EDU019 **THE MINDSET TO SUCCEED: OVERCOMING ACADEMIC FAILURE**

AUTHOR(S): Michele Aucock

Andres Merino

Lanelle Wilmot

University of Witwatersrand

Michele.aucock@wits.ac.za

andres.merino@wits.ac.za

lanelle.wilmot@wits.ac.za

ABSTRACT:

Drawing on narrative data from a case study, the researchers recount the academic journey of a Bachelor of Accounting Science degree student and explore the noncognitive factors adopted by her in order to overcome academic failure. The aim of the research is to uncover insights into academic resilience emanating from the adoption of learning or growth mindset in the face of failure, and the role that educators can play in the advancement of such a mindset. First, literature reporting on the role and function of noncognitive factors, with particular focus on a learning or growth mindset, in informing pedagogy is synthesised. Thereafter the role and function of a learning or growth mindset in the student's academic journey is illustrated. The value of cultivating this mindset is demonstrated in this case study. Implications for teaching and learning include the following. First, the learning mindsets which people adopt affect the goals they pursue, the responses they have to difficulties, and how they ultimately succeed (or not) at university, work and life. Second, a change in mindset is difficult but not impossible. Other individuals can aid this process by the type of feedback they give, and the mindsets that they themselves role model. Finally, the brain, with sustained effort, can grow and change overtime. Teaching people about self-theories in relation to the brain's malleability can help them to change the mindset that they hold and thus how they respond to challenges and setbacks. With greater knowledge and understanding of the role of noncognitive factors in teaching and learning, and support from educators, students experiencing academic failure can be inspired to view 'failure' as a valuable learning process towards academic success, rather than the end of an academic journey.

Key words:
Tertiary Accounting Education, student agency, learning or growth mindset, academic success

INTRODUCTION

Recent trans-global research into student-experience pertaining to alienation and vulnerability has shown this to be a common factor amongst all students: particularly so for many first-generation university students as they enter the middle-class environment of higher education (Christie, Tett, Cree, Hounsell, & McCune, 2008; Mann, 2008). However a number of issues specific to the South African context have placed black working-class and rural learners in South Africa in situations of acute risk of alienation, vulnerability and failure (Luckett & Luckett, 2009; Pillay & Ngcobo, 2010; June Pym & Kapp, 2013; Smith, Pym, & Ranchhod, 2012). Such issues include 'the dislocation of conventional family structures, the breakdown of the culture of learning and teaching in schools, and violence and conflict in society; all of which are legacies of South Africa's pre-1994 Apartheid system of government'(June Pym & Paxton, 2013). For many students (and their families) higher education is seen as the only way out of the cycle of poverty and disempowerment. However, their entry into tertiary institutions, away from home and the support of family and the familiar often produces intense loneliness and a loss of self-esteem and purpose. This is often compounded in the face of academically challenging courses for which many students may be underprepared (Luckett & Luckett, 2009; June Pym & Paxton, 2013; Smith et al., 2012).

How do young black (rural or working class) students respond to academic failure under such challenging conditions? Do they remind themselves that they are intelligent and capable, put their heads down and work not only harder but also smarter? Or do they lose heart, give up, drop out and/or blame others or circumstances? The purpose of this paper is to explore (through means of an exploratory case study) these different patterns of response (otherwise understood as the thoughts, feelings, actions and judgements comprising growth or fixed mindsets (Dweck, 2017) and the resultant effects when adopted by a Bachelor of Accounting Science student.

Self-Theories: Theories on Self-motivation and Intelligence

Central to the acquisition of the skills and strategies of self-regulated learning (SRL) associated with academic success, is self-motivation or drive (Dembo & Seli, 2013; Luckett & Luckett, 2009; June Pym & Kapp, 2013; Schunk & Zimmerman, 2012; Zimmerman & Schunk, 2008). When students are motivated, the prospect of them devoting the necessary time and energy to learn and apply appropriate SRL skills is far higher (Zumbrunn, Tadlock, & Roberts, 2011). The level of motivation of students is influenced by their self-efficacy beliefs or the self-theories they hold. To hold strong self-efficacy beliefs means to be confident in one's ability to complete tasks or to achieve particular goals, regardless of natural talent (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Dembo & Seli, 2013; Duckworth et al., 2007; Dweck, 2017). Educators have an important role to play in this regard as they can lay the foundational support that students need to increase their self-efficacy beliefs (Bandura et al., 1996). But how can educators help foster self-motivation and drive in their students?

Carol Dweck, a long term Professor of Psychology at Stanford University and researcher into theories on self-motivation and intelligence, believes that part of the solution lies in convincing students that they actually *can* improve. Dweck describes how people's self-

theories - the beliefs they hold about themselves and the nature of intelligence - create different psychological realities that comprise a variety of thoughts, feelings, actions and judgements. She, along with a number of other researchers into self-theories and learning outcomes, contends that these beliefs can shape a student's perception of what can be influenced versus what is out of the student's control (Bandura et al., 1996; Blackwell, Trzesniewski, & Dweck, 2007; Chiu, Hong, & Dweck, 1997; Dweck, 2006, 2012; Dweck, Mangels, Good, Dai, & Sternberg, 2004; Siegel, 2015b; Zadina, 2014).

According to Dweck (2017), students can be placed on a continuum corresponding with their implicit views of where academic ability comes from. Students who believe their academic success is based on innate ability have a 'fixed mindset' or hold an 'entity' theory of intelligence. Others, who believe their academic success is based on hard work, learning and perseverance are said to have a 'growth mindset' or hold an 'incremental' theory of intelligence. Students may not necessarily be aware of the self-theories from which they are operating but this can be detected in their behaviour, particularly with regard to their reaction to failure. Students with a fixed mindset fear failure because it would appear to reflect negatively on their basic abilities; students with a growth mindset don't mind or fear failure as much because they realize their performance can be improved and that learning emanates from failure. These two theories play an important role in all aspects of a student's life. Dweck argues that the growth – incremental – mindset will allow a student to live a less stressful and more successful academic life (Blackwell et al., 2007; Chiu et al., 1997; Dweck, 2017; Dweck, Chiu, & Hong, 1995; Paunesku et al., 2015; Romero, Master, Paunesku, Dweck, & Gross, 2014).

