From adversity to buoyancy

Marc Smith reconceptualises academic resilience in schools

Despite the growth of so-called non-cognitive skills interventions in schools, such as resilience training, there often exists a degree of dissonance regarding the definition of such terms. Resilience interventions have been found to use the term in different ways, reducing the significance of any measureable outcomes. Reconceptualising our view of academic resilience as academic buoyancy helps to distinguish between traditional views of resilience and the more useful role of learners' ability to bounce back from seemingly minor, yet subjectively crucial, daily setbacks.

questions

How do emotions impact on students' academic success?

How can teachers help students bounce back from personally significant setbacks?

resources

Martin, A.J. (2013). Academic buoyancy and academic resilience: Exploring 'everyday' and 'classic' resilience in the face of academic adversity. *School Psychology International, 34*(5), 488–500.

Pekrun, R. & Linnenbrink-Garcia, L. (Eds.) (2014). *International handbook of emotions in education*. New York: Routledge.

Over recent years there has been growing interest from educationalists and politicians in so-called 'non-cognitive' or 'soft' skills, resulting in attempts to introduce programmes such as character building and resilience training into schools. This growing interest counters what many have seen as an overemphasis on testing and the view of schools as 'exam factories'. There have been calls from both sides of the political divide for 'character and attentiveness' lessons (Prynne, 2014) as well as 'grit' and 'resilience' training (Vaughan, 2014) to be part of the educational curriculum, highlighting the importance being placed on what many view as skills that can be taught just like any other school subject.

The role of resilience is perhaps where the greatest emphasis has been placed. Many schools in the UK have implemented resilience- and grit-building programmes as part of the school culture in an attempt to encourage a positive attitude towards hard work and perseverance. While such attempts remain laudable, problems often arise when we attempt to measure the impact of such interventions and to disentangle related concepts that rely too heavily on techniques that don't necessarily measure those characteristics that the intervention is attempting to promote.

A recent systematic consultative review found that many resilience programmes within schools used the term 'resilience' is such a vague and conceptually weak manner that the authors found it difficult to identify those that could be realistically described as resilience-based (Hart & Heaver, 2013). This would suggest that interventions have been implemented with very little understanding of the desired outcome measures or, indeed, any specific measures at all. With the teaching profession becoming ever hungrier for evidence-based interventions, it remains disappointing that potentially valuable programmes are being implemented in the absence of both an evidence base and measurement strategies. Interestingly, results from the largest UK trial of resilience training in schools (the UK Resilience Project) continue to be largely ignored, perhaps due in part to disappointing outcomes and criticism concerning the intervention package (Coyne, 2013).

While the implementation of such interventions remains problematic, so does the terminology. When politicians responsible for education use terms interchangeably, they give the impression that skills such as resilience are synonymous with other skills such as grit, when not only do these terms represent different skills, they may not even represent an appropriate label for that which is being promoted. Furthermore, while promoting these skills, little attention has been paid to how they interact with and impact on other aspects, such as emotions, emotional regulation, motivation and engagement.

Resilience has been defined in the literature as 'good outcomes in spite of serious threats to adaptation or development' (Masten, 2001); and, although the term is often used to denote student responses to everyday setbacks and the ability to 'bounce back', resilience research has tended to concentrate on children at risk from psychopathology rather than the ways in which they cope with daily setbacks or general adversity. Those children who thrive and develop well in spite of these serious threats are said to be 'resilient'. Adversity itself can be seen as any threat that might undermine development: for example,

references

Bouteyre, E., Maurel, M. & Bernaud, J-L. (2007). Daily hassles and depressive symptoms among first year psychology students in France. *Stress and Health, 23*(2), 93–99.

Coyne, J. (2013). Positive psychology in the schools: The UK Resilience Project. *PloS blogs*. Retrieved 18 October 2014 tinyurl.com/nt6ehs5

Duckworth, A.L., Peterson, C., Matthews, M.D. & Kelly, D.R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, 92*(6), 1087–1101.

Dweck, C.S. (2000). *Self-theories*. Philadelphia, PA: Psychology Press.

Eccles, J. & Wigfield, A. (2002). Motivational beliefs, values and goals. *Annual Review of Psychology, 53*, 109–132.

