjoyable.	Am I doing my best? Yes. Till now we did not have HW, but I am paying attention. I like the topic. Because I like it and it is interesting.	<p>Neville is very positive about his experience of this topic.</p> <p><i>His choice of words is positive and depicts an enjoyable experience whilst learning probability.</i></p> <p><u>Does likeness towards the topic increase student engagement?</u></p>
Behaviour is good because he likes the topic.	How am I behaving? Till now, the first lesson was today actually, I am behaving well in my opinion, because I like the topic. I like all the topics. I behave in this manner because I like the topic. Even though some of them annoy me, I like the majority. I like them a lot.	<p>Behaves well because he likes the topic. Linking likeness of the topic with good behaviour.</p> <p><u>Why does he relate behaviour with likeness towards the topic?</u></p>
Teaching and learning: effective teaching.	So. What could the teacher do to teach this topic in a better way? Hmm... If I were the teacher, I wouldn't change anything because the teacher delivers it in a good way. Maybe	Give positive feedback about his teacher's teaching.

	<p>something can be changed in some areas, but for the rest it is all right. I do not have any idea in my head what could be changed. Everything is ok in my opinion.</p>	
<p>Performance in tests and feeling towards Maths.</p>	<p>What did I like the most during last week's lesson? Last week we started doing... What do you call them? I just mentioned them! Formulae. I liked the assessment grade, and I went to parents' day last week. I really like the assessment grade. I got 84% or something similar. It was about formulae and circles and I was really happy. Because I studied for the test. I studied.</p>	<p>Gives a great importance to his performance in tests. <u>What if he performs badly, would he still like Maths? Give too much importance to his grade?</u></p> <p>There seems to be a link between the performance in Maths and his likeness for the subject.</p>
<p>Teaching and learning: Effective teaching.</p>	<p>What annoyed me? Let me see. I do not think that there is anything that annoyed me during the lesson or during the topic. Nothing annoyed me. Nothing. And why?</p>	<p>Again giving very positive feedback about his teacher's teaching.</p> <p><i>Repetitions to underline his message.</i></p>

	Because the lesson is perfect. It is interesting. Very good.	
Relationship with peers: dislikes bullying.	What distracted me from paying attention? For example, sometimes someone has a problem, for example Jake, and they tell her (the teacher), look it is Jake again. That really bothers me.	Dislikes it when his peers pick up on a weak student.
Behaviour: Good behaviour linked to the fact that he likes the subject.	Do I distract others? I do not think so, because I am quiet during the lesson... Sometimes... Most of the times I stay quiet. I do not think I distracted others. I am not remembering that I ever shouted at someone and told him something. No, because I like Maths. That is why.	Again, he is linking the fact that he likes the subject with the fact that he is well behaved. Good behaviour is strongly linked with his positive relationship with the subject. <u>Good behaviour related to him liking the lesson?</u>

Emergent themes	Original Transcript	Exploratory comments
	<p>Let's see. What topic are we covering this week during the Mathematics lesson? This week we are doing probability and now we have arrived at a stage where we want to find for example $1/16$ chance, or $1/6$ chance that a dice will come at 6.</p>	
	<p>Ehm... What did I learn this week? This week I learned how or the possible outcome how, the possible outcome how something has a chance of happening. Something of the sort. The possibility. You know.</p>	
<p>Irrelevance of Maths.</p>	<p>Why am I learning this topic? Maybe we are learning it because for example. I do not need it. Personally I do not see how I need this topic in my life. But for example in a casino, they would need it. Even though I am</p>	<p>Cannot see the relevance of this topic go his daily like experiences. However, he is still able to give an example the use of probability.</p> <p><u>Can Maths be made more significant to the student's life? How is it that the student finds it difficult to find any use for this topic in his daily life?</u></p>

	<p>still young, I know that such things are needed in games rooms etc. to do so.</p>	
<p>Relationship with his peers: negative. Feels aggressive when others distract him and copy his work.</p>	<p>Describe a lesson I did not like? I think that the lesson that annoyed me the most...I did not have enough lessons since we are coming back from the holidays... That is the problem. I cannot describe it. On the other hand let me mention one thing that has been annoying me for a long time. Because sometimes they stay talking to me, they stay... Sometimes they really make me angry and I feel like hitting something. They come near you, and these are not good in Maths and they ask you to do their HW with you, then for example, I work, work, work, and then they do this, look, (acts someone sticking out his neck and copying), they do this and see what you are doing. They do not</p>	<p>Is really annoyed when others talk to him and distract him.</p> <p><i>Chooses aggressive words to describe his feelings.</i></p> <p>Hates it when others copy his work.</p> <p><u>How much important is it for him to have an adequate environment to be able to focus? Does this have anything to do with his condition?</u></p>

<p>Relationship with the teacher: A good teacher should help her students if they ask for help.</p>	<p>even bother to copy the question, just the answer. Isn't that stupid? If you did not understand the question, ask the teacher. She would help you. If she does not tell you, she is not a good teacher. Because all teachers need to explain to you. If they refuse to explain something to you, that means that you are not paying attention and you are not paying attention on purpose. That means you deserve it.</p>	<p>Describes how a teacher can be bad. If she does not help you when you ask a question then she is a bad teacher.</p> <p><u>How did he construct such a definition of a good/bad teacher? Can it be that he himself was denied a second explanation?</u></p>
<p>Activities: enjoyable and interesting.</p>	<p>Can I describe an activity that I liked this week? The most activity I liked is that when we have the end of topic because the teacher gives us a sort of activity. The best week is when she does not give us HW. I really enjoy that! If on a Thursday she does not give us HW I would really enjoy it. That means we do</p>	<p>Speaks positively about the activities prepared by his teacher.</p> <p><u>Can these activities done at the end of the topic be done more often?</u></p> <p><u>Why does he place so much importance to the issue of HW?</u></p> <p>Again speaks about his negative relationship with HW.</p>

Does not like HW.	not have HW till Monday. We really celebrate.	
Behaviour: Motivated to do his best. Teaching and learning: Give great importance to understanding.	Am I doing my best and why? Ehm... Yes, I try as much as I can to pay attention. Up till now I understood everything from the possibility topic. Everything till now.	The fact that he understands, helps him keeps on track and stay motivated.
Unable to reflect on his behaviour this week.	How am I behaving? I do not know. I do not know how I behave. I will start to say that I behave well but, you know, I do not really care. What is really important to me is that I understand and I know. If I misbehave, I do not care. The most important thing is that I understand the topic and questions. But if you misbehave a lot there is a risk that you do not understand. But that is different.	<p><i>Seems nervous by the repetition of words.</i></p> <p>This is the first time Neville is finding it difficult to talk/reflect on his behaviour.</p> <p>This is selfish. The most important thing is that he understands and does not care about his behaviour. <u>Is Neville hiding something about his behaviour this week?</u></p>

	<p>What could this teacher do to make me learn this topic better? Ehm. Sometimes she gives us too much HW and sometimes she tells us ... the topic better... maybe she can give us more notes. Because when we started the topic I did not understand it. For example, giving us another question would help. But I am not saying she should give us a whole exercise! What I am saying is a little, normal.</p>	<p><u>Should HW be so important and stressful to the student? Is it central to the Maths lesson?</u></p> <p><u>Is it essential to give drilling exercises to the students?</u></p>
<p>Teaching and learning: Enjoys Algebra the most.</p>	<p>The topic I enjoyed the most is algebra. I am being serious. The most enjoyable topic for me in the senior school was algebra till now. I regard it as interesting and beautiful. To work it out, I never have seen something like it.</p>	<p>Algebra is normally a topic disliked by most students. This is surprising. In fact Neville himself feels the need to say that he is serious about it and underlines this fact by using the statement 'I am being serious'.</p> <p><u>Why algebra?</u></p>
<p>Relationship with peers: Annoys him when they distract.</p>	<p>What annoys me? I already said. People who distract me and talk. However, sometimes if he is your friend, I would help him and</p>	<p>Again, says that he hates other students that distract him.</p>

<p>Feels anger towards those who distract him.</p> <p>Relationship with teacher: Is annoyed when he is not allowed to tell the answer. Gets angry.</p>	<p>explain the topic to him. But if you have someone sitting near you, and you do not like him, you get angry with him. I will not want him to sit near me... But the most annoying thing is that sometimes when you want to say something, teachers tell you, 'No, I want to continue with the lesson, I do not want to listen to you' Or else, once I said, 'Miss, miss I know how to work it out' or for example the algebra, no not the algebra, something else, I knew the equation, I knew how to work it out and do it, formula! Formula not algebra and I was saying 'Miss, Miss, Miss!' and she tells me, 'I do not want your answer, I do not want, I will explain!' That really makes me angry, when she does that. I wish she would tell me, 'Ok, let me listen to you'. For example, you explain 5-2,</p>	<p><u>Power struggle?</u></p> <p>Wants to participate in the lesson and say the answer but is not allowed. The teacher will want to explain it herself. This makes him angry.</p>
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<p>Behaviour: Would like positive reinforcement.</p> <p>Relationship with teacher: Annoyed when he is not allowed to participate.</p>	<p>and you explain it really well and she gives you an appraisal just in case. Because you know it and maybe if you do not attend private lessons, she will say, 'Did he do it on his own and learn it on his own. This students deserves a small reward.' But some teachers do not even take notice of me, and say, 'No, I will explain it!' I know the teachers' rule that they should explain. But they can give me a chance and if the others do not understand me, than it is ok for the teacher to explain it.</p>	<p>Talks about positive reinforcement.</p> <p><u>Teacher's rule? How did he construct this definition? What does this say about teachers and how the students perceive them?</u></p> <p>Complains about not being given enough time to participate. Mentions the teacher's rule that only teachers are allowed to explain. This is interesting when one considers that classrooms should be student-centred and not teacher-centred.</p>
<p>Behaviour: First time that he talks about negative behaviour.</p>	<p>What distracted me? Did I distract others? For example, sometimes, I see something funny and I will turn onto someone and tell him, 'Listen look at that'. But I do not do it very often because something funny doesn't</p>	<p>This is the first time that Neville reflects on his behaviour and talks about negative behaviour. He usually said that his behaviour is all good or tried not to reflect about it.</p>

