Research Article

Developing Mindsets: A Qualitative Study Among First-Year South African University Students

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Abstract

This article reports on a qualitative study that evaluated first-year students' lived experiences of attending a 12-week student support programme focused on fostering mindsets. Participants included 545 first year Engineering students enrolled for academic studies at a South African university. All participants completed qualitative narrative sketches depicting their experiences. A random sample of 300 students' narrative sketches was included as data in the qualitative study. The data were analysed using thematic analysis, and Dweck's theory on mindsets served as the theoretical lens through which the data were interpreted. The results indicate that the majority of students experienced significant personal growth from attending the student support programme. Additionally, the findings point to the relevance and importance of offering student support programmes focused on exploring mindsets to first-year students. The results of this exploratory study suggest that mindset theory should be considered as an essential component when advising first-year South African Engineering students. Furthermore, we make a case for the relevance of positive psychology-based development programmes for first-year students.

Keywords

Engineering students, mindset, positive psychology, qualitative research, student support

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Introduction

What good are positive emotions in an educational context? Positive psychologists claim that positive emotions can broaden and build students' thought and skill repertoires, improve resilience, and enhance academic performance (Duckworth & Seligman, 2005; Fredrickson, 2001; Mokgele & Rothmann, 2014). It is against this backdrop that positive psychologists further argue that the three traditional "r's" of education, namely reading, (w)riting and (a)rithmitic, should be augmented with three equally important "r's", namely reasoning, resilience, and responsibility (Gardner, 1999; Seligman & Adler, 2018).

Seligman and others contend that students should be supported in pursuing holistic academic wellbeing (Nelson & Low, 2011; Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). In other words, students should be supported to attain academic success to become fully functioning human beings (Seligman et al., 2009). Accordingly, researchers have called for a more holistic conception of student success that encompasses not only academic achievement but also the cultivation of non-cognitive factors such as social intelligence, flourishing, and positivity (Anderson, 2016; Sinclair, 2019). Dweck (2006) supports this view and contends that the mindset a person adopts is crucial in the pursuit of academic success and wellbeing.

Dweck's view is supported by seminal researchers, such as Chickering and colleagues who pointed to the importance of students' psychosocial development in relation to identity formation during the university experience (Chickering, 1969; Chickering & Reisser, 1993; Chickering & Gamzon, 1991). Likewise, Astin (1984, 1999) referred to the concept of student involvement and emphasised the importance of physical and psychological energy that students devote to academic practice. However, Tinto (1993) explained that student retention results from the student's longitudinal engagement with the formal and informal components of the university setting. Thus, from the perspectives of Chickering (1969), Astin (1984, 1999) and Tinto (1993), students and the university structures share a responsibility to ensure optimal engagement and holistic development.

Although previous studies have accumulated critical knowledge on the importance of students' individual attributes and the features of the university setting concerning the academic success and wellbeing of students, some issues remain underexplored (Adler, Seligman, Tetlock, & Duckworth, 2016; Anderson, 2016; Bowers & Lopez, 2010). For example, the operationalisation of mindset within the student support context has received little attention, especially within a South African setting (Mason, 2019; Van den Bergh, 2018). Assisting students in developing growth mindsets could not only help them in enhancing academic performance, but also aid in improving the capacity to deal effectively with a range of life challenges (Anderson, 2019). Hence, the promotion and subsequent empirical study of mindset within the context of student support is an area worthy of further investigation (De Villiers, 2014; Van den Bergh, 2018).

In light of these arguments, we report on a study that explored students' lived experiences of attending a 12-week interactive student support programme focused on operationalising the notion of growth mindsets within the context of higher education. The article has been organised in the following way: first, the study is framed concerning relevant literature, then the qualitative methodology that guided the empirical study is presented, and next the findings from the qualitative study are discussed. The article is concluded by summarising the main findings discussing limitations, and proposing avenues for future research.

Mindset: Theoretical Conceptualisation

Intelligence, specifically general intelligence, refers to an abstract combination of cognitive abilities that conveys strong evaluative associations with a variety of positive life outcomes, such as employment, income status, and overall life success (Sternberg, Grigorenko, & Bundy, 2001). When measured using IQ tests, the construct of intelligence has traditionally been viewed as a significant predictor of academic performance (Anastasi & Urbina, 1997). However, recent research has indicated that certain collateral factors such as motivation and test fitness strongly influence IQ test scores (Foxcroft & Roodt, 2013). Furthermore, research by Duckworth and Seligman (2005, 2006) has indicated that grit, which refers to the passionate and dedicated pursuit of meaningful goals, is a better predictor of positive life outcomes, including academic achievement, than traditional IQ measures. In this regard, Dweck and Leggett (1988) argue that a person's implicit theory of intelligence – the foundational beliefs about intelligence – is a significant predictor of positive life outcomes. Dweck and colleagues built on these ideas and proposed the theory of mindset (Diener & Dweck, 1978; Dweck, 1999; Dweck & Leggett, 1988).

