

# **MEASURING MOTIVATION IN STUDENTS WITH CHALLENGING BEHAVIOUR: DIFFICULTIES AND REWARDS**

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*“Once more unto the breach dear friends, once more”: motivation and  
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## *Abstract*

This paper provides a new perspective on some of the difficulties inherent in measuring motivational states in students who have challenging behaviour, and the potential benefits for such students if their motivation for learning is better understood. The implications of measuring motivation in such students are examined, in the context of a classroom where attendance is compulsory. Despite a wide range of research into the importance of motivation for successful learning among the general school population little research has targeted patterns of motivation in students who have challenging behaviour, or the implications for successful learning in these students. This paper considers these issues and outlines a mixed-methods case study that measures motivational responses of 14 students in the middle years of school with challenging behaviour. In this evaluative case study, data gathering involved students' self-reported Motivational Response Profiles (MRPs), participant observation, video data, and online probes contained within a specialist software tool. The research approach demonstrated the advantages to of data triangulation from both qualitative and quantitative sources in the analysis of responses. Findings indicated that different groupings of motivational responses existed for this cohort of students - from unmotivated to fully-engaged - and academic achievement varied across these motivational groupings. Negative motivational groupings tended to relate to poor achievement, and positive motivational groupings to higher achievement. A compliant motivational grouping produced performance ratings well below those of the fully engaged motivational grouping, supporting a hypothesis that compliance is a necessary but not sufficient condition for learning in these students. These findings highlight the potential benefits of further research into the relationship between motivation to learn and academic achievement, both for the benefit of students with challenging behaviour, and the teachers who teach them.

## MEASURING MOTIVATION IN STUDENTS WITH CHALLENGING BEHAVIOUR: THE DIFFICULTIES AND REWARDS

Context is often left out of debate and discussion surrounding challenging behaviour in education. Schools are institutions for learning. Young people in schools find themselves in the particular and universal circumstance of being forced into a situation where they are not only required to attend and observe, but are also required to learn — perhaps even learn something that they do not want to. Behavioural responses of students in compulsory education vary, from enthusiastic compliance to outright defiance. In the case of defiant behaviour in the classroom the modification of this challenging behaviour is often addressed directly, independent of the learning context. This paper addresses assumptions surrounding the relationship between challenging behaviour and motivation to learn in students who through action, or inaction, defy the learning process. Firstly, an assumption underlying much of the literature surrounding the modification of challenging behaviour in the classroom is that if students can be encouraged to control their behaviour in the classroom, then they can then have the opportunity to learn (Bracks, 2006; Brennan, 2006, 2007; D. Cameron, 2007; Cowley, 2006; T. J. Lewis, Scott, & Sugai, 1994; Richmond, 2007; Rogers, 2005, 2006). One of the intended elements of improved behaviour in the classroom context is improved learning, not just improved behaviour for its own sake. This paper also addresses the assumption of motivational researchers — that if a student is interested, motivated, or engaged in the classroom then such a student more likely to be learning effectively. If a student is learning effectively then they will be complying with the wishes of the teacher as schools are defined as institutions for learning (Ainley, Hidi, & Berndorff, 2002; Deci, Koestner, & Ryan, 2001; Ely, 2008; Hidi & Harackiewicz, 2000). The purpose of this paper is to address the tensions that exist between these two assumptions in the education of students with challenging behaviour.

The existence of students with challenging behaviour is not a new phenomenon. Strategies designed to deal with such students were written as long ago as the second century. The Greek physician Galen (c. 175 A.D.) suggested that the censorship of inappropriate ‘cultural’ stimuli, a good diet and lots of exercise was the best way to prevent the corruption of children (Beekman, 1977). Today there are a modern approaches developed to address the difficulties of having students with challenging behaviour in the class (Foster, Brennan,

Biglan, Wang, & al-Ghaith, 2002; Kazdin, 2001; R. Lewis, 1991; Rogers, 2006, 2007).

Central to these approaches is the belief that achieving behavioural compliance in a student is a precondition for improved learning outcomes. While a number of behaviour management approaches have been effective in the modification of challenging behaviours (Chafouleas, Riley-Tillman, & Sugai, 2007), as a group they have largely ignored consideration of student motivational factors (Cowley, 2006; Richmond, 2007; Rogers, 2007; Sugai et al., 2000). In these approaches little connection is made between behaviour, motivation and successful learning in the classroom.

In much the same way as behavioural researchers have considered motivational factors as peripheral, research into student motivation rarely deals with the types of learning issues confronted every day by teachers who have students with challenging behaviour in their classrooms (Deci, Koestner, & Ryan, 2001; Harter & Connell, 1984; White, 1959). Motivational research emphasises understanding motivational factors, and linking them to academic success, separate from behavioural considerations. Motivational researchers have found that student compliance alone, without interest (Ainley, Hidi, & Berndorff, 2002), attempts at mastery (Ames, 1992b) or internal self-regulation (Deci et al., 2001) leads to a lack of success in the classroom. Students with challenging behaviours often present as outliers in these large-scale quantitative motivational research studies (Ryan & Deci, 2000).

Despite these 'gaps' in the research there are some strong, perhaps unintended, hints in the behavioural literature that engagement, interest or motivational issues are a significant factor in the antecedents to challenging behaviour.