	<p>occur frequently. For example, something very famous is the '21'. If you look it up. Write 9+10 on YouTube, you find a coloured man and if you find it click on it. For example when the teacher says, '21', we say '21'. It is a meme. That is what they call it.</p>	
<p>The Maths lesson: HW as cause of distress and worry.</p>	<p>What else can I say about the Maths lessons? The one think I wish for is that we are given less amount of HW. For me Maths is the most interesting lesson, but that HW, even though I know it is good for us, but...Some teachers do not know that we are given more HW apart from the Maths HW. Or else she gives only 4 or 5. Not 10 as usual. That's all!</p>	<p>Again, Neville mentions the large amount of HW. This seems to be causing him some large amount of distress.</p> <p><u>Should HW 'spoil' the fun? Should it be so stressful to the student?</u></p> <p><u>Reasonable enough? Why should be students be drilled to learn the topic?</u></p>

Emergent themes	Original Transcript	Speaker	Exploratory comments
	Can you talk about your relationship with the Maths teacher?	Researcher	
Relationship with teacher: dependent on subject being taught.	It depends on the lesson it is.	Neville	Neville says that the relationship with the teacher is dependent on the lesson. <u>Does a more interesting Maths content make it easier to have a positive student-teacher relationship?</u>
	The Maths lesson.	Researcher	
Teaching and learning: The more interesting the lesson is, the more motivation to learn and effort.	If it interests me a lot, I will do more. Sometimes, if it annoys me I do not pay attentions. But, sometimes I do improve a bit, but.	Neville	Effort and motivation are dependent on the lesson's interest. <u>Motivation/performance directly linked with how interesting the lesson is?</u>
	And what about your relationship with the teacher?	Researcher	
	I have a good relationship with the teacher.	Neville	
	Is it important that you have a good relationship with the teacher?	Researcher	
The importance of having a good	Yes, because if you do not have a good relationship, for	Neville	

relationship with the teacher: communication.	example, you have a question and you will not want to talk to her because you will not have a good relationship with her.		Feels comfortable to ask questions only if he has a good relationship with the teacher. <u>Is the relationship between the student and teacher as important as the lesson delivery?</u>
	Do you have a better behaviour given that you have a good relationship with the teacher?	Researcher	
	Yes, it is supposed to be that way.	Neville	<u>A good relationship improves student behaviour?</u>
	Can you talk about your relationship with your classmates?	Researcher	
	Good, good.	Neville	
	In the class?	Researcher	
	Good, even during group work.	Neville	
	What can you tell me about group work? How do you get along with your classmates during group work?	Researcher	
Teaching and learning: Competition increases motivation to do well.	Sometimes, for example, all right, there are those who make me laugh a bit, even me for	Neville	

	example. During group work I try to win. I am very competitive. I will be competitive as much as I can.		Neville is very competitive. Competition makes him want to win. Increases motivation and makes more effort. <u>Is all this competition healthy? Should the emphasis be on collaboration?</u>
	During a particular VD entry you said that you were doing group work, you lost and you were sad. Can you talk about this?	Researcher	
Teaching and learning: Ineffective teaching. Feeling of anger as a direct result of the	I did not really lose. I think I know what that was. We had done it, then something happened, I went to ask the teacher. I asked her, 'Is this good or not?' She told us, 'You need to remove something.' And then we did it, the time run out, and we had done it. Two groups did it exactly the same as we did and later she said that ours was wrong. We showed her the paper, that had the exercise and she told us it was wrong. I got angry there because it did not make any sense. We had gotten	Neville	Is more concerned on why his team lost rather the concept being learned by the activity. Still unable to figure out what they did wrong and still do date thinks they were right. Thus, the learning outcome of this activity was not reached as the student still does not know what was done wrong and what the correct answer should be. The competitive nature of the activity brought about feelings of anger.

competitive nature of the activity.	it wrong and she told us to do something else. And it was exactly how we showed it to her.		<u>Is getting angry because of the competitive nature of the activity a good thing?</u>
	But do you enjoy this type of activities?	Researcher	
	Yes, a lot.	Neville	
	Why?	Researcher	
Competition is linked with interest in the lesson.	Yes because they are interesting and ... you stay with your friends and see how smart they are and so on.	Neville	This competitive nature of the activity makes it more interesting for the student. <u>Activities make the lesson more interesting? Increase student's motivation and performance</u>
	So you enjoy working with your friends?	Researcher	
Relationship with peers: Collaboration	Yes, a lot!	Neville	Enjoys working with his friends.
	Do you learn from your friends?	Researcher	
	Yes, I will know what is passing through their minds.	Neville	
	How?	Researcher	
Relationship with peers: Peer tutoring.	For example, if they say, 'We need to do that this way.' I would know, for example, I would not have known that it	Neville	Neville is very positive about working with his friends. He feels that he learns new things with the help of his friends.

	should have been done that way. That means that they come up with something that I would not have thought of. So I learn from it and that is good.		<u>Peer tutoring as successful? Peer tutoring helps the student understand better?</u>
	And how do you behave during these activities?	Researcher	
Relationship with peers: annoying	Sometimes, the others annoy you. But I interest myself and get involved in the activity for sure.	Neville	It seems that Neville has a love-hate relationship with his peers. Even though he has just previously said that he learns from them, there are some classmates that annoy him.
	During a particular VD entry you said that you get annoyed when others copy your work. Can you talk about this?	Researcher	
Relationship with peers: annoyed when other students copy his work. Teaching and learning: Regards the time used to	Yes. A lot. Because it does not make any sense. It makes no sense really. It is not fair. Because I stay working them, and wasting my time to get it correct. Then, they come near you and they stay copying you. It is not fair on me. And this did not only happen to me. In fact, my friend, in class, mhm, they used	Neville	<i>Feeling of injustice and unfairness underlined by the use of words and repetition.</i> Neville is annoyed that other students copy his work not because they will not learn the concept by doing so. It is only because he feels that only he will have 'wasted' the time and it is not fair that others copy and do not 'waste' time. <i>Neville uses the word 'wasted' to describe the time used whilst doing his work.</i>

work Maths as a waste of time.	to copy from him, the one next to him, he used to do this [acting someone copying]. Then he told me, 'Can I come sit next to you because the one next to me is annoying me.' The one sitting next to him did not hear him. And he left and we noticed that the one sitting next to him that used to copy from him started calling his friends to copy from them as well to tell you the truth. He was too lazy.		Does not see the time he dedicates to the subject as an investment to learning but as a 'waste' of time.
	During a particular VD entry you say that the Maths lesson is perfect and very good. Why do you think so?	Researcher	
Teaching and learning: effective.	Because it makes sense. Even how the teacher teaches, even that she give us the things at the end of the lesson.	Neville	Student understands the lesson, and thus he describes the lesson as perfect. <i>Interesting choice of words: perfect.</i>
	What happens at the end of the lesson?	Researcher	

Relationships: Peers: Group work Successful Activities	The group work and so on. The challenge. That is what I call it.	Neville	Likes group work. <u>Is group work really so effective?</u>
	After every lesson?	Researcher	
	After each... what do you call it? Topic.	Neville	
	Can you talk about this 'challenge'?	Researcher	
Activities: Relevant and successful.	Yes, so that you are challenged on what you have learnt. If you learnt that, you will be given a challenge on it. However, sometimes, very rarely, the teacher does not do it. There was one, I could have shown it to you if I had gotten the book, and we did not do it. I do not know why. I do not really know why, but we had skipped it.	Neville	The activities in this case are used as reinforcement at the end of the lesson. As a test to measure whether students have understood the topic and to apply it. Is disappointed that the activity was not carried out at the end of one particular topic. <u>Does this show the success of such activities?</u>
	Are you in a group during the challenge?	Researcher	
	Yes always in a group	Neville	

	And how do you feel during the challenge?	Researcher	
Competitive nature of group work. Too much stress on winning rather than learning.	I feel, that I want to win. Even though you will win nothing, but I am not interested in that. The most important is winning and being the best group.	Neville	The ultimate goal for the student here is to win and not to learn. <u>Is the competitive nature of the activity been taken too far?</u> <i>'Winning', 'the best.'</i> Choice of words shows the extreme competitive nature of the activities.
	During the VD entries you say that you have a netbook but you never use it.	Researcher	
Ineffective use of technological resources.	Never! In fact at the moment it is at the technician.	Neville	Netbook never used in class even though it is available.
	How do you think that the netbook can help you in the Maths lesson?	Researcher	
Ineffective use of technological resources.	I do not know exactly. However, I think that it could help us if we used the calculator. Instead of buying a new one. I have no idea. Because we never use the netbook and according to me	Neville	Neville says that the use of netbook would not make the lesson any better. However, since they never used the netbook he is not in the best position to compare between a lesson during which a netbook is used and one during which not netbook is used.

	the lesson is fine as it is. We do not need the netbook.		<u>How come it is that such an educational tool is readily available, but still not used by the teacher? Was the teacher trained to use such a tool? What could be the problem?</u>
	You also say that you do not like HW.	Researcher	
	Sometimes yes.	Neville	
	Can you talk about this?	Researcher	
HW as causing stress, feeling of sadness.	For example, sometime we are given a lot of HW. And a lot of people do not like HW. Because I do not feel like it, if I do not have HW, I go home happy and so on. I know that everyone needs to do HW. But if it was reduced, I would be much better for me. For example, three times a week is enough for me.	Neville	Again, Neville complains about HW. He sees it as restricting his freedom after school. <u>Should HW be the cause of so much stress and anxiety?</u>
	So you would reduce the volume of HW?	Researcher	
	Yes.	Neville	
	Is there anything else you can be given instead of HW?	Researcher	

