# A scoping literature review of the relationship between positive psychology interventions and student retention

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**Preface**

I loved being a participant in the MAPP programme and despite every assignment being a struggle, I felt the headiness of my own growth in their completion, but I almost became a statistic in my own research as I battled to find a topic to research for my dissertation.

So firstly, my thanks go to Greg Stahl (my nephew) for dropping out of university and fuelling me with the drive to find out why someone as smart as you obviously are, chose to discontinue. Armed with my new knowledge, I'm coming for you!

That said, I would like to thank the following people:

- Chrizanne, my supervisor, for your guiding wisdom and support throughout this project. Your invaluable insights and the pruning of my poetic license ensured that any success is yours.
- Werner Nel - you can't know how valuable our chat was to the success of this project. For me the road to hell is paved with statistical models seeking interpretation and I arrived for our meeting envisaging a tsunami of retention statistics bearing down on me, begging for analysis. On hearing your clarification that my systematic review was actually a scoping review (thereby requiring a statistic-free, narrative interpretation) you ensured that my dissertation journey did not end there and that I did not become one of my own dropouts! It was that close a call!
- My nieces, Nadia and Joanna Stahl, for beating all the odds and succeeding in securing your degrees. According to everything I now know from all the research, you both should not have made it. I am a very proud auntie.
- My friends – for understanding my nerdish need to complete this study, often ignoring their calls to more leisurely pursuits.
- My dance instructor, for listening to my whining and allowing me to cancel our lessons when deadlines loomed.
- My mountain bike – for promises made not kept!
- Lastly Pooh, for all the craziness, love, and laughter. Without you, the spark would be gone.

**Declaration**

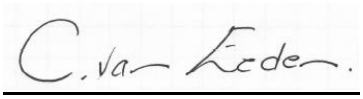
I, Eileen Stahl, declare that “A scoping literature review of the relationship between positive psychology interventions and student retention”, is my own work and that the views and opinions expressed are those of the author and based on supporting literature references as detailed in the list of references.

I further declare that the content of this research will not be submitted for any other qualification(s) at any other institution.

Eileen Stahl
November 2019

**Permission to Submit**

I, Professor Chrizanne van Eeden hereby give permission to Eileen Stahl to submit this document as a mini-dissertation for the qualification MA in Positive Psychology. Furthermore, I confirm that this mini-dissertation has been written in the article format that is in line with the 2019 General Academic Rules (4.4.2 and 4.10.5) of the North West University.



22 November 2019

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## Declaration by Language Editor

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22 November 2019

### EDITING CERTIFICATE

This certificate serves to confirm that I am a qualified and certified editor and translator. I confirm that the academic article with the title **A scoping literature review of the relationship between positive psychology interventions and student retention** has undergone a professional language edit (including the checking of spelling, grammar, register and punctuation). The onus rests on the client to work through the proposed changes after the edit and accept or reject these changes.

Yours faithfully

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**Summary**

The purpose of this research was firstly, to uncover by means of a scoping review, those positive psychology interventions (PPIs) aimed at both the individual and the institution which have shown positive results in retaining students; secondly, to collate the successful PPIs into a digestible format, and thirdly; to make recommendations for application in the university environment. From the vast field of student retention it was presumed that there must be successes which, if found, should be made available and even compulsory before acceptance of any student into university, ensuring them at least a fighting chance of success. Hence the research question arose and the decision was made to scope the literature in a search for individual or collaborative programmes which have shown success in student retention and to collate those for ease of access.

Over the many years of student retention research, numerous theories and solutions have been proposed with scant application and minimal impact in relation to the problem. Yet despite all the theories, dropout rates continue to rise alarmingly, and with the global drive to widening participation they are likely to keep climbing. The emerging field of positive psychology is claiming some success in both individual and collaborative interventions.

Sin and Lyubomirsky (2009, p. 468) define positive psychology interventions as *empirically validated, purposeful activities constructed to increase the frequency and quality of positive emotions and experiences, in order to facilitate the use of actions and thoughts that lead to flourishing,* whilst bearing in mind Parks and Biswas-Diener's (2013) argument that there is *no definitive classification* of what constitutes a PPI and that a *positive result can suffice,* were the guiding principles applied in the choice of research used.

This scoping review was conducted in line with Arksey and O'Malley's (2005) recommendations and the data was gathered by means of a data base search of the keywords. The findings were separated into two groups: those PPIs affecting individual aspects of the student (such as developing optimism), and those collaborative PPIs introduced by the institutions (such as compulsory mentorship programmes) showing a positive outcome in the field of student retention. A collation of the results was compiled in a narrative format, conclusions drawn, limitations noted, and recommendations made.

The main finding was that there is much by way of both individual and collaborative constructs and programmes which, when applied, have shown measurable success in retaining students. It was established that student success often requires a multi-pronged approach, involving students, staff, tutors, and the institution. More importantly, some of the PPIs' effect was sustained over the duration of time, confirming a deeper change, perhaps sustained as way of being, rather than just being influenced by the novelty of an interaction, ensuring continuation to graduation.

Questions were raised as to why this information is not being shared, applied, and implemented as policy in all institutions. In addition, it was considered whether it was costs, secrecy, embarrassment, commercial advantage, or something else which was preventing the sharing of valuable retention information amongst the institutions.

**Key words:** Positive education, positive psychology interventions, scoping review, student retention, student success

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# CHAPTER 1

## LITERATURE BACKGROUND AND METHODOLOGY OF THE STUDY

**Key words:** Positive education, positive psychology interventions, scoping review, student retention, student success

## 1. Introduction

In this current climate of massification of higher education, particularly as it is being played out in South Africa, there has never been a more important time to consider why the thorny issue of student attrition refuses to die, and what can be done to turn the tide on student dropout rates.

In the educational environment, student retention is defined as a student's ability to continue their studies until successful graduation. Kim, Newton, Downey, and Benton, (2010) implicate both the student and the institution in the retention problem, claiming that just as university success is important to the students, evidenced by their commitment to engage with and meet their goals, it is a binary process requiring the universities to make good on their promise to educate the students and as such, demonstrate the accomplishment of their mission by seeing the students through to graduation. Inspired lecturers too, are a necessary tool in this tripartite alliance, and all three aspects have been heavily researched over the years in the search for answers. Powell's (2009) claim that student retention is one of the most widely researched areas in education holds as true today as it did in 1922 when research into the problem began. South Africa has a greater attrition problem than most, and many would argue for different reasons than those of the rest of the world (McGregor, 2007) but globally the picture is similarly bleak with dropout rates continuing to climb despite best efforts to reverse the trend. Reasons offered for the problem are legion. Theories abound, and a range of models of retention have been proffered over the years (Bean, 1980; Braxton, Brier, & Steele, 2007; Tinto, 1993, 2005). Numerous solutions, aimed at the student, the lecturers, the university, and the environment have been proposed and success has been claimed for various types of interventions. But what works? By means of a scoping review of the existing literature, this study proposes to uncover and collate in a digestible format those positive psychology interventions (PPIs) which have proven to impact on university student retention.

In this chapter an overview is given of the literature in which the theoretical frameworks relevant to this study were explicated. (Since the literature reviewed and discussed in this chapter forms the theoretical background of the study, duplication may occur in the research article that reports on the research findings.)

## 2. Problem Statement

Globally the university student dropout numbers continue to increase at alarming rates despite all efforts to stem the outflow. PPIs are claiming some success in reversing this trend but is there any evidence to confirm these successes?

### 2.1 The purpose of the research

The search for certainty in the field of PPIs' success in student retention began as a casual enquiry by the researcher, based on curiosity at the high student drop-out rate, but soon

morphed into a frustration at finding little evidence of studies or reviews detailing what actually works in student retention in a university environment, despite the obvious magnitude of the problem. Literature showed that individual studies of assorted positive psychology constructs in varying environments abound, but practical collations and relevant applications tested in a university environment were thin on the ground, seemingly disproportionate to both the claims of success and the problem of student retention. Tinto (2006, p. 8) said "it is one thing to identify effective action, it is another to implement it in ways that significantly enhance student retention over time", and this would seem to be at the heart of the apparent research-practice gap in PPIs, evidenced by the paucity of university studies. So the question arose – what works? Which, if indeed any, PPIs are influencing university student retention and success?

### 2.2 Why a new study is needed

Much has been written, researched, and talked about but dropout rates continue to increase (Tswanya, 2017; Weale, 2018) suggesting that either there is currently no application of the PPIs successes or the supposed successes are not really there. Despite the volumes of individual studies on, for example, improving well-being (Richards & Hupert, 2011), developing strengths (Soria & Stubblefied, 2015) and increasing self-efficacy (Multon, Brown, & Lent, 1991) claiming success, there appeared to be little implementation by way of applications or collations detailing a *how-to* on student retention. Perhaps all the information is out there and there is a disconnect between the various factions responsible for student success, or perhaps the problem is one of the institutions not sharing their innovations widely amongst themselves. However, due to the enormity of the problem, it seemed a little like fiddling while Rome was burning, to not have this information easily accessible. Burns, Crow, and Becker (2015) agreed, maintaining that a means of sharing and implementing this information is the most sorely needed innovation in higher education. Similarly, there appears to be no recent reviews of the topic specifically targeting university students, despite emerging global information.

With all this in mind, this research aims to uncover and collate those interventions which researchers claim have positively influenced student retention.

## 3. Literature Background

Literature pertaining to the theoretical frameworks relevant to this study is discussed below.

### 3.1 History of the student retention problem

As far back as 1922, after analysing data from 107 institutions in the USA, Caldwell (1922) lamented the 32% loss of first-year students and followed up with various reasons that included poor academic performance, personal issues, family problems, financial reasons, transfers, and marriage (notably more for women due to the era).

Earliest approaches to the problem were to blame the students (Tinto, 2005). Drop-outs were deemed to be less able or less motivated, absolving the institution of any responsibility. However, since the 1970s the pendulum had swung and the role of the environment and more particularly the institution and its practices were implicated, with researchers calling for integration and engagement within academic life between students and the academic environment as the solution (Tinto, 2006). A greater appreciation of how a wide spectrum of cultural, economic, social and institutional factors influences student retention (Berger, 2001) was being established and became the focus for those researchers seeking answers. A complex mix of both intrinsic and extrinsic factors was proposed and studied in an attempt to unearth a solution. Student engagement, integration, ethnicity, age, place of residence, preparedness for university, teaching practices, and institutional systems, were all being challenged and put under the microscope and the dynamic interaction between the variables considered at length. For example, Bean (1985), Tinto (1975), and Pascarelli and Terenzini (1980) all shared concerns that socialisation was the dominant force in dropout decisions, claiming that peers had a much greater influence on students than faculty members. Others blamed the problem on the lack of university support, whilst still others believed that perhaps developing the student's self-efficacy would bring about the desired changes (Chemers, Hu, & Garcia, 2001). Confusion was evident and a host of predictors of college student retention were being reported but there was still no truly effective solution to the quandary.

### 3.2 The global picture

Student retention is a global problem which continues to confound even the experts in the field. Schneider and Yin (2011) estimated that the lost costs to the US government in funding over a five-year period to 2009, was around $4 billion, excluding actual costs that the students covered themselves, such as tuition fees, materials and lost income. Notwithstanding the fiscal losses, add to that the wasted time and emotional toll on the students, as well as the fact that this means fewer trained graduates entering the work force, which has become a world-wide problem and is particularly worrying for society's progress when it concerns engineering and science graduates. Additionally, the institution suffers from a loss of income, reduced numbers in classes, damage to its reputation, and a waste of public funds (Schneider & Yin, 2011).