Finn, J.D. & Rock, D.A. (1997). Academic success among students at risk for school failure. *Journal of Applied Psychology, 82*(2), 221–234.

Fredrickson, B. (2001). The role of positive emotions in positive psychology. *American Psychologist, 56*(3), 218–226.

Gadbois, S.A. & Sturgeon, R.D. (2011). Academic self-handicapping. *British Journal of Educational Psychology, 81*(2), 207–222.

Gervais, R.L. & Hockey, G.R.J. (2005). Daily hassles, daily uplifts, sleep loss and stress. *Proceedings of the British Psychological Society, 13*(2), 153–154.

Goetz, T., Preckel, F., Zeidner, M. & Schleyer, E. (2008). Big fish in big ponds. *Anxiety, Stress, and Coping, 21*(2), 185–198.

Gonzalez, R. & Padilla, A.M. (1997). The academic resilience of Mexican American high school students. *Hispanic Journal of Behavioral*

Finn and Rock (1997) examined the academic success of students at risk of school failure, distinguishing between resilient and non-resilient school 'completers' and 'non-completers'. Others (e.g. Overstreet & Braun, 1999) have investigated social factors, such as exposure to community violence, and their relationship to academic achievement and functioning or the achievement of ethnic minorities (e.g. Gonzalez & Padilla, 1997).

While some have seen resilient individuals as being in some way special, others view the process as arising from

Academic buoyancy is the ability of students to successfully deal with academic setbacks

'normative functions of the human adaptational system' (Masten, 2001, p.227). In other words, rather than being remarkable individuals with extraordinary psychological strength, at-risk children are more, not less, likely to display high levels of resilience.

While research into these at-risk groups has provided some useful clues concerning individuals at risk of

psychopathology, they tell us little about how students cope with everyday setbacks and even less about why some students are able to bounce back while others struggle to recover. Such setbacks (e.g. a bad grade on a test or competing deadlines) cannot necessarily be viewed as major assaults on developmental processes, but rather as minor setbacks and daily hassles. Resilience research investigates cases of extreme adversity rather than the daily problems students face, suggesting that day-to-day resilience is a particular form of resilience with a much lower research base. Martin and Marsh (2008) have suggested that the ability to cope with these daily setbacks and minor adversities can be reconceptualised as 'academic buoyancy' in order to distinguish the term from the traditional view of academic resilience.

Academic buoyancy is the ability of students to successfully deal with academic setbacks and challenges that are 'typical of the ordinary course of school life (e.g. poor grades, competing deadlines, exam pressure, difficult schoolwork)' (Martin & Marsh, 2008, p.54). Although the term resilience can be used in different ways, there is a tendency to associate low resilience with chronic underachievement, being overwhelmed and incapacitated, debilitation in the face of chronic failure or anxiety, clinical affect such as anxiety and depression, truancy and disaffection from school, and comprehensive and consistent alienation or opposition to teachers. Academic buoyancy, on the other hand, is associated with the process of dealing with isolated poor grades and patches of poor performance, typical stress levels and daily pressures, threats to confidence due to poor grades, low-level stress and confidence, dips in motivation and engagement, and the way in which learners deal with negative feedback on schoolwork (Martin & Marsh, 2008).

Although resilience and buoyancy appear related to each other and buoyancy appears to be a good predictor of resilience, the differences relate to the difference of degree (e.g. threats to confidence) and differences of kind (e.g. dips in motivation). Another study, of Australian high school students, suggested that buoyancy and resilience were separate constructs sharing around 35 per cent variance, with buoyancy more salient in protecting from low-level negative outcomes and resilience more salient in buffering major negative outcomes (Martin, 2013)

So is academic buoyancy just another term for the ability to cope with daily hassles? Daily hassles research involves the measurement of how incidents impact on the individual and their relationship to other negative emotional outcomes (e.g. Bouteyre et al., 2007; Hewitt et al., 2014) and the use of certain coping strategies (Gervais & Hockey, 2005). Similarly, the relatively recent identification of 'grit' as a specific trait associated with achievement has led to erroneous comparisons with both resilience and buoyancy. Grit has been defined as 'perseverance and passion for long-terms goals' (Duckworth et al., 2007); and while there remains the possibility of a reciprocal relationship between them, buoyancy and resilience, being conceptually similar, are viewed as dynamic emergent constructs, whereas grit is generally viewed as a trait that may or may not be teachable. Academic buoyancy, therefore, relates to the ways in which the individual responds to and attempts to deal with these everyday challenges.