Although Dweck (2017) believes that people's implicit theories of intelligence (their self-theories) comprise fundamentally either an entity or incremental theory, she maintains that it is possible to hold a mixture of the two theories or to hold an incremental theory in one domain (such as writing ability) and an entity theory in another domain (such as mathematics) or vice versa. Nonetheless she firmly contends that the self-theory that is held in a particular domain affects motivation in that area, including how the person responds to setbacks (Dweck & Master, 2008). Research has also shown that self-theories about intelligence tend to be relatively stable over time, with students consistently preferring one theory over the other, and that despite entering high school or university with equal scores, people holding an incremental theory do better in their test scores over time when compared to those holding an entity theory (Robins & Pals, 2002). Longitudinal studies have also shown that the self-esteem of people holding an incremental theory did not decline over time while the opposite was shown to be true for those people holding an entity theory (Blackwell et al., 2007; Dweck, 2006; Paunesku et al., 2015; Romero et al., 2014).

Motivational Framework Stemming from the Two Self-Theories

These two distinct self-theories direct students' thoughts, feelings and actions in opposite directions with regard to the following fundamental elements: a) the setting of goals; b) responses to failure; c) attitudes towards academic effort; and d) strategies employed in the learning process (Dweck & Master, 2008).

The Setting of Goals: Entity vs Incremental Self-theories

First, each theory leads to the creation of different goals (Blackwell et al., 2007; Robins & Pals, 2002). Entity theorists tend to choose 'performance goals' over 'learning goals 'in order to obtain positive judgements and avoid negative judgements about their ability (i.e. confirm their ability). Incremental theorists, on the other hand, tend to create 'learning goals'. This is because they believe that intelligence is malleable and can be improved. These students set goals which are about subject mastery and competence, i.e. how well the principles and concepts have been mastered and the application thereof. Students adopting performance goals value 'looking good' or appearing competent, while students with learning goals value learning (Dweck, 2006).

Responses to Failure

Dweck and her collaborators (Blackwell et al., 2007; Dweck, 2006; Dweck et al., 2004) have shown that students holding an entity theory tend to respond to failure with a 'helpless' response, while students holding an incremental theory tend to respond to failure with a 'mastery' response. If a student believes that intelligence is fixed while also believing that intelligence can be measured, then failure for that student will mean that they are indeed unintelligent. The resultant effect is usually one of a feeling of 'helplessness', which in turn leads to the student giving up, dropping out, blaming others or circumstances , and/or trying to feel superior to his/her fellow students in some other way (Dweck & Master, 2008).
Studies, by Blackwell et al (2009) and Nussbaum and Dweck (2008) have demonstrated that as a result of the disempowering nature of an entity theory failing or underperforming students become less self-motivated, less enthusiastic about the subject matter they are attempting to study, and more anxious. This in turn results in less effort being applied to their studies. In fact, for some students, having failed and thus demonstrated their lack of intelligence or academic ability, the only way out of such a situation is to resort to other (counterproductive) methods of coping with failure, such as lying, cheating or identifying with students who performed even worse than they do (Blackwell et al., 2007; Nussbaum & Dweck, 2008).

Because students holding an incremental theory believe that intelligence is malleable and can improve with hard work and effort, they find failure challenging and view it as part of the learning process. For these students, failure acts as feedback about how well they are doing. People displaying a mastery response don't show a decline in self-esteem and will persevere in the face of the challenge. By attributing failure to their own lack of effort rather than a lack of ability, these students are able to take control of the situation and set themselves up for a better outcome (Dweck & Master, 2008).

Beliefs about Effort

The two theories also lead to different beliefs about the value of effort (Duckworth et al., 2007; Dweck, 2006; Paunesku et al., 2015; Romero et al., 2014). When facing an intellectual challenge, entity theorist students tend to believe that cognitive ability alone should help overcome the setback, not effort. After a setback, they tend to question the value of putting any effort into rectifying the situation in the mistaken belief that 'trying' harder is pointless as it will not change the outcome. In fact, research has shown that for many of these students, 'having to try harder' may even serve to show them up as academic frauds (Blackwell et al., 2007; Dweck, 2006). Conversely, students holding an incremental theory value effort in the

belief that that it *can* help them improve, regardless of their current level of ability (Dweck, 2006).

Beliefs about Strategies for Addressing Failure

Students holding either theories will want to be successful in the academic context, and as long as they are succeeding with the task at hand, their different beliefs about intelligence may not always have an impact (Dweck & Master, 2009). In the face of failure or academic setbacks however, the different responses in approaches become more obvious. Entity theorists tend to become defensive and tend to blame their intellect (or lack thereof). They tend not to pay attention to feedback or new academic information, particularly if it relates to failure of a task, test or examination and thus miss out on a learning opportunity. Students holding an entity theory are less likely to take advantage of educative support (i.e. in the form of additional practice tasks or enrichment classes) as this would mean having to acknowledge their current lack of ability. Thus, rather than embracing the challenge and setting themselves up for future development and success, they choose to hide their shortcomings. Over time, this evasive action (i.e. the avoidance of corrective opportunities) can backfire, with students falling further and further behind their classmates (Dweck et al., 2004; Mangels, Butterfield, Lamb, Good, & Dweck, 2006). At some point, the students may disengage from the problem altogether and give up. 'Helpless' explanations, such as: 'I wasn't smart enough', or 'I'm just not good at this subject' or 'The test was unfair', for failure or shortcomings tend to characterise this situation (Blackwell et al., 2007).

Students holding an incremental theory, on the other hand, tend to view failure as an opportunity to learn, practice and grow. When faced with an academic setback, these students tend to want to understand where they have gone wrong and how it can be corrected because they believe they '*can*' succeed. They will attempt to generate new or alternative ways to approach problems, to think outside of the box, because they believe that there are alternative ways to achieve their goals (Dweck, 2017) .

Teaching Incremental Theory for the Cultivation of a Growth Mindset

For the past decade and a half, Dweck (2017) along with a number of other educators and advocates of the cultivation of a growth mindset in education for academic success (Blackwell et al., 2007; Paunesku et al., 2015; Siegel, 2015a, 2015b; Zadina, 2014) have stressed the importance of teaching students (at all levels of education) about an incremental theory of intelligence. In a number of independent studies, it has been demonstrated that teaching students about the neurobiological malleability of the brain and then encouraging then to develop a growth mindset results in increased motivation, better grades, and higher achievement in test scores (Blackwell et al., 2007). Whether the students were in junior high school or at a university, those who received this message outperformed students in the control groups (even when the students in the control groups received first-rate training in study skills). The students also reported a greater investment in learning, and teachers reported noticeable changes in these students' desire to work hard and learn. These benefits were especially important for students who had been subject to negative stereotyping i.e. girls studying mathematics and African-American students (Aronson, Fried, & Good, 2002; Blackwell et al., 2007; Dweck et al., 2004; Good, Aronson, & Inzlicht, 2003).