In 2005 in the USA, only 54.8% of students completed their degrees within six years, in Australia the figure was 64.1% and in the UK 82% completed within three years. In the Czech Republic the completion figure was 72%, and 80% of the French students completed within the allocated degree period (Times Higher Education, 2016). Fast forward to 2014, and the figure is even bleaker with UK topping the charts at 71% completion, USA with 49%, and Australia sliding to just 31% (Niemtus, 2017). In Argentina in 2013, the graduation rate

was 27%, (Kelly, 2013) the second lowest in South America and in South Africa the figure was 15% (DHET, 2015) for undergraduate degrees. (Graduation rates take into account not only students who drop out, but also those who transfer to another college. Completion rates only count those students who graduated in four years at the same institution.)

Opinions differ vastly as to the solution. Student–centred programmes are being introduced globally and the move to widening participation has been applauded in some circles, but there are dissenting voices in many European countries who feel that universities have a standard to uphold and in doing so students will be lost, viewing student attrition as a necessary evil of the culling process. In addition, they were unsympathetic to students who lacked the necessary entry-level qualifications to access university believing that those who cannot make the grade and cannot stay the distance have died by their own hand, and so it should be. Others disagree and view the rising attrition rates unquestionably as a stain on society to be eradicated at all costs.

The European Commission claimed that the UK's high completion rate is due to a stringent admissions system in which institutional autonomy has been upheld and a widespread and embedded expectation exists from institutions and students that completion is possible in three years, except in exceptional circumstances (Times Higher Education, 2016). Some governments have adopted a survival of the fittest approach. Undeterred by its dropout rate, the Czech Republic perceived it as a quality assurance measure to maintain standards as it removes low-skilled and unmotivated students who do not comply with the demands of tertiary education (Times Higher Education, 2016).

The French blamed lower entry qualifications and lack of a selection process for student entry, for its high first-year dropout rates (almost 50%) but despite this figure and as previously mentioned, 80% of French students still go on to complete within the allocated degree period (Times Higher Education, 2016). It was claimed that Argentina's low 2013 retention rate was largely attributable to unrestricted open admission, which was widely viewed in Argentina as a victory for the students (Kelly, 2013). In Italy, a similar problem was found, where it was shown that reforms opening access for the lower social classes led to increased dropout rates (Gitto, Minervini, & Monaco, 2011).

These differing viewpoints perhaps demonstrate the philosophical schism apparent between the European individualistic culture in which one takes accountability, and the South American collectivistic culture in which the collective takes responsibility. South Africa shares similar views with the South American approach as demonstrated by the *FeesMustFall* movement.

In the interests of balance it is important to mention that to view all student retention as success may be an over-simplification. Assumptions are generally made that processing as many students as possible through university and retaining them at all costs is evidence of success. (This in itself creates problems of over-marketing by the universities, grade inflation

by the professors and pressure on the students. In addition, artificially enabling students to positions requiring high levels of skills is of questionable value and may even be dangerous for society.)

Therefore whilst many are calling for widening participation as a right, which is likely to compound the problem, equal numbers are calling for tighter selection criteria as a solution to the high dropout rate. Clearly something has to change but opinions differ as to who should lead the charge and how it should be executed.

## 3.3 Stakeholders' perspectives on student retention

The perspectives of relevant stakeholders in the student retention phenomenon are presented in the discussion below.

### *3.3.1 The student perspective*

In 2013, Hellmundst and Baker conducted a mixed-method study in Australia of a university-enabling programme aimed at giving students a voice. The main theme that emerged from this study was that students wanted a supportive and challenging environment from the tutors, which they said encouraged their self-confidence and was key to their performance. They wanted guidance but not spoon-feeding, which was deemed a negative. Specifically, they needed to engage with their learning in a way that they had not been able to do at school. A positive attitude and encouragement from the tutor, was the second most preferred theme which the students felt was motivating and necessary for their success, closely followed by an appreciation for tutors who demonstrated a concept via examples. Lastly, structure within the programme was highly valued as a means of access and control of their learning.

Whilst exploring widening participation and student retention in their study on student success, Hixenbaugh, Dewart, and Towell (2012) confirmed that relationships with tutors and the university were deemed key by many students. Those students in the study who felt that staff was invested in their development, felt more committed to the university and its ideals.

A more negative note was sounded by some South African students who were interviewed in a qualitative study on their transition to university. They bemoaned the fact that their schooling left them unprepared for the workload, the fast pace, and the leap in learning that had to be made from high school to university level (Smit & Wolmarans, 2018). They claimed that they were not taught to think for themselves and suddenly they were forced into an environment where they had to do everything, resulting in demotivation, disinterest and likely to lead ultimately to dropout. It is clear from their comments that students felt inadequately prepared by their schooling for the university journey ahead and arrive with unrealistic expectations of their professors and the university. All of these student

comments were echoed in research by Nyamupangedengu (2017), and reported as being not only a student gripe, but a lecturer's one too as they had to deal with the fallout.

### *3.3.2 The lecturer perspective*

Nyamupangedengu (2017), whilst being sensitive to the ills of South Africa's past, questioned the lack of preparedness of South Africa's students even after three years of university attendance. Nyamupangedengu's (2017) research found that students still expected their lecturer to prepare their notes for them and that they were incapable of doing so themselves, indicating poor academic literacy. The students felt that the pace of lectures was too fast, which was another indicator of the unabridged gap between school and university and of their lack of preparedness. Nyamupangedengu (2017) concluded her study by recommending that students should become more independent and take ownership of their learning.

Building on the above view, Van der Merwe and Nell (2013) found that a majority of South African students in their small study sample, showed little evidence of reflective thinking and appeared to rely upon rote learning and memorisation, believing that to recall the facts means that they understood the material (which ultimately only leads to a superficial acquiring of the knowledge). The authors' recommendation was for an urgent overhaul of educational strategies, particularly when it comes to cultivating students' critical thinking skills and assisting them to develop their own understanding, beyond the rote learning that many students see as the end in itself. Jacobs and Pretorius (2016) supported this recommendation, adding that inflated marks and lack of academic literacy are commonplace in the South African public schooling system, despite constant denials from the school education authorities. The authors demonstrated their point by finding in their research, that three students who scored 90% in Grade 12 mathematics, failed the subject at first-year university level.

Hassle and Lourey (2005) conducted a study with more than 1 100 university students (in the USA) in an attempt to determine attitudes towards learning and accountability. The authors claimed to have witnessed a shift from the student of ten years before who took accountability for their learning, to the new generation of students who displayed a sense of entitlement, apathy and lack of responsibility towards their education. The authors protested the fact that such students expect high grades despite low quality work and have no interest in getting an education but merely focus on obtaining a degree. The dropping standards, the authors claimed, were partially fuelled by the conforming of lecturers who, in fear of empty classrooms impacting their salaries, pander to the whims of the students by inflating their grades. Hassle and Lourey (2005) further found that students value good grades over actual learning and that they perceive it as the university's responsibility to retain them. The authors also found that the students over-estimated the value of their own performance, with the

majority believing that they deserved better grades. Despite skipping classes, turning up unprepared for lessons, having a poor work ethic, submitting late assignments and manipulating instructors, 93% of the students surveyed still believed that they were responsible students. Hassle and Lourey (2005) concluded their findings on student attitudes by recommending a system-wide transformation, beginning with change to the instructors' accommodating attitudes, with grades reflecting students' true ability, holding all the students to the same high and exacting standard. Better administrative support was also deemed necessary for lecturers so that they can return to the role of being teachers and not small business owners overloaded with duties beyond their core purpose. In support of this view on students' sense of entitlement to higher grades, one Duke University professor Rojstaczer (2003) claimed not to have given a 'C' grade, or lower, for more than two years prior. Chowning and Campbell (2009) coined the phrase *academic entitlement* to describe this personality variable of students. Realistic expectations were found to be the key to successful achievement in a study conducted by Nicholson, Putwain, Connors, and Hornby-Atkinson (2013), who called for measures to be taken by academia to encourage students to this end.

In light of the above it is apparent that lecturers are becoming disillusioned with an education system that provides students ill-prepared for university with little academic literacy and then expects that the students will make it through to graduation. The poor attitude, disinterest and work ethic of the students whilst in the system is a demotivator for the lecturers which might ultimately result in a crucial loss of teaching talent.

Differing opinions between student and lecturer seem to exist, but as motivated and committed lecturers would appear to be essential to student success, according to Hellmundst and Baker (2013) and Hixenbaugh et al. (2012), uncovering and sharing PPIs that encourage a positive outcome in students, will surely also impact the lecturer's enthusiasm and ultimately create a successful result for all.

### *3.3.3 The university perspective*

Tasked with educating all-comers, the universities are now being looked to by the public sector, students and experts, who are all calling for a solution to the low retention rates.

Tinto (1999) stated that classroom settings, residential halls and support that the university offers, are determining factors in student success. He called for the institutions to put student retention at the centre of all activity and to prioritise student welfare. Tinto (1999) also recommended that the institutions endeavour to make students feel valued and create environments that foster learning and integration, consequently increasing their commitment to the university. He proposed a system of learning communities, which in their most basic form begin with a kind of co-registration or block scheduling that enables students to take courses together, allowing them a shared learning experience. Such a shared learning

environment allows not only for social bonding but also academic integration which Tinto (1999) viewed as essential to student success. Tinto's Student Integration Model (1999) has been widely criticised for its narrow approach, using the average student who is based in residence halls and ignoring individual characteristics. The strength of the model has been viewed by other researchers as a predictor of student attrition, but not necessarily of high achievement. Investigating Tinto's model in its claim that student integration is a forerunner of high achievement, McKenzie and Schweitzer (2001) found that Australian students with high integration had in fact *poorer* levels of achievement than those with lower integration who had higher academic performance. They identified that high academic achievement is not necessarily related to retention and poor academic performance does not always result in attrition. In a later development, McKenzie and Schweitzer (2001) noted that the social nature of universities may be changing and with the advent of the internet, studying in isolation may have become adaptive for a sub-group of high achieving students, possibly outdating some long-held beliefs and theories regarding social integration as key for student success. Boyle and Nicole (2003) and Nicole and Boyle (2003) supported Tinto's (1999) views and found that a similarly engaged and collaborative learning environment led to a reduction in the dropout rate in their class from 20% to 3%. The shared learning concept was deemed a valuable tool for peer-learning mastery of difficult engineering concepts, often the primary reason why engineering students drop out. However, their motivation was for a specific subject-related problem, although serendipitously the general retention problem was favourably affected. It appears that in this case, through the sharing of conceptual struggles, optimal learning was achieved. Barnett (2007) encouraged institutions to develop in students a will to learn and stressed that although it is the students' responsibility to learn, they tend to learn in an encouraging and exciting environment. If this is absent and the students feel they cannot learn, or think it is beyond them, they will withdraw.

Contrary to the idea of students as victims of an ailing system with too high standards as is often claimed by disgruntled students, research has shown that if university admission criteria are set too low and a large number of students are admitted that barely scrape through, the chances are that high attrition rates will follow (Tinto, 1993). Defining the population of students prior to admittance can have a direct impact on student attrition rates (Dodge, Mitchell, & Mensch, 2009). Harrison and Hatt (2010) emphasised that widening participation is about extending the opportunity to those who have the potential, and Tinto (1975) stated that if the student does not have the ability and skills to perform at the required level, they will leave. Tinto (1993) provided compelling figures to indicate that the more selective an institution is, the less of a problem retention is. Harvard and such universities claim a completion rate as high as 98%, primarily due to their high admission criteria and policies (Harvard College, 2018). In a research paper exploring widening participation and student retention, Hixenbaugh et al. (2012) found that higher university entry qualifications

were positively related to degree outcome and it was reported that those who enter with higher GPA (grade point average) scores, show more persistence to graduation (Titus, 2006). GPA at entry, indicating academic ability, is still deemed to be the strongest predictor of academic success according to research by Farrington et al. (2012), thus returning the challenge, at least in part, back to the school education system to better prepare their students for university's academic challenges.

In short it is accepted that universities must create an environment conducive to student learning by applying best practices and providing motivated lecturers and support staff but it is also incumbent upon them as a priority, to ensure that those students which they choose to admit are academically ready for the journey.

