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Student Engagement in the Middle Years: Describing Influences and Possible Teacher Actions

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This article proposes a model identifying some factors influencing student engagement in school, especially in middle years, and indicates possible foci for interventions to improve engagement and life opportunities. It argues that students' needs inform their goals, which in turn direct their beliefs about their capacity to influence their own futures, which then determine their orientation to learning opportunities. Teachers, and others, can intervene productively at each point.

Keywords: Engagement, Motivation, Needs, Goals, Mastery goals, Performance goals, Persistence, Effort

Factors contributing to underparticipation in schooling

There seems to be a link between the disengagement of some students in the middle years and its potential to exacerbate the disadvantage of particular groups of students. Overall there appears to be a decline in school engagement of young adolescents compared with their engagement in primary school (Hill, Holmes-Smith, & Rowe, 1993), and increased truancy and greater incidence of disruptive behaviour, alienation and isolation (Australian Curriculum Studies Association, 1996). It may be that this inhibits the capacity of Australian schools to address inequalities. Lokan, Greenwood and Cresswell (2001), for example, argued that recent curriculum reforms have failed to address the obvious disadvantage of particular groups of students, and have not resulted in significant gains in engagement, especially in the middle years of schooling. McGaw (2004) claimed that Australia is performing worse than other developed countries in this regard and he categorised Australia as high in quality but low in equity. In other words, while the achievement of students overall is high, there are wide differences between the high and low achieving students.

Various factors can contribute to lack of participation in schooling and learning. It is possible that students in the middle years lack confidence, are deficient in skills, give up easily, or do not see the relevance of the curriculum content, or are not aware of their difficulties, or feel they can be successful at school without effort on their part. To explore these further, we investigated individual students' perceptions of the extent to which their own efforts contribute to their success in, and enjoyment of, school in general, and English and mathematics in particular.

This article uses results from research that has been published elsewhere (see, for example, Sullivan, McDonough, & Turner Harrison, 2004) to propose a model that both describes possible influences and also suggests strategies for teacher intervention. The following section describes some factors contributing to the model presented later in the article.

Needs and goals

One of our assumptions is that a determinant of the apparent lack of engagement is the motivation of the students which is directly connected to their needs. Needs may direct specific

behaviours and can be categorised as focussing on self, cognitive functioning and social relationships (Nuttin, 1984, as cited in Hannula, 2004). Self needs relate to identity, autonomy and consistency. Cognitive functioning requires exchange of information including comprehending self, others and the world, and social relating requires positive responses from, and a need to benefit, others. Whilst schooling has potential to activate each of these needs, it is not always successful and sometimes students satisfy these needs in ways opposite to the direction the school and the teacher intend.

Hannula (2004) described goals as a specific object of needs. The example was given of a student having a need for autonomy and a, possibly unstated, goal of challenging the authority of the teacher. We are interested in how individual students' goals are pursued and their capacity to make decisions about their own goals.

Beliefs about capacity for self-regulation

In seeking to understand the basis for the decisions the students make, we sought to investigate their orientation to, and capacity for, self-regulation. The underlying theory was derived from the work of Dweck (2000) who distinguished two perspectives on intelligence. One is a fixed perspective of intelligence entitled *entity* theory to refer to people who believe that their intelligence is genetically predetermined and remains fixed through life. Dweck suggested that students who believe in the entity view require easy successes to maintain motivation, and see challenges as threats. The alternate perspective is where students see intelligence as malleable or *incremental* and they can change their intelligence and/or achievement by manipulating factors over which they have some control. Students with such incremental beliefs often choose to sacrifice opportunities to look smart in favour of learning something new.

Orientation to learning

Directly connected to these views of intelligence are the ways that students are oriented to learning. Incremental "theorists", according to Dweck, appear to be concerned with learning new things and getting smarter, suggesting that they hold learning goals, sometimes called *mastery* goals or achievement goals. People with such goals tend to have a hardy response to failure and remain focused on mastering skills and knowledge even when experiencing challenge. They do not blame others for threats, do not see failure as an indictment on themselves, but rather they hold learning goals which are to increase their competence when confronted with difficulty. Confidence in their own ability does not make a difference to students who see intelligence as incremental and success is not needed to build mastery goals. On the other hand, Dweck suggested that entity "theorists" tend to be concerned with performing and looking smart. Such an orientation is associated with *performance* related goals, where students rely for success on tasks that offer limited challenge.