	She can give us a type of question, I think she sometimes did this, and she tells us, 'Try to do it, if you do not manage, ok, but try to do it. If you find something related or you do it tell me.' I see this as interesting. Even though it takes a lot and a lot of time.	Neville	
	So she does not give you a specific question, but you decide the question?	Researcher	
	Or else she gives us... no, no. I do not like that. In fact, there was a topic like that. We needed to find a question ourselves. I really did not like it. She gives us a really difficult question related to the topic to do it at home.	Neville	
	So it is like the challenge?	Researcher	
	Yes, but for home.	Neville	<u>Challenging questions increase motivation to work?</u>
	You say that Maths is very important; it is all around you,	Researcher	

	you use it all the time, and you mention areas and the camera. Does this mean that you are more interested to learn the subject?		
Relevance of Maths. Life after school: career ambitions.	Yes, because it is almost like, almost like, if you look at a summary of all the jobs available, almost all need this subject that is Maths.	Neville	Importance of the subject measured by the fact that a lot of jobs use the subject. <u>Maths as related to one's life increases student interest in the subject? Is this importance given to the subject healthy? Do all jobs require Maths?</u>
	And how do you feel about the importance of Maths?	Researcher	
Relevance of Maths	I feel that without it you cannot do anything. Literally, without it you can do nothing. Because, for example, look at this table, they used maths to do it. Even though they used glass and wood, but still to calculate how big they needed to make it, exactly like this, they needed Maths.	Neville	Thinks that Maths is very important. Is able to give an example on how Maths can be important.
	You say that probability is not important for you. It is important for those who work in	Researcher	

	a casino, but not for you. Can you talk about this?		
Irrelevance of Maths	It does not really interest me because we rarely use it in our lives. When you are playing a game of, let's say, Monopoly and you use the dice. I do not even play the game, you can imagine. I do not play any dice games or anything similar. At the moment there is nothing, I cannot think of any other problems that need probability.	Neville	
	And how do you feel about this?	Researcher	
Irrelevance of Maths: disinterest towards the topic.	I feel, It does not really interest me. But I still pay attention during the lesson to see what is going to happen and so on. But I start to say, god forbid I ever have a problem, when we have a problem we do not stay doing the Maths and going mad about it. We do not do this and that. We just do it. For example for	Neville	<p><u>If maths does not make sense to their daily life experience, than it does not interest him. Does this reduce motivation and interest in the subject?</u></p> <p>The uses related to everyday life of this topic are superfluous for the student.</p>

	the dice we do not stay counting the chances. I just throw the dice and that's all. It's ready.		<u>Are the examples used related to real life far-fetched or superfluous?</u> <u>Challenging the examples Maths teachers give in class?</u>
	You say that you have good behaviour because you like almost all the topics. If you did not like the topics, do you think your behaviour would still be good?	Researcher	
Behaviour: directly linked with interest towards the subject.	No. If I do not like the topic, if I do not like it, I would pay less attention for sure and I would talk to my friends during the lesson. Something for that for sure.	Neville	Being interested and engaged helps Neville to behave well.
	Are there any topics that you do not like at school?	Researcher	
	... I mentioned one but I forgot. I think that for now, I like them almost all.	Neville	
	Think of a subject that you like less than Maths. Is your behaviour better or worse?	Researcher	

	Maltese [laughing].	Neville	
	And how do you behave during the Maltese lessons as compared to the Maths lesson?	Researcher	
	Different. I do not read. I get bored. For example she tell us to read this. I say, 'Oh no how annoying.' She gives us the HW. Not that I distract others, but I stay complaining to myself. I say. 'Oh, how annoying.' Even when it is time for the lesson, 'Oh, how annoying, it's time for Maltese.'	Neville	<u>Does interest towards the subject have so much weighing on student behaviour?</u>
	And you do not say this for Maths?	Researcher	
	For Maths, if it is free I say, 'Yes! We have free and we do not have HW.' But that is obvious for everybody. But when the Maths teacher comes, I say, 'What are we going to learn today.' That is what I say.	Neville	The student has a good attitude towards the subject and seems to like it.

	So you would be looking forward to do something?	Researcher	
	Yes	Neville	
	You say that you get break-ins, but not during Maths. Why is it that you get break-ins during Maths, but in other subjects yes?	Researcher	
<p>Good behaviour and level of work.</p> <p>Likeness towards the subject linked to improvement.</p> <p>Likeness towards the subject linked to good behaviour and respect towards the teacher.</p> <p>Good student-teacher relationship based on the likeness towards the subject.</p>	<p>Because for Maths. For example, I do all the HW, I do not behave badly during the lesson, mhm, what else. And since you like it, you will improve in actual fact. Because if you like it, it does not make any sense that the teacher needs to tell you to stop talking. It does not make sense being asked not to talk and you love the lesson. This will never happen. That is, if you love the lesson, you will not get a break in or anything, because you behave well and do you work well. But during some lessons I</p>	Neville	<p>Since he likes the subject he has a positive outlook on the subject and is sure he will improve.</p> <p>No sense in exhibiting bad behaviour if one likes the subject.</p>

If he gets annoyed this can lead him to bad behaviour	get annoyed. That is what I am going to say. I talk a bit and stop.		More likely to talk and exhibit bad behaviour during annoying lessons.
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Week 6 – Video Journal – 21/04/2016

Emergent themes	Original Transcript	Exploratory comments
	So. What topic am I doing? Graphs. Till now. Or straight line graphs as they say.	
Relevance of Maths.	What did I learn this week? Do I think this is useful? This week I learnt more advanced things about the graphs topic. On the coordination's <i>etc...</i> I think that is how they refer to them. Why do I think we are doing this topic? Because of some problems in life. Everybody needs it. Even though we kids do not use it, but when we grow, to become, let	Even though he does not really now the connection between straight line graphs and real life situation, he still thinks that they will come handy further on in his life.

Life after school. Career ambitions.	us say an architect, or whatever, you will need it.	
Teaching and learning: Maths as difficult. Maths as annoying.	Talking about a lesson that I did not like this week. The one that I did not like the most is the most difficult one. A difficult lesson really annoys me. I do not like it when the miss explains something totally different from what we are doing. For example, we will just have finished the squares topic and she tells us that we will learn about triangle all of a sudden. This annoys me.	The student does not like difficult topics. <u>Engaging students in the correct difficulty level is vital? Will students lose interest if the content being covered is not of the appropriate difficulty level?</u> <u>How difficult is it to present adequate work to students?</u> The student does not like sudden changes in topics.
Teaching and learning: The Maths lesson as not enjoyable.	I did not really like any lessons. But the best one was... was not long ago... a lesson that I liked ... I didn't have any lessons that I like. Because I am not liking graphs already. Which part did you like? There is not specific part of the lesson that I like. I regard them as being normal.	Cannot think of a lesson he liked that week. This is worrying. The student is saying that he did not enjoy a single Maths lesson.

Behaviour: Easily distracted. Incontrollable behaviour. Talking out of turn.	I am trying to do my best, but sometimes I see something and I will want to talk about it. But that happens always. Nobody will stay like this [making a straight face], up straight, not talking and doing all that he is required to do. Everyone one will say, 'Listen, listen, look at that.' Always!	Neville is trying to justify his behaviour by saying that it is the norm amongst all students.
Behaviour: Talking out of turn.	As I already said, maybe I talk a bit, but if we have to go on with the lesson, we have to get on with the lesson. Thus, if the lesson has to continue, I will continue.	<i>Neville finds it hard to admit bad behaviour and uses the word 'maybe'.</i>
Relationship with teacher as positive. Effective teaching	On the whole the teacher is doing a good job. She is giving us one new thing every day. Something new every day.	Neville is happy with his teacher. He is happy with the teaching-taking place in class.
Behaviour: Talking out of turn, distracted. Distracting others.	When I talk I get distracted. But that happens to everyone. Did I distract other? Yes I did... obviously. If I talk, I will distract others. He will look at me and listen to me. Or else, he can	Again Neville tries to justify his behaviour. However, his is now being more open to talk about his negative behaviour in class. Previously we have seen him try to avoid such an argument.

	ignore me but if he is your friend he will not tell you to stop.	
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Week 7 – Video Journal – 27/04/2016

Emergent themes	Original Transcript	Exploratory comments
	This week we are doing graphs topic. This week I have learned how to do straight line graphs. We started them last week in reality, but this week we are doing them in more detail. We have learnt what the y-intercept is etc.	Seems to know what is going on in class.
Relevance of Maths	Why are we doing this topic? I am not that sure about what problems in the life could be related to this topic. I know that, someone, what's his name? He saw a fly flying in the ceiling. But I am not certain why they did it and the problems etc.	<u>How can the teacher connect such a topic to real life?</u> He is referring to Rene Descartes and the Cartesian coordinate system.