In South Africa with its high unemployment rate and where education is seen as an escape from poverty, Lahteenoja and Pirttila-Backman's (2005) recommendation for a clearer definition and division of labour between universities and polytechnics, may help direct those with less interest in the pursuit of knowledge to institutions geared more towards vocational training. This would seem to be a proposition worth considering and may also lighten the load of universities and help create more successful student outcomes. Perhaps too much value is being placed on a university education and not enough on vocational pursuits.

### 3.4 Summary of the retention problem

Worldwide it would seem that opinions differ vastly on what causes the retention problem and who is responsible. Against a confusing backdrop of conceptualisations, theories, and opinions, universities must find a way to deliver on their retention rates. The dilemma facing them would seem to be how to retain their status as a seat of learning offering a quality education whilst opening their doors to all-comers. Having explored and considered the issue of student retention extensively, the topic has now reached theoretical saturation akin to "knowing more about the disease than the cure" (Tinto, 2006, p.10) and research is gradually moving away from the problem into the seeking of solutions. Numerous interventions are being tried and tested globally. From the individual to the collaborative, these programmes are being introduced, with varying success rates. Some solutions showing early signs of success are emerging from the science of positive psychology and this review hopes to unearth those PPIs which have been developed and applied, influencing student success and retention.

### 3.5 Positive Psychology

The science of positive psychology was conceptualised and introduced by Martin Seligman and others in 1999, who foresaw a world where the emphasis that had previously been focused on the pathological aspects of psychology, would move away from this focus to one of developing the best in individuals and re-focusing on what makes life most worth living, in

order to create thriving individuals and institutions. Positive psychologists' claim is not to have re-invented the wheel, but merely to have united that which was previously scattered in an attempt to legitimise and brand the positive aspects of living, under a complementary banner (Seligman, 1999). Building on Maslow's research Seligman's approach called for psychologists to centre on the scientific study of well-being, optimism and flourishing, to develop those positive aspects instead of concentrating on problem-focused psychology (Seligman, 2011).

Seligman, Steen, Park, and Peterson (2005) saw positive psychology as an umbrella term for the study of positive emotions, positive character traits, and enabling institutions. The authors believed that more emphasis should be placed on the positive, not to ignore or replace what was known of human suffering, weaknesses and disorders, but to complement and balance knowledge to create a more realistic and holistic approach to human development, broadening and balancing the view of psychology as it was seen up until then. Seligman and Csikszentmihaliyi (2000, p.6) famously stated that "treatment is not just fixing what is wrong; it also is building what is right".

Of interest is that positive psychology is also flourishing as an elective in universities. In 2006, it was the most highly enrolled class ever in Harvard's psychology department (Russo-Netzer & Ben-Shahar, 2011). Ever-growing numbers of students are signing on for courses at undergraduate and graduate level in the subject but as Parks (2011) stated, there is little in the way of published literature that brings it all together and she deemed this necessary, adding that there is a very real thirst for best practices and teaching within the genre.

Positive psychology's phenomenal growth is evidenced by the volume of data available on search engines. A search conducted by Rusk and Waters (2013), uncovered over 18 000 documents related to positive psychology, representing 4% of *PsycINFO*'s total data spanning the globe. Geographically, a large measure of positive psychology's success has been claimed and documented for positive interventions in countries as far afield as Finland, the UK, USA, South Africa, and Australia.

### *3.5.1 Positive psychology and student retention*

Grounded in stringent scientific theory, from this novel approach emerged the practical arm of positive psychology interventions. PPIs are viewed as empirically validated, purposeful activities constructed to increase the frequency and quality of positive emotions and experiences, in order to facilitate the use of actions and thoughts that lead to flourishing, (Sin & Lyubomirsky, 2009). Parks and Biswas-Diener's (2013) interpretation argues that there is no definitive measure of a PPI, with the positive result often determining a PPI as such. PPIs application in the university setting can take the form of interventions aimed either individually at the student, through developing their positive emotions, personal strengths,

self-efficacy, etc., or collaboratively, implementing practical positive programmes targeting the institution, its staff members, classroom practices and the student's social and academic environment. Sometimes identified areas of student weakness would need to be addressed with a specific PPI aimed at the individual level and other times a collaborative approach may be required.

### 3.6 PPIs aimed at the student, through individual constructs

Central to positive psychology is the concept embodied in Fredrickson's Broaden and Build theory, in which Fredrickson (1998, 2001) asserted that generating positive emotions such as love, joy, contentment, pride, and interest, can broaden one's thought-action repertoire during moments of stress, can relieve negative emotion, and support positive coping mechanisms. As a result, when positive psychological, social, physical and intellectual resources are broadened and built (Fredrickson, Mancuso, Branigan, & Tugade, 2000), they serve as protective factors for both health and psychological wellness (Fredrickson & Losada, 2005; Fredrickson, Cohn, Coffey, Pek, & Finkel, 2008) as well as triggering upwards spirals resulting in a broader experience of emotional well-being (Fredrickson & Joiner, 2002). Focusing on negative emotions results in more of the same, which leads to narrow thinking and can be draining and debilitating. Evolution dictates that people are hard-wired for negativity for survival of the species to see off threats, hence we need to apply conscious effort to raise awareness of the positive aspects of our lives. Encouraging students to focus on the positive can become a self-fulfilling prophecy, enhancing the feelings of mastery, paving the way for academic success. According to Cohn, Fredrickson, Brown, Mikels, and Conway, (2009) positive emotions are seen to improve the overall life satisfaction of individuals who frequently experience them, nurturing psychological growth and promoting flourishing (Cohn et al., 2009; Fredrickson, 2001; Fredrickson & Losada, 2005). Positive student well-being has been associated with a number of positive effects including better learning, productivity and resiliency (Marks & Wade, 2015) hence is a precursor to success and achievement both at university and beyond. In a ground-breaking UK high school A-level study, after having launched a course on happiness and well-being incorporating mindfulness, the school results improved so dramatically that it shot up the Sunday Times rankings from 256$^{th}$ place to 21$^{st}$ (Seldon & Martin, 2017). Moving away from the deficit model and focusing on developing positive attributes has become a primary focus for higher education.

Research has indicated that positive psychology interventions can significantly decrease depression and anxiety while simultaneously significantly increasing life satisfaction, happiness, self-esteem and subjective well-being (Fredrickson, 2001; Seligman, Rashid, & Parks, 2006; Sin & Lyubomirsky, 2009), lasting one year post-intervention. Sin and Lyubomirsky (2009) conducted a meta-analysis on 51 studies, with 4 266 participants, to

determine whether interventions focused on increasing positive emotions, behaviours and cognitions, alleviate depression symptoms. Results indicated that PPIs significantly enhance subjective well-being and significantly decrease symptoms of depression. Studies have shown that students with depression are twice as likely to drop out of college (Eisenberg, 2009) and students' mental health issues in general, have trebled in recent years (Marsh, 2017). As high levels of depression in students, estimated at 1 in 5 (Rosenberg, 2018) is a growing problem, alleviating their emotional distress alone could potentially affect retention rates.

In education circles, thriving emerged as a key element of success. Schreiner (2010) described thriving as being fully engaged intellectually, socially and emotionally in the college experience, whilst recognising that successful thriving acknowledges the contribution of academics as well as the development of time management, optimism, appreciation of differences in others and community involvement. According to Schreiner (2010), these characteristics can be taught, like many other positive psychology constructs and linked to academic success, investing further hope in the potential of PPIs. As an argument for the potentiality of change, Lyubomirsky (2007) challenged the long-held belief that happiness levels were pre-set and immutable and developed a pie chart suggesting that whilst up to 50% of happiness can be genetically predestined, 10% is circumstantial, leaving a 40% surplus under the individual's direct control. This is a malleable 40% and is the area targetable by PPIs. The key to achieving success is the individual's ability to harness personal factors such as attitudes, emotions and behaviours, to the positive.

Claims for success have been made for strengths-based education, focusing on students' strengths rather than on their weaknesses, fostering self-determination, sparking their engagement and thereby producing higher levels of learning and consequently student success (Schreiner & Anderson, 2005). Strengths-based teaching builds community between student, lecturer and university and research found that this student-faculty interaction is a strong predictor of academic success and persistence to graduation (Schreiner & Anderson, 2005). The talent development approach holds that every student can learn under the right conditions (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) and has the same approach as positive psychology emphasising the same positive principles, which focus on developing talents into strengths, harnessed to achieve academic excellence.

As pioneers of positive psychology research, Ryan and Deci (2000) developed their self-determination theory of human motivation and personality, which relates to people's inherent growth tendencies and innate psychological needs by considering intrinsic and extrinsic motivations. Intrinsic motivation refers to initiating an activity because it is interesting and satisfying in itself, as opposed to carrying out an activity to obtain an external goal (extrinsic motivation). Increasing students' intrinsic motivation, that which is self-authored, self-initiated, and self-regulated (Ryan & Deci, 2000), results in higher levels of

interest, excitement and confidence, making them more likely to engage in the learning process and ultimately achieve success.

Dweck's (2006) mindset theory of intelligence attributes a large measure of students' ability to persist in the face of adversity, to their mindsets. Dweck (2006) studied the mindset of thousands of students and concluded that 40% have a fixed mindset, meaning that they were limiting their potential by claiming that they cannot do something when faced with a challenge. This thinking ensures that they hit a mental barrier creating a self-fulfilling prophecy. On the other hand, those students with a growth mindset were more likely to persist in the face of adversity and even failure, seeing it as a challenge to be overcome. Mindsets can be transformed and research has shown that a growth mindset can temper, for instance, even the well-documented deleterious effects of poverty on academic achievement (Claro, Paunesku, & Dweck, 2016) holding promise for students from lower socio-economic milieus' university success.

Aspects of positive psychology can also have a ripple effect on student populations. According to Astin (1999) high-achieving students are a beneficial resource, because such students enhance the quality of the learning environment for all students. Student relationships are often an important predictor of university dropout. Roseth, Johnson, and Johnson's (2008) research showed that in a meta-analysis of 148 studies from 11 countries, positive peer relationships explained 30-40% of the variance in academic achievement. Maunder (2018) agreed adding that attachments to peers was a stronger predictor of university adjustment than attachment to the university. Peer relationships can be strengthened through PPIs targeting individual constructs such as well-being and positive emotions, amongst many others.

### 3.7 Collaborative interventions

As the quality of a university is measured in part by its student retention and graduation rate, collaboration across all areas of the institution is necessary to achieve this. Although there is little that higher education institutions can do to directly affect student success they can create the conditions in which the student can enhance their own thriving and consequently empower them towards success. O'Rourke (n.d.) argued that even in its simplest form, attrition occurs as a by-product of a need to maintain standards in an institution, making the universities culpable and as such, largely responsible for solutions.

But even before the student has set foot on campus, measures can be taken to pave the way for success. To close the gap between high school and university, pre-entry interventions or enabling courses focusing on preparing the student have shown success both in preparing the student for university and ultimately to graduation (Chesters & Watson, 2016). An Australian study found that those students who (despite having a lower GPA which often determines high dropout chance) took a university-led enabling course, were 1.7

times more likely to be retained than those who did not, and mature students (who have notoriously high dropout rates) were 2.5 times more likely to graduate (Chesters & Watson, 2016).

Assessment tools such as the College Learning Effectiveness inventory (CLEI) (Kim et al., 2010) can be used by the universities to identify potential students' strengths and weaknesses even before admission. The CLEI can locate the level of functioning across various dimensions, such as academic risk, attitudes, behaviours and dispositions. Students can be at-risk for many reasons and programmes can be tailored to suit whatever the risk factor might be. Having detected any areas of potential risk, these can be highlighted and red flagged on a system designed to offer supportive measures in the necessary at-risk area. Singell and Waddell's (2010) research confirmed that at-risk students can be identified before they arrive on campus and the authors further suggested that this information could be used to maintain an institution's low attrition rate, by informing the admissions decision based on the student's predicted probability of retention.

