

National Standards, individual differences, and children's motivation

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New Zealand has a wide spread of achievement (although not as wide as some countries) and National Standards (NS) in numeracy and literacy are touted as the answer to raise standards for those who are 'underperforming' at least, at school. In this country that means large numbers of Maori and Pasifika (especially boys), those with learning and cognitive disabilities, and some for whom English is an additional language. It also means those for whom school just does not 'suit' and there are many of these children too. These are the highly creative children who question authority, are easily bored and have a plethora of innovative ideas (think what Margaret Mahy, Rhys Darby, Burt Munro and Peter Jackson must have been like at school). There are also the children who have outstanding visual/spatial ability, scoring above 90% in the Ravens (an IQ test that measures visual/spatial intelligence). These children may also be strong in literacy and numeracy but often they are not. Under the intended NS system they (and their teachers) would be considered failing.

The learning needs of these children are unlikely to be met by NS. To take a simple analogy, if you are naturally short in stature but you are part of a system that values height, no amount of measuring and evaluating your height is going to magically increase your stature. Instead of regularly measuring your growth against some ideal NS target it would be fairer and more humane to consider what you are good at. You may have a brilliant mind for chemistry, or hand-eye coordination that rivals Roger Federer. Your strength may lie in your affinity with animals or in your flair for cooking. However, if height targets are the standards you must be measured against and reported on you will continually receive the comment "not reaching target yet" or the proverbial "could try better". There is no compelling evidence to show that regularly reporting on children's inability to reach a target encourages them to learn. Children learn best when engaged, motivated, see purpose and meaning, and feel that magic mix of frustration, excitement, purpose, meaning, determination and elation.

The NS system as proposed, threatens to be more punitive than educative. The same groups of low achieving children will be measured within an inch of their lives and found wanting. The same groups of children will be effectively punished by a system that is supposed to nurture every child. As Skinner himself said, punishment does not work. As virtually every book on leadership espouses, encouragement, a sense of purpose and mission, feeling valued and challenged, and feeling you make a difference does foster progress. Relentlessly focusing on literacy and numeracy targets is unlikely to be the panacea for low achievement. Schools already have a tendency to disadvantage some groups of children and while we in education are working on this, there is much to be done. NS are a retrograde step as they penalise those already at risk.

There is much to be learnt from educational psychology here. The classic work by Rosenthal and Jacobson (1968) shows that there is a tendency for teachers to get what they expect from their students. This happens because teachers have (often unconscious) tendencies to treat students differently based on how likely they think it is

that students will be successful. The intended system of NS threatens to perpetuate stereotypes as teachers report on some students lack of progress in literacy and numeracy. Although the expectancies themselves may be accurate perceptions, they can adversely affect student performance. Meyer (1992) showed this in his research into the paradoxical effects of praise and criticism on perceived ability. For example, a student's mediocre performance may stay at that level simply because the student perceives that the teacher does not expect too much from him or her! Some educationalists and psychologists refer to these as self-fulfilling prophecies, others as the Pygmalion Effect named after the book written by Robert Rosenthal, a Harvard University professor, and Leonore Jacobson, a principal of an elementary school in San Francisco. In the book called *Pygmalion in the classroom: Teacher expectations and pupils' intellectual development* the main argument put forward is that expectations that teachers have about their students' behaviour can unwittingly influence such behaviour.

This influence could have either a positive or negative impact depending upon whether teachers expected students to perform well or to perform poorly. When teacher expectations were high, students performed well; when expectations were low or when students were expected to fail then they tended to do so. Rosenthal and Jacobson's work on the Pygmalion effect in the classroom was one of the first studies providing clear evidence to support the hypothesis that teachers' expectations have an impact on students' performance. Their study found that a subtle change in teaching strategies and communication patterns such as teachers paying more attention and giving more encouragement and positive reinforcement to children from whom more gains were expected could have positive results in children's performances in terms of their achievement (Webb & Fraser, 2009). The point here is that NS may have an adverse effect on teachers' expectations; as they plot the lack of progress of children they may treat low performing children accordingly, hoping that the poor performers leave their school, or tear their hair out in utter frustration. The reality may be that the child who is not progressing to target in NS is in fact the next Jamie Oliver (who has dyslexia and did not perform well at school according to any standards).

There is a vast literature on internal and external motivation that also adds to this issue. NS are externally imposed targets that require reporting against. Not only does the intended NS system threaten teacher motivation, it can decrease learners' internal motivation. Henderlong and Lepper (2002) refer to the "4 C's" of intrinsic motivation – challenge, curiosity, control and context. Mountaineers climb mountains because they are there. Scientists are curious to discover why things are the way they are. Humans find the exercise of control over their environment to be inherently motivating. Intrinsic motivation can then be taken to mean when a person engages in a behaviour without coercion; this motivation is strongest when the urge to engage in a behaviour arises from what is within the learner, rather than outside pressures such as praise, rewards and performance targets (Webb & Fraser, 2009).

The following lists the circumstances under which feedback such as NS targets could undermine children's motivation (Webb & Fraser, 2009). Extrinsic target goals can easily lead to:

- Inferences of low ability (Meyer, 1992).
 - Overjustifying of performance (Kohn, 1999).
 - Encouraging performance and ability at the expense of attitude and effort (Mueller & Dweck, 1998).
 - Causing perceived locus of control to shift from internal to external (Deci, Koestner & Ryan, 2001).
 - Encouraging invidious social comparison (Kohn, 1999; Dweck, 2006)

NS is feedback that invites these outcomes. Instead, what we should focus on ways to increase intrinsic motivation (Sansone & Harackiewicz, 2000), such as feedback that:

- Enhances feelings of competence and autonomy (Deci, Koestner & Ryan, 2001).
- Encourages learners to focus more on effort and attitude (Mueller & Dweck, 1998).
- Is informative, helpful, reinforcing, encouraging and supportive (Brophy, 1981).
- Is perceived as sincere, expectations are high but realistic, enhances competence and autonomy, and encourages adaptive attributions (Henderlong & Lepper, 2002).
- Is given within a culturally supportive environment (Butterworth & Bevan-Brown, 2007).

The intended NS system provides the kind of feedback that will undermine many children's enthusiasm for learning rather than increase intrinsic motivation. To return to the earlier analogy, no amount of target setting will make a person of short stature taller. We risk enforcing a punitive system of targets that will reward some and punish others. Ironically, it is likely to be those children already most at risk. There is much to be celebrated about New Zealand education and much potential for ongoing improvement. The direction that the intended NS system provides however, works counter to growing the worth of every child.

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