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THINKPIECE: STUDENT MOTIVATION IS A SYSTEM WIDE RESPONSIBILITY

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Most teachers accept that student engagement in learning is critical to success. Yet far too many students are disengaged, with research by Goss and Sonnemenn (2017) showing that only 60 percent of Australian primary and secondary students were actively engaged in school at any point in time. To improve outcomes for students, therefore, student engagement needs to be a critical focus, not just of teachers but the whole system.

This essay is an examination of the last 18 years of my teaching career in terms of what I learned about engagement in an ‘accidental’ experiment. By chance, I had the opportunity to compare student engagement and their beliefs about themselves in school, across three syllabuses and reporting systems. The observations point to a number of critical factors that need to be changed to improve engagement. While some of those factors are within the teachers’ control, some, which actively mitigated against student engagement, are not, making the teacher’s job more difficult and consequently depressing student outcomes. One such aspect is the student report card, which in its most common form appears to decrease engagement in many students, especially those who begin school with any form of disadvantage.

To improve engagement, we need an understanding of motivation and its psychological underpinning (Reeve, 2012).

Motivation theories

Three theories proved most useful in explaining observations and providing ideas for classroom application. Attribution theory underpins most other motivation theories and combined with Carole Dweck’s intelligence mindsets, and Ryan and Deci’s Self Determination Theory (SDT) seemed to fit observations of student behaviour best and were helpful in improving classroom engagement.

The essence of attribution theories is that people adopt behaviours consistent with beliefs that they develop by attributing causes to events (Fiske & Taylor, 1991). Attribution theory helps in understanding why a student or teacher behaves in the way they do under particular conditions such as organisational, academic or cultural practice within a school or classroom (Eccles, 1983; Graham & Golan, 1991; Roeser et al., 1996).

Self-efficacy beliefs and a strong belief that effort leads to success are powerful determinants of motivation. Carr et al. (1991), for example, found that students’ belief that effort is related to success was undermined when their effort did not achieve their expectations, as in the case of the student who works but continues to fail. Garcia and Pintrich (1994) found that low achieving students often felt powerless to motivate academic behaviour.

Carole Dweck’s Theory of Intelligence (Dweck & Leggett, 1988) explains people’s actions in terms of a belief about intelligence developed from their attributions for their successes and failures. Dweck suggests that a belief that intelligence is malleable and improved by learning is positive for motivation and resilience in learning, while a belief in a fixed intelligence is not productive for motivation, often leading to giving up.

Teachers are similarly affected by attribution processes. Those who believe in malleability view students as individuals preferring an individual reference in making judgements, while those with fixed beliefs tend to judge students in comparison. Studies have shown that teacher beliefs and behaviours do impact on student beliefs, motivation and achievement (Rheinberg, 1983).

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For best impact, teachers should hold the same beliefs as are desirable for the students and, by implication, conditions for teaching; school climate, syllabus structures etc, must also reflect the desired beliefs.

The third theory, Self Determination Theory (SDT) shows value in understanding and creating motivating classrooms. SDT posits that all people want to learn and improve but conditions have to be maintained that support positive perceptions of three important conditions:

1. Competence — the belief that one can do what is required successfully.
2. Autonomy — the belief that the outcome or goal of one's actions has personal meaning and value.
3. Relatedness — a sense of belonging and closeness in relationships (including to an individual, group and/or culture) within the context of the actions required.

SDT also describes motivation as falling on a continuum from externally to internally generated, with more internally generated being more productive (Ryan & Deci, 2009).

In motivation theories, positive beliefs about self, about self in relation to others, or about self in relation to contexts such as school are critical for maintaining student motivation.

The following are relevant student beliefs for maintaining motivated engagement from my observations and research:

- I am able to learn and do the task required.
- Success is defined as personal growth due to effort.
- Effort leads to success.
- Engagement and effort are the markers of a 'good' student.
- The purpose of assessment is to provide information to help me to learn effectively.
- Intelligence is malleable and responsive to effort.
- School will lead to personal growth, valuable learnings and useful outcomes.