Ames (1992) described *mastery* goals as involving cognitive processes that have cognitive, affective, and behavioural consequences. Mastery goals involve a belief that effort and outcome covary. The focus is on intrinsic value of learning and effort utilisation, and a belief that effort will lead to a sense of success or mastery. Within a mastery goal, individuals are oriented to developing new skills, trying to understand the work, improving competence and willingness to engage in the process of learning. Associated with *mastery* goals are believing that effort leads to success, taking pride in successful effort, being willing to accept challenges, taking risks, having an inherent interest in learning, seeing a positive relationship between attitudes and learning, increasing the time spent on tasks, increasing perseverance in the face of difficulty, increasing the quality of engagement with learning and the ability to use self regulating strategies.

Ames (1992) explained that with *performance* (or ego involvement) goals the focus is on one's ability or self worth. Ability is evidenced by doing better than others, by surpassing preset norms or achieving success with little effort. Especially important is public recognition. Learning is only evident as a way to achieving a desired goal. Self worth is determined by perception of ability to attract recognition, and is threatened when effort does not lead to recognition. *Performance* goals are connected with avoidance of challenging tasks, with a negative affect following failure, a negative judgement of ability, and the use of superficial and short term strategies.

The research summarised below was based on these constructs as described by Dweck and Ames.

The research focus and data collection

The questions that underpinned the research were:

a) Is the performance/mastery distinction meaningful and can it be measured by whether the students persevere on tasks they find difficult?
b) Are achievement and perseverance connected to either mastery or performance goals?
c) Do students see success at school as desirable and a product of their own effort and action?
d) Are positive student responses to school learning opportunities inhibited by factors such as lack of self awareness, lack of confidence and lack of success?

Data were collected from students in one year 8 (age 13) class in each of four schools in a regional Australian city. The data sought students' responses to questions and tasks relating to learning both English language and mathematics. A survey was administered to, and interviews conducted with, about 50 students. The schools served predominantly low socio-economic communities, with students experiencing difficulties in learning English and mathematics well represented.

The interviews took the form of a teaching conversation. Two sets of hierarchical tasks on a similar topic were constructed in both English and mathematics, ranging from very easy to very difficult. There were three English tasks involving reading activities related to specific CSF outcomes. Students were required to navigate websites to identify appropriate information to complete tasks. In the case of mathematics, we posed a set of six tasks on the area of figures ranging from counting squares to a sophisticated task requiring interpretation of a scaled drawing.

For each task the interviewer asked the question, sought the student's explanation of their strategy and their perception of whether they were correct. If correct the interviewer instructed the student to attempt the next task. The intention was that eventually nearly all students would confront the challenge of a task which was difficult for them. The students were asked how they felt about the challenge they experienced, and the type of support they needed to solve the problem. We also sought students' responses to a vignette about advice they might give to one of their peers who was a potentially high achiever but who deliberately does not try. The interviewers used a template to make a written record of students' oral responses to the area questions, and audio taped the parts of the interview in which students responded to open response items.

The survey included items adapted from three instruments proposed by Dweck (2000), and asked students to rate their self confidence and achievement, their persistence, their perception of the value of schooling, and what constitutes successful learning.

The development of the model of influences

The results of the study informed the development of the model presented below. The key findings, as described in Sullivan, Tobias and McDonough (in press), were as follows:

- The students were surprisingly confident in their own ability, they perceived themselves as trying hard, and they saw these as linked.
- The students seemed aware of the importance of effort.
- Even though we anticipated that students would give up when posed difficult tasks and this would provide the prompt for our discussions, in both the English and mathematics tasks all students persevered for the whole time. It could be noted that the way the tasks were posed eliminated the social context of the classroom, and this may have been more likely to result in mastery goals.
- Inferences from some responses suggested that many students have a performance orientation, not only to learning the subject matter but also to effort. Many saw success as pleasing the teacher, and they also saw effort as pleasing the teacher as well. It confirms the conjecture that orientation to mastery or performance goals is not connected to confidence or achievement.
- Many of the responses that we interpreted as evidence of a performance orientation may be related to short term goals. In other words, such students saw pleasing the teacher, getting questions correct, getting the work completed, and scoring well on tests as the desirable goals.
- A key finding was that, to an open response item, nearly half of the responses related to the negative influence of classmates. We interpret these responses as indicating that the students feel that it is common for students to appear not to try hard as a result of complying with a classroom culture that censures achievement and effort. The responses explain a lack of observable effort as being, on one hand, a result of a desire to be popular, and on the other hand, from fear of retribution from peers. This suggests that motivation, and resulting decisions on needs and goals, may be as much a product of group or cultural factors as individual goals.
- Interestingly, many students indicated that they feel that the lack of effort by some students is an issue that should be addressed. These suggestions about how this could be done were extraordinarily insightful, mature, and empathetic. Perhaps, even though recognising the peer pressure to appear not to try, the students see a need for teachers to offer strategies for overcoming the pressure.
- Only some of the students were aware of the processes for solving problems, only some could articulate the difficulties they were experiencing, and only some could describe what made the question difficult.