Heckaman, Conroy, Fox and Chait (2000) conducted a meta-analysis of 22 studies relating to challenging behaviour in school settings involving 68 students aged 4 to 14, of whom 51 were males and 17 were females. The problem behaviours targeted were aggression, damage to fixtures and fittings, self-harm, abusive language, calling out, crying, screaming, being off task, failing to complete tasks, task avoidance, non-compliance and general disruptive behaviour. Heckaman et al. reported that 15 of the 22 studies hypothesised that curricular and other instructional variables, including student interest, were associated with the problem behaviours exhibited (Heckaman, Conroy, Fox, & Chait, 2000). In these 15 studies, the antecedents to the problem behaviours were identified by observations, structured interviews, and teacher rating of problem behaviour. Personal, situational and topic interest are motivational variables (Ainley et al., 2002; Hidi & Harackiewicz, 2000). In these studies

the implication is that lack of interest, or lack of motivation to attend to the task, is one of the antecedents to challenging behaviour in the learning context. In the remaining seven studies, the identified function of the problem behaviour included obtaining the attention of the teacher and/or escape/avoidance of demands or tasks in the classroom. Again, if the antecedent for the challenging behaviour relates to an avoidance of the task, it may be inferred that the individual was not motivated to do the task set. An implication suggested by Heckaman's study is that in all 22 studies many of the 68 students exhibited challenging behaviours as a consequence of lacking interest in, being disengaged from, or wanting to avoid classroom work. One possible interpretation of Heckaman's work is that some of these students exhibited challenging behaviour because they were neither motivated to be in the class, nor to complete set tasks.

#### *Measuring motivation in students with challenging behaviour – the difficulties.*

It is assumed that learning can take place if and when students with challenging behaviour are compliant (Richmond, 2007). Currently, educational administrations decide upon behavioural guidelines or rules, which are set in place with appropriate sanctions. In Victoria, Australia, the code of conduct in schools is mandated by the government (Hayward, 1994). All parties agree to the procedures, actively or tacitly, and compliance is then required by all stakeholders, including teachers and students.

Most administrative literature surrounding challenging behaviour and the pursuit of consistency contains a paradox (Galloway, 1998). A consistent approach by all teachers, at all times would presuppose that an individual teacher would be entirely consistent in their reactions to students from day-to-day, class-to-class, and student-to-student. In such an ideal educational world, the judgement of the teacher with regard to context, personal issues or communication styles of individual students would never be tested. Even if there was complete agreement between teachers regarding behaviour management and teachers communicate behavioural norms identically to all students, on every occasion, it would remain impossible to control the way such information would be perceived by students themselves (Richmond, 2007).

The relationship between motivation to learn and challenging behaviour is rarely, if ever, mentioned in administrative approaches to students with challenging behaviour. The dilemma inherent in an administrative approach to behaviour management is that although a

motivated student is usually compliant, a compliant student is not always motivated (Hidi & Harackiewicz, 2000).

### *Difficulties for teachers*

A body of teacher-centred, hands-on behavioural literature addresses a readership of teachers, encouraging them to improve classroom management practice. All teacher-centred studies and approaches have a number of aspects in common. They deal specifically with elements of the student's behaviour within the teacher's control. These approaches often require the teacher to manipulate, professionalise, and control the dialogue between the teacher and the student in order to encourage more appropriate behaviour. Teachers are encouraged to effect change upon circumstances within their direct control, paying little attention to less tangible factors, such as individual student interest or motivation. Cowley (2006) emphasises the practical aspects of managing "*misbehaviour*", and outlines the key issues that a teacher needs to address in order to "*get the buggers to behave*". Cowley gives a step-by-step guide to classroom management and elaborates upon each step. She suggests that teachers should be: "*definite; aware; calm; positive; interested; flexible; persistent; consistent, and to give students structure*" (Cowley, 2006, p. 6).

Cowley's ideas on behaviour management and teacher practice are partially echoed in a variety of literature. Ross (1999) takes a similar approach and disassociates challenging behaviour in the class from the task, or curriculum. Lewis and Sugai (1999) emphasise interpersonal relationships, encouraging the students to behave well by structuring verbal interactions using repetition of student language (R. Lewis, 1991; Lovegrove, Lewis, & Burman, 1991; Ross, 1999). Once again, motivational issues and their relationship with challenging behaviour are not directly addressed. Brennan (2007) argues that effective anger management on the part of the teacher can assist in the management of student behaviour. He encourages the teacher to smile more often in the face of the challenging behaviour, build interpersonal relationships, and use Socratic questioning techniques. Richmond (2007) describes behaviour management as an iterative, circle of correction, resentment and disruption, with acknowledgement and correction balanced upon the fulcrum of the teacher's expectations.

As hands-on approaches to the management of challenging behaviour in schools are often teacher-centred, approaches to interventions focus on what the *teacher* can do in the classroom. Measurement and manipulation of motivation or interest in individual students is perhaps perceived as unrealistic for the teacher in an everyday setting. Understanding motivational preferences for learning in individual students requires a student-centred approach. As a result of this teacher-focused approach, many studies (Brennan, 2006; Cowley, 2006; R. Lewis, 1991; Richmond, 2007; Ricochet, 2007; Rogers, 2006) do not deal directly with the underlying motivational structures that attempt to describe fear of failure, or the learned helplessness (Seligman, 1975) exhibited when students find the work too hard. In addition, students who initiate challenging behaviour because they are not motivated to attend to a task, or who state “*But I don’t want to*” (Ely, 2008), may find themselves having their behaviour modified by teacher-centred approaches which fail to address the underlying motivational issues that they are attempting to articulate.