The ability to bounce back from daily setbacks is likely to be influenced by several interconnecting factors. Martin and Marsh (2006) have proposed a number of motivational predictors of academic buoyancy, the so-called 5Cs: Confidence (self-efficacy), Coordination (planning), Control (low uncertain control), Composure (low anxiety) and Commitment (persistence). Longitudinal studies have found the 5Cs to be

Sciences, 19(3), 301–317.
Hart, A. & Heaver, B. (2013). Evaluating resilience-based programs for schools using a systematic consultative review. Journal of Child and Youth Development, 1(1), 27–53.
Hewitt, P.L., Caelian, C.F., Chen, C. & Flett, G.L. (2014). Perfectionism, stress, daily hassles, hopelessness, and suicide potential in depressed psychiatric adolescents. Journal of

Psychopathology and Behavioral Assessment. doi:10.1007/s10862-014-9427-0
Martin, A. (2002). Motivation and academic resilience. Australian Journal of Education, 46(1), 34–49.
Martin, A. (2003). The Student Motivation Scale. Australian Journal of Education, 47(1), 88–106.
Martin, A.J. (2013). Academic buoyancy and academic resilience. School

Psychology International, 34(5), 488–500.
Martin, A.J., Colmar, S.H., Davey, L.A. & Marsh, H.W. (2010). Longitudinal modelling of academic buoyancy and motivation: Do the '5Cs' hold up over time? British Journal of Educational Psychology, 80(3), 473–496.
Martin, A.J. & Marsh, H.W. (2006). Academic resilience and its psychological and educational

correlates. Psychology in the Schools, 43(3), 267–281.
Martin, A.J. & Marsh, H.W. (2008). Academic buoyancy: Towards an understanding of students' everyday academic resilience. Journal of School Psychology, 46(1), 53–83.
Masten, A. (2001). Ordinary magic. American Psychologist, 56(3), 227–238.
Overstreet, S. & Braun, S. (1999). A preliminary examination of the

significant predictors of academic buoyancy and to partially mediate between prior and subsequent academic buoyancy (Martin et al., 2010). Earlier research had identified three resilience outcome constructs representing a breadth of students' experiences and the capacity to effectively deal with challenge, adversity and setback within a school context (Martin & Marsh, 2006). These three constructs consist of enjoyment of school (a school-related cognitive-affective measure), class participation (a behavioural measure), and self-esteem (a global affective measure).

The identification of these three outcome constructs are themselves related to earlier (pre-buoyancy) studies into students' motivation and engagement, and factors in the 'Student Motivation and Engagement Wheel' (Martin, 2002). Adaptive dimensions of student motivation consist of self-efficacy, valuing of school, mastery orientation, persistence, planning and study management. Maladaptive dimensions consist of anxiety, uncertain control, failure avoidance and self-handicapping. The 'wheel', therefore, represents the psychological and engagement dimensions that underpin academic resilience, while academic resilience predicts the three outcome constructs of enjoyment of school, class participation and general self-esteem.

The 5Cs, as predictors of academic buoyancy, represent a useful starting point for the planning and implementation of school-based interventions aimed at strengthening students' day-to-day resilience and their ability to 'bounce back' from seemingly minor but personally significant setbacks in the daily lives of learners. Specific factors related to self-efficacy address students' beliefs about their own capabilities and issues regarding academic self-concept. Effective goal-setting and the development of self-regulatory skills further develop the ability to plan and persist while interventions designed to reduce anxiety can diminish students' fear of failure and reduce the likelihood of them employing self-handicapping measures.

The role of negative emotion: Test anxiety

Further studies have discovered that the concept of academic buoyancy explains a significant proportion of variance in all four components of test anxiety (cognitive: worry and irrelevant thoughts; emotional: tension, bodily symptoms) beyond that explained by coping (Putwain et al., 2012). However, academic buoyancy was found to be inversely related to test anxiety but unrelated to coping, suggesting that academic buoyancy does not reflect a general tendency towards adaptive coping. The authors have suggested that the measures included in the scale used to quantify academic buoyancy may not be challenging enough to engage those processes related to coping, further suggesting that although coping might be related to resilience, it does not appear to be related to academic buoyancy. Furthermore, it is more likely that buoyancy is related to positive and adaptive outcomes rather than threat appraisal directly.