The theory of mindset proposes that people hold certain assumptions or implicit theories about aspects such as intelligence and personality (Yeager & Walton, 2011). These assumptions point to people's perceptions of, amongst other things, their capacity to change, their engagement in learning, and their motivation (Yeager, Trzesniewski, & Dweck, 2013). Thus, the concept of a mindset refers to a mental model of one's perspective of the self, the malleability of personal attributes and the relationship with the world (Anderson, 2019; Yeager et al., 2013).

Dweck (2006) differentiates between two classifications of mindset, namely fixed mindset and growth mindset. A fixed mindset, also referred to as an entity theory of intelligence, and refers to the personally held belief that a person has a pre-established and set range of skills, talents, and abilities. Individuals who hold fixed mindsets may erroneously interpret learning encounters as threatening to their psychological wellbeing because they regard themselves to be limited in terms of skills, talents, and abilities. Moreover, those who hold a fixed mindset tend to personalise failure as indicative of personal shortcomings. Hence, students who adopt a fixed mindset tend to avoid challenging learning experiences and are likely to be disengaged (Dweck, 2006).

In contrast, the growth mindset, which is also referred to as the incremental theory of intelligence, suggests that people can develop the skills required for, amongst other things, academic success through purposeful effort (Blackwell, Trzesniewski, & Dweck, 2007). Compared to the fixed mindset, a growth mindset can be regarded as a more empowering stance that students can adopt concerning academic-related tasks. Students who develop growth mindsets tend not to personalise failure, but consider it as a vital element of the learning journey (Dweck, 2006).

Research by Blackwell et al. (2007) and Dweck (2012) found that students who adopted growth mindsets were more motivated and less anxious, and performed better academically. Dweck (2006) proposes that students' mindsets can be changed from rigid and inflexible to open and flexible by shifting the focus from a results orientation to a process orientation. Thus, a focus on meaningful engagement versus an exaggerated emphasis on the outcome could promote a growth orientation. The transformation from a fixed mindset to a growth mindset can be facilitated via student support programmes that encourage greater self-awareness and optimism, emphasise a process-based focus, and highlight the significance of psychological flexibility in the face of challenges (Anderson, 2019; Meevissen, Peters, & Alberts, 2011; Van Lingen, George, & Persence, 2019). Additionally, addressing the basic psychological needs of autonomy (experiencing a sense of self-directedness); competence (mastery experiences) and relatedness (social connectedness) could promote positivity and motivate students to engage proactively in the academic process (Ryan & Deci, 2017). More research is needed to explore the value of mindset-based support programmes offered to students (Anderson, 2019; Dweck, 2006), especially within a South African context (De Villiers, 2014; Van den Bergh, 2018; Van Lingen et al., 2019).

Goal of the study

This article reports on a study that explored qualitatively the experiences of first-year students who attended a 12-week support programme (hereafter referred to as 'the Programme'). The Programme focused on facilitating the development of growth mindsets among participants. The study was guided by the following research question: What are students' lived experiences of attending the Programme?

The Programme

The Programme sought to involve students in reflective and experiential learning focused on facilitating a smooth transition from the school environment to the university context. Thus, the Programme fell into the ambit of the first-year experience (FYE) initiative, which is focused on supporting students in navigating the transition from secondary and tertiary education (Nyar, 2018).

Furthermore, the Programme aimed to assist students in reframing the FYE as an opportunity for growth, development, and self-discovery. Thus, the Programme adopted a process-based focus and emphasised the importance of self-directedness, mastery experiences, and social engagement.

The Programme was presented over a 12-week timeframe comprising one 90-minute contact session per week that was scheduled in students' timetables. The main topics addressed during the Programme were self-awareness, motivation, and problem-solving. Each contact session started with reflective exercises and short videos relevant to the topic that was used with permission from LifeXchangeTM (https://lifexchangesolutions.com/). The contact sessions consisted of individual self-assessment and interactive small group and class discussions, presentations by the facilitator and self-development homework exercises. The participants completed the narrative sketches, indicating their experiences of the Programme, in week 12.

Since the Programme was not part of the students' curriculum and therefore not credit-bearing, the participants were not obligated to attend the sessions. However, because the Programme was scheduled in students' timetables, and the faculty supported the initiative, attendance was strongly encouraged.

Research Method

Research design

A qualitative design, positioned within a phenomenological approach, was adopted to conduct the study (Creswell, 2014; Giorgi, 2009). The phenomenological approach focuses on understanding, interpreting and reporting on the lived experiences of participants. A phenomenological approach was regarded as appropriate for the research focused on developing an empathetic understanding of the lived experiences of a particular phenomenon (the experience of attending the Programme) among a sample of first-year university students (Creswell, 2014; Giorgi, 2009).

Research context

The study was conducted at a large South African residential university that boasts a total population of approximately 60 000 enrolled students. The student population is diverse in terms of sex, race, and language and accurately resembles the broader South African demographics (Statistics South Africa, 2016). Data for this study were collected from students enrolled for studies in Engineering due to the authors' work-related affiliation within the specific faculty.

Sample

Data for this study were collected using narrative sketches from a total of 545 first-year Engineering students who participated in the Programme. No biographical data were collected from students as the focus of the study was on the Programme and not on assessing age, sex or other variables in relation to students' experiences.