Types of report

I have mentioned the student report as a critical factor in supporting or depressing engagement. For the purposes of this essay, I define two forms of report: a comparative report being most common in use, and an informational report. A comparative report is one where the definition of success depends on comparison, either with other students or most commonly with an expected standard by which a satisfactory performance is judged. A student is usually given a letter or number to describe their position on a (mostly) 5-point scale. In Australia, the scale is A, B, C, D, E with C usually implying the pass grade and D or E implying unsatisfactory. The scale is repositioned each year such that C in Grade 10 is harder to attain than a C in Grade 9 etc, making progress hard to recognise.

Informational reports do not define success in comparison with a standard, instead describing a student's achievement as an absolute position on a fixed continuum that is constant for all grades. A position, for example, of '200' on the scale is the same whether it is attained in Grade 7, 8 or 9. Students move through the continuum, making progress explicit. Examples of this form of report are being used in New Zealand and Australia for reporting on broad learnings such as Literacy and Numeracy, although these also contain elements of comparison by referring to expected grade level positions.

Observations

From 1995, I was the Head of Science in a large urban high school in a low socioeconomic area in Queensland, Australia. Like many teachers I was concerned at the lack of engagement of students, knowing this had a profound impact on their learning. For me, this is also an issue of equity because

students with a disadvantage, such as low SES or parental education, seemed to have their disadvantage exacerbated throughout their schooling when it should be reduced. This observation is borne out by Goss & Sonneman (2016).

It was clear to me that those students who were most disengaged held the least positive self-beliefs about learning, school and the future, with those beliefs attributable to long-term failure in school.

In 1999, I joined a team of teachers to write a new outcomes-based syllabus for Queensland (Science: Years 1 to 10 Syllabus, 1999) which contained two significant features that allowed a complete change of direction in classroom learning.

1. Core content was organised not as disparate facts for each grade level to learn but as concepts on continua that covered all grades from 1 to 10. These continua were called Learning Continua and were similar to what are now called Learning Progressions.
2. Reporting (and hence assessment) was designed to show student progress along the continua.

From 2000 to 2004, I implemented the new syllabus in a form specifically designed to maximise engagement. In particular, a report was designed to demonstrate a student’s progress (see Figure 1), an informational report.

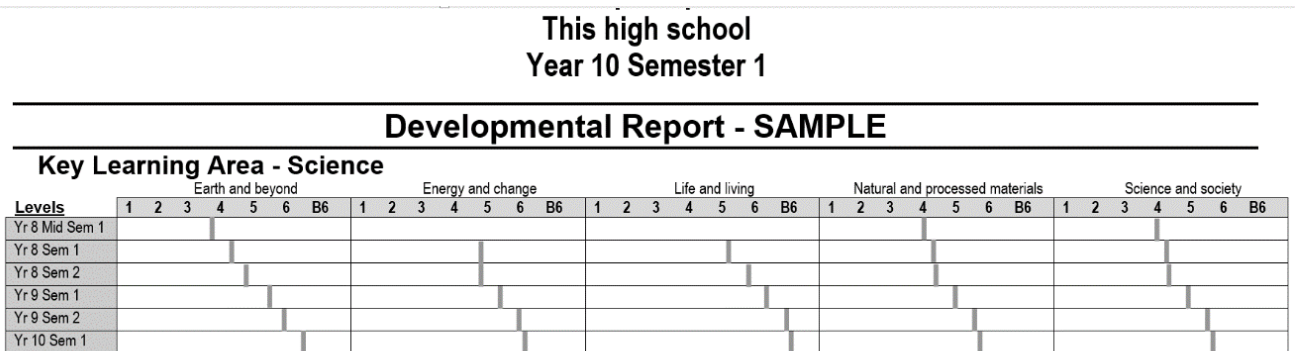


Figure 1: Sample science report 2000–2004.

Students worked on flexible tasks with freedom to choose or invent their own in collaboration with their teacher. Assessment was contiguous with the task, with teachers observing, conferencing students and examining their final product to identify demonstrations of understanding. These were then collected and analysed to determine a student’s position on the continuum for reporting purposes.