Given the positive effects of holding an incremental theory in order to succeed in the academic environment, it would appear advantageous to teaching and learning practices to adopt and cultivate such a theory. In their daily interaction with students, educators should possibly be asking: why is this student failing or succeeding?; how might the self-theory of this student be instrumental in his/her academic failure or success?; and, how might my understanding of the role of these two very different self-theories shape my teaching practices to facilitating maximum leaning for success? At a time when only 15% of the undergraduate students who access tertiary education institutions in South Africa complete their degrees (DHET, 2013), the research team felt it was important to determine effective ways to support students in order to maximise their chances of graduation. Following is a description of the first steps taken by the research team to address academic failure through raising awareness around the introduction of the role and function of self-theories in adopting an incremental theory or growth mindset towards academia.

METHODOLOGY

A Case-study Approach

Yin, a prolific writer on the topic of the case-study approach with regard to research methodology, defines a case study as an 'empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident' (Yin, 1994). In other words, a case study allows for the researcher to 'deliberately…cover contextual conditions believing that they might be highly pertinent to [the researchers] phenomenon of study' (Yin, 1994). Grix (2010) in reinforcing Yin's deliberate focus on context explains: 'The emphasis on context is crucial, as the rational for honing in on a specific case is to be able to identify, uncover and unpick specific contextually factors in which the event, person or policy you are analysing is embedded.' Having established the primary elements comprising a case-study, Yin (1994) describes three distinct types of case-study: descriptive, exploratory and explanatory. His description of an exploration case-study, (a type of study primarily carried out with the intention of testing initial working hypotheses, checking for availability of, and access to, relevant data, ascertaining the relevant variables for a study and assessing the suitability of the case for further, more extensive, research (Grix, 2010)), appeared particularly pertinent to the research context in which this research team was operating for the following reasons. Firstly, at the commencement of this research project not a single reference to self-theories or mindset in relation to academic success was present in the SOA Bachelor of Accounting Science degree. Secondly, although a number of studies on the effects of self- theories on academic success have been conducted elsewhere in the world, by the likes of Nussbaum & Dweck (2008), Dweck & Maters (2009) and Romero et al (2015) to name but a few, to the knowledge of the research team no such research has been conducted and documented in the South African accounting education context. Finally, the research team had access to a number of 'initial working hypotheses' emanating directly from the literature review. The first of which hypothesized that: the learning mindsets which people adopt affect the goals they pursue, the responses they have to difficulties, and how they ultimately succeed (or not) at university, work and life; the second: a change in mindset is difficult but not impossible; the third: educators can aid this process by the type of feedback they give, and the mindsets that they themselves role model; and the fourth: teaching people about the brain's neurobiological malleability can help them to change the mindset that they hold and in turn

affect how they choose to respond - in thought, manner or deed - to challenges and setbacks for the better.

The narrative constituting this case study is drawn from an ongoing enquiry into the life experiences of Bachelor of Accounting Science students from previously disadvantaged backgrounds, who have had access to and success within the university, despite the odds, having come from impoverished home circumstances. To recruit research subjects a request was made to all Thuthuka Bursary Fund students (registered at the aforementioned university), inviting them to participate in the research project. The Thuthuka Bursary Fund is a transformation initiative of the South African Institute of Chartered Accountants (SAICA) aimed at encouraging previously disadvantaged South African black and coloured learners in schools to pursue a career in the Chartered Accountancy (CA) profession, by offering them full bursary support at tertiary institution accredited by SAICA. To date, 26 Thuthuka Bursary Fund students have participated in the case study, following detailed informed consent procedures and reassurances of their right to withdraw. For the purposes of this article, only one of these students' stories was highlighted.

The Interview Procedure

Prior to participating in the one-on-one interview processes, students were given a list of reflective questions to help them prepare for their individual interviews. These questions had been submitted to the University's Human Research Ethics Committee (non-medical) for ethical clearance. During the interview process students were encouraged to own the process and to engage in the interview as they felt best reflected their experiences. Each student related his/her life story, with special emphasis on when and how failure had derailed their academic journeys, and how they had ultimately managed to succeed despite these challenges. The researchers met with the students on campus and facilitated their narratives by asking them to share their experiences with them. On occasion the researchers would interject by asking a few probing questions in order to gain greater clarity or understanding, but in accordance with protocols typically adopted in narrative inquiries, the interviewers attempted to remain 'listeners' more than 'interviewers' (Chase, 2011). All narratives were audio-recorded with the students' permission. On average, each student initially spent about 2 hours recounting his/her story. Semi-formal follow-up sessions were conducted at a later stage.

To extract the essence of these students' mindset processes and the role they played in overcoming academic failure (or not in some cases), all interview transcripts were subjected to thematic content analysis (Chase, 2011; Merriam, 1998).

A Single Case-study Approach

For the purposes of this article, only one of the 26 students' stories was highlighted for discussion. For the remainder of this paper this student will be known a Naledi. The reason for adopting a single or macro case-study approach for this study was that it allowed for the researchers to a) examine one student's journey in a real life context in detail, and b) get a glimpse of broader processes at work in the student community (Merriam, 2014). The case study itself was developed from data collected in six in-depth interviews with Naledi conducted over a 24-month period. The email and cell phone text messaging

correspondence between Naledi and her mentor, as well as study plans, timetables, principle notes and summaries were also used as sources of data for thematic content analysis and data triangulation. The texts that have been selected for inclusion in this paper were specifically chosen to illustrate the dynamic nature of Naledi's self-theories in order to illustrate the 'ups and downs' of her personal and academic transformation. After a rough draft had been constructed, Naledi was asked to corroborate and approve the study. This process prioritizes the research data and affords the researchers some 'objectivity' while simultaneously honoring Naledi as a research participant and not a research object (Badenhorst, Moloney, Rosales, Dyer, & Ru, 2015).