Unlike qualitative interviewing, narrative sketches are limited because researchers cannot pose follow-up questions or use probes to explore participants' responses in-depth (Giorgi, 1985). In light of this limitation, and to ensure that an adequate number of participants' points of view were considered, it was decided to include a random sample of 300 students' narrative sketches as data in the study. Data saturation was achieved after reviewing approximately 220 narrative sketches. However, to ensure that no new themes emerged, it was decided to analyse the full complement of 300 narrative sketches.

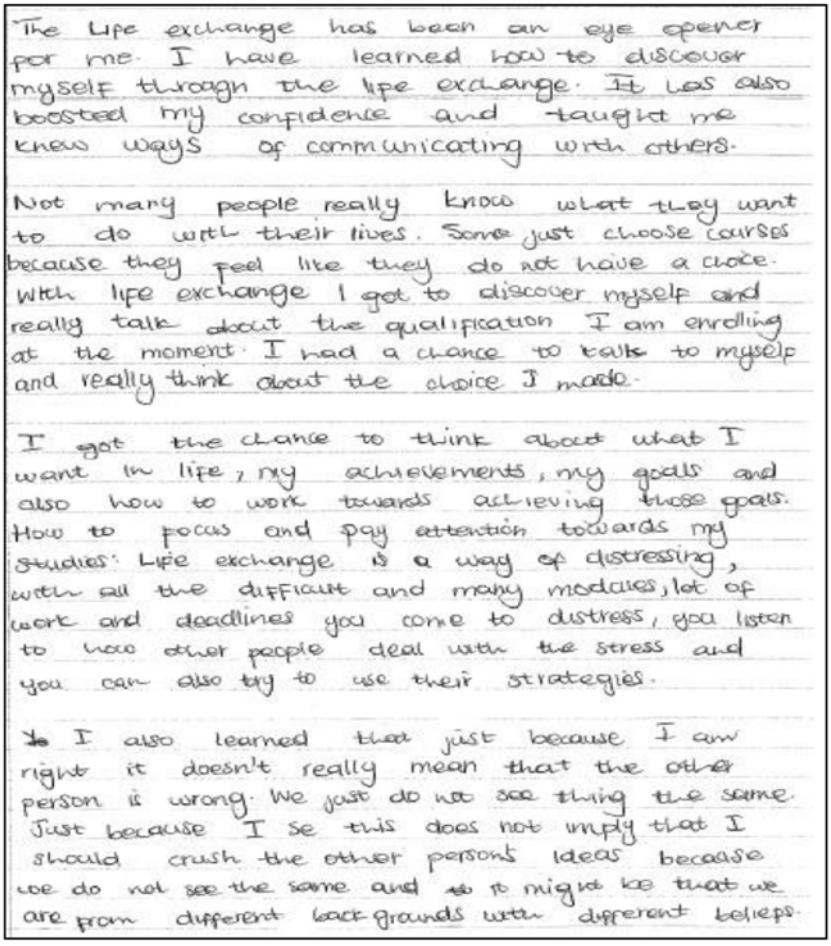
The random sample was selected using the 'RANDBETWEEN' function in Excel. First, numbers were allocated to all narrative sketches and the sampling frame was created in Excel. Then, the 'RANDBETWEEN' function was used to select a random sample comprising 300 numbers. The final sample was double-checked to ensure that no duplicates were included in the sample.

Data collection and procedure

Data were collected using narrative sketches, which are described as documents written by participants to depict their stories and perspectives about a specific qualitative phenomenon being investigated (Giorgi, 1985). In the study, participants were requested to write about their experiences of attending the 12-week student support programme. Specifically, students were invited to share their experiences of attending the Programme in a narrative format.

The 300 Narrative sketches varied in length from one to three handwritten pages. An example of an anonymised narrative sketch is provided in Figure 1.

Figure 1. *Example of a narrative sketch*



The life exchange has been an eye opener for me. I have learned how to discover myself through the life exchange. It has also boosted my confidence and taught me knew ways of communicating with others.

Not many people really know what they want to do with their lives. Some just choose courses because they feel like they do not have a choice. With life exchange I got to discover myself and really talk about the qualification I am enrolling at the moment. I had a chance to talk to myself and really think about the choice I made.

I got the chance to think about what I want in life, my achievements, my goals and also how to work towards achieving those goals. How to focus and pay attention towards my studies. Life exchange is a way of distressing, with all the difficult and many modules, lot of work and deadlines you come to distress, you listen to how other people deal with the stress and you can also try to use their strategies.

I also learned that just because I am right it doesn't really mean that the other person is wrong. We just do not see thing the same. Just because I se this does not imply that I should crush the other persons ideas because we do not see the same and it might be that we are from different back grounds with different beliefs.