Students being given credit for what they could do improved their sense of competence and helped create a link between effort and success. Success became defined as ‘improving through effort’ which helped to develop a malleable intelligence mindset. From the start it was clear that students enjoyed their increased freedom to choose tasks meeting the SDT condition for autonomy.

The potential for improvement under these conditions is typified by one student who I observed in my class and tracked through Year 12.

This student came to my Year 10 class from another school. Initially, she was quiet but acted dumb, doing no work. Her first comments to me were that she was “just a bimbo”. and “had never passed science ever”. After two months, she admitted, “I CAN do science”. She worked consistently, was self-reliant, and asked for help with accessing and understanding information. She demonstrated consistently at acceptable levels of understanding. After 10 months, at the end of Year 10, she chose biology in senior school because she believed she could do it. I checked her results after Year 12 and found she had passed biology in senior school.

The significant change in this student’s performance was clearly related to her improved self-efficacy beliefs that she could improve with effort.

In general, students demonstrated much higher levels of self-efficacy and competence in most classes, and in my classes in particular enjoyed the autonomy they were given leading to greater motivated engagement.

In 2004 the Australian government mandated that schools use a comparative report with a 5-point scale (A–E) to be implemented from 2005.

During the period 2005 to 2017, teachers and students worked with a science programme in many ways similar to the previous period except that the report, and hence assessment, had to be comparative, on a 5-point scale. In an attempt to ameliorate the impact of the report, I created new systems to avoid reference to A–E until necessary for reporting and developed a ‘Personal Best’ report. These did not appear to overcome the negative impact of the more formal comparative report.

In retrospect I regarded this as an accidental experiment, with me, a keen observer, able to compare student behaviours, beliefs and outcomes over two contexts varying in the form of reporting and with a third traditional syllabus and report providing a reference point:

- Pre-2000, with a traditional syllabus using traditional tests and a comparative report,
- 2000–2004 with an outcomes-based syllabus allowing significant student choices, task-based assessment and an informational report focused on improvement, and
- 2005–2017 with learning tasks and assessment similar to the previous period, but with a mandated comparative report.

Although I have focused mainly on those aspects of motivation most directly attributable to the form of school report, other productive beliefs were also apparent during period 2 where the whole school programme was designed for student engagement.

Table 1: Observations in Terms of Beliefs

Desirable beliefs	Pre-2000	2000–2004	2005–2017
Success is defined as personal growth due to effort.	Not demonstrated at all.	Demonstrated in many students.	Demonstrated by some students to some extent.
I am able to learn and do the task required.	Not often demonstrated by low achieving students.	Demonstrated by most students most of the time.	Demonstrated by high achievers and occasionally by low achievers.
Effort leads to success (using definition of success above).	Only students getting A and B on their report demonstrated this belief.	Demonstrated in majority of students.	Mainly students getting A and B on reports showed this belief. Some other students developed it.
Engagement and effort are the markers of a ‘good’ student.	Only in students already achieving.	Demonstrated in many students.	Reasonably well demonstrated by some students.
The purpose of assessment is to provide information to help me to learn efficiently.	Not demonstrated at all.	Demonstrated in many students.	Reasonably well developed in some students, but rarely in students who were scoring poorly.
Intelligence is malleable and responsive to effort.	Very few students demonstrated this belief.	Demonstrated in many students.	Demonstrated in some students.
School will lead to personal growth, valuable learnings and useful outcomes.	Only in students already achieving but they tended to focus on achievement rather than growth.	Demonstrated in many students.	Only in students already achieving but they tended to focus on achievement rather than growth.

In summary, the period from 2000 to 2004 based on an informational report showing progress through learning continua

- created a stronger link between learning and effort,
- showed the most internal motivation, and
- was easier to support and maintain beliefs that were productive for motivated engagement.

The main structural difference between the two periods 2000–2004 and 2005–2017 was the style of formal report, suggesting that this report plays a significant part in the development of student and teacher beliefs, particularly those regarding self-efficacy. Low performing students, in particular, showed a great improvement in self-efficacy during the 2000–2004 period, while high performing students appeared to relish the opportunity to constantly progress. The report also seemed to impact on teacher perception, with teachers in the period 2000–2004 using fewer comparative and judgemental terms when speaking of students.