The Case-study: Naledi

In mid-2014, after four and a half years of grueling study, Naledi, an aspirant Chartered Accountant, was on the verge of failing the third year of her degree, having previously had to repeat her first and second years of study. Disillusioned and suffering from burnout, Naledi approached one of her third year content course lecturers for help. Over a period of two years of intensive consultation with and mentorship by the lecturer, Naledi was able to redirect the behaviours that had impeded her ability to complete her undergraduate degree in accounting in order to graduate.

The Journey

Brought up by her great-grandmother, Naledi lived and went to school in a small town in the province of KwaZulu-Natal, South Africa. From the age of one, Naledi had been left in the sole care of her great-grandmother. Naledi's father, although absent from her life, provided for her education. Consequently, instead of having to attend the educationally 'inferior' township school, Naledi was able to attend the local ex-Model C school in her hometown.

Quiet, reserved and prone to spending time 'reading books rather than playing in the street with friends', Naledi earned the reputation of being 'special'. She excelled as she progressed though the school system with ease and confidence, coming in the top five of her class consistently throughout her school career.

> I think the teachers just looked at my face and said - here's the top ten badge - cos that's literally how it felt, I felt like I never had to work, but somehow I always did well.

A life-changing event occurred in her penultimate year at high school when Naledi's great-grandmother passed away, leaving Naledi alone to take care of two younger cousins who had also been placed in the care of her great-grandmother. Naledi took on the responsibility as a matter of course. At the beginning of her final year at high school, Naledi's aunt returned to the family home. From the start there was tension in the relationship and although Naledi was relieved of her role as sole caregiver, her goal during her final year at school was to achieve matriculation marks sufficient to gain entry to a 'prestigious' university in Johannesburg – a destination she saw as 'rescuing her from her present predicament'.

Her decision to apply for the Degree of Bachelor of Accounting Science was three-fold: first it would enable her to leave home; second, she had heard from a friend that one could earn a great deal of money, security and status as a Chartered Accountant (CA); and third, as a

'special' person she had to keep up her reputation for setting (and achieving) high academic goals. Therefore, instead of using money she had been given by her aunt to purchase a loaf of bread for the family meal, she used the money to buy airtime to contact the university of her aspirations to request an application form. From May of 2009 until February of 2010, Naledi kept a daily diary recording the 'days, weeks and months' remaining until she could 'escape' from her home and go to university. She also confessed to sleeping with the University Prospectus under her pillow every night. This new goal motivated Naledi to work hard which resulted in her achieving excellent matriculation results, and ultimately being offered a place at the university of her choice.

University life

On entering the University, Naledi felt that she 'had arrived'. This attitude, she conceded in one of her interviews, was bound to sabotage any future attempt at success as she had made the university a destination in itself and not a place that would require a great deal of work in a discourse she knew very little about. Confidant that during the course of the next four years she would acquire an undergraduate degree - a Bachelor of Accounting Science Degree - and a post-graduate diploma in accounting – a Higher Diploma in Accounting - and the opportunity to write the SAICA ITC, she relaxed and took full advantage of being young and irresponsible for the first time in her life. This was fueled by the mistaken belief that she was not only capable of passing (her academic track record testified to this) but that she deserved to be there because she was 'special'. In addition to being 'very' bright, Naledi believe that she was 'special' because she had risen above poverty and rural township life, she had 'been lucky enough not to have a baby' and have to leave school, and she had overcome the loss of both mother and great-grandmother. Finally, Naledi believed she was 'special' because she had aspirations greater than that of being a 'check-out person at the local super market'. Lacking any knowledge of or experience in 'the world of work', and absolutely no insight into the knowledge, skills and strategies needed to succeed in a highly challenging academic discipline, Naledi 'had fun' with the rest of her classmates. What Naledi did not realize at the time, and only discovered at a later stage, was that her friends, after returning from a night of partying, would settle down to work, while she would go to bed exhausted. She reflects:

> the fact that they thought I was special at home, when I came here, it was just going to be a disaster - I'm not working and I think I'm special - it was just a bad combination.

The academic gap between Naledi and her peers began to increase: they were passing their subject tests, while she was not. Unaware of the fact that she was operating with a fixed mindset and instead of reflecting on her own actions and taking responsibility for why she was failing, Naledi turned to her friends to find out how they were managing to succeed. If a 'successful' student studied through the night to prepare for a test, Naledi would sit at her desk attempting to do the same. Year after year, locked in a disabling mindset, Naledi continued to move through the university system, with no definite goals, no work ethic or study strategies in place, no timetable in use, copious but inadequate notes and summaries, very few hours of sleep, no work/relaxation balance in place, and an ever increasing loss of confidence and self-esteem. She lived on memories of being special, and motivated herself

by telling herself she needed to stay at university to rescue her abandoned cousin from a life of poverty in their hometown.

Four and a half years later and yet to graduate with a degree that should have taken three years to complete, Naledi was still unaware of how and where she was going wrong. The year had begun on a positive note as she had been awarded a full bursary by the Thuthuka Bursary Fund (TBF). Determined to pass, this her final year, on the first attempt, Naledi started the year off well. It began with her doing better than a number of her peers in their first Managerial Accounting test. Her confidence, and self-esteem, boosted -'I could do this' - Naledi took her 'foot off the pedal and began to relax'. This change in attitude had far-reaching outcomes; by the middle of 2014, with mid-year examinations just about to be written, Naledi realized that she had not done enough work to pass.