#### *Difficulties in measurement*

The measurement of the motivation to learn in the classroom is problematic. Galloway (1998) claims that in the secondary schooling context, it is the teacher’s task to motivate up to 30 individuals, for whom attendance in class is compulsory. This view is also expressed by Australian authors (R. Lewis, 1991; Rogers, 2006). Failure to motivate students can result in problems with classroom management (deCharms, 1984). Motivation to learn in the classroom can only be measured by asking students motivational questions and perhaps also triangulating this information with observations to confirm the veracity of responses (deCharms, 1984; Harter & Connell, 1984; Rotter, 1966). This may not always be possible, as students may be too young, have a low functioning Autism Spectrum Disorder (ASD) or some other disability that prevents them from giving valid responses to meta-cognitive motivational questions. Furthermore when students in the secondary education system, may be able to answer direct motivational questions like ‘*In my class do you feel like you are doing what you want to do?*’ (Ely, 2008; Ryan & Deci, 2000), a teacher may be unwilling to engage in a discussion that may allow direct challenge to their teaching practice. Direct measures of motivation to learn, or interest, as antecedents to challenging behaviour are more time consuming than indirect measures of a student’s challenging behaviour, the

environment, and events in that environment (Chandler & Dahlquist, 2002; Dunlap, L., Clarke, & Robbins, 1991; Fitzsimmons, 1998; Heckaman et al., 2000; Kazdin, 2001; O'Neill et al., 1997).

It is often shown that when familiar personnel systematically observe students in a range of settings antecedent environmental events are likely to be noted in relation to the behaviour. They can be specifically targeted as part of the Functional behavioural assessment (FBA) process (Chandler & Dahlquist, 2002). In the practical classroom environment, observations by a number of people are often compiled to create a pool of data. These may be used to aid the generation of hypotheses concerning the antecedents of challenging behaviour (Riechle & Wacker, 1993). Indirect measures such as these are often employed in behavioural research. Murdock O'Neill and Cunningham (2005) used indirect methods for interviewing the parents and teachers of eight students with challenging behaviours. Interviews took the form of a highly structured Teacher Team Functional Assessment Interview (TTFAI) (Murdock, O'Neill, & Cunningham, 2005). The Motivation Assessment Scale (MAS) for interviewing parents/carers was also used (Durand & Crimmings, 1998). Similarly Murdock implemented a Likert-like 0-6 (*0 = never, 6 = always*) Problem Behaviour Questionnaire (PBQ). Murdock found that teachers and students did not always agree but that there could be agreement across descriptive, indirect methods of assessment. Teacher-reported surveys were useful in measuring aspects of behaviour, but of limited use in measuring motivation to learn as an antecedent to that behaviour.

A teacher, or any third party, can only record behaviour resulting from the motivational state of the student. It is only possible to infer motivational states through indirect measures, but data obtained from relevant third parties can usefully establish contextual factors in a naturalistic setting. Within behavioural research indirect forms of data collection seek to establish the topography of the behaviour and other contextual variables usually related to the behaviour (Sugai et al., 2000).

Dunlap et al. (1995) identified and controlled the curricular variables based upon findings from direct observation as well as student and teacher interviews. The study involved two students aged 9 and 13. Dunlap's results demonstrated that the manipulation of curricular variables as antecedents was useful in the creation of more appropriate replacement behaviours (Dunlap, Foster-Johnson, Clarke, Kern, & Childs, 1995). The results of Dunlap's research, and other similar studies (Clarke et al., 1995; Dunlap et al., 1991; Dunlap, White,

Vera, Wilson, & Panacek, 1996), indicated that the manipulation of curriculum was relevant to lessening the student's desire to escape or avoid classroom tasks. As with Heckaman's research these findings imply that an increase in student interest or motivation to do a task had a positive relationship with behavioural outcomes for students with challenging behaviour. The manipulation of curriculum to promote student engagement represents a manipulation of an environmental variable promoting motivation to attend a task in the classroom context.

The Heckaman and Dunlap research, alongside other studies, (Bessette & Wills, 2007; Gable, 1999; Umbreit, 1996) suggested that manipulation of classroom curriculum and environment to increase student interest in a task was likely to produce an improvement in behaviour. If the antecedent to the challenging behaviour of these students was the lack of interest in the work itself, then adjustments to the curriculum and its delivery were potential solutions to this challenging behaviour. In the course of the implementation of the Functional Behavioural assessment (FBA) process many researchers are using motivational language and constructs, such as the use of the terms *interest* and *engagement*. If, as this research suggested, compulsory attendance in the classroom setting was an antecedent to challenging behaviour, and the function of the challenging behaviour was to escape or avoid the learning task itself, then addressing motivation and interest in the student may be useful in the generation of behaviour support plans.

#### *Measuring motivation in students with challenging behaviour – the rewards*

Within the educational context, motivation to learn is often seen as the key to influencing positive change in both behaviour and academic progress, particularly for those students exhibiting both challenging behaviour and minimal progress (McInerney, 2005). McInerney believes that teachers cannot be held responsible for the individual character traits of their students, but they can seek to influence the progress and behaviour of the students in their care.

The measurement of motivation in students with challenging behaviour requires an effective conceptual framework that is applicable in the classroom. One important distinction discussed in motivational research to date is the distinction between intrinsic and extrinsic motivation. If a student is intrinsically motivated, they engage in an activity for its own sake. Students who are intrinsically motivated to work on a task, enjoy participation in the task as

its own reward; they find the task enjoyable in and of itself (Deci, 1971). Conversely, extrinsic motivation involves working at a task as a means to an end. Students who are extrinsically motivated engage in the task to receive some reward, or avoid some negative consequence, such as punishment, or being perceived as incapable by the teacher (Deci et al., 2001). This fundamental distinction has influenced consideration of motivation to learn but personal motivational factors have only been related to successful learning in the classroom if and when they coincide with the teacher's goals as expressed in the curriculum.