<p>Teaching and learning:</p> <p>Maths as annoying.</p> <p>Maths as confusing.</p>	<p>I did not like almost all the lessons last week. This is because I dislike graphs. I do not like it. You have to stay drawing the graphs. You need to get everything out from your pocket. Oh my! What confusion. Then, if you do something wrong, you need to erase everything off. This really annoys me. You need to stay paying a lot of attention to detail.</p>	<p>The student does not like the topic. Unlike during previous topics, the student for the first time is finding a topic annoying and confusing. <u>Is this having an effect on his performance and motivation?</u></p> <p><u>Is the Maths the problem, or the drawing and plotting of graphs?</u></p>
<p>Teaching and learning:</p> <p>Maths as confusing and frustrating.</p>	<p>I cannot think of a lesson I liked this week. I did not really have one. I am being very serious here. I disliked all the lessons. Because you need to grab the thing and do this that and this. Too confusing.</p>	<p>Again, for the second consecutive week, Neville cannot think of a lesson he liked.</p> <p><i>Again, uses the word 'confusing'.</i></p>
	<p>I am trying to do my best because maybe I will need it for my test next Thursday.</p>	
<p>Behaviour: Difficult to concentrate if one does not like the topic.</p>	<p>Talking about my behaviour. I tend to lose my concentration quickly, because when the student doesn't like it, he will not really</p>	<p>The student is very clear here. If he does not like the topic, he finds it difficult to concentrate.</p>

<p>Maths as boring linked with talking out of turn and bad behaviour</p>	<p>pay attention, attention, attention. He will surely do something. That means that sometimes I talk, because I get bored and start not hearing the teacher repeating the same things and things. And I get really annoyed when she continues repeating things sometimes.</p>	<p>Bad behaviour because he has no interest in the subject?</p> <p>When the lesson is boring he easily exhibits bad behaviour and starts talking out of turn.</p>
<p>Behaviour: Distractions: Talking out of turn.</p>	<p>What distracted me from my attention towards the lesson were small things. For example, when someone talked to me or I talk to someone else. This happens when, for example, I see something funny, or for example, I would have invented something up and I would want to share it with my friends.</p>	<p>Neville is talking about negative behaviour.</p> <p>These are minor incidents.</p>
<p>Maths as annoying.</p>	<p>So. I think that if I were a Maths teacher I would not do graphs this year. I do not think that it has anything to do with this year. I think that it is better that we do it in</p>	<p>Neville dislikes this topic.</p>

	<p>form 3. It starts in form 3 and continues in form 4 and 5. Even though I think that it would be too simple. But I prefer that graphs be in Forms 3, 4 and 5 because it really, really annoys me.</p>	<p><i>Uses repetition to stress the fact that graphs really annoy him.</i></p>
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Week 8 – Video Journal – 04/05/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>At the moment we are doing a topic on... what's it name? ... Angles and constructions!</p>	
<p>Teaching and learning: Revision: Useful to refresh memory.</p>	<p>I am not going to talk about what I learned this week. Because most of the things covered were revision this week. This is so that we do not forget what was covered during angles and constructions last year. Thus, for now, I did not learn anything, but I have to say that we have learned what we did last year.</p>	<p>Sees value in doing revision. So that to revise the things one has done in previous years and re fresh one's memory.</p>

Relevance of Maths: Angles in real life situations.	I regards it as useful for me since when you do a plan of something, for example the door, it opens at 90 degrees angle and so on.	Neville can give an example of angles in real life.
Relevance of Maths: Superficial? Life after school: Career ambitions.	We are learning this to solve life problems. I do not know exactly what I can mention as an example. I think that, for example, the topic construction, for plans, if you are going to become an architect.	Knows that these can be useful but doesn't really know why. Not being able to associate a use for angles and construction in his daily life. But, somehow he knows he will use it in the future.
	I did not have any lessons that I did not like because till it was all revision. There isn't anything that I dislike. Up till now, I like angles and constructions. Even last year, I used to like it.	
Teaching and learning: Effective teaching. Maths lesson as interesting and enjoyable.	I liked all the angles and construction lessons because they are interesting. The part that I enjoyed the most was yesterday, when there was a question and I said the most difficult part, and the miss said, 'Like Neville said!' I felt	Unlike the previous two weeks, Neville likes the Maths done in class again.

<p>Relationship with teacher: Positive reinforcement feels good.</p>	<p>really good, better than the rest for example. Even though I am not better than the rest, everybody is equal.</p>	
<p>Behaviour: Giving his best, motivated. Link between topic being carried out and motivation.</p>	<p>I am giving my best, even though up till now we do not really need to give our best. But just the same I give my best because this is revision and we need revision.</p>	<p>Is giving his best again. Neville never mentioned that he was giving his best during the past few weeks. <u>Is there a link between effort and likeness, interest towards the topic being done in class?</u></p>
<p>Behaviour: Talking out of turn.</p>	<p>I think that this week, I talked to someone, just a bit, but I am still focused on the lesson and know what is happening and I would know where we are and so on.</p>	<p>Justifies bad behaviour by saying that he will still be paying attention and following the lesson.</p>
<p>Relationship: Positive, likes her teaching and approach.</p>	<p>I do not think that the teacher can do anything more. This is because our teacher, is so good, everything, everything, nice she teaches. She</p>	<p>Neville has a very good relationship with his teacher and likes the way she teachers her class.</p>

Relationship with teacher: Answers difficulties and does not make fun when one does not understand.	doesn't teach something difficult or say, 'look do it like this' (in a derisive voice). Or she doesn't say, 'Oh my, this one did not understand it' (in a derisive voice). She is nice with us; this means that if we do not understand one, she doesn't embarrass us in front of the class, she just tells us.	<u>Does this positive relationship has an effect on Neville's attitude towards the subject? And what about his behaviour?</u>
Behaviour: Talking out of turn, distractions	What made me lose my concentration this week? As I already told you, sometimes I talk or they talk to me or else I look at something and lose myself, I hear a sound and I do 'heh' (looking away from the camera).	Minor behavioural problems in class.
	I have nothing more to add. For me Maths was good this week.	

Week 9 – Interview – 09/05/2016

Emergent themes	Original Transcript	Speaker	Exploratory comments
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	How do you feel when the teacher praises you?	Researcher	
Relationship with teacher: positive reinforcement makes student feel good.	I feel good, because I start saying to myself that I am a person that is intelligent in front of the others. That is what I feel. I do not feel better than others. That means that I will be happy and she would have cheered me up. I would say that like this it is better.	Neville	Is cheered up and happy when teacher acknowledges good work. <u>Are appraisals more effective than giving consequences? Do they improve the relationship between the student and teacher?</u>
	In a particular VD entry you say that the teacher does not make fun of you when we ask questions, but she answers us. How do you feel about this?	Researcher	
Relationship with teacher: Hates it when teachers make fun of questions asked.	It is better. Because certain teachers, for example from outside of Malta, in America the most, sometimes they make fun of them. For example 'You do not know this? Are you serious? This is the thing that we did the	Neville	Neville is happy that he can freely ask questions in the Maths lesson without the risk of being made fun of by the teacher. This environment in class can be very beneficial to learning especially for Maths. Maths is a subject during which students learn by trial and error and by making

	most...' Sometimes, you get annoyed when someone does this to you.		mistakes. <u>Can such an environment be created if the teacher makes fun of the students when they ask questions?</u>
	And why did you mention America?	Researcher	
	An example.	Neville	
	But, has this ever happened to you? Did you ever have a teacher that you asked a question to...?	Researcher	
	I think that it happened in Year 5, when I was doing something in Maths. I do not know. But I think that the teacher in Year 5 used to do this sometimes.	Neville	<u>Did this event have an effect on his relationship with the subject and with teachers in general?</u>
	And how did you feel about it?	Researcher	
Relationship with the teacher: Negative experience with previous Maths teacher.	I did not feel good because everybody used to look at me in a bad light when I did not know something. And not knowing something is normal because I am still young and you are an adult. I do not know everything, everything, and everything.	Neville	Describes a negative experience with a Maths teacher. Made to feel bad.

	Can you talk about a Maths lesson that you like?	Researcher	
Feelings linked with performance in the subject.	If am not wrong, it was the lesson that cheered me up that I liked the most. And it passed quickly. I was cheered up.	Neville	Liked a lesson because he was made to feel good. <u>Can there be a link with feeling and performance in the subject.</u>
	The teacher?	Researcher	
	Yes. I forgot exactly when it was. But it is something like that.	Neville	
	Ok, that lesson cheered you up. But was there a lesson that by the way the teacher explained, or the activities done, you enjoyed it?	Researcher	
	This week I feel that I enjoyed all of them.	Neville	
	What went on during the lessons?	Researcher	
	We were doing angles and constructions.	Neville	
	And what did you do?	Researcher	
Teaching and learning: Effective teaching.	We did new things, and even the HW passed quickly. I did what she told us quickly. I	Neville	Neville enjoyed the lessons this week. Time seemed to fly.

Maths lessons as enjoyable.	understood everything and I was enjoying listening to her because we were learning new things.		<u>Understanding as crucial for a good lesson?</u>
	Yes, and you say that during angles and constructions you enjoy yourself a lot because they are interesting. Can you talk more about this?	Researcher	
Relevance of Maths.	Because that is how I regard it. I think that I need it. I regard it as nice according to me.	Neville	<u>Needs it. Does this increase his interest towards the subject?</u>
	Can you talk about a lesson you did not like?	Researcher	
Long lessons become boring. Boredom linked with bad behaviour: talking out of turn.	Maybe sometimes, double lessons annoy me because I would have gotten bored. I would not feel like listening to a whole double. And I stay waiting for a double lesson. In fact, I get bored so much that sometimes I start talking because, because for me a double lesson of Maths is not so good. I prefer having a lesson after the break and then have a break. Even	Neville	Double lessons make Neville lose his concentration and interest in the lesson. They become boring. He gets bored and this can get him into trouble since he loses his focus and starts talking to his friends.

A short break can be a solution to break up long lesson.	though you cannot have two lessons that are the same. I prefer it like this. Having a lesson in between them.		Suggest that a small break is given between double lessons. Student empowerment and opinion. <u>Can young students concentrate for long periods of time?</u>
	What happens during the lesson?	Researcher	
Repetition linked with boredom.	Because I start getting bored with the same stuff. Sometimes, the teacher repeats a lot, for example.	Neville	Hates repetition.
	You say that graphs really annoyed you. Can you talk about it?	Researcher	
Quicker paced lessons help him enjoy the lesson.	Because, for example, you waste a lot of papers. You need things and it annoys me because it takes long to write, it takes long in everything.	Neville	Neville says graphs annoy him because they take long to do.
	And what do you like?	Researcher	
	Up till now, I love algebra the most.	Neville	
	And why? What difference is there between graphs and algebra?	Researcher	

Relevance of Maths	Because Algebra is something we really need more than graphs.	Neville	Is more interested to a particular subject because he thinks he will need it more.
	And why do you think so?	Researcher	
	Because that is how I feel. That Algebra I need it more. In Form 3 I will use it, also in 4 and 5. You should know that I would use it in Form 3, 4 and 5.	Neville	
	You said that graphs should be done in the next years. Why do you think so?	Researcher	
	Because I do not like it. I do not enjoy it.	Neville	
	You also said that you get annoyed when you are doing a topic on let's say squares, and all of a sudden you start a topic on triangles. Can you talk about this?	Researcher	
Successful activities	Because sometimes she doesn't do the exercise and does not give us the challenge. Or sometimes during the double lesson, the bell goes and all of a sudden there is a change.	Neville	The student complains that sometimes the activity at the end of the topic is not done. This shows that this activity is having a positive effect on the student and he look forward to it.