In terms of the research questions, we did find the performance/mastery distinction to be useful but more sophisticated tools will be needed than merely observing student perseverance on tasks to measure it effectively, achievement was directly linked to neither mastery nor performance goals, students claimed to see success as both desirable and a product of their own actions, and while success may have been inhibited by lack of self awareness, it seem to be more strongly influenced by pressures to confirm to classroom cultural norms. Arising from these results, we propose the following as a model of how these various influences operate:

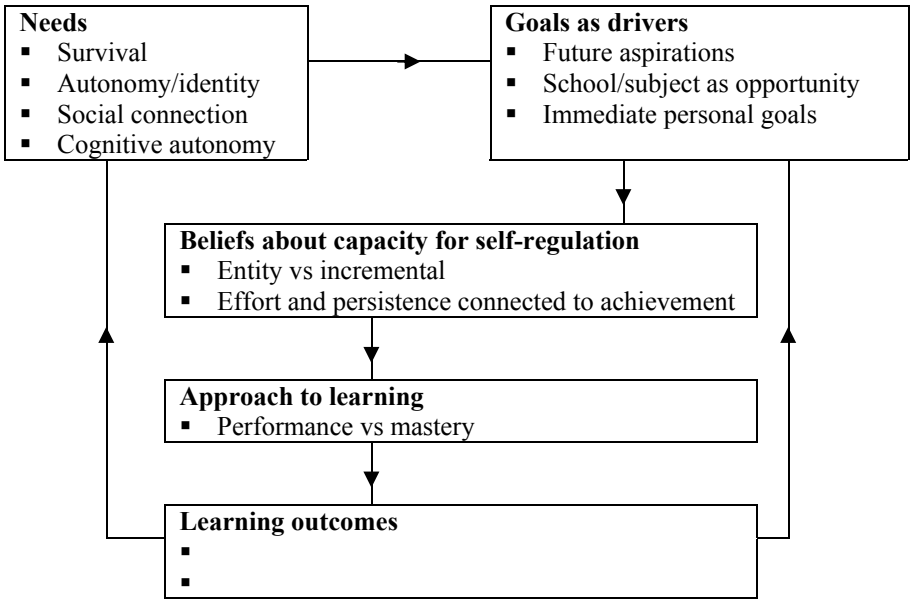

Figure 1: A draft model connecting needs, goals, self-beliefs and learning orientation.

This model proposes that needs inform goals which in turn influence students' beliefs about their capacity for self-regulation which then effect their approach to learning which has a direct impact on learning outcomes. The learning outcomes in turn inform needs and goals.

Of course, the key is not so much how the factors are influenced but how teachers and others can intervene. This can occur at each stage.

Influences on needs

In the model the initiating driver is *needs*. Earlier identity, autonomy and social functioning were identified as key needs and therefore determinants of *goals*. As an aside, the more basic need of survival must be satisfied before these other needs can even be considered. In terms of influences, it is assumed that needs are predominantly determined by cultural and family influences, with a lesser role for the teacher.

Influences on goals and possible interventions

Goals are derived from needs, and as well as by culture, community and family, these are also influenced by teachers. Mellin-Olsen (1981), for example, argued that deep learning can result if students see some purpose, either in interest, through perceived usefulness, or even as a goal to some other end, for the learning. Teachers can contribute to the development of broader goals, in which current effort can contribute to future employment or life choices.

At the macro level, teachers can facilitate engagement in activities that assist students to see connections. For example:

- students could role-play particular employment possibilities such as plumber, pharmacist, painter, and simulate the concept of what the community might look like in, say, thirty years time to initiate discussions on the ways that their futures are connected not only to their own actions but also to those of their peers;
- graduates, some of whom have been successful and some not, can be invited to talk to younger students to create a sense that students like them ultimately become school leavers

and either participate or not in the work force or higher study as the case may be;

- foster metacognitive activities such as thought cycles (McComb & Pope, 1994) that assist students to see direct connections between their thoughts, feelings, actions and responses, to promote student self-monitoring and self-regulation.

At the micro level, connections can be made by posing tasks that students see as relevant to their current and future lives, as is discussed further below.

It should be noted that if social needs are satisfied by conforming to the demands of the group which censures effort and achievement in schools, and especially if the need for autonomy can also be satisfied by defining oneself as opposed to school, then schools have a difficult challenge to overcome this. It seems that this classroom culture may be a more important determinant of participation than the curriculum, methods of teaching, modes of assessment, teacher experience, level of resources, or anything else. This even has implications for the social dimension of learning. If, for example, a teacher uses group work, and if the group censures effort or perseverance, then this could foster performance avoidance, resulting in lower expectations and lower achievement. Teachers should be encouraged to find ways to make students aware of the possible negative effects that such peer factors can have on their personal goals.