An examination of literature on motivation provides useful conceptual frameworks for the measurement of individual motivation of large sample sets in educational environments (Ames, 1992a; Deci et al., 2001; Galloway, 1998; Hidi & Harackiewicz, 2000; Ryan & Deci, 2000). However little research has been conducted which links intrinsic and extrinsic motivation to learn, or the lack of it, to the learning of students with challenging behaviour.

Self-Determination Theory (SDT) proposes that individuals are self-determined; namely, they have tendencies toward active engagement and personal growth. SDT aims to bring together humanistic, psychoanalytic and developmental methodologies, with behavioural, cognitive and post-modern approaches. One of the aims of SDT is to differentiate and measure the various forms of motivation on the intrinsic/extrinsic spectrum together with the conditions likely to sustain them (Ryan & Deci, 2000).

Within SDT there is some debate as to whether extrinsic rewards can undermine intrinsic motivation. This was first claimed in 1971, when Deci implied that extrinsic rewards such as gold stars, best-student awards, and honour rolls have a negative effect upon intrinsic motivation (Deci, 1971). Meta-analysis of the large body of subsequent research refuted this claim (J. Cameron & Peirce, 1994). Since then, further meta-analysis has been completed to support the original claim (Deci et al., 2001). It is relevant that in Deci's meta-analysis of 2001, studies that included uninteresting tasks were excluded. It was found in a supplementary meta-analysis of 13 studies that employed uninteresting tasks, extrinsic rewards did not reduce intrinsic motivation (Hidi & Harackiewicz, 2000). These results suggest that the relationship between extrinsic rewards, and intrinsic motivation, is of particular relevance to further research into the motivation styles of students with challenging behaviour (Hidi & Harackiewicz, 2000).

## The Current Study

As noted above, current behaviour modification approaches do not use tools to directly measure motivation to learn as a contributory factor in challenging behaviour (Chafouleas et al., 2007; Dunlap et al., 1991; Foster et al., 2002; Kazdin, 2001). Given the potential rewards and attendant difficulties associated with the measurement of motivation to learn in students with challenging behaviour, a study was designed to measure motivation to learn and achievement outcomes in students who were identified, and identified themselves, as having challenging behaviour in the classroom. This study was entitled “But I don’t want to”: Complying with the Wishes of the Teacher — a Necessary but not Sufficient Condition for Learning in Students with Challenging Behaviour (Ely, 2008). One of the assumptions underlying the study was that if a student is achieving good academic outcomes in the classroom setting, then their behaviour was, at least in part, appropriate for a learning environment. The study outlined below describes the analysis of the results from a Motivational Response Profile (MRP) data (see Appendix A), participant observation, video data, and a Between The Lines (BTL) online task. There were two separate analyses. The first describes the results and analysis for the whole cohort. The second presents individual case studies for the particular participants.

This study argues that motivation to learn can be a contributing factor in success for students with challenging behaviour by investigating the hypotheses: (a) Compliance is a necessary, but not sufficient, condition for success in the classroom in students with challenging behaviour, and (b) Intrinsic motivation is a positive factor for success in the classroom in students with challenging behaviour.

## Method

### *Participants and context*

Fourteen Students with challenging behaviour were selected, 13 of which providing the majority of useable data. The participants in this research attended a small urban community school in Melbourne. The sample school had a history of success with students who had previously not experienced success in secondary education. The total student population in the sample school was approximately 100, a small school by Victorian

government school standards. Many of these participants arrived at the sample school because they had been asked to, or had chosen to, leave their previous schools for reasons relating to ‘poor’ behaviour, ‘poor’ attendance, or they “*did not fit in*”. The majority participants received financial assistance in the form of an Education Maintenance Allowance (EMA); an allowance paid to low-income families to help with the costs associated with education. Participants were all enrolled in year 9 and 10 (aged 14 to 16 years).

### *Measures*

In a mixed-methods evaluative case study the intrinsic and extrinsic motivational responses of 14 adolescent students were measured. Motivation and task performance data gathering involved students responding to self-reported Motivational Response Profiles (MRPs) a 12-item 1-5 likert-like survey (see Appendix A). Participants were asked a series of motivational questions and graded their own responses on a Likert-like 1-5 scale. Questions were asked relating to intrinsic motivation, how the task related to their own personal goals, how they felt during the task, volitional issues and extrinsic motivation. The average number of MRPs conducted per participant was ten, the minimum being no fewer than seven, and the maximum no more than 13. In addition task performance was established jointly by both the researcher and a classroom teacher familiar with the participant’s abilities. An assessment was made based upon the expectations of the individual participants. The task performance score took into account the abilities and aptitudes of the individual participants in each of their subject areas. The task performance was not a mark or grade but an assessment of the participant’s success or otherwise at a task in a particular classroom situation, at a particular time, and was moderated against the participant’s effort and ability.

Both participant observation and video data were used to triangulate the data gathered using the MRPs. An online probe contained within Between the lines (BTL) specialist software tool was also used to measure motivational states. The BTL software was modified to administer the MRP and to examine the relationship between a change in motivational state and performance outcome in a real time context (pre- and post-).