Data analysis

Data were analysed by following five interrelated and iterative steps (Giorgi, 2009; Henning, Van Rensburg, & Smit, 2011). First, the researchers engaged in the process of familiarisation by reading the narrative sketches multiple times. At this stage of the analysis, a deliberate attempt was made to bracket personal experiences through qualitative memo writing. Second,

a process of coding commenced at a granular level by attaching labels to words, phrases, and sentences. During the second phase, the researchers engaged in ongoing reflective discussions that allowed them to reach a consensus on the coding framework. Third, codes were combined into meaningful units. Fourth, the meaning units were transformed into psychologically sensitive descriptive expressions. This step also included classifying meaning units into broad themes and subthemes. Fifth, the synthesis of a general structure of the individual psychological elements of participants' experiences of attending the Programme was conducted (Giorgi, 2009; Henning et al., 2011).

Lincoln and Guba's (1985) guidelines for qualitative research were adopted to enhance the trustworthiness of the findings. The following measures were implemented to strengthen the trustworthiness of the qualitative interpretation: collecting rich data through narrative sketches; participant verification fully describing the research method and procedure; and ongoing reflective practice through qualitative memo writing.

Research ethics

The university where data were collected granted permission to conduct the study (Ref. number: REC/2019/11/003). All identifying information (e.g., surnames, names, and student numbers) was treated confidentially and removed before the data analysis. No course credit or financial benefits were offered for participation. All participants gave individual written informed consent.

Findings and Discussion

The qualitative analysis revealed four central themes, namely (1) From resistance to buy-in, (2) Awareness, (3) Insight, and (4) Learning and growing. Collectively these themes point to a journey of transformation where students entered the university context in a state of uncertainty characterised primarily by a fixed mindset. The transformation process was facilitated through participation in the Programme. The end-state contrasted with students' initial experiences and was characterised by a sense of realistic optimism, confidence, and trust in their abilities to deal with the challenges entrenched in the university context.

In the next section, the four qualitative themes are discussed, followed by a discussion of the underlying principles and inferences that emerged after the analysis. The referencing system in parenthesis denotes participant numbers (e.g., P#1 for Participant 1).

From resistance to buy-in

The qualitative analysis revealed that participants initially presented with low buy-in and

resistance towards the Programme. Amongst others, Participant 151 explained that the contact sessions appeared "useless at first". Other participants also expressed this sense of resistance; for example, Participant 207 indicated that he/she initially "felt offended … when making us reflect on ourselves". Participant 285 agreed: "At first I didn't want to do these classes."

Mason and Nel (2011) reported similar findings concerning initial low buy-in and resistance from a sample of first-year students who attended a psychosocial student support programme. From Astin's (1984) student involvement perspective, the data suggested students invested limited psychological energy during the initial stages of the Programme. Similarly, through the lens of Tinto's (1993) conceptualisation, there was a limited engagement between students' pre-existing attributes and the features contained within the Programme. However, following the initial resistance, students in the particular study reported significant personal growth (Mason & Nel, 2011). This led the authors to speculate that future programmes could do well to ensure proper buy-in from students and faculty in an attempt to manage resistance and promote psychosocial development (Chickering, 1969; Mason & Nel, 2011).

Similar to the students in the Mason and Nel (2011) study, participants' initial resistance and negative orientations ("At the beginning of the course I had a fixed mindset and was always negative" P#162) were replaced by reports of finding significant value from attending the Programme. For example, Participant 151, who had initially expressed strong opposition, explained that "as useless as these classes seemed at first, I kept attending … it made me more independent and helped to take charge of the future." Other participants exclaimed that the Programme "should be compulsory for all students" (P#208), and "Life skills (the Programme) is the best … it was perfect" (P#207).

The similarities between the study reported here and the Mason and Nel (2011) study were that the support initiatives were compulsory add-on programmes that did not offer clear initial tangible benefits such as academic credit to students. Thus, it seems that students may consider add-on programmes as onerous when the benefits are not directly evident. In this regard, one participant noted that initially, the Programme was "boring and time-consuming…academically it did not help that much" (P#38).

However, when the benefits such as holistic development and personal growth, became palpable, participants appeared more motivated to participate. Moreover, the fact that the Programme addressed students' basic psychological needs of autonomy ("the classes helped me become more independent" P#286), competence ("I learned so many new things … I grew as a person" P#223) and relatedness ("We had fun in this programme and got to know each other better" P#217), appears to have resulted in favourable experiences and greater awareness. The importance of buy-in and support from faculty could also not be overstated, as participant 293 attested: "Thank you so much to our dean for this opportunity."

This theme indicates that the low initial buy-in and resistance to participating in the Programme was replaced by higher levels of motivation and indications of significant personal growth. We speculate that a combination of becoming aware of the benefits addressing basic psychological needs, and the support from faculty played vital roles in creating buy-in from students.

Awareness

Participants' qualitative accounts shared a common thread around the stressful reality of the FYE. Amongst others, one participant explained: "[S]ince this is my first year, I found it overwhelming" (P#145). The sense of being overwhelmed during the FYE highlighted the need for the Programme, as another participant explained: "Before this programme I struggled a lot…my life was not good…the classes [Programme] changed everything" (P#158). Participants agreed that the Programme assisted them in developing the capacity to address numerous stressors associated with the FYE. These stressors included academic concerns ("The Engineering course, the academic work is not easy…" P#9), intrapersonal challenges ("I never had self-confidence … I never had positive thoughts …" P#12), interpersonal relationships ("Before the programme I had insufficient confidence to speak to others" P#147), and personal doubts ("I came to see that I can pass this course…I used to believe that I don't belong and that I'm not good enough" P#144).