Internationally, many universities have now appointed staff such as Enrollment Managers and Retention Strategists to devise and implement an action plan to manage the on-going process of student retention (Hossler & Kalsbeek, 2018). With the advent of social media and technology, this process can begin as soon as an enquiry is made to the university and the student is on the system. One of the earliest social media applications tested, the *Student Messenger* (a texting application), found that students using it felt supported by both friends and university as they were kept abreast of proceedings during the critical period of their transition to university and beyond. Using this application also facilitated an informal interdependent system of learning between the students about the university and its unfamiliar environment. It also offered them an opportunity for social bonding and peer support and proved to be a useful tool to aid students' early social and academic integration into university life (Harley, Winn, Pemberton, & Wilcox, 2007), one of the most vulnerable times in the student journey.

Building on this earlier technology whose rudimentary inroads have now evolved into highly sophisticated programmes, are many effective university-led initiatives such as *Pathfinder* (in Clayton, 2002), the *Edith Cowan* scheme (in Draper, 2010) and others. Terabytes of student information can be stored and utilised to red flag any at-risk students and prompt the institution to step in with the appropriate support when necessary. *Track and Connect* (in Barnes, Macalpine, & Munro, 2015) is an example of one of the many interactive university-wide IT programmes developed to enhance the student experience of transition and beyond. It identifies at-risk students from the outset, monitoring their progress throughout the semester and linking them to available resources, personal support and academic assistance through individualised, appropriate and timely advice. Proactive and preventative, this tool identifies at-risk students through stored demographics and on-going

academic and engagement data, which are fed into it as the semester progresses. E-mail follow ups are sent out at previously identified key times in the timetable or when an at-risk behaviour, such as non-attendance at class is detected, and the necessary support is given (Track and Connect in Barnes et al. 2015). This Australian programme has yielded excellent results and according to Barnes et al.'s study (2015), not only was the attrition rate lowered from 19% to 7%, but passing grades increased from 67% to 73%. This particular programme is in further development and an opt-out option is being incorporated, along with upgrades gleaned from new research, which is likely to make it even more successful.

From within the many supportive resources offered by the university-led initiatives, mentorship programmes are just one of the interventions which have been shown to impact strongly on student success. According to Salinitri (2005) in his research on first-year, at-risk students with low-proficiency levels, a one year mentoring programme had dramatic effects on retention, decreasing attrition in the mentored group to 8.6%, compared to the control group's 32.7% and additionally the study showed that 71.4% of mentored students were in good academic standing at year end compared to 34.5% in the non-mentored control group.

### 3.8 Summary of the positive psychology intervention field

From the available research, it would seem that there is a plethora of studies and approaches claiming successful retention of students of which just a few have been introduced in this proposal. Tinto (2006) emphasised that the effectiveness of retention programmes are enhanced by linking them to classroom interventions and assessment tools. Ultimately it might be discovered that a generalised multidimensional solution would be the best approach, combined with sensitivity to the individual needs of the specific student. Clearly there will never be a one-size-fits-all intervention as each individual has their own strengths and weaknesses and face a unique array of personal triumphs and disasters which they bring to their academic experience.

Positive psychology has been around in higher education almost since its inception and having discussed but a few of the constructs responsible for effecting student success, it must be said that there are many more individual constructs such as motivation (Morrow & Ackermann, 2012), goal-setting (Schippers, Scheepers, & Petersen, 2015), resilience (Yeager & Dweck, 2012), and hope (Snyder et al, 2002), which have been researched in different environments and have been shown to change thinking, attitudes and emotions. Similarly, there are many collaborative programmes which have been implemented and which may not have been acknowledged here. This review is not intended to be exhaustive, but merely representative and informative of the vast field of positive psychology and indicative of some of its more successful practices.

As applications appear to have far-reaching success in such diverse areas as business, counselling and individual applications, one would expect to find supportive

evidence of many similar triumphs in higher education. But which interventions relating to student retention are proving themselves and are deserving of implementation in the university environment?

## 4. Research Question and Aims

Below the research question and aims of the study are given.

### 4.1 Research question

After reviewing the existing literature discussed above, a research question proposed is:
What positive psychology interventions can be identified by a scoping literature review aimed at addressing the problem of student retention?

### 4.2 Research aims

To address the research question the following aims were proposed:

- To conceptualise student retention and PPIs from the literature.
- To identify, by means of a scoping review, PPIs that have been shown to positively address student retention in either an individual or group context.
- To collate those PPIs which fall within the inclusion and exclusion criteria as depicted below.
- To make recommendations for application in the university environment.

The research was conducted by mean of the following methods.

## 5. Research Methodology

The research consists of a scoping literature review.

### 5.1 Literature study

A literature study introduces the student retention phenomenon, considers the global approach, presents three perspectives (student, lecturer and university), conceptualises PPIs and contextualises them in a university setting, whilst exploring both their aims and more particularly, their outcomes on university student retention.

### 5.2 Research design

To research the topic, a scoping review was selected for its ability to concisely and accurately appraise, quantify and collate a wide body of different types of research (Arksey & O'Malley, 2005). This can be done without the constraining need for quality assessment of the studies uncovered and thereby allows the researcher more time to better examine the extent, range, and nature of the topic (Davis, Drey, & Gould, 2009; Levac, Colquhoun, & O'Brien, 2010). The field of PPIs is a broad field spanning multiple constructs and many

collaborative programmes, potentially requiring countless man hours to effectively cover the research literature. A scoping review gives an overview of the volumes written and the impact shown by the studies chosen for inclusion, in a more easily digestible format. Although a scoping review is often the forerunner for the more extensive and in-depth systematic review which many researchers are more familiar with, it can be undertaken as a project in its own right. Because a scoping review tends to be less well-known than other review types, this prompted Dijkers (2015) to challenge researchers to consider its place in the research world and to tread carefully until there is an acceptable standard definition. Dijkers's (2015) comparison of the scoping review to a rare bird or at worst a chameleon was supported by his research which revealed that of 344 scoping reviews, 63% of authors felt the need to defend their position and define the term for clarity. He made the further claim that one could hardly imagine systematic review authors having to do likewise. This shows that much confusion in the knowledge synthesis field exists and has given rise to debates amongst the experts and a calling for more standardisation of the various types of reviews. Grant and Booth's (2009) research reviewed the methodologies of 14 different types of reviews in an effort to define and categorise the variety within the genre and their findings supported Arksey and O'Malley's (2005) definition of a scoping review.

In a more recent attempt to regulate, better define, and perhaps ameliorate the need for constant explanation of the scoping review term which has plagued previous authors, Colquhoun et al. (2014) proposed an enhanced Arksey and O'Malley (2005) methodology as the standard method for conducting scoping research. The authors emphasised that no quality assessment should be conducted in a scoping review, in light of the fact that this is the domain of a systematic literature review and to do so would only introduce confusion between the two. However, Grant and Booth (2009) challenged this view by asking whether we *really have knowledge*, either displayed graphically, tabularly or narratively (another dispute), if we have not done any form of quality assessment first. The debate rages on, but in the meantime researchers look to Arksey and O'Malley's (2005) approach for certainty and credibility, as their work remains the yardstick for scoping reviews.

From the many types of reviews to choose from, some whose processes are highly acceptable to the research community and some less so, some with rigid criteria for their execution and others with a more relaxed approach, which one is chosen depends on the type of problem one is trying to research. The main differences between a scoping review and a systematic literature review, according to Dijker (2015), are twofold. Firstly, a systematic literature review is likely to focus on a well-defined question where appropriate studies can be identified in advance, whereas a scoping study tends to address a wider field whilst considering many different types of studies. Secondly, the systematic literature review, as the gold standard, demands an in-depth systematic approach often using multiple researchers for methodology and search verification and is compelled by its very nature to

assess the quality of the research being considered. Arksey and O'Malley (2005) concurred with the above and emphasised that a scoping review goes wide but not deep and typically summarises the research results narratively. The authors (Arksey & O'Malley, 2005) further cautioned that researchers in scoping research should expect a continuous back and forth between early finds and new insights and that constant change in search terms is likely to be required, advising that even the inclusion and exclusion clauses may be decided post hoc. They also added that scoping reviews are beneficial for identifying gaps in the evidence base and also for identifying research activity in a specific field. Of note is that in conducting any review, it may even be found that there is a lack of relevant primary research on the topic but this does not mean that the review is useless. Gough, Oliver, and Thomas (2017) stated that the absence of evidence is a finding in itself and that this lack of evidence can also inform future research agendas.

To date there appears to be a gap between the research and application of PPIs as a solution to the student retention problem at university level, despite the volumes of research targeting other environments claiming success. This study as an adjunct hopes to draw attention to this gap in the literature, or at the very least light the trail for others to follow. Ideally there will be many successes found in the higher education environment, but failing that, by providing evidence of PPIs success elsewhere it is hoped that recommendations can be made for future application in the university environment. As this research intends to scope the literature on PPIs, and specifically in a university setting to select what works in student retention, as well as having considered all the afore-mentioned recommended criteria, a scoping review was chosen as the most appropriate research design for this study.

## 5.3 Research method

The process of conducting a scoping review is deemed less prescriptive than that of (for example) a systematic literature review. Nevertheless, there are some guidelines as determined by Arksey and O'Malley (2005) which have been adopted as the yardstick by which a scoping review should be conducted (Dijkers, 2015).

### *5.3.1 Data collection and data analysis*

To address the research question in line with Arksey and O'Malley's (2005) recommendations for the method of a scoping study, this research followed the five steps that the authors propose.

*Step 1: Identify the research question*

What positive psychology interventions can be identified by a scoping literature review aimed at addressing the problem of student retention?

*Step 2: Identify primary studies*

*Search strategy:* A search was carried out in the below-listed databases, journals, theses, referrals from the references and the internet. All relevant articles found under the keywords listed were downloaded and reviewed in order to develop a list of the assertions made about the efficacy of the interventions and grouped into similar categories such as:

a. Individual studies targeting specific constructs regarding students (i.e. positive emotions, strength-based education, self-determination theory, mindsets, and others), conducted in an academic environment.
b. Collaborative interventions such as pre-entry interventions, assessment tools, Track and Connect, mentorship initiatives, and other positive education programmes targeting overall student success.

*Keywords:*

Student retention
Student success
Positive education
Positive Psychology interventions
University dropouts
Psychological capital and student retention
Goal-setting and student retention
Motivation and student retention
Resilience and student retention
Grit and student retention
Hope and student retention
Gender and student retention
Self-efficacy and student retention
Happiness and student retention

*Databases:*

ERIC
PsycINFO
Google
Google Scholar

*Journals:*

Journal of College Student Development
Student Success
Journal of Positive Psychology
Journal of College Student Retention: Research, Theory and Practice
International Journal of the First Year in Higher Education
Sabinet South Africa e-publications
About Campus

*Theses:*

Any relevant theses were considered.

*References:*

In the reading of the many articles on PPIs, it was assumed that there will be many which refer to other relevant material, so a form of snowballing was also used in the process.

*Internet searches:*

The keywords listed above were searched, along with any other relevant keywords which could yield results of the search. Both manual and automated search strategies were used and after the search was complete, the author approached both the librarian and supervisor at NWU to confirm the search process.

*Step 3: Select studies relevant to the research question, in line with the inclusion clause detailed below*

*Inclusion:* Although it may be debatable and challenging to corral exactly which studies the purists might claim should fall under the banner of positive psychology, a useful definition would be anything that could be deemed "a purposeful activity designed specifically to increase the frequency of positive emotions and experiences and which helps to facilitate the use of actions and thoughts that lead to flourishing" (Sin & Lyubomirsky, 2009, p. 468) specifically in the context of higher education. Cognisance was also given to Parks and Biswas-Diener's (2013) argument that there is no definitive classification for a PPI, and that in positive psychology the positive outcome is itself the determiner. This creates a broad definition and challenges are anticipated in identifying what might be justly classified as a PPI, considering that many of the successful studies appear to defy easy classification and tend to be of a collaborative nature, between university, technology, lecturers and staff and students. For the purposes of this research the PPIs considered included studies researching individual constructs such as well-being, tutor-led interventions such as Tinto's learning communities and university programmes such as *Track and Connect*. They were sifted, categorised, and collated, in terms of specific criteria to be determined as the process evolves. This stage reiterates that Arksey and O'Malley (2005) stressed the requirement for openness to change as the research process is unfolding in this type of research, owing to its scoping nature and due to the inevitability of the uncertainty of the potential findings in the sifting process.