Systems as well as teachers bear responsibility for motivation

Improving student motivation is critical to improving education outcomes, and although teachers will continue to bear the main responsibility, my observations and research strongly suggest that system constructs, such as syllabuses and reports, be designed with consideration given to motivation theories to ensure that they do not undermine positive student beliefs, particularly those pertaining to self-efficacy. Specifically, basing syllabus content on learning continua, reporting to parents and students on progress through those continua, avoiding comparison as much as possible which leads to more positive beliefs of self-efficacy, making internalised motivation more likely and more easily supported by teachers.

Mark Gould biography

Mark Gould has had careers as a scientist, dancer and teacher but is now happily retired. He taught for 38 years, initially in primary schools and later in secondary schools as Head of Science. He has been a team member writing syllabuses in senior chemistry and junior science and textbooks in the same areas. In 2000, Mark developed a passionate interest in student motivation after helping write an outcomes based science syllabus for Queensland and implementing a successful innovative science programme based on it. This passion led to many years of experimentation and research on how to boost student motivation, particularly for poor performing students.

References

- Carr, M., Borkowski, J. G., & Maxwell, S. E. (1991). Motivational components of underachievement. *Developmental Psychology*, 27(1), 108–118. <https://doi.org/10.1037/0012-1649.27.1.108>
- Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, 95(2), 256–273. <https://doi.org/10.1037/0033-295x.95.2.256>
- Eccles, J. (1983). Expectancies, values and academic behaviors. In J. T. Spence (Ed.), *Achievement and achievement motives: Psychological and sociological approaches* (pp. 75–146). Free Man.
- Fiske, S. T., & Taylor, S. E. (1991). *Social cognition* (2nd ed.). McGraw-Hill.
- Garcia, T., & Pintrich, P. (1994). Regulating motivation and cognition in the classroom: The role of self-schemas and self-regulatory strategies. In D. H. Schunk & B. J. Zimmerman (Eds.), *Self-regulation of learning and performance: Issues and educational applications* (pp. 127–153). Lawrence Erlbaum Associates.
- Goss, P. J., & Sonnemann, J. (2016). *Widening gaps: What NAPLAN tells us about student progress*. Grattan Institute. <https://grattan.edu.au/report/widening-gaps/>
- Goss, P., & Sonnemann, J. (2017). *Engaging students: Creating classrooms that improve learning*. Grattan Institute. <https://apo.org.au/sites/default/files/resource-files/2017-02/apo-nid72749.pdf>

- Graham, S., & Golan, S. (1991). Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology*, 83(2), 187–194. <https://doi.org/10.1037/0022-0663.83.2.187>
- National Research Council and Institute of Medicine. (2004). *Engaging schools: Fostering high school students' motivation to learn*. The National Academies Press. <https://doi.org/10.17226/10421>
- Reeve, J. (2012). Self-determination theory perspective on student engagement. In S. Christenson, A. Reschly, & C. Wylie (Eds.), *Handbook of research on student engagement* (pp. 149–172). Springer. https://doi.org/10.1007/978-1-4614-2018-7_7
- Rheinberg, F. (1983). Achievement evaluation: A fundamental difference and its motivational consequences. *Studies in Educational Evaluation*, 9(2), 185–194. [https://doi.org/10.1016/0191-491x\(83\)90026-3](https://doi.org/10.1016/0191-491x(83)90026-3)
- Roeser, R. W., Midgley, C., & Urdan, T. C. (1996). Perceptions of the school psychological environment and early adolescents' psychological and behavioral functioning in school: The mediating role of goals and belonging. *Journal of Educational Psychology*, 88(3), 408–422. <https://doi.org/10.1037/0022-0663.88.3.408>
- Ryan, R. M., & Deci, E. L. (2009). Promoting self-determined school engagement: Motivation, learning, and well-being. In K. R. Wentzel & A. Wigfeld (Eds.), *Handbook of motivation at school* (pp. 171–195). Routledge.
- Science: Years 1 to 10 Syllabus*. (1999). Queensland School Curriculum Council. https://www.qcaa.qld.edu.au/downloads/p_10/kla_science_syll.pdf