It is also important to involve the parents and community not only in understanding themselves the way that student participation and engagement now will effect their future, but also to enlist their support in intervening with the students.

Influences on student beliefs about their capacity for self-regulation and possible interventions

The next key factor is the students' *beliefs about their capacity for self-regulation*. Dweck (2000) argued that teachers can teach self regulatory behaviours such as decoding tasks, perseverance, seeing difficulties as opportunities, and learning from mistakes. This capacity for teachers to enhance positive self-regulatory responses is evident in quite separate research strands on self fulfilling prophecy (e.g., Brophy, 1983), and motivation (e.g., Middleton, 1995). Dweck (2000), for example, emphasised that it is possible for praise and criticism to be both positive and negative. Dweck argued that teachers should model beliefs that, for example, deficiencies are a sign to try harder, that teachers should be frank with students about what they need to reach their goals, that students should be encouraged to use their resources fully, that students should be encouraged to learn that challenge and effort enhance self esteem and are not threats, and that teachers can avoid camouflaging failure or deficiencies.

Influences on student orientation to learning and possible interventions

The most important focus of teacher intervention is in influencing the overall *orientation to learning*. It is noted that Elliot (1999) further categorised performance goals as either performance oriented or performance avoidance. This helps to explain the number of students who are so far progressing successfully at school but who appear to have a performance rather than mastery orientation. Since both of these performance orientations are perhaps the result of the same teacher actions, we treat them as the same.

Ames (1992), for example, argued that teachers can influence the students' approach to learning through careful task design. Some of the characteristics of appropriate tasks are the need for variety and diversity, for the tasks to include meaningful reasons for students to engage in the tasks, ideally for the task to be personally relevant, for there to be challenge, interest and control, for these to foster metacognitive approaches and to include a social component. Ames further

argued that students may benefit if teachers direct attention explicitly to the longer term goals of deep understanding, linking new knowledge to previous knowledge, linking new knowledge to its usefulness and application, and generally focusing on the mastery of the content rather than performance to please the teacher or parents, or even their own self esteem through any competitive advantage. This complements suggestions about tasks from Gee (2004) who formulated principles for task design that were derived from the analysis of successful computer games. Some of his principles particularly related to task formulation were for:

- learners to take roles as "active agents" with control over goals and strategies;

- tasks to be "pleasantly frustrating" with sufficient, but not too much challenge;

- skills to be developed as strategies for doing something else rather than as goals in themselves;

- tasks to allow learners to take on a particular identity (e.g., that of a scientist or author).

Other principles that were related to the sequencing of tasks were for:

- tasks to be neither too free nor too complex, at least initially;

- information to be provided when needed and not sooner;

- tasks to be associated with building cycles of expertise.

Gee also suggested that tasks be able to be customised to match the readiness of the learner both for those who experience difficulty and for those for whom the core task is not challenging.

Implications for Teaching and Teacher Education

In summary, we have argued that students' needs influence their goals which can determine their beliefs about self-regulation and orientation to learning. We made some suggestions of ways that teachers might intervene to foster mastery goals by emphasizing the potential for current school engagement to enhance future options, and also by choosing tasks that stimulate and affirm mastery goals.

There is though a challenge to some apparently common teacher beliefs. Some considerations are that:

- if teachers pose tasks and interact with students in ways designed to elicit self-affirming responses for the teachers, then this is likely to exacerbate an orientation to performance in the students;

- the goal of teaching is to foster independence of thought and action and to avoid actions that might engender greater dependence on the teacher;

- while success is motivating, this does not mean creating opportunities for soft successes on easy tasks, but supporting students as they overcome meaningful challenges;

- praise is not always productive, and neither is criticism always counter-productive: pointing our students' deficiencies is an important part of learning;

-while rewards and punishments are sometimes necessary, they are equally counterproductive as motivating influences; and

- evaluative mechanisms that promote social comparisons are likely to foster performance goals.

Another aspect might be to consider the ways that we choose to affirm. It seems better to

affirm desired behaviours, rather than comparative achievement for example. Some examples of affirmations that we see as desirable are: "trying something different when you are stuck like that increases your changes of solving the problem"; "explaining what you did clearly, like that, can help you to understand better"; "when you kept trying even when it was hard, like you did, you increase your chances of success"; "when you work things out for yourself, like that, you are more likely to learn than if I tell you how"; "helping others, like that, also helps you to learn"; and "you should be pleased that you planned out what you were trying to do".

All of these issues have important consequences for both pre- and in-service teacher education.

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