Highly anxious, she approached a lecturer who she 'trusted' for academic help and guidance. This was the start of a mentoring relationship that is still in place today, and is the reason, she believes, she was able to shift mindsets, overcome her difficulties and reclaim her academic aspirations. Prior to approaching the lecturer, Naledi had relied on her 'special' academic ability to get through her courses. She admits to 'not putting enough effort into her studies'. With her inability to self-regulate with regard to trying to gain access to and negotiate a very challenging academic discourses within an equally challenging institution, where students are viewed as numbers, cohorts (those passing and those failing) and through-put (or not) statistics, Naledi was a sure candidate for failure. The literature on mindset and self-theories (Briceño, 2013; Dweck, 2012; Dweck & Master, 2009; Nussbaum & Dweck, 2008) indicates that in order for a students to overcome failure, take responsibility for their learning and adopt the skills and strategies comprising self-regulated learning, they need to have a growth mindset. In the case of Naledi, it took a year for her to take full responsibility for her weaknesses in order for her to leverage her strengths appropriately. During their initial meetings in mid-2014, the lecturer, now acting more as a mentor and guide than content specialist/ mindful of her devastation at having failed, provided a 'caring' or 'safe' space for Naledi to come to terms with her situation (Christie et al., 2008; Dweck et al., 2004). During those meetings the mentor, drawing on insights gained from the literature on mindset and learning, began to introduce Naledi to the skills and strategies comprising self-regulation as well as highlighting the need for hard work, perseverance and sustained effort. He also recognized that until she took full responsibility for her failure and was able to adopt a learning mindset, she would not be able to change. The mentor therefore, in an empathetic but assertive manner, encouraged Naledi to take responsibility for the role she had played in her many failures, with particular reference to her most recent failure – that of third year. He challenged her to reflect on what needed to change in all areas of her life in order for her to ultimately succeed in her studies. This included the need for her to a) start creating goals for learning (i.e. to strive for mastery and competence of content matter) rather than performance goals (i.e. just passing); b) viewing effort as a necessary part of learning rather than as a reflection of low intelligence or lack of natural ability; c) attempting to think out of the box and generate new or varied ways to do things rather than to revert back to using old - now unsuccessful - strategies (but with greater determination) and; finally, to recognize the value of embracing the process of learning (as painful and demanding as it may be) above that of focusing on the end product.

For the first time in her academic life Naledi was being mentored and supported by someone she trusted and felt supported by. She felt that she was being seen as an individual with academic potential –'and not just, a number, a fee paying student or part of a cohort of failing students' (as in the case of the University), or as 'a potential bride worth so many cows' (as in the case of her family). In her words:

> That was the biggest thing with [my mentor] like he saw where I was and then he tried to help me wherever I wanted to go to instead of saying you won't pass third year because you've already failed first year and second year.

Although committed to the process and really wanting to succeed, Naledi was unable to adopt a change in mindset for the first six months of the intervention. Then, at the beginning of 2015, having failed the third year examinations, Naledi finally accepted that she needed to take responsibility for her lack of direction, her lack of motivation, her lack of time-tabling, her lack of principle note-making, her lack of sleep, her lack of nutritious food and her regular exercise: In her words: 'it took me five years to take ownership of the fact that I have to take responsibility for my life...five wasted years'. This shift in mindset proved to be the catalyst to the making of a truly productive and challenging mentor/student relationship. In the June of 2015 (and just prior to her mid-year exams) Naledi spoke confidently and energetically about the skills and strategies she had finally started to enforce:

> …the discipline of making a timetable and actually following it through. Seeing how are you spending your time, accounting for the time that you are spending. After doing that I remember thinking: Oh my God I spend so much time doing other things when I'm here to study…

[So the mentor challenged your sleeping patterns?]

> Yes, big time. I remember looking at him funny when he said I should sleep at least seven hours. I said that's like the craziest thing anyone has ever said, my friends sleep for three hours and they seem to be doing fine. I thought it was absurd but at the beginning of the year I aimed for eight hours but I end up sleeping maybe seven and a half hours. It helps because in class I am able to concentrate and because I am able to concentrate in class I can see which concepts I'm going to kind of struggle with when I go back and study, so I ask the lecturers and then they are able to explain so I spend less time going over the work which means I can attempt tutorials which is a big thing, because I get to actually practice. So the sleep is probably the biggest thing...and even when I get to school, from eight to four I'm not tired. Then I take an hour and a half break and I'm able to study again because I'm not even sleepy so I can't even say, let me take a nap, I'm able to work from six til ten, that's when I try to sleep. During those four hours, I actually get shocked at how much I am able to do in a short amount of time, instead of saying I'm going to study til three in the morning and you have a lot of time to work but you actually do one hour's worth. The intensity, it's the intensity.

[At the start of the interview, you mentioned eating a healthy lunch, was healthy food part of the equation?]

Yes, he did say that I should try to eat healthily and exercise, and that when you I take time off not to think about the books, not to feel guilty for taking time off but to be fully there, completely. Like say going for ice cream with friends, be there fully… He suggested the whole balance thing - I thought you only had to do that when you are much older. But after seeing the benefits of eating healthily and excising, I want to do it more. Fries are very nice but I would rather have a productive day than be tired and full and uncomfortable.

Also, for the first time in five and a half years, Naledi was able to shed the stigma of failure and to view it as a learning experience. She explains:

It sucks that I failed, but people don't see the stuff that happening inside or how happy I am that I get to have this opportunity to solidify knowledge and make sure that by the time I get to fourth year I know a lot more than I would have known had I passed. I have to look sad and depressed for failing, but I'm not too bummed because of it, because of the learning that has happened, especially after discovering that I could actually write stuff in my own words.

For the most part Naledi's journey has been written in the third person. Following are however a few extracts taken from email and sms correspondence between Naledi and her mentor. They have been included to illustrate a) how the mentor went about nurturing a sense of personal agency in Naledi through exposing her to a growth mindset and the learning skills and habits needed to overcome academic failure and b) how Naledi responded to this process of mentorship and awareness raising. The extracts are written (and recorded) in the first person in the form of an unfolding narrative between Naledi and her mentor.

Setting the Context:

In January of 2015, Naledi wrote:
Hi
I came by your office on Monday. I was on campus and came to greet you.
You're probably aware of this but I didn't pass FinAcc. It was a bit hard coming to terms with it but I think I'm fine now…
I wanted to ask if you could help me in 2015, just as you did last year. Even though the outcome wasn't what either of us wanted, I learnt some valuable lessons from the process. I believe that I will benefit greatly from it, especially starting as soon as the academic year begins.

In response the mentor wrote:
I will definitely be available to provide guidance and support. I think you were very close to getting through but we shouldn't dwell too much on the past. I am sure that you are now ready to do well in all your future studies and this is something very positive.

I would start by writing down the strategies that you are going to follow for each course. Tax, audit and Man Fin. Also write strategies for FinAcc but with the aim of revising them.