Test anxiety represents a particularly relevant area in relation to academic buoyancy as the 5Cs framework would suggest that higher levels of test anxiety result in lower levels of academic buoyancy and, subsequently, lower levels of achievement. Research into test anxiety and academic buoyancy also highlights an emotional component within the academic buoyancy construct. Test anxiety is a situation-specific form of trait anxiety that incorporates a general tendency to appraise assessments and examinations as threatening (Spielberger & Vagg, 1995) and is associated with a number of negative academic and personal outcomes, including risk to personal wellbeing (Putwain, 2008), lower competence beliefs (Goetz et al., 2008), stronger goal-avoidant orientations (Putwain & Daniels, 2010; Putwain et al., 2010), stronger academic self-handicapping (Gadbois & Sturgeon, 2011) and maladaptive forms of coping such as avoidant and emotion-focussed strategies (Zeidner, 1998).

It has been speculated (Putwain et al., 2012) that buoyant individuals may not view academic failure as threatening to either personal aspirations or self-worth due to their belief in the ability to bounce back from failure. This in turn would suggest an incremental (growth) rather than an entity-based (fixed) attributional style as hypothesised by Dweck (2000). It can also be speculated that buoyant individuals do not hold an expectation of failure because of a belief in their ability to respond positively to the challenge of evaluative-performance events, suggesting further that academic resilience is based on positive ways of approaching academic setbacks rather than attempting to cope with them. This would suggest that academic buoyant individuals are better able to employ positive emotional responses to potentially threatening situations; however, this remains speculative due to the lack of research in this area.

Academic buoyancy and positive emotions

If negative emotions such as anxiety reduce the ability to cope with daily setbacks within an education setting, can positive emotions fuel the ability to bounce back? Martin and Marsh (2008) have suggested that academic buoyancy can be viewed as a positive psychology version of resilience. Resilient individuals do appear to display more positive emotions than less resilient individuals and also tend to be more curious and open to new experiences. In addition, they are able to utilise positive emotions to bounce back from stressful experiences more quickly and effectively than less resilient individuals (Tugade & Fredrickson, 2011).

Positive emotions also appear to regulate more negative emotions through

relationship between exposure to community violence and academic functioning. *School Psychology Quarterly, 14*(4), 380–396.

Prynne, M. (2014, 10 February). Children must be taught resilience and attentiveness, Tristram Hunt claims. *The Telegraph*. tinyurl.com/naf9bdr

Putwain, D.W. (2008). Test anxiety and GCSE performance. *Educational Psychology in Practice, 24*(4), 319–334.

Putwain, D.W., Connors, L., Symes, W. & Douglas-Osborn, E. (2012). Is academic buoyancy anything more than adaptive coping? *Anxiety, Stress, and Coping, 25*(3), 349–358.

Putwain, D.W. & Daniels, R.A. (2010). Is the relationship between competence beliefs and test anxiety influenced by goal orientation? *Learning and Individual Differences, 20*(1), 8–13.

Putwain, D.W., Woods, K.A. & Symes, W. (2010). Personal and situational predictors of test anxiety of students in post-compulsory education. *British Journal of Educational Psychology, 80*(1), 137–160.

Schiefele, U., Krapp, A. & Winteler, A. (1992). Interest as a predictor of academic achievement. In K. Renninger, S. Hidi & A. Krapp (Eds.) *The role of interest in learning and development*. Hillsdale, NJ: Lawrence Erlbaum.

Spielberger, C.D. & Vagg, P.R. (1995). Test anxiety. In C.D. Spielberger & P.R. Vagg (Eds.) *Test anxiety: Theory, assessment, and treatment* (pp.3–14). Philadelphia, PA: Taylor & Francis.

Thomas, C.R. & Gadbois, S.A. (2007). Academic self-handicapping. *British Journal of Educational Psychology, 77*(1), 101–119.