Local and international research papers, written in English, claiming success, measured by the likelihood of a positive connection between intervention and outcome, were included. The studies chosen for inclusion need to show that there is:

a. A specific positive psychology intervention in line with Sin and Lyubomirsky's (2009) and Parks and Biswas-Diener's (2013) definitions.
b. An outcome evaluation.

*Exclusion:* Any interventions which did not fall in line with the proposed definitions or inclusion criteria, or those outdated pre-technology procedures which had been superseded, debunked, or revised, were excluded from the research.

*Step 4: Chart the data on data sheets*

A data sheet was designed for purpose as the process unfolded and a common analytical framework was applied to all the research papers, ensuring standardisation of the information collected. A process indicative of thematic analysis was proposed. In line with the research purpose and the positive psychology conceptual framework, all articles indicating success in student retention were downloaded. The next step separated the findings into two broad categories: namely, successful *student-centred interventions* and successful *university-led interventions.* The final step in charting involved the relevant studies being coded under text words such as *goal-setting* for categorisation, under *student-centred interventions*, and programmes such as *Track and Connect* under *university-led interventions*. Information regarding the construct or programme type, its success rate, and citation details for every study chosen was also logged on the data sheet. (A decision was also made to try, as far as possible, to report on studies which claim statistically proven retention rates, evidenced by percentage point increases, and preferably to secure those studies which might have been measured against a control group, for greater credibility).

*Step 5: Collate, summarise, and report the results*

Once satisfied that the studies chosen were representative of the field of PPIs, the researcher collated them under the two broad categories discussed (student-centred PPIs and university-led PPIs) and further itemised them into the appropriate constructs or programmes in tabular form.

### *5.3.2 Summary of the research process*

1. Writing and approval of proposal.
2. Conduct search in line with inclusion and exclusion criteria.
3. Collect and analyse relevant studies.
4. Collate studies identified.
5. Compile research report.

## 6. Ethics

As only data was handled, it was expected that there were few pertinent ethical considerations in using the already-published studies as detailed in the inclusionary clause. Notwithstanding this, the researcher acknowledges that all research should be ethical and

undertakes to report on all material used in the review as accurately and honestly as is possible and will refrain from falsifying any information.

Despite the growth in both systematic and scoping reviews there is a paucity of literature addressing the issue of trustworthiness in reviews generally, leaving researchers content that ethics is someone else's problem due to the secondary nature of the material used. Vergnes, Marchal-Sixou, Nabet, Maret, and Hamel (2010) argued that consent given in one study is not necessarily valid for another, calling for some simple measures to be added to current practices in the interests of enhancing the ethical quality of these types of reviews.

To address the issue of trustworthiness in this study strict adherence throughout the process to transparency and the principles of ethical research was maintained. A study conducted by one researcher only, without recourse to member checks or triangulation methods due to the nature of the research, potentially leaves the researcher vulnerable to researcher bias. However, in this study it is hoped that the researcher's predispositions are contained and objectivity prevails. Given that the process is systematically documented, from the decision-making of categories chosen, to stringent verification of the data and accurate writing up of the findings, the intention is to credibly and trustworthily report on the relationship between PPIs and student retention.

## 7. Format of mini-dissertation

Chapter 1: Literature background and methodology of study.

Chapter 2: Manuscript: Identifying positive psychological interventions influencing student retention, by means of a scoping literature review.

Chapter 3: Conclusions, limitations of, and recommendations from this study.

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# CHAPTER 2

## MANUSCRIPT OF THE STUDY

## IDENTIFYING POSITIVE PSYCHOLOGY INTERVENTIONS INFLUENCING STUDENT RETENTION BY MEANS OF A SCOPING LITERATURE REVIEW

**Key terms:** Positive education, positive psychology interventions, scoping review, student retention, student success.

**ABSTRACT**

The aim of this study was to identify and collate, by means of a scoping review, those positive psychology interventions (PPIs) which have been found to influence university student retention. Individual constructs and university-led programmes were explored globally and a representative sample of successful constructs and programmes was presented. Evidence showed that student well-being, thriving, using strengths, self-determination, positive mind-sets, goal-setting, self-discipline, hope, optimism, self-efficacy, resilience and humour, all positively influenced student retention. University-led programmes such as realistic recruitment policies, pre-entry courses, using assessment tools, assisting with course choices, using information and communication systems, mentorships, developing a strong teacher-student relationship and a campus-wide collaboration all yielded impressive increases in both grades and retention. Recommendations were made for further research and practical application.

In light of South Africa's recent spate of student uprisings calling for easier access to universities and the potential compounding effect to the retention problem that this could bring there has never been a more appropriate time, or more essential topic requiring the uncompromising eye of research to validate what actually works in student retention, for the benefit of student, institution, and society at large. Of note, and perhaps worryingly so for the universities, higher education enrolments have grown by almost 90% in South Africa between 1994 and 2012 (Council of Higher Education, 2013, p. 37), whilst 85% of South African undergraduate students do not graduate, and only 20% of masters, and 12% of doctoral students complete their studies (Murdoch, 2013). Just as student success is important to the students evidenced by their commitment to engage with and meet their goals, it is a binary process requiring the universities to make good on their promise to educate the students and as such, demonstrate the accomplishment of their mission by seeing the student through to graduation (Kim, Newton, Downey, & Benton, 2010). Inspired lecturers too, are a necessary tool in this tripartite alliance, and all three aspects have been heavily researched over the years in the search for answers. Student retention is regarded as one of the most widely researched areas in education and this holds as true today as it did in 1922 when research into the problem began (Powell, 2009). More recently, with the global push towards inclusivity of previously disadvantaged groups into higher education, the attrition problem is being compounded. Likewise, in South Africa where education is viewed as recompense for past wrongs and a ticket out of poverty, the attrition problem has reached epidemic proportions, making South African student dropout rates the highest (measured) in the world. The reasons offered are legion and despite extensive research being conducted attrition rates continue to climb. Numerous solutions, aimed at the student, lecturer, and institution are being proffered as the panacea, but what works? This study proposed to, by

means of a scoping review of the existing literature, uncover and collate in a digestible format, those positive psychology interventions (PPIs) that have proven to positively relate to university student retention.

## 1. Introduction

The broad aim of this study was to do a scoping literature analysis to understand positive psychology interventions that could constructively be used in solutions for the student retention dilemma.

### 1.1 History of the Student Retention Problem

The literature search revealed that earliest approaches to the attrition problem were to blame the students (Tinto, 2005). Drop-outs were deemed to be less able or less motivated, absolving the institution of any responsibility. By the 1970s, the pendulum had swung and the role of the environment and more particularly the institution and its practices were implicated (Tinto, 2006). A greater appreciation of how a wide spectrum of factors of cultural, economic, social, and an institutional nature influence student retention (Berger, 2001), was being established and became the focus for researchers seeking answers. A complex mix of both intrinsic and extrinsic factors was being explored. Student engagement, integration, ethnicity, age, place of residence, preparedness for university, teaching practices, and institutional systems were all being challenged and investigated and the dynamic interaction between the variables considered at length (Bean, 1985; Pascarelli & Terenzini, 1980; Tinto, 1975, 2005, 2006). Confusion was evident and despite best efforts still no absolute solution to the retention problem has been found.

### 1.2 The global picture

Globally, the picture is similarly bleak. The USA government estimated lost funding costs for the five-year period to 2009 at around $4 billion, not counting the students' direct financial and emotional costs, or the cost to business of losing potential graduates in the work force. Equally, in a downward spiral, the institutions suffered from loss of income, damage to its reputation, and a waste of public funds (Schneider & Yin, 2011).

Across the international student retention spectrum the UK would seem to be faring best with 82% of students graduating. According to the European Commission, this is due to a stringent admissions system in which institutional autonomy has been upheld and to an embedded expectation from institutions and students that grade course completion is possible in three years, except in exceptional circumstances (Times Higher Education, 2016). Some governments have adopted a survival of the fittest approach. The Czech Republic perceive attrition to be a quality assurance measure to maintain standards since it removes low-skilled and unmotivated students who do not comply with the demands of tertiary education (Times Higher Education, 2016). The French concur, blaming lower entry qualifications and the lack of a selection process at student entry for its high first year dropout rates, but despite that, 80% of French students still go on to graduate within the allocated degree period (Times Higher Education, 2016). In South Africa with its 15%

completion rate, the *#FeesMustFall* movement will likely compound the attrition problem by allowing access to more students who are unprepared for the rigours of university life, as has been proven by climbing attrition rates as a result of a similar movement championed by the students in Argentina, who demanded open access (Kelly, 2013). The result there, although lauded as a success by the student movement, saw the graduation rates drop to 27% in 2013.

Internationally, in the push for widening participation, without stringent entry requirements and prepared students, it would appear that increased attrition is the inevitable result. The notable theorist Tinto (1993) agreed, claiming that research has shown that if university admission criteria are set too low and a large number of students, who barely scrape through are admitted, high attrition rates are likely to follow. Defining the population of students prior to admittance can have a direct impact on student attrition rates (Dodge, Mitchell, & Mensch, 2009). Harrison and Hatt (2010) emphasised that widening participation is about extending the opportunity to those who ***have the potential***, and Tinto (1975) added that if the student does not have the ability and skills to perform at the required level they will leave, providing compelling figures to indicate that the more selective an institution is, the less of a problem retention is. Harvard and such universities claim a completion rate as high as 98%, primarily due to their high admission criteria and policies (Harvard College, 2018). Grade point average (GPA) at entry, indicating academic ability is still considered to be the strongest predictor of university completion according to many theorists (Tinto, 2006; Farrington et al, 2012; Hixenbaugh, Dewart, & Towell, 2012; Pascarelli &Terenzini, 1980; Titus, 2006) thus putting the ball squarely back to the school education system to better uphold standards and prepare their students for university's academic challenges. Given the failing secondary education system, the paradox that now lies before the institutions is how to find a way to heed the call to widen participation whilst ensuring the tighter admission criteria required to admit those capable of completion. Clearly, both approaches make uneasy bedfellows and will require exceptional input from all parties involved in student education.

## 1.3 Stakeholders' perspectives on student retention

The perspectives of relevant stakeholders in the student retention phenomenon, are presented in the discussion below.

### *1.3.1 The student perspective*

According to research conducted in Australia by Hellmundst and Baker (2013) aimed at giving students a voice, the main theme that emerged was that students wanted a supportive and challenging environment from the tutors, thereby encouraging their self-confidence and uplifting their performance. They wanted guidance but not spoon-feeding, and to engage with their learning in a way that they had not been able to do at school. A positive attitude

and encouragement from the tutor were also highly prized. When students in the study felt that staff was invested in their development, they felt more committed to the university and its ideals.

In South Africa, the picture is somewhat different. According to research conducted by Smit and Wolmarans (2018), South African students tend to lay the blame at the schooling system which they say left them unprepared for the workload, the fast pace, and the leap in learning that had to be made from high school to university level. The disgruntled students claimed that they were not taught to think for themselves and suddenly they were forced into an environment where they had to do everything, resulting in demotivation, disinterest, and which will be likely to lead ultimately to dropout.