### *Procedure*

There were 131 individual motivational response protocols (MRPs) completed by the 14 participants over a period of two months. During the initial two weeks the researcher attended regular classes without gathering data to familiarise the respondents to the researchers presence. This settling in period was critical as while the researcher often observed surreptitious, low level ‘off task’ or challenging behaviour, the researcher did not communicate this to the supervising teachers concerned. This passive behaviour on the part of the researcher perhaps encouraged the participants to communicate their opinions on their motivation to learn with greater freedom and veracity. The researcher attempted to establish a role as ‘not a teacher’ before gathering data.

Data were grouped into positive and negative motivational responses and analysed in order to establish a link between motivational responses and task outcomes for the cohort. Data were selected and classified according to groupings derived from the intrinsic and extrinsic motivational responses gathered from the MRPs and the BTL task, and triangulated with the participants observation and video data. Once the data was classified into motivational response groupings it was placed in the following motivational response sub-groupings outlined in Table 1. These data were analysed both for the group as a whole and for individual participants. Means of task outcomes were also generated for each motivational grouping, both for the tasks associated with the MRPs in the classroom and for the BTL task.

Table 1: Motivational response groupings

<b>Negative motivational responses</b>		
<p>The <i>very poor</i> response to the tasks; all results with a rating of 1 on both ‘<i>Did you feel like you were doing what you wanted to do?</i>’ and ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’</p>	<p>The <i>noncompliant</i> response to the tasks; all results with a rating of 1 on the ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’ To prevent overlap, this grouping excluded <i>very poor</i> tasks.</p>	<p>The <i>disengaged</i> response to the tasks; all results with a rating of 1 on the ‘<i>Did you feel like you were doing what you wanted to do?</i>’ To prevent overlap, this grouping also excluded <i>very poor</i> tasks</p>
<b>Positive motivational responses</b>		
<p>The <i>compliant</i> response to the tasks; all results with a rating of 5 on ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’ and a result of 4 or less on ‘<i>Did you feel like you were doing what you wanted to do?</i>’</p>	<p>The <i>autonomous</i> response to the tasks; all results with a rating of 5 on ‘<i>Did you feel like you were doing what you wanted to do?</i>’ and a result with a rating of 4 or less on ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’</p>	<p>The <i>fully engaged</i> response to the tasks; all results with a rating of 5 on both ‘<i>Did you feel like you were doing what you wanted to do?</i>’ and ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’</p>
<b>‘Other’ motivational responses</b>		
<p>The <i>other</i> response to the tasks; all <i>other</i> tasks where the results had a rating of greater than 1 and less than 5 on both ‘<i>Did you feel like you were doing what you wanted to do?</i>’ and ‘<i>Did you feel like you were doing what the teacher wanted you to do?</i>’</p>		

Each participant had tasks, all in the naturalistic everyday school setting. They were grouped by motivational response (Table 2). Two methods of data analysis were then employed. Firstly, performance outcomes were correlated with motivational outcomes groupings for the cohort and then the data was used to outline the individual case study profiles.

Table 2: Educational experience for the participants, grouped by motivational response

	Very poor	Noncompliant	Disengaged	Compliant	Autonomous	Fully engaged	Other
Abby	3	1	3			2	
Bernie	1	1	2*	2	1		3
Carly		1	3	1	2		1
Doug	2	2**	2*	1	2	3	1
Eddie			1	1		2	5
Fiona			4	1	1		4
Gary		3**				2	2
Hanna	1				2	6	1
Ian				2*		1	8
Jake	1			1*	3	5	
Kimba	1	1**	1	1*	1	4	1
Lucy				7*		4	
Mark	1		1	1	1	4	2
Nick				1	1		
Total	10	9	17	19	14	33	29

Notes:

\* For some of the tasks observed the participants motivational responses were ambiguous. In some disengaged tasks the participant responded with a 5 to the question ‘*did you feel like you were doing what the teacher wanted you to do?*’ and in some compliant tasks the participant responded with a 1 to the question ‘*did you feel like they were doing what they wanted to do?*’ In each individual case, participant observational data was used to accurately determine the nature of the motivational response.

\*\* In some non-compliant tasks, participants reported a score of 5 to the question ‘*did you feel like you were doing what you wanted to do?*’ and in some autonomous tasks the participants responded with a 1 to the question ‘*did you feel like you were doing what the teacher wanted you to do?*’ In each individual case, participant observational data was used to accurately determine the nature of the motivational response.

Motivational responses we compared with the mean task performance for the cohort in Table 3. It can be clearly seen that there is a relationship between motivational response and task performance when the a mean task performance of 1.70 and 1.44 for those tasks with a very poor and recalcitrant motivational response is compared with the mean task performance of 3.36 and 3.88 for tasks with autonomous and fully engaged motivational responses. Mean task performance for tasks with compliant motivational responses was 2.63 for the cohort and made up only 15% of total lessons, indicating that compliance alone did not have a strong relationship with high task performance and was not a frequent occurrence. Additionally those tasks with an autonomous motivational response had higher task

performance mean than compliant motivational responses, although only 11% of task were of this type.

Table 3: Summary description of motivational responses and task performance

<b>Motivation response to task</b>	<b>Percentage of participants in each task type (%)</b>	<b>Number of tasks in each task type</b>	<b>Percentage of total tasks (%)</b>	<b>Mean for task performance</b>	<b>Standard deviation</b>
Very Poor	50%	10	7%	<b>1.70</b>	1.06
Recalcitrant*	43%	9	7%	<b>1.44</b>	0.73
Disengaged*	57%	17	13%	<b>2.18</b>	1.13
Compliant	77%	19	15%	<b>2.63</b>	1.12
Autonomous	46%	14	11%	<b>3.36</b>	1.15
Fully engaged	77%	33	25%	<b>3.88</b>	1.08

Note. \* Excludes all *very poor* tasks

The 29 (20%) remaining ‘other’ tasks did not fall into the above categories, as the participants had no extreme views (no 5’s or 1’s on the Likert-like scale) in answering questions 1 and 2 on the MRP that related directly to intrinsic and extrinsic motivation. ‘Other’ tasks generated a mean for the task performance of 3.21 (SD .94). For the entire sample, the mean task performance is 3.00 (SD 1.28). Coincidentally the mean task performance for the eight males was 3.04 (SD 1.27) and for the six females 2.95 (SD 1.31), thus demonstrating that there was no significant relationship between motivation and gender in this cohort.