During the first 6 months of 2015, Naledi and the mentor met on a regular basis; during these meetings the mentor provided insights into the skills and strategies comprising self-regulated learning. Although this space was an academically challenging space, because it was 'safe', supportive and 'non-judgmental, Naledi was eventually able to trust herself enough to realize a shift in mindset. The true test of Naledi's mindset transformation came in May of 2015, when she had to write her mid-year exams. Following are extracts from the ongoing narrative between student and mentor as they negotiated the last 6 months in Naledi's academic journey. The narrative starts with Naledi's response to the following question posed by the mentor: *How did you do in the exams this week? Did your strategies work?*

On 30 May, Naledi wrote: *Just wrote FinAcc. Can't actually believe how important staying calm is. I planned as you had advised. Made key points but only for the first part. Overall, strategy-wise I'd say it was alright. I kept thinking that all I need is a pass; it really did calm me down. It actually made me focus on at least passing each section.*

On 31 May 2015, the mentor wrote: *I am glad to see that you are finding the advice I am giving you useful. Now you need to concentrate on the next two exams, so don't give too much importance to how you feel about Tax. We can come up with Tax specific strategies for the third and fourth block.*

However, what you need to do is to learn from the experience of the two exams regarding reading time, time management, choice of the order of questions to answer and believing in your ability to get through the paper. I really liked your decision to scratch the section you were stuck with to continue with the rest of the paper. In some other situations you will need to make a choice and then stick to it even if you are not 100% sure that that it is the right choice. But again by making a decision you are able to move forward.

On 7 June the mentor wrote: *How is your Saturday plan going? It is OK to rest if you are tired but try to get the right balance.*

In response Naledi wrote: *Can't seem to work now. Think it's also because my body is not used to this [rest]! Resting seems like a waste of time. But there's also zero productivity.*

In response, the mentor wrote: *Something that may help is to set yourself small tasks, but to work with intensity on them. A little bit like a sprint. I suppose you are tired because you feel you have been running a marathon. Maybe having short term targets can help.*

With regards the productivity issue maybe try to keep track of how you spend your time. You can show me next week (sometimes knowing that you need to be accountable for something may actually help you to get things done). Otherwise try to see if you can come up with your own strategies. Keep positive and focus on the small steps….
Good luck & I hope that tomorrow you are able to be more focused.

On 8 June, Naledi wrote: *Thank you. I will try the small setting of small tasks. Not sure what it would look like. But I will try. I have written down all the things I would like to do before I write and when my study times will be.*

In response the mentor wrote: *Great! If you need to fine tune as you go along feel free to do so. Plans are aids only so be ready to be flexible. I think that now it is very important that you get between 8 and 7.5 hours of sleep each day (this is not a waste of time). You need that to be fresh; otherwise you will get burnt out.*
Keep up the good work!

On 13 July Naledi wrote: *It's been a while. I checked my results. I was hoping I would pass everything but I'm okay. A lot went into getting these and I would like to thank you.*

Auditing 48; FinAcc 61; Man Acc 57; Tax 57

They are the best marks I have ever gotten since I came to Wits. I know you can't celebrate at half time but I am using them as motivation. Although they are not a true reflection of how much effort went into studying, they show where I spend the most and least time on. I feel like I got 48 for Auditing to remind me that I'm not above anything (Auditing was my highest mark end of 2014 and the only one I passed in June-50 on the dot last year). Unfortunately I did not consult on it as vigorously as we had agreed, but I have learnt my lesson.

There is room for improvement but you should know that I feel really good about these marks. What seems to be working is sleeping 8 hours daily. It changes absolutely everything.
I am eternally grateful and would like to continue meeting with you. I know I disappear sometimes and the reason is that during those times I feel like I need to impress you. And that is really bad because it leads to me lying about my progress and what/how I'm doing. So if you could just bear with me during those times.

I'm excited for the 2nd semester as we cover some really exciting topics, and I do well emotionally when I'm excited. I'm driven by emotion and have noticed that sleeping (!) helps calm me down and be able to control them. I will check your consultation times and set up a meeting around that when school starts.

26 Aug the mentor wrote: *Are you "aggressively" consulting with lecturers?*
I understand you have a Man Fin III test on 2 September. How are the preparations going?

In response Naledi wrote: *I have been consulting. Definitely more than I used to, but probably not as aggressively as we had agreed. I have been consulting with academic trainees, as they tend to give a lot more exam technique. I spend a bit less time on the notes, and a lot more on tuts. The test marks SHOULD reflect that.*

On 4 September Naledi wrote: *Subject: Re: Reflections*
I am doing alright, I'll say. It has been a relatively good test week. Aiming for a certain mark has pushed me a lot. I remember you saying 65? I wrote 70s on my wall in my room. I'm going over my FinAcc tuts now and was quite surprised to see that I did virtually all my 3rd block tuts. But because of the practice that I need, I have decided that I am going to redo the key ones.

On 18 September Naledi wrote: Subject: results

I was planning on telling you all of my results but I cannot hold it in. FinAcc results came out and I got (drumroll please) 65%!! Remember I said I was going to get 60%... I am very happy and excited.

On 27 September Naledi wrote:
Subject: Rest of the results

First let my say I passed everything (another first-going down in the history books).

When I got my tax results I was a little disappointed. I got 71%. Remember I said I would get 80%. I was a little sad until I remembered how far I've come. Even in 2015 it is a huge jump (I got 60 in June). 71 are excellent and I should actually be very happy.

When Auditing came I thought that the test might have been harder than I thought because even though I said I would get 70, I thought I was being humble lol. I thought I would get higher. I got 67.

For Finance I got 53. I remember it was a horrible paper.

I have only gone over FinAcc and have identified what I missed in the scenario and any gaps in principles. I plan on being done with the others by Sunday.

What I learnt from all of this is this I shouldn't be too hard on myself. That it is great that I am making predictions but it is not the end of the world if they are not true. Linking it to the Friday sessions, because I am a heart person, not doing as well as I thought I'd do leaves me disappointed and unable to work. So the remedy is being kinder to myself. And being very proud!

The average for September is 64% !!!

We are finally winning.

On the 24th November 2015, the day after Naledi wrote her fourth and final examination, the researchers conducted their sixth and final interview with her. During that interview they asked her to reflect on the past six years of her life at university and in light of this, what her response to the following four statements would be: 1) 'I can change my abilities through effort'; 2) 'I can succeed'; and 3) 'This work has value and purpose for me'; and, 4) 'I belong in this learning community' (Farrington et al., 2012). Her response is as follows:

1. 'I can change my abilities through effort': *Yes definitely! So when I look at abilities, it's how much you are able to do, you can change your marks through effort. Basically the more work you do, and that's like doing the right things, the more marks you'll get.*

2. 'I can succeed': *Of course I can! Yes, I feel like I don't even need to elaborate on that one* (Naledi laughing).