### *1.3.2 The lecturer perspective*

Hassle and Lourey (2005), two lecturers in the USA who conducted a study of more than 1 100 university students in an attempt to determine attitudes towards learning and accountability, looked towards the students to change. The authors claimed that current students, compared to previous generations of students, displayed a sense of entitlement, apathy, and lack of responsibility towards their education. Most students (they claim) have no interest in getting an education but merely focused on obtaining a degree. Hassle and Lourey (2005) claimed that the dropping standards are partially fuelled by the conforming of lecturers who, in fear of empty classrooms, pander to the whims of the students by inflating their grades. The authors also found that the students over-estimated the value of their own performance, suffering from academic entitlement (Chowning & Campbell, 2009) with the majority believing that they deserved better grades, despite having a poor work ethic. Hassle and Lourey (2005) concluded their findings on student attitudes by recommending a system-wide transformation, beginning with change to the instructors' accommodating attitude and with grades reflecting students' true ability. A lack of administrative support also came under fire as did the overload of duties beyond the lecturers' core purpose. A call for a return to the role of being teachers was deemed necessary for student success.

Whilst being sensitive to the ills of South Africa's past, Nyamupangedengu (2017) questioned the lack of preparedness of South Africa's students even after three years of university attendance, suggesting some culpability on the students' part. The research found that South Africa's students still expected to be spoon-fed, assuming that their lecturer would prepare their notes for them as they were incapable of doing so themselves. The unabridged gap between school and university was apparent too, in that the students felt that the pace of lectures was too fast, yet another indicator of their lack of preparedness. Nyamupangedengu concluded by recommending that students should become more independent and take ownership of their learning. Similarly, Van der Merwe and Nell (2013) found that the majority of South African students in their small study sample, showed little

evidence of reflective thinking and appeared to rely upon rote learning and memorisation, believing that to recall the facts means that they understood the material. Their (Van der Merwe & Nell, 2013) recommendation was for an urgent overhaul of educational strategies, particularly when it comes to cultivating students' critical thinking skills and assisting them to develop their own understanding, beyond the rote learning that many students see as the end in itself. Jacobs and Pretorius (2016) supported this recommendation, adding that inflated marks and a lack of academic literacy are commonplace in the South African public schooling system, despite constant denials from the school education authorities.

In sum, realistic expectations were found to be the key to successful achievement in a study conducted by Nicholson, Putwain, Connors, and Hornby-Atkinson (2013), who called for measures to be taken by academia to encourage students to this end.

### *1.3.3 The university perspective*

The universities are now being looked to by the public sector, students, and experts, who are all calling for a solution to the low retention rates and to this end many universities globally have introduced sophisticated systems in an attempt to tackle the ever-growing problem (Barnes, Macalpine, & Munro, 2015; Dale, 1995; Draper, 2010; Fowler & Boylan, 2010; Scrivener et al., 2015).

Theorists, such as Tinto (1999), claimed that classroom settings, residential halls, and support that the university offers, are determining factors in student success. Tinto (1999) also recommended that the institutions endeavour to make students feel valued and create environments that foster learning and integration, consequently increasing their commitment to the university and thereby making it more difficult for them to disentangle themselves and drop out. Tinto's (1999) proposal of a system of learning communities was implemented by Nicole and Boyle (2003) in a Scottish university and has shown great success in such areas as learning the difficult concepts of engineering, evidenced by attrition rates that dropped from 20% to 3%. Such a shared learning environment allows not only for academic integration but also for social bonding which Tinto (1999) and others viewed as essential to student success. That said, caution was sounded by Mihaly (2009), whose research shows that high integration can work against student retention, in that too much social bonding can lead to distraction from the task at hand. The study found that the more socially integrated the student, the lower their marks. Individual personality types should also be considered as too much forced socialisation can have a negative effect on students who prefer to work alone. In addition, McKenzie and Schweitzer (2001) noted that in the changing social nature of universities with the advent of the internet, studying in isolation has become adaptive for a sub-group of high achieving students. They also found that Australian students with high integration had ***poorer*** levels of achievement than those with lower integration who had

higher academic performance, indicating that high academic achievement is not necessarily related to retention and poor academic performance does not always result in attrition.

The above discussion briefly sketched the student retention versus attrition matter that universities face and grapple with. This research intends to approach the phenomenon from the viewpoints of positive psychology that will be briefly set out below.

## 2. Positive Psychology

The science of positive psychology was conceptualised and introduced by Martin Seligman in 1999, who eschewed the old approach where the emphasis was placed ***solely*** on the pathological aspects of psychology. Their hope was towards developing the best in individuals, groups and societal structures to re-focus on what makes life most worth living, in order to create thriving individuals and institutions (Seligman & Csikszentmihaliyi, 2000).

Positive psychology's phenomenal growth is evidenced by the volume of data available on search engines, but as Parks (2011) cautioned there is a real need for published literature on best practices and teaching within the genre, that brings it all together.

### 2.1 Positive psychology and student retention

Grounded in stringent scientific theory, from this novel approach emerged the practical arm of positive psychology interventions. PPIs are viewed as empirically validated, purposeful activities constructed to increase the frequency and quality of positive emotions and experiences, in order to facilitate the use of actions and thoughts that lead to flourishing, (Sin & Lyubomirsky, 2009). PPIs application in the university setting can take the form of interventions aimed either individually at the student, through developing their positive emotions, personal strengths, self-efficacy, etc. (Adler, 2016; Linley, Nielsen, Gillett, & Biswas-Diener, 2010; Marks & Wade, 2015), or collaboratively implementing practical positive programmes targeting the institution, its staff members, classroom practices and the student's social and academic environment (Barnes et al., 2015, Nicole & Boyle, 2003).

### 2.2 PPIs aimed at the student, through individual constructs

Research has indicated that PPIs can significantly decrease depression and anxiety while simultaneously significantly increasing life satisfaction, happiness, self-esteem and subjective well-being (Fredrickson, 2001; Seligman, Rashid, & Parks, 2006; Sin & Lyubomirsky, 2009), lasting up to one year post-intervention. Sin and Lyubomirsky (2009) conducted a meta-analysis on 51 studies, with 4 266 participants, to determine whether interventions focused on increasing positive emotions, behaviours and cognitions, alleviate depression symptoms. Results indicated that PPIs significantly enhance subjective well-being and significantly decrease symptoms of depression. As high levels of depression in students estimated at 1 in 5 (Rosenberg, 2018) is a growing problem, alleviating their

emotional distress alone could potentially significantly affect retention rates. Of relevance is that 1 in 3 students ***who drop out*** of university are already suffering from clinical depression or severe anxiety (Niemtus, 2017).

In education circles, encouraging thriving emerged as a key element of success. Schreiner (2010) described thriving as being fully engaged intellectually, socially and emotionally in the college experience and according to Schreiner (2010), these characteristics can be taught, paving the way for PPIs.

Claims for success have been made for strengths-based education, focusing on students' strengths rather than on their weaknesses, fostering self-determination, sparking their engagement and thereby producing higher levels of learning and consequently student success and persistence to graduation (Schreiner & Anderson, 2005). Likewise the talent development approach holds that every student can learn under the right conditions (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006) and focuses on developing talents into strengths, harnessed to achieve academic excellence.

Ryan and Deci's (2000) theory of human motivation and personality, which relates to people's inherent growth tendencies and innate psychological needs by considering intrinsic and extrinsic motivations, showed that developing students' intrinsic motivation results in higher levels of interest, excitement and confidence, making them more likely to engage in the learning process and ultimately achieve success.

Dweck's (2006) mind-set theory of intelligence attributes a large measure of students' ability to persist in the face of adversity to their mind-sets, which are transformable. Dweck (2006) studied the mind-set of thousands of students and differentiated between a fixed mind-set, meaning that they were limiting their potential by claiming that they cannot do something when faced with a challenge, and a growth mind-set which made those students more likely to persist in the face of adversity and even failure, seeing it as a challenge to be overcome.

Even something as simple as developing positive peer relationships can impact the decision to stay or go. Roseth, Johnson, and Johnson's (2008) research showed that in a meta-analysis of 148 studies from 11 countries, positive peer relationships explained 30%-40% of the variance in academic achievement. Maunder (2018) agreed, adding that attachments to peers was a stronger predictor of university adjustment than attachment to the university.

### 2.3 Collaborative interventions

Higher education institutions are compelled by their commitment to student education, to create the conditions in which the student can enhance their own thriving, and consequently, to empower them towards success. O'Rourke (n.d.) mentions that attrition, even in its simplest form, occurs as a by-product of a need to maintain standards in an institution. Thus,

attrition makes universities culpable and as such, obliges them to find solutions, and some universities have begun to address the challenge.

To close the gap between high school and university, pre-entry interventions focusing on preparing the student, have shown success both in developing the student for university and ultimately to graduation (Chesters & Watson, 2016). Results from one study have indicated that those students who (despite having a lower GPA) took a university-led enabling course, were almost twice as likely to be retained as those who did not (Chesters & Watson, 2016). Many English-speaking universities now make it compulsory for students to attend the university's own personalised pre-enabling programmes (particularly for international students whose English may be suspect) which incorporate critical thinking skills, social introductions, mentoring, and the like.

Assessment tools such as the *College Learning Effectiveness inventory (CLEI)* (Kim et al, 2010) can be used by the universities to identify potential students' strengths and weaknesses even before admission across various dimensions such as academic risk, attitudes, behaviours, and dispositions. Programmes can be tailored to suit whatever the risk factor might be (Singell & Waddell, 2010) and in addition, can maintain an institution's low attrition rate by informing the admissions decision based on the student's predicted probability of retention.

From within the many supportive resources offered by the university-led initiatives, mentorship programmes are just one of the interventions which have been shown to impact strongly on student success showing dramatic effects of up to 300% reduction in attrition rates (Salinitri, 2005).

Social media applications that were tested found that students using them felt supported by the university as they were kept abreast of proceedings during the critical period of their transition. The applications also offered them an opportunity for social bonding and peer support, and proved to be a useful tool to aid students' early social and academic integration into university life (Harley, Winn, Pemberton, & Wilcox, 2007), one of the most vulnerable times in the student journey.

Many effective university-led initiatives engage some highly sophisticated programmes with the ability to store terabytes of student information to red flag any at-risk students and prompt the institution to step in with the appropriate support when necessary. They identify at-risk students from the outset, monitoring their progress throughout the semester and linking them to available resources, personal support, and academic assistance through individualised, appropriate and timely advice. Attrition rates in one study were less than halved following the implementation of one such programme (Barnes et al., 2015) with others showing equal success.

## 2.4 A future perspective

Given the rapidly changing face of the work environment and the prohibitive costs (for many) of a university education, employers and students alike are raising their voices to challenge the *relevancy* of universities. In the USA, a higher education bubble is threatening due to the excessive costs and its inability to yield a return on the investment through shrinking job opportunities and lower salaries. Educational overcrowding, coupled with inadequate vocational guidance, thereby limiting career opportunities, is a major cause of disillusionment and consequently student dropout in Europe (Cabrera, Tomas, Alvarez, & Gonzalez, 2006) and may be equally so for South Africa. A growing number of employers, even such giants as PricewaterhouseCoopers, are eschewing the need for a degree in favour of softer skills and calling for universities to focus on employability (Ow, 2018). Due to the many changes in policies and, often doubting the quality of university graduates, employers are searching for softer skills such as critical thinking and good communication skills, choosing to build in the specific hard skills necessary. In the UK, the introduction of degree apprenticeships (akin to the now obsolete South African Technikon programmes) being offered to those from previously disadvantaged backgrounds are contributing as a solution to the retention and the skills shortage problems by offering a university degree through one-day-a-week-attendance, whilst the student is employed for four days learning the practical aspect on the job, and earning a living wage (Jarvis, 2019). These types of programmes positively impact university retention given that the highest attrition rates occur in the previously disadvantaged sector resolving several often-mentioned reasons for student dropout in one solution. The added advantage of earning while they learn takes care of the financial burden (often a distraction from the studies of the disadvantaged), and the students gain practical experience and a degree at the same time. Jarvis (2019) claimed that these programmes are having a significant effect on sectors with severe skills shortages such as digital technology, nursing, policing, and teaching. In South Africa with its high unemployment rate and where education is often undertaken not for its own sake but simply as a means of entering the work force in a mistaken belief that a degree is a ticket to wealth and success, the introduction of degree-apprenticeships might resolve some of the funding and attrition issues that are so prevalent. In addition, Lahteenoja and Pirttila-Backman's (2005) recommendation for a clearer definition and division of labour between universities and polytechnics, may help direct those with less interest in the pursuit of knowledge to institutions geared more towards vocational training and hence, the employability that business is calling for. This would seem to be a proposition worth considering, particularly in South Africa with its frightening unemployment level, and may also lighten the load of universities and help create more successful student outcomes.