	The topic changes?	Researcher	
	Yes, the topic changes.	Neville	
	Can you talk about this challenge?	Researcher	
Successful activity Positive reinforcement	The challenge is at the end of each topic. It is supposed to be at the end of each topic, but for certain topics it was not done. She gives us a challenge, the hardest question with regards to the topic and if we get it correct she might give us a chocolate or whatever or an appraisal or whatever.	Neville	The positive effect of positive reinforcement can be seen here. The student does his best and looks forward for this activity in order to get the positive reinforcement such as a piece of chocolate or appraisal.
	Do you enjoy doing the challenge?	Researcher	
	Yes	Neville	
	Why?	Researcher	
Difficult vs challenging	Because it is challenging.	Neville	The student complains when something difficult is given but likes challenging questions. <u>What is the difference between challenging and difficult? Is it the way it is presented?</u>

	Can you talk about the times you do revision in class?	Researcher	
	Revision annoys me. I prefer starting from the start. And we sort of redo the Maths rather than revision.	Neville	
	But why does revision annoy you?	Researcher	
Teaching and learning: hates repetition. Maths lesson as boring.	Because, I get annoyed repeating the same things. As I told you.	Neville	Neville does not like revision because it is repetitive and boring.
	And how do you behave during the revision lessons? Differently from normal lessons?	Researcher	
Behaviour: Bad behaviour linked with dislike towards topic.	Yes, sometimes I look here and there. I do not give my full attention, since I do not like it.	Neville	When lessons are boring and repetitive Neville has a larger inclination towards being disruptive. <u>Interest/motivation directly linked with behaviour?</u>
	You said that you regard some subjects as not important for your life, but others as less	Researcher	

	important. Does this affect the way you perform in the topic?		
Relevance of Maths. More attention given to relevant topics	Yes, that is how it is supposed to be. I give a lot of attention in angles and constructions and for graphs I do not look at in a good light.	Neville	Neville is very clear here. He gives attention and tries his best in topics which he deem are important for his life but does not do so for topics that he does not deem as important. <u>Relevance to one's life as directly linked with interest/motivation?</u>
	Can you talk about the times you misbehave during the lessons?	Researcher	
Feeling unhappy linked to misbehaviour.	On when I misbehave... Sometimes there is a week, when I am not happy at all, sometimes.	Neville	Links misbehaviour with feeling unhappy.
	And why aren't you happy during that week?	Researcher	
Linking bad behaviour with annoying topics.	Because, for example, something happens before. Sometimes I get annoyed because certain topics are not interesting and she starts giving us HW for example.	Neville	<u>Feelings as directly linked to behaviour/performance?</u> <u>Maslow's hierarchy of needs in action?</u>
	And when you are not happy, what happens?	Researcher	

Feeling unhappy: Does not feel like working.	When I am not happy, I do not feel like doing anything.	Neville	When he is unhappy, Neville does not feel like working. A strong link between feelings and performance in class.
	And what happens during the lesson?	Researcher	
Feeling linked to performance.	I do not pay attention.	Neville	
	And what do you do during the lesson? Do you distract others?	Researcher	
Feelings linked to performance. Feeling angry Incontrollable behaviour	I start quiet, but I will be angry in my inside. I say, 'Oh, how annoying, hope the lesson passes quickly, I do not feel like doing anything...'	Neville	When Neville has negative feelings he finds it difficult to focus on the lesson. <u>Does he know how to handle anger?</u>
	And how often does this happen?	Researcher	
Negative feelings linked to negative performance	Not a lot. There will have to be someone who calls me names, or someone who told me, told me something.	Neville	Even though this has a negative effect on his performance in Maths. This is not related to the Maths content. It is linked

Relationship with peers: negative, bullying			to something that happens before he enters the Maths class.
	And how can the teacher help you?	Researcher	
Relationship with teacher: Teacher can help by asking about feelings.	Maybe, looking at me at telling me, 'What's wrong with you? I am hearing you complaining.'	Neville	Here Neville suggests that the teacher takes note of the feelings of the students in class and asks them how they are feeling. <u>Can the teacher notice when a student is feeling angry?</u>
	Have you ever asked for help in dealing with this situation?	Researcher	
Relationship with peers: Caring.	Once, I was next to my friend and he asked me, 'What happened Neville?' And I told him what had happened and he told the teacher. If I am not remembering incorrectly, she was going to give me an appraisal to cheer me up? I do not know. It was something like this.	Neville	
	What makes you give your best in Maths? What motivates you to do your best?	Researcher	

Successful activities	Sometimes, the challenges the most. I love them.	Neville	
	And what annoys you and prevents you from giving your best?	Researcher	
If he does not like the lesson he will not give his best. Negative feelings prevent him from giving his best.	For example, if we are doing a topic that I do not like or when someone makes me sad before the lesson. Or if it is the last lesson for example. Because sometimes we have the last lesson.	Neville	When Neville does not like the topic, he finds it difficult to do his best. Feelings as vital with regards to lesson performance.
	And why does the last lesson annoy you?	Researcher	
Tiredness linked with negative performance.	Because I do not feel like doing the last lesson. You will be tired and do not feel like a lesson. You will want to go home.	Neville	Neville finds it difficult to focus during lessons at the end of the day.
	So you prefer that Maths lessons be done at the beginning of the day rather than during the last lesson?	Researcher	

Tiredness linked with negative performance.	For example, today, it is at the start. I prefer it like this rather than towards the end. Because Maths is a difficult subject. And it is not good to do it towards the end since you will be tired at that time. And I notice that certain students do not even pay attention during the last part of the lesson. And today they will pay more attention because they will have just waked up. They will have taken everything, the cereal. And they will be more focused and looking at the board.	Neville	<p>Students need to be in the best possible position to be able to focus and give their best during the lesson. If students are tired at the end of the day, it will be very difficult for them to give their best during the lesson.</p> <p>This is not directly related to the actual Maths content but has a very direct effect on the teaching of such content.</p>
	And what should take place during the last lesson?	Researcher	
	PE, or fitness. Something that makes us happy before going home.	Neville	

Week 10 – Video Journal – 18/05/2016

Emergent themes	Original Transcript	Exploratory comments
	<p>At the moment we are not doing any topic and so on during the Maths lesson. We are doing revision during the lesson, but to mention a topic we are doing the first thing that is working with number if I remember correctly. That we did during all the year.</p>	<p><u>If content is understood well, do students need to spend so much time on revision? How is it that teacher blame time constraints when asked why they do not do activities during class time, however they manage to finish the syllabus one month before?</u></p>
<p>Revision: No learning-taking place?</p>	<p>What have I learned this week? As such, I have learnt nothing because now we are doing revision. But what I have learned, just to tell you, is that I am remembering the things we did during the start of the year. Because now I will need to revise all the things we did from the start, since we will soon be having the exams.</p>	<p>Neville says that no learning is taking place since they are doing revision. <u>Are revision lessons useful? Are they a waste of time?</u></p>
<p>Revision as consolidation</p>	<p>We do revision so that we do not fail and we will know everything for example. So that we</p>	<p>Revision helps Neville refresh his memory.</p>

	do not forget what we did in the start of the year.	
	Mhm. I did not like... There is no lesson because as you know I love Maths and there are not lessons that I do not like.	
	There are no lessons that I liked a really lot, lot. Or any lessons that I do not like. Just normal lessons to tell you the truth. Not as such a favourite lesson.	
Exam orientation	Yes, these are things that you surely need even if I do not feel like doing them. You have to do them for your exams.	Neville thinks he needs them because of his exam. <u>Is it healthy for exams to be given so much importance?</u>
	Talking about my behaviour... Maybe sometimes I talk, but overtime I do it because I get bored or if she gives us HW. I would say, 'Oh, how annoying'. Or something similar.	<u>Boredom leads to bad behaviour?</u>
	I think that the teacher can give us a little HW to see whether we get it correct. Then she	

	<p>does not give us more HW about it, but if we get it wrong she can explain it and give us HW again. But if we get it correct we can pass on. This is doing revision.</p>	
<p>Distractions: Talking out of turn, loss of attention, boredom.</p>	<p>What distracted me? As I said, sometimes someone talks to me or I want to talk. Or I start staring at the window since I get bored. I would not want to pay attention because I would have got bored.</p>	
	<p>Nothing else to say about the Maths lesson. No. That's all.</p>	

Week 11 – Video Journal – 25/05/2016

Emergent themes	Original Transcript	Exploratory comments
Revision and useful	<p>At the moment we are doing the algebra topic.</p> <p>Not as in starting it, but revision not to forget.</p> <p>This seems to be helping me a bit.</p>	
Revision as consolidation Exam oriented	<p>What did I learn? Not exactly learned... I remembered again. This is because you will not remember the first things of the year. In fact, she asked me a question and I did not know it because it was at the start of the year and then she told me what it was and I said, 'Oh that is the way to do it.' That means that I had forgotten. Why are we doing this? We are doing this revision because of the exams. But as such we are not doing only one topic. Probably we are not doing algebra today; most probably we are going to change.</p>	<p><i>Revision as a 'remembering' exercise rather than a 'learning' process.</i></p> <p><i>Interesting choice of words by Neville.</i></p> <p><u>Why do students tend to forget things? Does this show lack of 'deep' learning?</u></p> <p>At the end of the year the lessons have become more exam oriented. They are in preparation for the exam.</p>