The stressful reality of the FYE has been well documented in the literature (Grøtan, Sund & Bjerkeset, 2019; Mason, 2017) and participants' perspectives suggest that awareness of the challenges and finding support are critical components of addressing stressors. Explicitly, participants explained that they had developed an understanding that stressors can be managed ("The course enhance my self-belief. I now know that I can go for the things that I want. It's not just about winning" P#44). Moreover, participants noted that attending the Programme had a significant effect on their awareness that stressors within the university are normative experiences and that they can adopt strategies in dealing with demands in constructive ways. This level of understanding is consistent with the mindset theory, which suggests that persons who adopt a growth mindset are more likely to embrace change and stressors as opportunities for growth (Blackwell et al., 2007).

Insight

Due to the ubiquitous nature of stress during the FYE (Grøtan, Sund, & Bjerkeset, 2019; Mason, 2017), students must develop, amongst other things, the mindsets required for success (Yeager & Dweck, 2012). From participants' narrative sketches, it became apparent that they had gained insight into the dynamics of mindsets by partaking in the Programme. Amongst other things, participants shared personal insights into how they reframed negative interpretations and experiences to opportunities for growth. In this regard, Participant 10 explained that "it

was at first that everything was seen as impossible … since I started attending the lesson [the Programme], things started to change … it all started with a mindset and an attitude change …" Participant 14 agreed and explained: "I did some introspection and came to understand that there is an underlying philosophy … it's about how I make decisions." This thematic idea was crystalised by Participant 120, who shared that "in life there will always be hurdles … you have to challenge yourself and step out of your comfort zone …."

Gaining personal insight into the self in relation to the world is a critical feature in psychological and mindset literature (Anderson, 2019). From a psychological perspective, the concept of insight refers to the process of understanding a specific phenomenon, such as the demanding FYE, in a new or novel way (Hill & Kemp, 2016). Mindset theory emphasises a person's intrinsic motivation to learn and draw inferences about the self, the world, and the self in relation to the world (Yeager & Dweck, 2012). Furthermore, a growth mindset encompasses the belief that intelligence, including psychological flexibility and problem-solving skills, can be developed through learning and effort (Yeager et al., 2013). What emerged from participants' feedback was that participation in the Programme helped to establish the insight that they could be active agents in deciding how to interpret the challenges associated with the FYE. The following quote, by Participant 149, illustrates this interpretation: "What inspired me to study Engineering was that I loved fixing things…I now know if things don't go my way that I shouldn't just change my goals, but I can find different ways of achieving my goals" (P#149).

The quote by Participant 149 points to a new or novel way of understanding that he/she can reason and decide on a course of action when confronted by life challenges. Moreover, it illustrates the understanding that the ability to make choices can influence participants' essential life goals "I came to understand myself as a power that can influence the story of my life" (P#150).

Learning and growing

The qualitative analysis revealed that participants had gained numerous benefits from attending the Programme. Amongst other things, participants pointed to significant personal development and growth. According to Participant 142, the Programme had played a crucial role in "widening my views. I came to understand that we are all unique, so we see things differently … you have to put in the work to make you better."

Furthermore, the data indicated that participants had been assisted in developing meaningful visions of the future "… want to achieve a doctorate degree in engineering" (P#143) that boosted motivation "I have set my goals higher and I am more determined than ever" (P#213), promoted goal-directedness "I have set my goals higher and I am more determined than ever" (P#113), and encouraged engagement in their academic studies "The values, principles and knowledge that I gained have a direct on my academic

studies" (P#229). According to some participants, the Programme had direct benefits concerning success during the university experience. Participant 149 explained that the Programme "encouraged me not to drop out". Others commented on the development of academic skills "I acquired so many skills … learning and study skills that helped me to develop an academic plan that resulted in better grades" (P#154).

The qualitative analysis further revealed that certain benefits extended beyond the classroom setting. Specifically, participants pointed to developing a sense of humour "The programme helped me develop a sense of humour … can laugh at things now" (P#233) and the relevance of values in guiding life decisions "I learned humility – giving credit where it is due… interdependence – relying on others and working together … vulnerability – asking for help when I don't know" (P#45). The notion of mindset cuts across various life domains. Hence, the cultivation of a growth mindset can benefit students beyond the immediate academic demands and assist in developing responsible citizens who are focused on contributing to the greater good (Duckworth, 2016; Dweck & Leggett, 1988).

The benefits associated with attending the Programme could be summarised as a journey from predominantly fixed mindsets "I was always afraid of making mistakes" (P#287) to a growth orientation "I learned that I can make choices and work hard to achieve what I want" (P#39). According to Dweck (2006), the schooling system often entrenches a fixed mindset in students due to several factors. Therefore, the provision of support mechanisms, such as the Programme, seems vital in developing the non-intellective skills that could augment academic-related skills.