3. 'This work has value and purpose for me'. *So [when I finish my studies] I want to go back home to teach accounting for three years. So the more [I] know about [the] subject and the*

more experience [I] have then it will help [me] with that…even beside that, like I said earlier, I'm going to need it at some point, I'm not at university just to pass time, and it's to help me do the work… I will need it while doing my Articles, or like even whilst I'm still here it's going to help me do my next test or next year [when I study for my Higher Diploma in Accounting].

4.'I belong in this learning community': *'In my high school I was one of the top students, so when I came here and realized that people actually did better than I did; it made me feel that I only came here because of luck. I didn't feel like I belonged here cos I didn't feel like I was smart enough. But now I belong in this learning community. When I think of myself, I feel like I am meant to be here…I'm supposed to be here….*

In early December of 2015, Naledi received formal confirmation that she had passed the final year of her Bachelor of Accounting degree. In 2016 Naledi successfully completed a Higher Diploma in Accounting and on 31 March 2017, with the release of the SAICA ITC results, she came one-step closer to realizing her dream of becoming the first Chartered Accountant in her small rural community.

Catalysts for Change: Allowing for the Presence of the Relational in the Accounting Space.

The reasons contributing to Naledi's failure were multiple and complex, but in the main, they comprised an inability to deal with an ever increasing and academically challenging workload under very stressful personal circumstances, with very little understanding of the dynamics comprising an academically challenging accounting degree, and a fixed mindset. It was only when Naledi had reached an all-time emotional low, i.e. failing the last year of her undergraduate degree that she finally decided to reach out to one of her lectures for help. Over a period of two years of consultation with and mentorship by a lecturer, Naledi was able to redirect the fixed mindset thoughts, feelings and actions that had impeded her ability to access, and succeed within the discourse of accounting to those comprising a growth mindset. It was however only when Naledi had been afforded a 'caring' 'safe', and 'non-judgmental' space to explore her many failures and take full responsibility for them, that she was able to finally adopt the necessary skills and strategies, and most importantly the mindset, to take responsibility for her learning and succeed in a discourse that nearly broke her.

RECOMMENDATIONS

Effective pedagogy is not a one-way process: although educators naturally want all of their students to profit from their efforts, they also want students to profit from their own efforts (Luckett & Luckett, 2009). A growth mindset can help students to actively seek learning, to enjoy learning, and to learn successfully. Although students are ultimately responsible for their 'mindsets', this research has shown that a shift in mindset from one self-theory to another – with the accompanying changes in thoughts, feelings and actions (as described previously) can result in academic success. This shift can be facilitated in a number of different ways. Firstly, educators need to operate with an enabling self-theory.This is important for two reasons: a) research has shown that educators holding an incremental theory do not tend to put students into categories and expect them to stay there, but educators holding an entity theory are likely to do so. Not only do they tend to believe in

fixed attributes, but they also tend to believe that they can quickly and accurately judge those attributes. This means that once they have decided that someone is or is not capable they are closed to any new information to the contrary. This does not assist students who they have decided are not capable (Falko Rheinberg as cited in Dweck, 2006). And b) educators need to be aware of the benefits of 'praising' for 'strategies and processes' rather than 'intelligence or ability' in order to foster the adoption of an incremental theory by their students.

Second, in order to encourage greater theoretical understanding of entity and incremental theories, students and educators should be encouraged to attend workshops on the subject matter. These lectures and workshop can be offered in addition to regular content lectures/workshops and can be presented by educators and/or psychologists with an in-depth knowledge of educational neuroscience and the malleability of the brain (Siegel, 2015a; Zadina, 2014).

Finally, positive stories using role models have been shown to create change and self-motivation in people. Growth minded educators and even student tutors, can function as good role models in this regard (Bandura et al., 1996; Dweck, 2017; Siegel, 2015b).

CONCLUSION

In summary, self-theories or mindsets are the beliefs that people hold with regard to self-motivation and intelligence. Mindset processes are underpinned by four fundamental premises: first, that there are two mindsets which people adopt which affect the goals they pursue, the responses they have to difficulties, and how they ultimately succeed at school, work and life; second, that people can change, and that other individuals can aid this process by the type of feedback they give, and the self-theories that they themselves role-model; third, that the brain, with sustained effort can grow and change overtime; and lastly, teaching people about the brain's neurobiological malleability can help them to change the self-theory that they hold and thus how they respond to challenges and setbacks.

A change in self-theory is difficult but not impossible, as has been demonstrated by Naledi. With the ever increasing pressure on universities to improve through-put rates, adopting an incremental theory in teaching and learning practices may just help to bring about the necessary change required for academic success

'Be the change you wish to see in the world' (Mahatma Gandhi)

IDEAS FOR FUTURE RESEARCH

Although literature emanating from research into the academic impact of operating from a fixed mindset vs. operating from a growth mindset has been documented in a number of different educational contexts, presently this does not seem to be the case in accounting education. It is hoped that this study will not only contribute towards redressing this gap, but that interest in and adoption of such a theory may arise as a results of this study. That said the study does have a number of limitations that need to be acknowledge. Even though this case study was in fact part of a larger case study comprising 26 students, the focus (with

regard to this particular study) was limited to a single female student from a previously disadvantaged background, enrolled for an accounting degree at a local university in South Africa. Therefore, although the study allowed for the examination of one student's journey in a real life context in detail, and gave the research team a glimpse of broader processes at work in the student community, it may have limited generalizability. Further research is required to investigate consistency (or lack thereof) of the findings across a) larger student numbers, b) gender, c) other universities and/or d) other socio-economic groups and subgroups.

References

Aronson, J., Fried, C. B., & Good, C. (2002). Reducing the effects of stereotype threat on African American college students by shaping theories of intelligence. *Journal of Experimental Social Psychology, 38*(2), 113-125.

Badenhorst, C., Moloney, C., Rosales, J., Dyer, J., & Ru, L. (2015). Beyond deficit: graduate student research-writing pedagogies. *Teaching in Higher Education, 20*(1), 1-11.

Bandura, A., Barbaranelli, C., Caprara, G. V., & Pastorelli, C. (1996). Multifaceted impact of self-efficacy beliefs on academic functioning. *Child development, 67*(3), 1206-1222.