<p>Maths lesson as difficult and stressful.</p>	<p>So, the lesson that I did not like... I do not know. I think that the lesson that I will not like the most will be the most difficult one. I do not know which ones will be the most difficult, but they will annoy me. They will annoy me quite a bit. And I will not want to do them.</p>	<p>Neville does not like difficult lessons and these seem to cause some sort of stress.</p>
<p>Interesting lesson linked with giving his best</p>	<p>Talking about a lesson that I enjoyed. Yesterday, yesterday we did Algebra and I enjoyed it. I gave my best. Why? Because I regard algebra as interesting, as important, more than the others.</p>	<p>When Neville is interested he will give his best and try harder.</p>
<p>Revision as annoying. The Maths lesson as boring. Exam oriented.</p>	<p>I feel this way every week because I interest myself in Maths. But now I am getting quite annoyed in Maths, since we are doing revision and not a normal lesson. I get bored and do not feel like doing any lesson, for example I start saying, ' Oh how boring this lesson is, I hope it passes soon.' I do this. Because exams</p>	<p>Neville says that the Maths lessons are not as they used to be. They have become boring because they only consist of revision. They have become totally focused on the exams ahead.</p> <p><u>Is revision annoying for the student? Does it increase chances of bad behaviour?</u></p>

	are fast approaching and I start saying, 'How annoying.'	<u>Is it worth it having so much revision?</u>
	I think that during this topic she does not need to do the revision better. The past papers or the papers, whatever as they say.	
Distractions.	What distracted me? Words, hearing something. Mhm... if someone talks to another person, and I look at them. Almost, everything can happen.	
	I have nothing more to say.	

Week 12 – Video Journal – 01/06/2016

Emergent themes	Original Transcript	Exploratory comments
<p>Revision as refreshing of memory.</p>	<p>At the moment we are doing revision, but I think I forgot about what we are doing. Because a long time passed since I had Maths. And we are doing something, something, doing something, I do not know, I do not know, but, eh, circles! Circles. Circles. Revision. That means that we change topic quickly. This does not even last one week. We do not even do two days. One day or one lesson we do them.</p> <p>One revision topic. This topic, I did not learn anything, but the things I had forgotten, such as the circles formula, I had forgotten it and now I remember it. Two Pi r and Pi d for example. For the area, for example and so on.</p>	

<p>Relationship with the teacher: Does not like being shouted at.</p>	<p>What I did not like are parts, pieces. When I am doing something wrong and the teacher shouts at me. That makes me angry and I will then not feel like a lesson. Because then you would not want to see her face when she shouts at you for example.</p>	<p>This is the first time Neville complains about his teacher. Does not like being shouted at.</p>
<p>The Maths lesson as boring. Boredom linked with distracted behaviour.</p>	<p>I do not know about any lessons that I liked. The lessons are now boring, I have nothing to do. I stay playing with things. I do not feel like it at the moment.</p>	<p>Revision lessons are boring according to Neville. He gets easily distracted and plays with things.</p>
	<p>Am I giving my best? Yes, I am not sure, but I think I am doing my best. Why? Because that's it. I manage to give my best.</p>	
	<p>Talking about my behaviour. I feel more like energetic. I have just arrived at school. Since I am a boy who gets excited, after school I have</p>	

	<p>things to do and I get excited I enjoy it. And I will be excited to leave school. During the last lesson I cannot help stopping myself. I get so excited to go home. So I start screaming as I am going down the stairs to go home. Yeah!! I am happy.</p>	
	<p>The teacher can take longer. Because in one lesson, in the middle of the lesson, she changes circles, literally. And I get confused. Because we did so many topics this week. We did a lot, let alone during double lessons. Four topics. Revision. To not forget. It is like the teacher is not doing the topic correctly.</p>	<p>These lessons are revision, so one is expected to go over the topics in a rapid way. I will not give too much weight to this.</p>
<p>Distractions: external.</p>	<p>What distracted me? Mhm. Some sounds from outside, or for example, I see someone outside, or someone knocks, I will have to look at him for sure, or if I am writing and someone calls me. Something like this. Is there anything</p>	

Exams causing stress.	else I would like to say? Not really. I hope that the exams pass as quickly as possible. That is what I would like to say. And not only for Mathematics, but for everything. This is because exams really annoy me. So that is the last thing. That the exams pass. I do not love exams. Not one thing. Nothing.	
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Appendix 3: Ethical Clearance



Downloaded: 23/12/2015
Approved: 23/12/2015

Jonathan Camenzuli
Registration number: 130113791
School of Education
Programme: Ed.D in Children, Schools & Families

Dear Jonathan

PROJECT TITLE: Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.

APPLICATION: Reference Number 006646

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 23/12/2015 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 006646 (dated 09/12/2015).
- Participant information sheet 1013360 version 2 (09/12/2015).
- Participant information sheet 1013365 version 2 (09/12/2015).
- Participant information sheet 1013364 version 2 (09/12/2015).
- Participant information sheet 1013363 version 2 (09/12/2015).
- Participant information sheet 1013362 version 2 (09/12/2015).
- Participant information sheet 1013361 version 2 (09/12/2015).
- Participant consent form 1013356 version 1 (07/11/2015).
- Participant consent form 1013357 version 1 (07/11/2015).
- Participant consent form 1013358 version 1 (07/11/2015).
- Participant consent form 1013359 version 1 (07/11/2015).


If during the course of the project you need to [deviate significantly from the above-approved documentation](#) please inform me since written approval will be required.

Yours sincerely

Professor Daniel Goodley
Ethics Administrator
School of Education



MALTESE EPISCOPAL CONFERENCE
Secretariat for Catholic Education

The Head


15th January, 2016

Mr Jonathan Camenzuli, currently working on a doctoral research project at The University of Sheffield, requests permission to ask the input of 5 students aged between 12 and 15 years to conduct a video journal and to conduct interviews with the same students with regards to the video journal entries, at the above mentioned school.

The Secretariat for Catholic Education finds no objection for Mr Jonathan Camenzuli to carry out the stated exercise subject to adhering to the policies and directives of the school concerned.



Rev Dr. Charles Mallia
Delegate for Catholic Education

Appendix 4: Information Sheets & Consent Forms

Information sheet for educators at school (English Version)

[Date]
Mr. Jonathan Camenzuli



Dear Mr. /Ms. [Surname],

I am a doctoral student at the School of Education at the University of Sheffield. As part of my studies, I will be writing a thesis and the title of my thesis is '*Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties*'. The aim of the study is to explore the views of students with Social, Emotional and Behavioural Difficulties (SEBD) with regards to their learning experience of Mathematics. Moreover, it will suggest educational strategies and interventions that could make this learning experience of Mathematics more meaningful to students with SEBD.

My research involves providing students with a video camera and they will be asked to input 5 minutes video journal entries on a weekly basis with regards to their learning experience of Mathematics (total of 60 minutes in 12 weeks). It then involves talking to the students about their video journal entries through an audio recorded individual informal interview that will be done with me every 4 weeks (total of 60 minutes in 12 weeks). The project will have a duration of 12 weeks. The audio and video recording of the activities during this research will be used for analysis only. No other use will be made of them without your written permission, and no one outside the research will be allowed access to the original recordings.

In order to be able to do my research study, I will need the participation of students from your school. I would like to assure you that all the information collected will be used solely and for the purpose of the study. Total

confidentiality and anonymity will be maintained. I would like to point out that anything the students says will be treated in confidence. The students' name or the name of the school will not be written down anywhere and the students will be given a pseudonym. Participants will have the right to withdraw from the study at any time, even after the conclusion of the study by contacting the undersigned or my supervisor, Dr. Anthony Williams (anthony.williams@sheffield.ac.uk). Complaints can also be forwarded to my supervisor's e-mail.

This project has been ethically approved via the School of Education ethics review procedure at the University of Sheffield. This research is funded by the Maltese Government Scholarship Grant (MGSS).

Thanks and Regards,

Mr. Jonathan Camenzuli

Information sheet for educators at school (Maltese Version)

[Data]
Is-Sur Jonathan Camenzuli



Għażiż/a Sur-/Sinjura- [Kunjom],

Jien student fl-Iskola tal-Edukazzjoni ġo l-Università ta' Sheffield u qiegħda nagħmel id-dottorat. Dan il-kors jinvolvi li jien nagħmel teži u t-titlu ta' din it-teži hu 'Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.' (Ilħna mill-marġini: L-esperjenza fit-tagħlim tal-Matematika ta' student b' diffikultà soċjali, emozzjonali u ta' mġieba). L-ewwel għan ta' din ir-riċerka huwa li jesplora l-ħsibijiet ta' studenti b' diffikultà soċjali, emozzjonali u ta' mġieba fir-rigward tal-esperjenza fit-tagħlim tal-Matematika. It-tieni għan ta' din ir-riċerka u li jiġu ssuġġerita strateġiji ta' kif wieħed jista' jagħmel din l-esperjenza fit-tagħlim tal-Matematika waħda aħjar lil dawn l-istudenti.

Ir-riċerka tiegħi tinvolvi li jien nagħti kamera li tiegħu l-video lis-studenti u huma se jiġu mitluba jirrakkontaw l-esperjenza tagħhom waqt il-lezzjoni tal-Matematika darba f'gimġha f'kamra privata. Kull darba se jiġu mitlub jiġbdu 5 minuti (total ta' 60 minuta fi 12 –il gimġha). Wara jien se nsaqsi lit-tfal permezz ta' intervista' informali dwar dawk l-esperjenzi li jkunu rrakkontaw fid-djarju (total ta' 60 minuta fi 12 –il gimġha). Din l-intervista' se ssir kull erbgħa gimghat. Il-proġett kollu se jdum 12-il gimġha. L-awdjo u l-video tal-istudent se jiġi użat biss għall-analiżi. L-informazzjoni użata mhux se tiġi użata bl-ebda mogħod sakemm ma jkollniex permess tiegħek bil-miktub mil-partecipant. Fladd minn barra r-riċerka m'hu se jitħalla jara l-video originali.