Qualitative themes: Discussion

This study has indicated that the Programme had a meaningful qualitative effect on students' mindsets. Additionally, the study supported the arguments from, inter alia, Chickering (1969), Astin (1984, 1999) and Tinto (1993), that students and the university share a responsibility to promote student involvement and holistic development. However, the findings are only valid for students' data at a single South African university within a specific faculty and year of study. As a result, the generalisability of the findings is limited. However, from the qualitative analysis we drew five specific inferences that may be relevant and transferable to other contexts.

First, the findings suggest that academic content ought to be augmented with student support programmes that focus on non-intellective factors, such as mindset. Amongst other things, the inclusion of factors that promote reasoning, resilience, and responsibility could not only enhance the core academic curriculum but also holds promise for the holistic development of students (Seligman et al., 2009; Sinclair, 2019). Consequently, the findings reported here support the existing literature that calls for greater emphasis on non-intellective factors as avenues to support students during the FYE and other initiatives (Duckworth, 2016; Dweck, 2006; Mason, 2019).

Second, student support programmes that focus on mindset expose students to non-intellective factors that they may otherwise not have experienced in other contexts. In this regard, Participant 151 mused that the Programme "taught me what I wouldn't have learned anywhere else in the world … I started to understand myself … I started to grow up." Although the self-help and science-help literature have become thriving industries (Duckworth, 2016; Dweck, 2006; Kucharski, 2018), very few of these programmes are directed explicitly at the needs of first-year students in a South African context (Van Heerden, 2015). One of the significant contributions of this paper is that it highlights the importance of operationalising findings from empirical studies, such as mindset, into easily digestible support programmes for first-year students.

Third, student support initiatives – such as the Programme – that focus on enhancing students' sense of positivity can broaden perspective and build skillsets. In this respect, Fredrickson (2004) postulates that positive emotions do not only widen one's view of the world, but also allow persons to enter states that are conducive to more significant learning, critical thinking, creativity, and problem-solving. When considering the stressful nature of the FYE (Grøtan et al., 2019; Mason, 2017; Nyar, 2018), the cultivation of positivity seems non-negotiable, as is evidenced in a plethora of international studies (Duckworth, 2016; Dweck, 2006).

Fourth, although we argue that student support programmes are critical developmental initiatives, they are often viewed as add-on activities existing on the periphery of the academic project (Van den Bergh, 2018; Van Heerden, 2009). Consequently, low buy-in from faculty and students alike may serve as barriers towards the implementation and effectiveness of such support initiatives (Mason & Nel, 2011). Hence, high-level support from faculty seems vital in ensuring that support programmes are implemented and prioritised in the context of the curriculum. Furthermore, buy-in from students is a critical component in ensuring that support programmes have an effect.

Fifth, generating evidence for the efficiency of support programmes has become a critical aspect in the higher education context (Mason, 2019; Van den Bergh, 2018). Specifically, this study has highlighted the importance of engaging in scholarly practice by empirically studying students' experiences of support programmes, amongst other things. It is suggested that staff involved in student support should also consider embracing the principles of programme monitoring and evaluation when offering programmes to students. The benefits of adopting a monitoring and evaluation approach in student support, such as obtaining qualitative evidence depicting students' lived experiences, can assist in ensuring that support initiatives move from the periphery of the academic project to the heart of access and success (Mason, 2019; Van den Bergh, 2018; Van Lingen et al., 2019).

Conclusion

This article reported on a qualitative study that explored first-year students' experiences of attending a student support programme ('the Programme'). The findings indicate that participants experienced significant growth and development from attending the Programme. Furthermore, the data analysis revealed that participants' initial experiences were transformed from low buy-in, resistance and a fixed mindset to embracing positivity and a growth-orientated mindset. The findings also suggested that the cultivation of positivity, which is not necessarily an element of the traditional academic curriculum, can be introduced by developing and offering students support programmes based on mindset theory.

The study presented certain limitations. In the first place, the study was conducted at a single South Africa university at a specific point in time. Therefore, the possibility of gaining a different qualitative picture within a different context or at another point in time cannot be excluded. Second, data were collected using narrative sketches. Even though the sample size was relatively large, narrative sketches do not provide the mechanisms to explore participants' perspectives in greater depth. However, if we collected data using interviews, it would have been possible to examine additional aspects of participants' experiences further. Such an approach would have allowed for a more holistic and nuanced understanding of, amongst other things, outlier voices within the sample. Third, we did not collect biographical information, which prevented us from reporting on the age, sex and other specifics of the sample. Fourth, the study did not account for the influence of various collateral factors that influence the FYE. These factors include students' pre-university and schooling experiences, socio-economic status, motivation to study Engineering, and social circumstances while studying, for example, living on campus and maturity. Such factors could have influenced some participants' perspectives concerning the value of the Programme. Fifth, the study's theoretical framework did not account for students' openness towards learning and personal growth. Students' understanding of self is subject to, among other things, openness to learning and personal growth. Hence, the assumptions that students were equally open to learning and personal growth, could have introduced subjective bias in the study design.