Tugade, M.M. & Fredrickson, B.L. (2011).

the use of positive coping strategies, including, positive reappraisal, problem-focused coping or infusing day-to-day events with positive meaning (Tugade & Fredrickson, 2011). Perhaps students who are able to proactively use and nurture positive approaches are less likely to be negatively affected by daily pressures and regular setbacks. In addition, academic buoyancy's emphasis on growth and the suggestion that buoyant individuals display incremental attributional styles further emphasises the positive aspects of the buoyancy construct.

Broaden, build and buoyancy

Fredrickson (2001) describes a subset of positive emotions that broaden an individual's 'momentary thought–action repertoire'. This 'broaden-and-build framework' suggests that positive emotions promote positive behaviours; for example, the positive emotion of joy sparks the urge to play and the positive emotion of interest sparks the urge to explore.

Broaden-and-build theory suggests that positive and negative emotions have distinct and complementary adaptive functions and both cognitive and physiological effects, so, while negative emotions such as anxiety narrow the thought–action repertoire by preparing the individual to employ specific behaviours (e.g. fight or flight), discrete positive emotions broaden the thought–action repertoire by expanding the range of cognitions and behaviours and therefore creating more available options. This broadened mindset then builds on the individual's physical, intellectual and social resources.

The broaden-and-build framework would suggest an emphasis on building on strengths that nurture proactive rather than reactive approaches to setbacks and challenges, which could go some way to explaining why those students who experience positive emotions during daily setbacks are able to benefit from these

Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology, 86*(2), 320–333.

Vaughan, R. (2014, 30 September). Nicky Morgan: We must lift the burden on our 'hero' teachers. *Times Educational Supplement.*

Zeidner, M. (1998). *Test anxiety.* New York: Springer Science & Business Media.

Promoting academic buoyancy

Identify negative emotions
Students often divulge their anxieties about learning through their language. Identifying patterns of language that can lead to self-handicapping (those pre-emptive excuses we use to justify future failure) allow teachers to spot those students in danger of anxiety and underachievement. Statements such as 'I'm not clever enough to get an A in maths' or 'I've done my homework but it's probably wrong' could well be indications that negative emotions are stifling attainment.

Growth goals over attainment goals
Setting goals can be a powerful tool, particularly if they are incremental and represent a 'better than last time' or 'personal best' approach. And never neglect good feedback.

Praise effort over intellect
Praising the effort a student has put into a task, rather than their innate intelligence, reinforces the view that success is incremental. Incremental views of intelligence, in turn, allows students to understand the where they need to improve.

The power of 'yet'
When students display their anxieties through verbalising their inability to grasp a complex concept, emphasising that learning takes time and effort shifts the emphasis away from 'I cant do it' to one of 'I can't do it yet'.

A whole-school 'growth mindset' approach
According to Dweck (2000), those who view intelligence as malleable rather than a fixed entity tend to display higher levels of resilience and academic buoyancy. Ensuring that this 'growth mindset' remains consistent and part of a whole-school initiative can help students move beyond their last test result.

broadened mindsets and regulate negative emotional experiences as well as view failure in more positive terms. Certain individuals are able to draw on positive emotions in times of stress and are consequently able to cope better with daily setbacks through the effective use of such emotions. Buoyant individuals are, therefore, better equipped to deal with the low-level hassles and negative experiences encountered on a daily basis within a school setting through a kind of positive academic-psychological capital. For example, it has been found that individual interest maintains positive relationships with students' use of cognitive strategies, perceptions of skill and academic achievement as well as making a significant contribution to several aspects of the learning process (Schiefele et al., 1992) while also displaying a significant link to academic achievement, even after controlling for the effects of ability (Eccles & Wigfield, 2002).

In the scramble to promote so-called non-cognitive skills in education, it would appear that much of the research that could provide a suitable foundation on which to build interventions has been neglected. The growing research base for such interventions has been largely

ignored, and those interventions that have been implemented often lack both the research base and the design methodology that would promote and encourage replication (Hart & Heaver, 2013). A closer relationship between researchers and teachers would certainly help to eliminate the possibility that expensive and labour-intensive interventions yield very little in terms of outcomes.

Finally, any intervention that aims to strengthen day-to-day resilience and academic buoyancy must take into account other aspects of emotion and cognition. The encouragement and nurturing of positive emotions and the awareness of the consequences of negative ones should be incorporated into both research and interventions in order for these interventions to be properly trialled and systematically reviewed.

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