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Editorial

Growth approaches to academic development: Research into academic trajectories and growth assessment, goals, and mindsets

Background

In a climate of benchmarks, comparisons, accountability, and league tables, it is important to ensure that students are not excluded from access to academic 'success' or denied a sense of academic progress (Nichols & Berliner, 2007). Many assessment systems represent a 'zero-sum game' in which some students' success comes at the expense of others' success (e.g., Amrein-Beardsley, 2008; Nichols & Berliner, 2007). More than 30 years ago, Slavin observed: 'Some students enter class with such advanced skills that they need to do little to earn As or Bs, whereas others cannot make acceptable grades no matter how hard they try' (1980, p. 520). Today, things are apparently not much different, with a major review reporting 'under traditional models of assessment, some students and some schools may not experience success (because of how success is measured), regardless of how much they were learning or progressing' (Anderman, Anderman, Yough, & Gimbert, 2010, p. 128). In addition, there are many students who are performing to standard or benchmark, but are under-achieving relative to their academic potential (Anderman *et al.*, 2010).

Greater attention to academic growth may provide significant achievement and motivation support for a wide range of students: Although many students may not outperform peers, they can outperform their previous efforts; similarly, although many students may demonstrate acceptable comparative achievement, there is often room for further individual growth. Indeed, according to Dweck, 'the hallmark of human nature is each person's great capacity to adapt, to change, and *to grow*' (italics added; 2012, p. 614; see also Dweck, 2006). This Special Issue focuses on academic growth through an investigation of achievement growth, growth goal orientations, growth goal setting, self-concept trajectories, mindsets, and assessment – and their role in students' academic development.

A number of converging lines of theory suggest growth approaches to student development as a potentially exciting direction for psycho-educational research and practice. First, theorizing about 'growth mindsets' (Dweck, 2006, 2012) articulates the adaptive effects of 'incremental' beliefs about intelligence. Individuals with an incremental view (i.e., a growth mindset) see academic and non-academic outcomes as something that can be addressed through cognitive, emotional, and/or behavioural modification. In contrast, individuals holding an 'entity' view see their competence as fixed and difficult to address, leading to less inclination to make psycho-behavioural

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adjustments. Indeed, research has identified the role of incremental beliefs on students' academic trajectories through school (Blackwell, Trzesniewski, & Dweck, 2007).

Achievement goal theory is another perspective relevant to the study of growth. At its most fundamental level, goal theory is underpinned by performance goals (aiming to outperform others and demonstrate comparative competence) and mastery goals (aiming to understand, develop skill, and improve) (Elliot, 2005). It has been suggested that growth goals may represent an adaptive blend of mastery and performance goals (Martin, 2006, 2011; Martin & Liem, 2010). Specifically, growth goals may reflect a mastery orientation because they are self-referenced and self-improvement-based and yet hold a sufficient element of performance orientation in that the student is competitive, but with his or her own previous performance.

Goal-setting theory (e.g., Locke & Latham, 2002) also provides useful insights into the mechanisms by which growth goals may positively impact educational outcomes: Growth goals may make it clear to a student what they need to strive for to outperform a previous best; growth goals may help a student direct attention and effort towards the goal-relevant tasks that are important to attain educational outcomes; through self-competition, growth goals may energize the student; and growth goals may create a dissonance between current and desired attainment, and the student is then motivated to close this gap (Martin, 2011). Further, according to Senko, Hulleman, and Harackiewicz (2011), goals that comprise challenging standards create pressure to perform, arouse energy and effort, and lead to success. On a related note, a meta-analysis by Hulleman, Schrager, Bodmann, and Harackiewicz (2010) found challenge-seeking goals more likely to predict achievement than mastery or learning-oriented goals.

Self-determination theory (SDT) offers insights into growth approaches. According to SDT, there are three basic psychological needs, the satisfaction of which has implications for individuals' motivation and achievement, including the goals they pursue (Deci & Ryan 2008, 2012). These needs are autonomy, relatedness, and competence. When these needs are met, autonomous motivation arises (Deci and Ryan, 2008). Autonomous motivation encompasses intrinsic and integrated forms of regulation. Of relevance to growth and goals, it has been suggested that the pursuit of growth goals may function in a similar way to autonomous motivation (Collie, Martin, Papworth, & Ginns, 2014; Martin & Liem, 2010; Michou, Vansteenkiste, Mouratidis, & Lens, 2014). Indeed, as noted by Collie et al. (2014), a core feature of growth goals is that they are determined by students, about themselves, and for themselves. Hence, they align with concepts and principles under SDT. In addition, recent conceptualizing that integrates goal and SDT theories suggests that the self-based (growth) goals put forth under the new 3×2 goal framework (Elliot, Murayama, & Pekrun, 2011) are closely aligned with the autonomous motivation of SDT (Vansteenkiste, Elliot, Soenens, & Mouratidis, 2014)