Researchers should consider the findings and limitations reported here to advance understanding by investigating the role of mindset and related positive psychology-based support programmes in promoting holistic student success. Further data collection is also required to determine precisely how positive psychology-based student support programmes affect the academic success of first-year students. Even though there is evidence that positive psychology programmes show encouraging effects on students' levels of reported wellbeing, the reference to the impact of such programmes on academic performance remains scant. Lastly, the wide-scale availability of positive psychology-based support programmes for students via online platforms is an area that seems relatively underexplored. Researchers

are advised to include measures of students' openness towards learning and self-growth in future studies to develop a more in-depth understanding of different conceptions between students.

This article bears testament to the relevance of focusing on the holistic development of students. In this regard, student development and support units, academia and faculty have critical roles to play in developing reasoning, resilient, and responsible students. When we set out conceptualising and presenting the Programme to students, the guiding vision was to provide support in managing the transition from secondary school to university and making the FYE meaningful. The qualitative findings suggest that this vision was realised, as Participant 238 explained: "2019 was the most difficult year of my life … this programme taught me that life is about choices … it has given me hope" (P#238).

References

Adler, A., Seligman, M. E., Tetlock, P. E., & Duckworth, A. L. (2016). *Teaching wellbeing increases academic performance: Evidence from Bhutan, Mexico, and Peru*. University of Pennsylvania.

Anastasi, A., & Urbina, S. (1997). *Psychological Testing* (7th ed.). Prentice Hall/Pearson Education.

Anderson, D. S. (2016). *Wellness issues for higher education: A guide for student affairs and higher education professionals.* Taylor & Francis. Kindle Edition.

Anderson, J. (2019). *The learning landscape: How to increase learner agency and become a lifelong learner*. Hawker Brownlow Education.

Astin, A. W. (1984). Student involvement: A developmental theory for higher education. *Journal of College Student Personnel, 2*5, 297–308. https://www.middlesex.mass. edu/ace/downloads/astininv.pdf

Astin, A. W. (1999). Student Involvement: A Developmental Theory for Higher Education. *Journal of College Student Development, 40*(5), 518–529.

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. https://doi.org/10.1111/j.1467-8624.2007.00995.x

Bowers, K. M., & Lopez, S. J. (2010). Capitalizing on personal strengths in college. *Journal of College and Character, 11*(1), 1–11. http://dx.doi.org/10.2202/1940-1639.1011

Chickering, A. W. (1969). *Education and identity*. Jossey-Bass.

Chickering, A. W., & Gamson, Z. F. (1991). Seven principles for good practice in undergraduate education. *New Directions for Teaching and Learning, 47*, 63–69. https://doi.org/10.1002/tl.37219914708

Chickering, A. W., & Reisser, L. (1993). *Education and identity* (2nd ed.). Jossey-Bass.

Creswell, J. W. (2014). *Research design: Quantitative, qualitative and mixed methods approaches.*

SAGE Publications.

De Villiers, A. B. (2014). How student counselling can address students' emotional wellness and learning in higher education. *Journal for Counselling and Development Higher Education Southern Africa, 2*(1), 4–16.

Diener, C. I., & Dweck, C. S. (1978). An analysis of learned helplessness: Continuous changes in performance, strategy, and achievement cognitions following failure. *Journal of Personality and Social Psychology, 36*(5), 451–462. https://doi.org/10.1037/0022-3514.36.5.451

Duckworth, A. (2016). *Grit: The power of passion and perseverance*. Scribner/Simon & Schuster.

Duckworth, A. L., & Seligman, M. E. P. (2006). Self-discipline gives girls the edge: Gender in self-discipline, grades, and achievement test scores. *Journal of Educational Psychology, 98*(1), 198–208. https://doi.org/10.1037/0022-0663.98.1.198

Duckworth, A. L., & Seligman, M. E. P. (2005). Self-discipline outdoes IQ in predicting academic performance of adolescents. *Psychological Science, 16*(12), 939–944. https://doi.org/10.1111/j.1467-9280.2005.01641.x

Dweck, C. S. (2012). Mind-sets and human nature: Promoting change in the Middle East, the schoolyard, the racial divide, and willpower. *American Psychologist, 67*(8), 614–622. https://doi.org/10.1037/a0029783

Dweck, C. S. (2006). *Mindset: The new psychology of success. How we can learn to fulfil our potential*. Random House.

Dweck, C. S. (1999). *Essays in social psychology. Self-theories: Their role in motivation, personality, and development*. Psychology Press.

Dweck, C. S., & Leggett, E. L. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*(2), 256–273. https://doi.org/10.1037/0033-295X.95.2.256

Foxcroft, C. & Roodt, G. (2013). *Introduction to psychological assessment in the South African context*. Oxford University Press.

Fredrickson, B. (2001). The role of positive emotions in positive psychology: The broaden and build theory of positive emotions. *American Psychologist, 56*(3), 218–226. https://doi.org/10.1037/0003-066X.56.3.218

Gardner, H. (1999). Are there additional intelligences? The case for naturalist, spiritual, and existential intelligences. In Kane, J., *Education, information, and transformation* (pp. 111–131). Prentice Hall.

Giorgi, A. (2009). *The descriptive phenomenological method in psychology: A modified Husserlian* approach. Duquesne University Press.