Biex jien nkun nista' nagħmel ir-riċerka għandi bżonn il-partecipazzjoni tal-istudenti mill-iskola tiegħek. Nixtieq nassgurak li l-informazzjoni kollha li se niġbor se tkun biss użata għal fini ta' dan l-istudju u kull ħaġa li l-istudent

jiddiskuti miegħi se jibqa' kunfidenza u anonimu. L-isem tal-istudent mhux se jiġi miktub imkien u t-tifel se jingħata isem fittizju. L-istudent se jkollu d-dritt li jaċċetta jew jirrifjuta li jieħu sehem f'dan l-istudju f'kull stadju tal-istudji u jekk jhossu li m'għandux jipparteċipa mhux se jkun hemm effetti negattivi fuq l-istudent. Il-parteċipanti se jkunu jistaw jirtiraw minn dan l-istudju meta huma jixtiequ, anke wara li l-istudju jkun intemm. Dan huma jistaw jagħmluh billi jgħarrfu lili jew lis-'supervisor' tiegħi, Dr. Anthony Williams fuq anthony.williams@sheffield.ac.uk. Tista' tgħaddi l-ilmenti tiegħek fuq dan l-email ukoll.

Dan il-proġett ġie aċċettat etikament mil-bord tal-etika fi ħdan l-Iskola tal-Edukazzjoni ġewwa l-Università ta' Sheffield. Dan l-istudju huwa finanzjat b'fondi mil-'Maltese Government Scholarship Scheme (MGSS).

Grazzi u tisljiet,

Is-Sur Jonathan Camenzuli

Information sheet for parents (English version)

25/01/2016
Mr. Jonathan Camenzuli

Dear Parent,

I am a doctoral student at the School of Education at the University of Sheffield. As part of my studies, I will be writing a thesis and the title of my thesis is '*Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties*'. The aim of the study is to explore the views of students with Social, Emotional and Behavioural Difficulties (SEBD) with regards to their learning experience of Mathematics. Moreover, it will suggest educational strategies and interventions that could make this learning experience of Mathematics more meaningful to students with SEBD.

My research involves providing students with a video camera and they will be asked to input 5 minutes video journal entries on a weekly basis with regards to their learning experience of Mathematics (total of 60 minutes in 12 weeks). It then involves talking to the students about their video journal entries through an audio recorded individual informal interview that will be done with me every 4 weeks (total of 60 minutes in 12 weeks). The project will have a duration of 12 weeks. The audio and video recording of your child's activities during this research will be used for analysis only. No other use will be made of them without your written permission, and no one outside the research will be allowed access to the original recordings.

In order to be able to do my research study, I will need your child's participation. I would like to assure you that all the information collected will be used solely and for the purpose of the study. Total confidentiality and anonymity will be maintained. I would like to point out that anything your child says will be treated in confidence. Your child's name or your name will not be

written down anywhere and the child will be given a pseudonym. You have the right to give/not give your consent for your children participation at any stage throughout the project and this will not have any negative repercussions. Your child will also have the right to withdraw from the study at any time, even after the conclusion of the study by contacting the undersigned or my supervisor, Dr. Anthony Williams (anthony.williams@sheffield.ac.uk). Complaints can also be forwarded to my supervisor's e-mail. You have a right to see the children's video diary entries and recorded interviews at any stage of the project.

This project has been ethically approved via the School of Education ethics review procedure at the University of Sheffield. This research is funded by the Maltese Government Scholarship Grant (MGSS).

Thanks and Regards,

Mr. Jonathan Camenzuli

The participant should receive a copy of the signed and dated participant consent form and the information letter. A copy of the signed and dated consent form should be placed in secure place.

Information sheet for parents (Maltese version)

[Data]

Għażiż [Kunjom tal-ġenitur],

Jien student fl-Iskola tal-Edukazzjoni ġo l-Università ta' Sheffield u qiegħda nagħmel id-dottorat. Dan il-kors jinvolvi li jien nagħmel teži u t-titlu ta' din it-teži hu 'Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.' (Ilħna mill-margjini: L-esperjenza fit-tagħlim tal-Matematika ta' student b' diffikultà soċjali, emozzjonali u ta' mġieba). L-ewwel għan ta' din ir-riċerka huwa li jesplora l-ħsibijiet ta' studenti b' diffikultà soċjali, emozzjonali u ta' mġieba fir-rigward tal-esperjenza fit-tagħlim tal-Matematika. It-tieni għan ta' din ir-riċerka u li jiġu ssuġġerita strategiji ta' kif wieħed jista' jagħmel din l-esperjenza fit-tagħlim tal-Matematika waħda aħjar lil dawn l-istudenti.

Ir-riċerka tiegħi tinvolvi li jien nagħti kamera li tieħu l-video lis-studenti u huma se jiġu mitluba jirrakkontaw l-esperjenza tagħhom waqt il-lezzjoni tal-Matematika darba f'gimġha f'kamra privata. Kull darba se jiġu mitlub jiġbdu 5 minuti (total ta' 60 minuta fi 12 –il ġimġha). Wara jien se nsaqsi lit-tfal permezz ta' intervista' informali dwar dawk l-esperjenzi li jkunu rakkontaw fid-djarju (total ta' 60 minuta fi 12 –il ġimġha). Din l-intervista' se ssir kull erbgħa ġimġhat. Il-proġett kollu se jdum 12-il ġimġha. L-awdjo u l-video tat-tifel tiegħek se jiġi użat biss għall-analiżi. L-informazzjoni użata mhux se tiġi użata bl-ebda mogħod sakemm ma jkollniex permess tiegħek bil-miktub. F'add minn barra r-riċerka m'hu se jithalla jara l-video oriġinali.

Biex jien nkun nista' nagħmel ir-riċerka għandi bżonn il-partecipazzjoni tat-tifel tiegħek. Nixtieq nassigurak li l-informazzjoni kollha li se niġbor se tkun biss użata għal fini ta' dan l-istudju u kull haġa li t-tifel tiegħek jiddiskuti miegħi se

jibqa' kunfidenza u anonimu. L-isem ta' tifel mhux se jigi miktub imkien u lit-tifel se jinghata isem fittizju. Inti ghandek id-dritt li taçcetta jew tirrifjuta li t-tifel jiehu sehem f'dan l-istudju f'kull stadju tal-istudji u jekk thoss li t-tifel m'ghandux jipparteçipa mhux se jkun hemm effetti negattivi fuq t-tifel. It-tifel tieghek se jkollu id dritt li jirtira minn dan l-istudju meta hu tixtieq, anke wara li l-istudju jkun intemm. Dan int jista' jagħmlu billi jgħarraf lili jew lis-'supervisor' tiegħi, Dr. Anthony Williams fuq anthony.williams@sheffield.ac.uk. Tista' tgħaddi l-ilmenti tieghek fuq dan l- email ukoll. Int se jkollok dritt li tara d-djarju tat-tifel u l-intervista' mat-tifel tieghek meta tixtieq.

Dan il-proġett gie açcettat etikament mil-bord tal-etika fi ħdan l-Iskola tal-Edukazzjoni ġewwa l-Università ta' Sheffield. Dan l-istudju huwa finanzjat b'fondi mil-'Maltese Government Scholarship Scheme (MGSS).

Grazzi u tisliziet,

Is-Sur Jonathan Camenzuli

Meta li kunsens ikun iffirmit mill-persuni koncernati, l-ġenitur se t'jirçievi koppja ta' dan il-kunsens iffirmita mill-ġenituri u l-ittra bl-informazzjoni. Koppji tal-ittra u l-kunsens se jkunu merfġuha f'post sigur.

Information Sheet for students (English Version)

25/01/2016

Dear [Student],

I am doctoral student studying at the School of Education at the University of Sheffield. Part of my studies involves the writing of a thesis and the title of my thesis is *'Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties'*. The aim of the study is to explore the views of students with Social, Emotional and Behavioural Difficulties (SEBD) with regards to their learning experience of Mathematics. Moreover, it will suggest educational strategies and interventions that could make this learning experience of Mathematics more meaningful to students with SEBD.

As part of my study I will be giving you a video camera and you will be asked to input 5 minutes video journal entries on a weekly basis with regards to your learning experience of Mathematics (total of 60 minutes in 12 weeks). I will also be asking you some questions every four weeks with regards to your video journal entries (60 minutes in 12 weeks). These interviews will be audio recorded. The project will have a duration of 12 weeks. Afterwards, the data collected will be analysed by myself to see what you think about your learning experience in Mathematics and what could help in offering you with a better learning experience in the subject.

You have the right to give/not to give your consent to take part in this project. Also, you have the right to withdraw at any time, even after the conclusion of the study by contacting the undersigned or my supervisor, Dr. Anthony Williams (anthony.williams@sheffield.ac.uk). Complaints can also be forwarded to my supervisor's e-mail. You will be given another name if you choose to participate. What you say in your video journals and what you say about your video journals will be used only for the purpose of the study. Your parents will have the right to view your video journal if they request to do so at any stage of the project.

Thanks and Regards,

Mr. Jonathan Camenzuli

The participant should receive a copy of the signed and dated participant consent form and the information letter. A copy of the signed and dated consent form should be placed in secure place.