In Figure 1 the number of tasks in each task performance rating are grouped by motivational response. It can be seen that for this cohort students who fully engaged in a task have a greater chance of success as compared with students who have a negative motivational

response. It is noted that no task that was fully engaged had the minimum task performance of 1, and no very poor, recalcitrant, disengaged or even compliant task had any ‘very successful’ task performance ratings of 5. Additionally students who have an autonomous motivational response perform better than compliant students in this cohort.

*Results by Motivational Grouping*

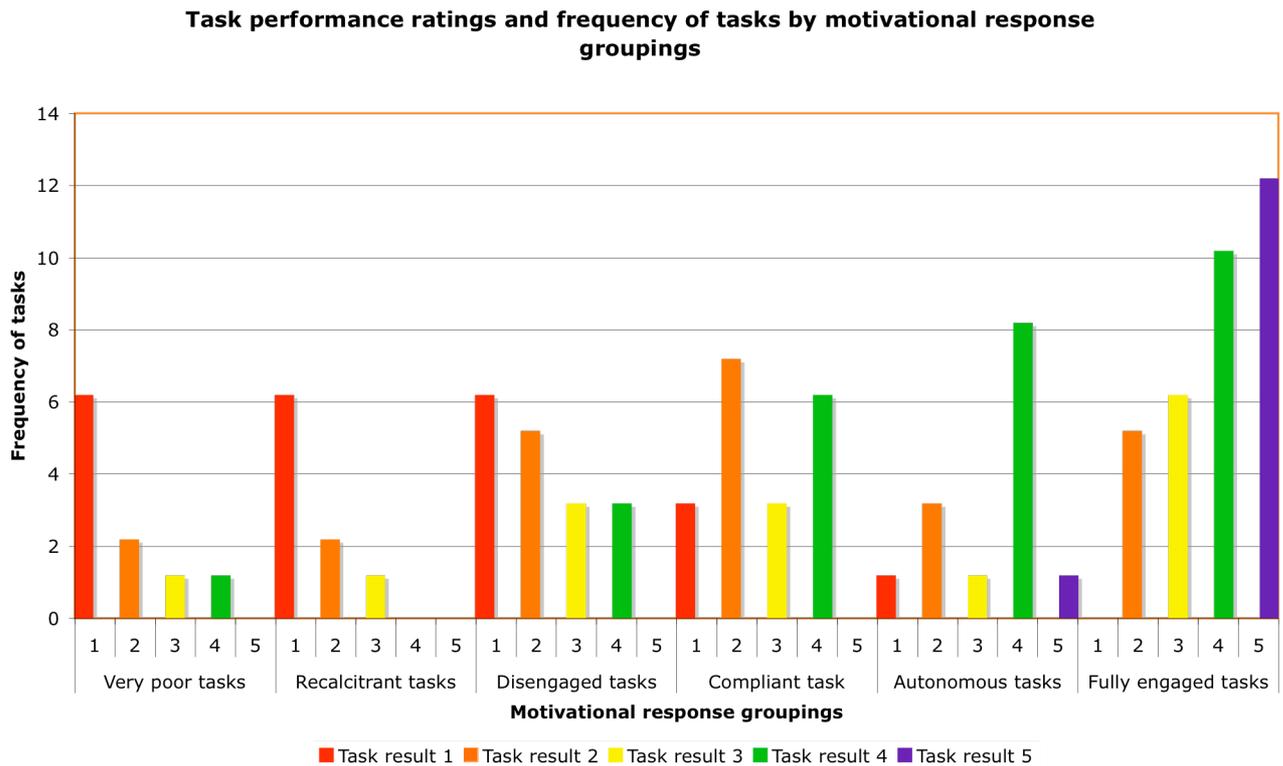


Figure 1: Task performance ratings and frequency of tasks by motivational response groupings

In Figure 1, tasks were grouped into the same motivational response groupings listed in Table 2 and 3, namely: very poor, recalcitrant, disengaged, compliant, autonomous, and fully engaged. The results for the motivational response grouping indicate that both intrinsic and extrinsic motivation have a positive relationship with high task performance for this cohort. In particular, the high intrinsic motivation evidenced in both the autonomous and fully engaged motivational response groupings has a positive relationship with high task performance.