Giorgi, A. (1985). *Sketch of a psychological phenomenological method*. Duquesne University Press.

Grøtan, K., Sund, E. R., & Bjerkeset, O. (2019). Mental health, academic self-efficacy and study progress among college students – The SHoT study, Norway. *Frontiers in Psychology, 10*(45).

https://doi.org/10.3389/fpsyg.2019.00045

Henning, E., Van Rensburg, W., & Smit, B. (2011). *Finding your way in qualitative research*. Van Schaik.

Hill, G., & Kemp, S. M. (2016). Uh-Oh! What have we missed? A qualitative investigation into everyday insight experience. *The Journal of Creative Behavior, 52*(3), 201–211. https://doi.org/10.1002/jocb.142

Kucharski, A. J. (2018). Ten simple rules for writing a popular science book. *PLoS Computational Biology, 14*(2). https://doi.org/10.1371/journal.pcbi.1005808

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalist inquiry.* Sage.

Mokgele, K. R. F., & Rothmann, S. (2014). A structural model of student wellbeing. *South African Journal of Psychology, 44*(4), 514–527. https://doi.org/10.1177/0081246314541589

Mason, H. D. (2019). The best that I can be: A case for a strengths-based approach during the first-year experience. *Journal for Student Affairs in Africa,* 7(2) 2019, 89–108. https://doi.org/10.24085/jsaa.v7i2.3827

Mason, H. D. (2017). Stress-management strategies among first-year students at a South African university: A qualitative study. *Journal for Student Affairs in Africa, 5*(2) 2017, 131–149. https://doi.org/10.24085/jsaa.v5i2.2744

Mason, H. D., & Nel, J. A. (2011). Student development and support using a logotherapeutic approach. *Journal of Psychology in Africa, 21*(3), 473–476. https://doi.org/10.1080/14330237.2011.10820484

Meevissen, Y. M. C., Peters, M. L., & Alberts, H. J. E. M. (2011). Become more optimistic by imagining a best possible self: Effects of a two week intervention. *Journal of Behavior Therapy and Experimental Psychiatry, 42*, 371–378. https://doi.org/10.1016/j.jbtep.2011.02.012

Nelson, D. B., & Low, G. R. (2011). *Emotional intelligence: Achieving academic and career excellence*. Prentice Hall.

Nyar, A. (2018). The first-year experience (FYE): Moving toward a well-defined field of study in South Africa. *Journal of Student Affairs in Africa, 6*(1), ix–xi. https://doi.org/10.24085/jsaa.v6i1.3061

Ryan, R. M., & Deci, E. L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Press.

Seligman, M. E. P., & Adler, A. (2018). Positive Education. In J. F. Helliwell, R. Layard, & J. Sachs (Eds.), *Global Happiness Policy Report*: 2018, (pp. 52–73). Global Happiness Council.

Seligman, M. E. P., Ernst, R. M., Gillham, J., Reivich, K., & Linkins, M. (2009). Positive education: Positive psychology and classroom interventions. *Oxford Review of Education, 35*, 293–311. https://doi.org/10.1080/03054980902934563

Sinclair, E. (2019). *Transforming student counselling services for a future Stellenbosch University.* Unpublished doctoral dissertation, Stellenbosch University, Stellenbosch, South Africa.

Statistics South Africa. (2016). Mid-year population estimates, 2016.

https://www.statssa.gov.za/publications/P0302/P03022016.pdf

Sternberg, R. J., Grigorenko, E. L., & Bundy, D. A. (2001). The predictive value of IQ. *Merrill-Palmer Quarterly, 47*(1), 1–41. https://doi.org/10.1353/mpq.2001.0005

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). University of Chicago Press.

Van den Bergh, T. (2018, September). Being kind can change the mind: The psychosocial benefits of kindness-based interventions. Paper presented at the 37th Annual Conference of the Southern African Association for Counselling and Development Conference, Durban, South Africa.

Van Heerden, M. S. (2015). *Life skills: My journey, my destiny*. Pretoria, South Africa: Van Schaik.

Van Heerden, M. S. (2009). *Providing and managing student support in higher education in a developing country.* (Unpublished doctoral thesis). University of Pretoria.

Van Lingen, H., George, L., & Persence, C. (2019, September). Facilitating student personal development using a positive psychology-based group counselling approach. Paper presented at the 38th Annual Conference of the Southern African Association for Counselling and Development Conference, Port Elizabeth, South Africa.

Yeager D. S., & Dweck C. S. (2012). Mind-sets that promote resilience: When students believe that personal characteristics can be developed. *Educational Psychology, 47*, 302–314. https://doi.org/10.1080/00461520.2012.722805

Yeager, D. S., Trzesniewski, K. H., & Dweck, C. S. (2013). An implicit theories of personality intervention reduces adolescent aggression in response to victimization and exclusion. *Child Development, 84*(3), 970–988. https://doi.org/10.1111/cdev.12003

Yeager, D. S., & Walton, G. M. (2011). Social-psychological interventions in education: They're not magic. *Review of Educational Research, 81*(2), 267–301. https://doi.org/10.3102/0034654311405999