Diamandis (2019) maintained that unless there is a shake-up in the institutions, the universities may become all but obsolete except for vocations such as doctors and

engineers who require specialised training. Many students internationally no longer see the value of a watered-down degree in an out-dated subject, coupled with prohibitive costs, offering little scope for entry into the work-place and limited career progression opportunities. The high costs of a university education combined with the massification of education and the resulting over-education effect, could bring serious repercussions for the universities if a way is not found to keep themselves relevant and desirable.

Having explored and considered the issue of student retention extensively, the topic has now reached theoretical saturation and research has moved away from the problem into the seeking of solutions (Tinto, 2006). Individual and collaborative interventions are being tried and tested globally. According to the results of this review there is much to draw on from the positive psychology field that would benefit students both in their university journey and beyond. Specific interventions targeting the institutions have been uncovered as have relevant studies outside of the narrow field of the higher education environment. Influences such as depression, motivation, hope, and happiness are just a few of the constructs researched which potentially could have an impact on student retention, as they have in other environments. A multidimensional approach, coupled with individual interventions aimed at specific problems appears to yield the best results. Tinto's (2006) emphasis that the effectiveness of retention programmes are enhanced by linking them to classroom practices and assessment tools, appears to be supported by the research. Every student will not succeed, there will always be valid reasons for non-completion, and massification and over-education benefits no-one, neither the institutions, nor the over-worked lecturers, and least of all the students. As such, it neither serves the business model it is designed around, nor the social philosophy of a university education for all which is, in part, driving it. That said, the research uncovered that there is much that can be applied by way of PPIs that has shown great success in supporting the student on their university journey to graduation.

## 3. Research Question and Aims

Below the research question and aims of the study are given.

### 3.1 Research question

After reviewing the existing literature a research question that emerged was:
What positive psychology interventions aimed at successfully addressing the problem of student retention can be identified by means of a scoping literature review?

### 3.2 Research aims

To answer the research question the following aims were used:

- To conceptualise student retention and PPIs from the literature.
- To identify, by means of a scoping review, PPIs that have been shown to successfully relate to student retention in either an individual or group context.

- To make recommendations for application in the university environment.
- To collate those PPIs which fall within the inclusion and exclusion criteria as depicted below.

### 3.3 Research Methodology

The research consisted of a scoping literature review.

### 3.4 Literature study

A literature study introduced the student retention phenomenon, considered the global approach, presented three perspectives (student, lecturer, and university), conceptualised PPIs and contextualised them in a university setting, whilst exploring both their aims and more particularly, their outcomes on university student retention.

### 3.5 Research design

To research the topic, a scoping review was selected for its ability to concisely and accurately appraise, quantify and collate a wide body of different types of research, without the constraining need for quality assessment of the studies uncovered (Arksey & O'Malley, 2005). Colquhoun et al. (2014) emphasised that no quality assessment should be conducted in a scoping review, as this is the domain of a systematic literature review and to do so would only introduce confusion between the two. Although a scoping review is often the forerunner for the more extensive and in-depth systematic review which many researchers are more familiar with, it can be done as a project in its own right. This shows that much confusion in the knowledge synthesis field exists and has given rise to debates amongst the experts and a calling for more standardisation of the various types of reviews. From the 14 different types of reviews considered (Grant & Booth, 2009), a scoping review was chosen as most appropriate to answer the research question and satisfy the aims as the research intended to scope the general field of literature on PPIs and more specifically to select what works in student retention in a university setting.

### 3.6 Research method

The guidelines for this type of research are dictated by Arksey and O'Malley (2005) whose layout has been adopted as the yardstick by which a scoping review should be conducted (Dijkers, 2015). The process of conducting a scoping review is deemed less prescriptive than that of a systematic literature review (for example) owing to its broader approach.

### 3.7 Data collection and data analysis

To address the research question in line with Arksey and O'Malley's (2005) recommendations for the method of a scoping study, this research followed five steps.

*Step 1: Identify the research question*

The research question was identified as: *What positive psychology interventions can be identified by a scoping literature review aimed at addressing the problem of student retention?*

*Step 2: Identify primary studies*

A search was carried out in all relevant databases, journals, theses, referrals from the reference lists and the internet. Data bases searched (such as *Eric* and *PsychInfo*), and journals (such as *Journal of College Student Retention* and *About Campus*) were all searched under all possible keywords (such as student retention, PPIs and various constructs and combinations) yielding a multiplicity of leads to articles both within the higher education field and outside of it. Reference lists, particularly of many articles, provided a rich source of material. Articles germane to the topic were downloaded and reviewed in order to consider the efficacy of the interventions and grouped into similar categories such as:

a. Individual studies targeting specific constructs researched in students (i.e. positive emotions, strength-based education, self-determination theory, mind-sets, and others), conducted in an academic environment.
b. Collaborative interventions such as pre-entry interventions, assessment tools, multidimensional programmes, mentorship initiatives, and other positive education programmes targeting overall student success.

Both manual and automated search strategies were used and after the search was complete, the author approached both the NWU librarian and study supervisor to confirm the search process.

*Step 3: Select studies relevant to the research question, in line with the inclusion clause detailed below*

*Inclusion:* Although it may be debatable and challenging to corral exactly which studies the purists might claim should fall under the banner of positive psychology, a useful definition was anything that could be deemed *a purposeful activity designed specifically to increase the frequency of positive emotions and experiences and which help to facilitate the use of actions and thoughts that lead to flourishing* (Sin & Lyubomirsky, 2009, p. 468) specifically in the context of higher education. Cognisance was also given to Parks and Biswas-Diener's (2013) argument that there is no definitive classification for a PPI, and that in positive psychology the positive outcome is itself the determiner. For the purposes of this research, the PPIs considered included studies researching individual constructs such as well-being, and tutor-led interventions such as Tinto's (1993) learning communities and university programmes such as *Track and Connect*. They were sifted, categorised, and collated, in terms of specific criteria determined as the process evolved. At this stage it is pertinent to reiterate that Arksey and O'Malley (2005) stressed the requirement for openness to change

as the research process unfolded in this type of research, owing to its scoping nature and due to the inevitability of the uncertainty of the potential findings in the sifting process. This made it difficult to project at an early stage the exact format that the data sheet would take and the categories under which the information would be best listed, but unfolded accordingly.

Local and international research papers that were written in English, claiming success, measured by the likelihood of a positive connection between intervention and outcome, were included. The studies chosen for inclusion needed to show that there was:

a. A specific positive psychology intervention in line with Sin and Lyubomirsky's (2009) and Parks and Biswas-Diener's (2013) definitions.
b. An outcome evaluation (preferably showing percentage increases in retention statistics and assessed against a matched control group where possible but these provisos were not cast in stone).

*Exclusion:* Any interventions which don't fall in line with the proposed definition or inclusion criteria were excluded from the research.

*Step 4: Chart the data on data sheets*

A data sheet was designed for purpose and, as Arksey and O'Malley (2005) had predicted, the process was a relentless back-and-forth one with the inclusion process unfolding and changing along the way. Once established, a self-constructed, common analytical framework was applied to all the research papers, ensuring standardisation of the information collected. A process indicative of thematic analysis was applied to categorise the articles. In line with the research purpose and the positive psychology conceptual framework, all articles indicating success in student retention were downloaded. The next step was separating the findings into two broad categories, namely: successful *student-centred interventions* and successful *university-led interventions.* The final step in charting involved the relevant studies being coded under text words such as *goal-setting* for categorisation under *student-centred interventions*, and programmes such as *Track and Connect* under *university-led interventions*. Information regarding the construct or programme type, its success rate, and citation details for every study chosen were also logged on the data sheet. (As mentioned in Step 3.b, a decision had also been made to attempt, as far as possible, to report on studies that claimed statistically-proven retention rates, evidenced by percentage point increases, and preferably, to secure those studies which had been measured against a matched control group, for greater credibility.)

*Step 5: Collate, summarise, and report the results*

Once satisfied that the studies chosen were representative of the field of PPIs, they were collated under the two broad categories discussed (student-centred PPIs and university-led PPIs) and further listed into the appropriate constructs or programmes. It was hoped to partially report in tabular form for ease of viewing but this was not possible due to the number of different types of studies and methods, making easy comparison difficult and potentially creating confusion. Accordingly, the results were discussed in narrative style as is typical of a scoping review, proposing the merits of the uncovered interventions with recommendations being made to inform policy and further research.

## 3.8 Ethics

As data only was handled, it is proposed that there were few significant ethical considerations in using the already-published studies, although this opinion does have its detractors. It is important to note that despite the growth in both systematic and scoping reviews, there is a paucity of literature addressing the issue of trustworthiness in reviews generally, leaving researchers content in the knowledge that ethics is someone else's problem due to the secondary nature of the material used. Vergnes, Marchal-Sixou, Nabet, Maret, and Hamel (2010) argue that consent given in one study is not necessarily valid for another, calling for some simple measures to be added to current practices in the interests of enhancing the ethical quality of these types of reviews. The researcher acknowledges the dissension therein and bearing this in mind, confirms that all research was ethically conducted and all material used in the review was reported on as accurately and honestly as was possible, and refrained from falsifying any information. A true account of the research was given and it is also hoped that the researcher's predispositions were contained and objectivity prevailed.

Given that the process was under the guidance of a research supervisor and was systematically documented from the decision-making of categories chosen to stringent verification of the data and accurate writing up of the findings, it is hoped that the intention to ethically and trustworthily report on the relationship between PPIs and student retention, was achieved.

## 3.9 Research Procedures

Procedures followed in this scoping review are described below.

### *3.9.1 The literature search strategy and process*

As the search process is key to the success of a scoping review (Levac, Colquhoun, & O'Brien, 2010), each step of the procedure will be itemised below in more detail before moving on to the findings of what works in individual and collaborative interventions in student retention.

*Step 1: Identify the research question*

The research question had been identified as: What positive psychology interventions aimed at successfully addressing the problem of student retention can be identified by means of a scoping literature review?