Information sheets for students (Maltese Version)

[Data]
Is-Sur Jonathan Camenzuli

Għażiż [isem tal-istudent],

Jien student fl-Iskola tal-Edukazzjoni ġo l-Università ta' Sheffield u qiegħda nagħmel kors li jwassal għal dottorat. Dan il-kors jinvolvi li jien nagħmel teži u t-titlu ta' din it-teži hu 'Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.' (Ilhna mill-margini: L-esperjenza fit-tagħlim tal-Matematika ta' student b' diffikultà soċjali, emozzjonali u ta' mgieba). L-ewwel għan ta' din ir-riċerka huwa li jesplora l-ħsibijiet ta' studenti b' diffikultà soċjali, emozzjonali u ta' mgieba fir-rigward tal-esperjenza fit-tagħlim tal-Matematika. It-tieni għan ta' din ir-riċerka u li jiġu ssuġġerita strateġiji ta' kif wieħed jista' jagħmel din l-esperjenza fit-tagħlim tal-Matematika waħda aħjar lil dawn l-istudenti.

Ir-riċerka tiegħi tinvolvi li jien nagħti kamera li tieħu l-video lilek u se tiġi mitlub tirrakkonta l-esperjenza tiegħek waqt il-lezzjoni tal-Matematika darba f'gimġha f'kamra privata. Kull darba se tiġi mitlub tiġbed 5 minuti (total ta' 60 minuta fi 12 –il gimġha). Wara jien se nistaqsi, permezz ta' intervista' informali dwar dawk l-esperjenzi li tkunu irrakkontat fid-djarju (total ta' 60 minuta fi 12 –il gimġha). Din l-intervista' se ssir kull erbgħa gimġhat. Il-proġett kollu se jdum 12-il gimġha. L-awdjo u l-video tiegħek se jiġi użat biss għall-analiżi biex nara int x'taħseb dwar l-esperjenza tiegħek fit-tagħlim tal-Matematika u x'jista' jsir biex din l-esperjenza fit-tagħlim tal-Matematika tiegħek tkun waħda aħjar.

Int tista' tagħżel jekk trid jew ma tridx tipparteċipa f'dan l-istudju. Għandek ukoll id dritt li tirtira minn dan l-istudju meta int tixtieq, anke wara li l-istudju jkun intemm. Dan int tista' tagħmlu billi tgħarraf lili jew lis-'supervisor' tiegħi, Dr.

Anthony Williams fuq anthony.williams@sheffield.ac.uk. Tista' tgħaddi l-ilmenti tiegħek fuq dan l- email ukoll. Int se tingħata wkoll isem differenti u tista' tagħżel li ma tipparteċipax anke aktar tard. Dak li tgħid fid-djarju se jintuża' biss għal dan l-istudju. Il-ġenituri tiegħek se jkollhom dritt jaraw id-djarju tiegħek jekk dawn ikunu jridu.

Grazzi u tisljiet,

Is-Sur Jonathan Camenzuli

Meta li kunsens ikun iffirmit mill-persuni konċernati, l-ġenitur se tjirċievi koppja ta' dan il-kunsens iffirmita mill-ġenituri u l-ittra bl-informazzjoni. Koppji tal-ittra u l-kunsens se jkunu merfġuha f'post sigur.

Consent form for Parents (English Version)

Title of Project: Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.

Name of Researcher: Jonathan Camenzuli

Participant Identification Number for this project:

Please Initial Boxes

1. I confirm that I have read and understand the information letter dated 25/01/2015 explaining the above research project and I have had the opportunity to ask questions about the project.
2. I understand that my child's participation is voluntary and that I am free to withdraw my child from the research at any time without giving any reason and without there being any negative consequences. In addition, I am aware that if my child does not wish to answer any particular question(s), s/he is free to decline. You can contact the researcher on 79065627.
3. I understand that my child's responses will be kept strictly confidential. I give permission to the research to have access to my anonymised responses. I understand that my child's name will not be linked with the research materials, and s/he will not be identified or identifiable in the report that results from the research.
4. I give my consent for my child to take part in the above research project.

Name of Parent

Date

Signature

Name of Researcher

Date

Signature

Copies: _____

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form and the information letter. A copy of the signed and dated consent form should be placed in secure place.

Consent form for parents (Maltese Version)

Titlu tal-Proġett tar-Riċerka: Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties. (Ilĥna mill-margġini: L-esperjenza fit-tagħlim tal-Matematika ta' student b' diffikultà soċjali, emozzjonali u ta' mgieba.

Isem tar-Riċerkatur: Jonathan Camenzuli

Numru ta' Identifikazzjoni għal-Ġenituri tat-Tfal Partecipanti:

Jekk jogħġbok qiegħed l-inizjali fil-kaxxi

1. Jien nikkonferma li qrajt u fhimt l-ittra ta' informazzjoni datata 3/11/2015 li titkellem dwar il-proġett ta' riċerka msemmi hawn fuq u kelli l-opportunita' li nsaqsi mistoqsijiet dwar dan il-proġett.
2. Jien nifhem li l-partecipazzjoni tat-tifel tiegħi hi volontarja u jien qiegħda/qiegħed fil-libertà li ma nħallix jew inwaqqaf lil ibni milli jjeħu sehem f'din ir-riċerka bla ma nagħti raġuni għaliex u mingħajr ma jkun hemm konsegwenzi negattivi. Jien naf ukoll li jekk ibni ma jridx iwieġeb xi mistoqsijiet partikolari hu jista' jagħmel dan.
3. Jien nifhem li t-twegibiet tat-tifel/tifla tiegħi se jkunu kunfidenzjali. Jien nifhem li l-isem tat-tifel/tifla tiegħi mhux se jkunu mqabbla ma' materjal fir-riċerka u hu/hi mhux se jġu identifikati fir-riżultati tar-riċerka.
4. Jien nagħti l-kunsens biex it-tifel/tifla tiegħi j/tippartecipa fir-riċerka.

Isem ta' Ġenitur

Data

Firma

Isem tar-Riċerkatur

Data

Firma

Koppji: _____

Meta li kunsens ikun iffirmit mill-persuni konċernati, l-ġenitur se t/jirċievi koppja ta' dan il-kunsens iffirmita mill-ġenituri u l-ittra bl-informazzjoni. Koppji tal-ittra u l-kunsens se jkunu merfġuħa f'post sigur.

Consent form for students (English version)

Title of Project: Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties.

Name of Researcher: Jonathan Camenzuli

Participant Identification Number for this project:

Please Initial Boxes

1. I confirm that I have read and understand the information letter dated 25/01/2016 explaining the above research project.
2. I confirm that I have had the opportunity to ask questions about the project. I also understand that my participation is voluntary and I am free to withdraw from the research at any time without giving any reason and without there being any negative consequences.
3. I understand that what I say in the research will be strictly confidential and I understand that for the research I will be given another name.
4. I give my consent to take part in the above research project.

Name of Student Date Signature

Name of Researcher Date Signature

Copies: _____

Once this has been signed by all parties the participant should receive a copy of the signed and dated participant consent form and the information letter. A copy of the signed and dated consent form should be placed in secure place.

Consent form for students (Maltese Version)

Titlu tal-Proġett tar-Riċerka: Voices from the margin: The learning experience of Mathematics by students with Social, Emotional and Behavioural Difficulties. (Ilhna mill-margini: L-esperjenza fit-tagħlim tal-Matematika ta' student b' diffikultà soċjali, emozzjonali u ta' mgieba.

Isem tar-Riċerkatur: Jonathan Camenzuli

Numru ta' Identifikazzjoni tat-Tfal Partecipanti:

Jekk jogħġbok qiegħed l-inizjali fil-kaxxi

1. Jien nikkonferma li qrat u fhimt l-ittra bl-informazzjoni dwar ir-riċerka msemija hawn fuq datata 2/11/2015.
2. Jien nikkonferma li kelli l-opportunita nsaqsi mistoqsijiet dwar il-proġett. Jien ukoll nifhem il-partecipazzjoni tiegħi fil-proġett hi waħda volontarja u jien nista' nieqaf milli nippartecipa milli nieħu sehem f'dan il-proġett mingħajr ma nagħti raġuni u mingħajr konsegwenzi negattivi.
3. Jien nifhem li dak li ngħid fir-riċerka se jkun b'mod kunfidenzjali u jien nifhem li fir-riċerka se ningħata isem ieħor u mhux l-isem li għandi.
4. Jien nagħti l-kunsens biex nippartecipa f'dan il-proġett.

Isem ta' l-istudent

Data

Firma

Isem tar- riċerkatur

Data

Firma

Koppji: _____

Meta tiffirma int se tingħata koppja ta' din il-karta flimkien mal-ittra bl-informazzjoni dwar il-proġett. Dawn il-karti għandek tħallihom f'post sigur fid-dar tiegħek li int u l-ġenituri tkunu tafu bih. Jien se nħalli l-koppja tiegħi go kexxun. Dan il-kexxun se nfakkru u nkun nista' nifthu jiena biss.

Appendix 5: My Action Plan

In Table A5.1, I present a possible action plan that is based on my professional growth. Given that this study is part of my professional doctoral journey, I do believe that the outcomes from this study should resonate well across my profession and my daily professional career. These plans fall within my responsibilities of an Education Officer with the Ministry for Education and Employment in Malta and my strong desire to offer students who present with SEBD with a better learning experience.

Community	Setting	Action Plans
Professionals in the School community: Teachers, Learning Support Assistants (LSA), Senior Management Teams	Seminars, accredited professional development courses	Through the Institute for Education ¹ in Malta, I will design and deliver professional development courses that are accredited to teachers and LSAs. These courses will deal with supporting students who exhibit with challenging behaviour and will be made available at national level both as voluntary and compulsory courses.
Policy makers	Meetings	Through my position as an Education Officer in inclusive education I will push forward changes in policy to better cater

¹ The Institute for Education was established in April 2015 to provide various modes of continuing professional development that inject the 21st century skills and competences into the educators at all levels of leadership and infuse equity and social justice within all the learning programmes. (see <https://instituteforeducation.gov.mt>)

		for student who present with challenging behaviour at school.
Research Community	Publication of papers	I will write peer-reviewed papers presenting the main findings of this study to disseminate research findings across the academic field. This will help in increasing resonance of my study as discussed in section 3.5.5, in chapter 3.

Table A5.1: My action plan