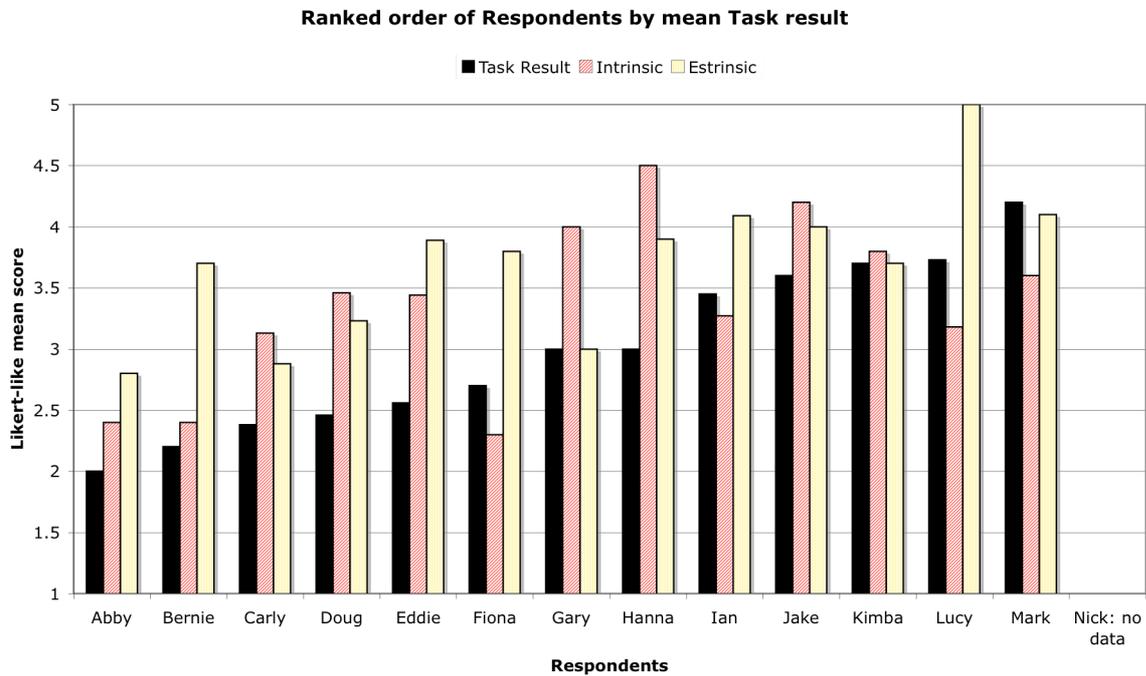
### *Results for the Between the Lines (BTL) Online Task*

The BTL task was administered toward the completion of the data-gathering period. Motivation was measured during (pre- and post-) the task. This was in contrast to the 131 MRP's which measured motivation at the immediate completion of tasks in the normal classroom setting. Over the task, participants where task performance was 3 or less had intrinsic motivation that fell or remained stable, while participants whose intrinsic motivation rose had a task performance of 3 or more. There is a relationship between high task performance and an increase in intrinsic motivation in this cohort. The relationship between extrinsic motivation and task performance was more complex. Levels of extrinsic motivation were reported as very high for the majority of participants with a pre-task mean of 4.46 and post-task mean of 3.85. It is supposed that in agreeing to do the task, the participants were 'Doing what the researcher wanted them to do', and responding to the extrinsic data accordingly. Video data confirmed that all participants were seated at the computer and on task during the time that they were attempting that task.

### *Results for the 14 Individual Participants Presented as Case Studies.*

In the following presentation of results, both the qualitative and quantitative results of the individual participants are presented and organised into 14 case studies. As can be seen in the overall direction portrayed in Figure 2 there is a positive relationship between task performance and both intrinsic and extrinsic motivation for each participant. Data gathered on personal goals, personal feeling and volition were used to aid the analysis of the motivational data, but data gathered in the initial MRPs relating to freedom of choice were omitted from the analysis (see Appendix A). The measurement of freedom of choice indicated that the compulsory, or 'forced' nature of attendance in the classroom would require further detailed analysis beyond the scope of this study.

As an introduction to the 14 individual case studies, Figure 2 presents the mean motivation scores all participants by name. These mean scores were generated from the MRP data for task performance, intrinsic motivation and extrinsic motivation. The results for all case studies are presented in a ranked order from least successful to most successful by task performance, and the scores are measured on a five-point Likert-like scale.



**Figure 2: Ranked order of respondents by mean task result**

Note: The mean for task performance is 3.00 (SD 1.28), the mean for intrinsic motivation is 3.37 (SD 1.66), and the mean for extrinsic motivation is 3.72 (SD 1.76).

Data from Tables 2 and 3 are also used to aid analysis by identifying the motivational typology of the tasks for each individual participant. Table four outlines the veracity of hypotheses 1 and 2 for each individual participant. Bernie was the only participant for whom the hypotheses were not relevant. Bernie frequently stated that he was doing what the teacher wanted him to do, but this did not directly translate into success at the task. Participant observations established that this lack of success at given tasks was due to short-term memory issues and constant tiredness in class. For all other participants there was evidence that compliance was a necessary but not sufficient condition for task success. This was true for Abby and Carly, who did not succeed as well as for Lucy and Mark, who did. When the results for the entire cohort as well as the individual analyses are considered three salient points can be made.

Table 4: Summary of results against hypotheses by participant.

<b>Participant</b>	<b>Hypothesis 1: Compliance was a necessary but not sufficient condition for task success.</b>	<b>Hypothesis 2: Intrinsic motivation was a positive factor in task success.</b>
Abby	Yes	Yes
Bernie	No	No
Carly	Yes	Yes
Doug	Yes	Fluctuating
Eddie	Yes	Fluctuating
Fiona	Yes	Fluctuating
Gary	Fluctuating	Fluctuating
Hanna	Yes	Fluctuating
Ian	Yes	Yes
Jake	Yes	Yes
Kimba	Yes	Yes
Lucy	Yes	Fluctuating
Mark	Fluctuating	Fluctuating
Nick	Insufficient data	Insufficient data

Firstly, different patterns or grouping of motivational responses can be said to exist for this cohort of students with challenging behaviour, from very poor to fully engaged. Secondly, task performance varied for each of the motivational groupings. Negative motivational grouping will tend to relate to negative performance outcomes, and positive motivational grouping will relate to positive performance.