Blackwell, L. S., Trzesniewski, K. H., & Dweck, C. S. (2007). Implicit theories of intelligence predict achievement across an adolescent transition: A longitudinal study and an intervention. *Child development, 78*(1), 246-263.

Briceño, E. (2013). Mindsets and student agency. *UnBoxed: A Journal of Adult Learning in Schools, 10.*

Chase, S. E. (2011). Narrative inquiry: Still a field in the making. *The Sage handbook of qualitative research, 4*, 421-434.

Chiu, C.-y., Hong, Y.-y., & Dweck, C. S. (1997). Lay dispositionism and implicit theories of personality. *Journal of personality and social psychology, 73*(1), 19.

Christie, H., Tett, L., Cree, V. E., Hounsell, J., & McCune, V. (2008). 'A real rollercoaster of confidence and emotions': Learning to be a university student. *Studies in Higher Education, 33*(5), 567-581.

Dembo, M. H., & Seli, H. (2013). *Motivation and learning strategies for college success: A focus on self-regulated learning*. New York: Routledge.

DHET. (2013). Statistics on Post-School Education and Training in South Africa: 2011. *Research Bulleting in Post-School Education & Training*. Retrieved from http://www.saqa.org.za/docs/papers/stats2011.pdf

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.

Dweck, C. S. (2006). *Mindset: The new psychology of success*: Random House LLC.

Dweck, C. S. (2012). *Mindset: how you can fulfil your potential*: Constable & Robinson.

Dweck, C. S. (2017). *Mindset-Updated Edition: Changing The Way You think To Fulfil Your Potential*. London: Hachette UK.

Dweck, C. S., Chiu, C.-y., & Hong, Y.-y. (1995). Implicit theories and their role in judgments and reactions: A word from two perspectives. *Psychological inquiry, 6*(4), 267-285.

Dweck, C. S., Mangels, J. A., Good, C., Dai, D., & Sternberg, R. (2004). Motivational effects on attention, cognition, and performance. *Motivation, emotion, and cognition: Integrative perspectives on intellectual functioning and development, 2*, 41-55.

Dweck, C. S., & Master, A. (2008). Self-theories motivate self-regulated learning. *Motivation and self-regulated learning: Theory, research, and applications*, 31-51.

Dweck, C. S., & Master, A. (2009). Self-theories and motivation. *Handbook of motivation at school*, 123.

Farrington, C. A., Roderick, M., Allensworth, E., Nagaoka, J., Keyes, T. S., Johnson, D. W., & Beechum, N. O. (2012). *Teaching Adolescents to Become Learners: The Role of Noncognitive Factors in Shaping School Performance--A Critical Literature Review*: ERIC.

Good, C., Aronson, J., & Inzlicht, M. (2003). Improving adolescents' standardized test performance: An intervention to reduce the effects of stereotype threat. *Journal of Applied Developmental Psychology, 24*(6), 645-662.

Grix, J. (2010). *The foundations of research*: Palgrave Macmillan.

Luckett, K., & Luckett, T. (2009). The development of agency in first generation learners in higher education: A social realist analysis. *Teaching in Higher Education, 14*(5), 469-481.

Mangels, J. A., Butterfield, B., Lamb, J., Good, C., & Dweck, C. S. (2006). Why do beliefs about intelligence influence learning success? A social cognitive neuroscience model. *Social cognitive and affective neuroscience, 1*(2), 75-86.

Mann, S. (2008). *Study, power and the university*: McGraw-Hill International.

Merriam, S. B. (1998). *Qualitative Research and Case Study Applications in Education. Revised and Expanded from" Case Study Research in Education."*: ERIC.

Merriam, S. B. (2014). *Qualitative research: A guide to design and implementation*: John Wiley & Sons.

Nussbaum, A. D., & Dweck, C. S. (2008). Defensiveness versus remediation: Self-theories and modes of self-esteem maintenance. *Personality and Social Psychology Bulletin, 34*(5), 599-612.

Paunesku, D., Walton, G. M., Romero, C., Smith, E. N., Yeager, D. S., & Dweck, C. S. (2015). Mind-set interventions are a scalable treatment for academic underachievement. *Psychological Science*, 0956797615571017.

Pillay, A. L., & Ngcobo, H. S. (2010). Sources of stress and support among rural-based first-year university students: An exploratory study. *South African Journal of Psychology, 40*(3), 234-240.

Pym, J., & Kapp, R. (2013). Harnessing agency: Towards a learning model for undergraduate students. *Studies in Higher Education, 38*(2), 272-284.

Pym, J., & Paxton, M. (2013). Surfacing Possibilities: Experiences of working with first generation university students.: Common Ground Publishing (forthcoming)

Robins, R. W., & Pals, J. L. (2002). Implicit self-theories in the academic domain: Implications for goal orientation, attributions, affect, and self-esteem change. *Self and Identity, 1*(4), 313-336.

Romero, C., Master, A., Paunesku, D., Dweck, C. S., & Gross, J. J. (2014). Academic and emotional functioning in middle school: the role of implicit theories. *Emotion, 14*(2), 227.

Schunk, D. H., & Zimmerman, B. J. (2012). *Motivation and self-regulated learning: Theory, research, and applications*: Routledge.

Siegel, D. J. (2015a). *Brainstorm: The power and purpose of the teenage brain*: Penguin.

Siegel, D. J. (2015b). *The developing mind: How relationships and the brain interact to shape who we are*: Guilford Publications.

Smith, L., Pym, J., & Ranchhod, V. (2012). Explaining the first-year academic performance of commerce academic development students: A statistical analysis. *South African Journal of Accounting Research, 26*(1), 43-65.

Yin, R. K. (1994). Case study research: design and methods. Applied social research methods series, 5. *Biography, Sage Publications, London.*

Zadina, J. (2014). *Multiple pathways to the student brain: Energizing and enhancing instruction*: John Wiley & Sons.

Zimmerman, B. J., & Schunk, D. H. (2008). An Essential Dimension of Self-Regulated Learning. *Motivation and self-regulated learning: Theory, research, and applications*, 1.

Zumbrunn, S., Tadlock, J., & Roberts, E. (2011). Encouraging self-regulated learning in the classroom: A review of the literature. *Proceeding of Metropolitan Educational Research Consortium.*