The self-concordance model (Sheldon & Elliot, 1999) is also relevant to the self-determined nature of goals. It proposes that consistency between goals and an individual's core values and interests has significant implications for goal striving. Self-concordant goals are integrated with the self. In contrast, externally set or referenced goals are not aligned with one's interests and values and thus lack volitional strength (Sheldon & Elliot, 1999). It may be speculated that there is adaptive self-concordance in growth goals.

There is also a growing body of research and conceptualizing around value-added models. There is increasing dissatisfaction with static or snapshot forms of assessments (see Anderman *et al.*, 2010). Thus, researchers are investigating alternative approaches to assessing progress across time. These approaches are referred to as value-added assessment models. Broadly, value-added assessment approaches estimate a student's

observed growth and compare this with the growth of students with a similar level of prior achievement. They thus seek to ascertain baselines for achievement growth that can determine adequate growth for students at different achievement levels.

Notably, however, as research and thinking in the area of academic growth expands, so too does the diffusion of findings and advice. This Special Issue is a timely opportunity to bring together major research and researchers that shed important and unique light on specific dimensions and applications of academic growth. Through quantitative and qualitative research traversing academic achievement, growth goal orientations, goal setting, mindsets, self-concept, and assessment, this Special Issue aims to map the broad and important terrain relevant to growth approaches to student development. As the limitations of 'traditional' approaches to student goals and assessment are increasingly recognized, growth approaches to motivation, engagement, and achievement are of greater interest. This Special Issue extends this work through its focus on value-added approaches at the student level, namely students' academic growth and the factors and processes that underpin it.

The treatment of growth in this Special Issue is purposefully broad, aimed at showcasing the diverse methodological, cross-cultural, substantive, and applied ways that researchers can attend to growth in academic settings. The first article, by Anderman, Gimbert, O'Connell, and Riegel (2015), is a review describing current and promising approaches to assessing achievement growth. They identify the importance of selecting the appropriate approach to assessing and analysing growth, provide guidance to assist effective selection, and describe what each approach can tell educators. Also focusing on achievement (in the Hong Kong context), Mok, McInerney, Zhu, and Or (2015) investigate students' achievement growth across 6 years beginning in elementary school. Not only identifying important aspects of achievement growth over time, they also provide guidance on how to conduct analyses across an extended time period. Parker, Marsh, Morin, Seaton, and Van Zanden (2015) also provide analytical and substantive guidance regarding trajectories over time. They track high school students' academic self-concept across 10 time waves with an interest in testing core contentions under the internal–external (IE) frame of reference model of self-concept.

Having attended to considerations around achievement, academic trajectories, and their analytical implications, the contributors then address some core motivational dimensions of growth that also underpin academic development. Elliot, Murayama, Kobeisy, and Lichtenfeld (2015) explore self-based (growth) goals (i.e., using one's own personal trajectory as a standard of evaluation), with particular focus on examination of potential-based goals that have not yet received much attention within the 3×2 achievement goal framework (Elliot *et al.*, 2011). In a cognate article, Martin (2015) further explores growth goals but with a focus on personal best (PB) goals and implicit theories of intelligence. His work implements a longitudinal cross-lag model to examine the causal ordering of PB goals and implicit beliefs about intelligence.

Whereas Elliot *et al.* (2015) and Martin (2015) examine growth goal orientations, Travers, Morisano, and Locke (2015) utilize qualitative approaches to investigate growth goal setting. Through a growth goal self-reflection exercise, they explore how growth goal setting can be aided by a growth reflection programme that also holds positive implications for achievement growth. Finally – and quite fittingly – Dweck (2015) closes this issue with Discussant remarks. In schools and academies worldwide, her work on student growth and students' mindsets is probably the most visible of any work into growth and has had most impact in shifting pedagogical and policy mindsets in this area.

Taken together, we hope this Special Issue on academic growth reaffirms seminal theory that underpins academic growth operationalizations. We also very much hope the Issue endorses and energizes current and ongoing research programmes and classroom practices that place student-based academic growth as a foundation for optimal education and development. It is also our desire that this Issue initiates some new conversations among researchers, practitioners, and policymakers that are aimed at inspiring and supporting students to strive towards their academic potential.

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