Additionally, the compliant motivational grouping produced performance ratings well below those for the fully engaged motivational grouping, supporting the hypothesis that compliance is a necessary but not sufficient condition for learning in these students. Thirdly, there was variability within and between the motivational responses for individual participants.

#### *Limitations of the study*

Several limitations of the above study should be recognised. Firstly, the mixed-methods design provided rich, detailed data relating to motivational responses and

performance ratings for this cohort of 14 participants, but the small number of participants restricted the generalisability of any potential conclusions. Secondly, the variability of the learning history, setting and type of challenging behaviour in individual students themselves would render questionable any large-scale repetition of this study. The purpose of this study was to expand upon the limited research in the area of motivation to learn and challenging behaviour and the results were of sufficient significance to encourage further research. The participant observational data collected for this study attempted to mitigate against environmental variables and it was only possible to speculate as to whether all relevant environmental variables relating to the motivational responses of the students were controlled for every measurement. The use of a self-selecting participant in a naturalist setting in a school tended to increase external validity but the internal validity was weakened.

Another limitation of this study relates to the validity of the participant's responses to intrinsic motivational questions. Responses were obtained directly after tasks were done in the classroom and relate only to that one particular learning activity. All MRPs were prefaced with contextual statements. One example would be: "*While answering those trigonometry questions... Did you feel like you were doing what you wanted to do*". The repetition of the MRPs over approximately 10 differing tasks for each participant was aimed at increasing the validity and reliability of data collected for each participant in an ecologically valid setting. Due to the nature of these students with challenging behaviour, who were observed exhibiting off task behaviour on a number of occasions, the observational data became critical in making assessments. The single BTL task was an example of the researcher taking a more active role in this study, as the BTL task was the only task that was initiated by the researcher. The extrinsic motivation for all participants was reported as very high for this BTL task, as the researcher had requested that the participants do the task, and as can only be expected upon initiating the task, they all reported that they were doing what the researcher wanted. This 'researcher' effect implies that there must be limitations placed upon the reliability of extrinsic data collected in this way. There was also a potential 'sour grapes' effect implicit in the reflective responses in the MRP data. A 'sour grapes' effect can be relevant when a respondent perceived that they did not succeed at a task, and as a result responded upon completion of that task that they were not motivated to do it. The real-time measurement tool used in the BTL task was designed to avoid dependence upon reflective

responses. The above limitations were taken into account in the discussion of the outcomes of this study.

## Discussion

The focus of the main body of behavioural research has been upon the managing of challenging behaviour in the classroom context. The management of behaviour is almost always expressed as the development and implementation of strategies to obtain compliance with the wishes of the teacher. If compliance alone is a necessary, but not sufficient condition for a successful learning experience in the participants in this study, then the conclusions drawn from the study 'But I don't want to' may indicate that behavioural strategies designed to elicit compliance may not be sufficient for effective learning. A student with challenging behaviour who is being compliant will be, by definition, be well behaved in a learning environment. This goal of compliance in the student in the educational environment is often presented as an end in itself within the research and literature surrounding behavioural modification. One possible implication of 'But I don't want to' is that the presence of intrinsic motivation in a student with challenging behaviour may be an influential factor in positive behaviour. Students in this small cohort who were highly intrinsically engaged in classroom tasks had academic success above the mean. These were the only lessons in which this was the case. If the students in this study were succeeding at their work then they must, at some level, be complying with the wishes of the teacher.

The implications for behavioural research are clear. In further research, the investigation of the triggering of intrinsic motivation, interest, or engagement may be useful adjuncts to current behavioural management practices. In particular the investigation of the motivational effects upon behaviour would require time-consuming direct methods of assessment, an challenge current administrative and teacher-centred approaches to behaviour, but it may be that the implications and potential benefits could prove useful. This study demonstrated that motivational responses can be effectively identified and grouped and that there is a positive relationship between high intrinsic and extrinsic motivation and high task performance in students with challenging behaviour. In particular, Functional Behavioural Assessment (FBA) research that so often identifies lack of interest in curriculum as an antecedent to challenging behaviour, may more effectively target motivational variables in

behaviour support plans if such variables can be accurately assessed and identified. This is particularly relevant to these students with challenging behaviour, as compliance alone is a necessary but not sufficient condition for learning in students with challenging behaviour.

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APPENDIX A

Reproduction of the Motivational Response Profile (MRP)

Interview questions (to be filled out by interviewer).  
MRP on challenging behaviours and motivation in school.  
Background information on activity.

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Success at task, rated by Researcher and Teacher:

Answer:

Not at all 1 2 3 4 5 very successful.

**Respondent Number:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Time:** \_\_\_\_\_ Please tick  one box per question.

**1. Are you?**

Male

Female

**Age?** \_\_\_\_\_

**2. Did you feel like you were doing what you wanted to do?**

Answer:

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_

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**3. Did you feel like you were doing what the teacher wanted you to do?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Did you feel like you were pursuing goals that were important to you?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**5. While doing this task, did you feel good?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**6. While you were doing the task did you feel pressured?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**7. During this task, did you have a choice as to whether or not you participated in it?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**8. Did you feel it was your own choice to do it?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**9. During the task did you have choices as to what you did?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**10. Were you doing what the teacher wanted you to do?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**11. Were you doing what you wanted you to do?**

**Answer:**

Not at all 1 2 3 4 5 All the time.

Notes: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_