*Step 2: Identify primary studies*

At the outset a purposive search of the keywords detailed in the proposal was conducted in the proposed databases in an attempt to select those studies which would provide a sample of the most valuable and relevant information. Identifying documents presented something of a challenge as PPIs are absorbed into many disciplines, and terms and concepts do not belong to the exclusive domain of positive psychology, nor did the constructs studied fall neatly into place under the banner of student retention. It had already been decided that few *a priori* assumptions would be applied putting boundaries around the search, and Sin and Lyubomirsky (2009), and Parks and Biswas-Diener's (2013) respective descriptions of a positive psychology intervention allowed for a loose interpretation. No limitations such as study design or date were put on the initial database searches and the Boolean *and* and *or* were used. The *related items* category was also explored to cover as broad a field as possible. Delimiters such as *full-text only* articles were not used as they could have potentially removed important articles that were not available in full text. Gough, Oliver, and Thomas (2017) cautioned that no search of specific databases is unbiased due to the fact that databases are not neutral having set their own criteria for inclusion. Bearing this in mind, the NWU online library was consulted and *EBSCO, ERIC, PsycINFO, Google* and *Google Scholar* were all searched, to eliminate bias as far as was possible. It was predictably found that *ERIC* and *PsycINFO*, being purveyors of education and psychology respectively, yielded many relevant and useable leads. *GreyNet* was also used to access grey literature which is a term used to denote leaflets, unpublished works, government reports and other literature considered unconventional and often overlooked in favour of peer-reviewed journals (George, Ferguson, & Pearce, 2014). It is important to note that although grey literature might not have undergone the meticulous peer review process, its inclusion adds comprehensiveness to the search results and some downloaded government reports particularly, yielded valuable insights into the dropout problem and some of its solutions. From within the database search, access was gained to many journals, some of which specialised in student retention and positive psychology such as the *Journal of College Student Retention: Research, Theory and Practice,* and the *Journal of Positive Psychology*, which led to further useful searches and studies. No specific theses were found to be of interest in the search and one of the richest sources of information was found to be the

reference list checking, while being mindful that this can lead to bias if not taken in balance with other sources. According to Gough et al. (2017, p. 48) “the extent of the research problem advanced will depend on what evidence is found” so it was deemed necessary to search as broadly as possible and to confirm the search by following the advice of George et al. (2014) who proposed that enlisting the help of a librarian is particularly useful. This advice was taken to review and confirm the veracity of the search process, and in so doing several other studies were considered.

*Step 3: Study selection*

As a balance had to be struck between using everything on the databases searched – an impossible task – and using exactly what was desired, titles and abstracts were initially read to weed out the irrelevant and duplicated studies. This was a time consuming but necessary first step to cull the volumes of literature on general PPIs into a more specific and manageable unit. The early results of the broad keyword search yielded a scattered array of several hundred studies, detailing research of many individual, and various combinations of constructs, and collaborative programmes, in many different formats and research environments. As a scoping review is often termed a rapid evidence assessment describing a broad field, by its very nature limiting the depth of the review in favour of its breadth (Gough et al., 2017), this was an expected result of the preliminary search.

Once the initial search was completed and the studies selected it soon became clear that a more iterative approach was necessary as predicted in the proposal, to determine relevancy and establish the eligibility criteria. Keeping the research question and aims in mind, around three hundred documents were selected and downloaded based on their titles and abstracts, into lever-arch files. The full documents were read and separated into the following four categories:

a) studies targeting individual constructs which had been applied to students, indicating a successful outcome, preferably verified by percentage increases in retention;
b) studies initiated and implemented by the institutions, which indicated a successful outcome, preferably verified by percentage increases;
c) studies that discussed the general field of positive psychology and its interventions; and
d) ‘possible’ studies that might be of of use in the general write-up, such as deviant or interesting takes on either the student retention problem, solution, or any novel approach not categorisable under a), b) or c).

In the reading of the first batch of downloaded studies, many more leads were found from the reference lists which met the eligibility criteria and they were also downloaded and

filed according to the abovementioned categories. The process of sifting and culling yielded a fairly comprehensive selection of relevant articles on the topic, from the entirety of the literature. Whilst keeping in mind Gough et al.'s (2017) admonition that in practice it is impossible to know that all potentially relevant studies have been located, as the researcher was coming across the same studies in the search, indicative of saturation (Arksey & O'Malley, 2005), it was considered that a satisfactory number of studies uncovered were representative of the general field of positive psychology and its interventions' success in student retention.

Once the search strategy was completed, a decision had to be made from the downloaded files, about which studies from the four categories would be discarded and which needed to be retained for the report. As far as possible a uniform approach was applied to the studies and this culling decision was made by choosing to write up from the most recent relevant research available and to discard outdated pre-technology procedures which had been superseded, debunked, or revised. A decision was also made to try, as far as possible, to report on studies which claimed statistically proven retention rates, evidenced by comparisons of before and after percentage point increases, and preferably to include those measured against a matched control group. Several cycles of screening would follow before the process was satisfactorily completed, and the final 126 most relevant studies were selected for inclusion.

*Step 4: Chart the data on data sheets*

As recommended by various authors (George et al., 2014; Gough et al., 2017; Levac et al., 2010) a summary or evidence table was used for organising information to assist in identifying patterns and grouping them into categories; a process indicative of qualitative theme analysis. A simple data sheet was drawn up that divided the studies to be used into two broad separate sections, namely: *student-centred interventions* and *collaborative interventions*, with columns across detailing the construct or programme type being studied and the citation information logged. This information was further divided into specific constructs and specific types of programmes, such as communication programmes or mentoring programmes to be used in topical order in the write-up, at a later stage. Which variables to extract and which studies to use from the multitude on offer was a challenge, as was the format of the layout to be written up, and the data sheet was continually updated and extended, with commentary. For this reason, Levac et al. (2010) recommended the use of two researchers working independently of each other to obtain consensus on the format of the data chart and variables to be used. Depending on how in-depth one wants to go in terms of reporting on the range of study designs, reviews, reports and commentaries, two researchers would likely increase both quality and accuracy, but for the purposes of this

review one researcher was used as is the required procedure dictated by the university to complete a master's degree.

A further challenge was charting the findings and incorporating them into a meaningful whole with the process information, as dominant themes emerged. Levac et al. (2010) agree that this task is a critical challenge of scoping reviews, proposing that this step would benefit from additional direction confirming qualitative content analysis as a means of documenting the wealth of information uncovered at this stage of the research. This process was applied and in combination with the constant sifting and culling it is believed that the most appropriate studies were selected.

*Step 5: Collate, summarise, and report the results*

Since the purpose of the study was to find and collate those studies ***representative*** of what works in PPIs in student retention, it was deemed unnecessary to include all the relevant studies found but merely to use a few as exemplars and to reject those that duplicated a finding from the same construct or collaborative programme, or those that did not contribute any new concepts. To document everything in the field was beyond the scope and purpose of this research and was deemed as unnecessary and supported by Arksey and O'Malley (2005, p. 27) who emphasised that a scoping review presents an overview and therefore there is no requirement to "synthesise evidence or aggregate findings" from the studies found. Equally, given that no quality assessment is called for, it would be doubly difficult to advise on the weight of evidence or give an opinion on whether the studies discussed provide robust or generalisable findings. Based on this, and given the complexity of the findings, a narrative report style was decided upon, as is common to this type of research.

The researcher's scoping review followed the framework of Arksey and O'Malley (2005) and the flexibility of the process allowed the researcher to expand the original focus from PPIs specifically targeting university students, to include successful PPIs in the broader field that could potentially be applied to the university environment when there were enough similarities to warrant inclusion. For example, it was clear that positive education targeting secondary schools had much to offer by way of their research, to university environments, and this was felt to be worthy of discussion. Although adolescents would encounter different challenges compared to those of university students the logical leap was made that success found in one field would likely be of value in another similar field. The eligibility criteria were expanded to accommodate these findings without straying from the essence of the original research questions and aims.

In the writing up of the report the researcher was conscious of Arksey and O'Malley's (2005) warning that "scoping studies are not a short summary of many articles" (p. 27), while

being challenged by the need to justifiably reduce the volumes to a manageable and intelligible whole that did not read like a shopping list.

Of note is that many of the constructs researched are theoretical allies, co-existing positively; for instance, raising well-being affects positive emotions, consequently re-enforcing goal-setting, increasing persistence levels, thereby impacting retention and success. One often begets the other and as Seligman (2011, p. 20) stated “very little that is positive is solitary”. This bi-directionality made it challenging to disentangle and comfortably categorise the successful PPIs under one specific construct for the purposes of the layout of the research. Some terms such as well-being, positive emotions, flourishing and other constructs, were used in tandem or interchangeably in the write-up, their bi-directional nature making it hard to separate their respective influences. As the aim was to provide a broad spectrum of what works, this issue was deemed minor and the interventions reported on below were selected as potent examples of successful PPIs and discussed accordingly under two main groupings.

## 4. Results of the study

What can be done to ensure that students persevere and complete their studies? To effectively answer this question the variables and solutions shaping student withdrawal and motivation were considered and isolated into those that were under the influence of the student and those that were under the institution’s range of influence.

At the outset it needs to be clarified that it is difficult to assess the influence of any intervention with absolute certainty. Many experiences and circumstances impact on a student’s decision to withdraw from their studies, causing institutions to apply comprehensive solutions. Hence, to apportion causality to a specific intervention is a veritable minefield. However, some practices emerged as counter measures to dropout, worthy of inclusion and recommendation.

### 4.1 A review of student-centred interventions

Several constructs (when present in the student) emerged from the research as being conducive to retention. The PPI’s reviewed have been drawn from international studies and thirteen foci were identified under this category as being deserving of discussion. PPIs involving well-being, creating thriving, developing strengths, encouraging self-determination, changing mind-sets, setting goals, improving self-discipline and raising hope, optimism and self-efficacy all showed measurable results in student retention and success; as did developing resilience, humour and gratitude. Each construct will be discussed under a separate heading with reference to the related research.

Of relevance to the positive psychology movement is that Alkan (2014), Tinto (2006) and other social integration theorists considered that university dropout was better predicted

by non-academic factors such as loneliness and a sense of not belonging to the university, than by academic factors. Their social and academic engagement theories are well documented and many individual and collaborative solutions have been built around them to better integrate the student thereby lessening the chances of dropout.

### *4.1.1 Well-being-based interventions*

Well-being drives success. The skills for well-being are learnable and well-being and academic achievement are mutually reinforcing. Accordingly, Lopez (2011) found that the typical student with high well-being earns 10% more university credits than one with low well-being. Adler (2016) conducted extensive research proving this across cultures, in three separate studies in secondary schools in Mexico (68 762 participants), Peru (694 153 participants), and Bhutan (8 385 participants). After a fifteen-month intervention teaching ten *life skills* which included mindfulness, coping with emotions, and critical thinking, the researchers confirmed that the intervention significantly increased both well-being and academic results in all three studies, measured against matched control groups. The results suggested that, independent of social, economic, or cultural contexts, teaching well-being in schools on a large scale is both achievable and of value. Increases in perseverance (an essential condition for student retention) in students who received the well-being curricula in Peru rose by 6.3% from their pre-intervention score. Other studies confirmed the potency of teaching well-being as a key predictor of student retention, as well-being is not only about how one feels but also about how one functions (Richards & Huppert, 2011), otherwise we might just have happy dropouts.

In a USA meta-analysis, Payton et al. (2008) investigated social-emotional learning *(SEL)* programmes that seek to promote various social and emotional skills in high schools. Collectively their research analysed three reviews that included 317 studies, and involved 324 303 adolescent students. Their research revealed that on average, when an intervention incorporating social-emotional skills, attitudes about self and others, connection to school, positive social behaviour, and academic performance, was introduced, students' grades increased by 11%, prosocial behaviours increased by 9%, adolescent depression and anxiety decreased by 9%, and behavioural issues decreased by 9%, all of which has been connected to student retention (Bolier et al, 2013). In another study in the UK, after having launched a course on happiness and well-being incorporating mindfulness, a school's results improved so dramatically that the school's ranking increased by 235 places to 21st place in a credible rankings list (Seldon & Martin, 2017)

Several on-line studies such as that of Eysenbach (2014) targeting youth in an open-access on-line PPI designed to increase well-being and resilience, found similar significant increases in well-being and reductions in depression, measured against a control group. Well-being impacts better learning, broader attention, and more creative thinking (Seligman,

Ernst, Gillham, Reivich, & Linkins, 2009) – essential tools for student success. In one randomised controlled clinical trial, an online well-being intervention designed to counter depression, stress and anxiety in Finnish university students showed significant increases in well-being post-test, and was still evident 12 months later (Rasanen, Lappalainen, Muotka, Tolvanen, & Lappaleinen, 2016).

A largely unexplored issue in university student dropout is the fact that students' mental health has become a factor in attrition. In a UK government report it was found that, of students dropping out with the lowest grades, 25% were suffering from a mental disorder, such as depression or general anxiety disorder (Aronin, 2019). In support of PPIs as an antidote to depression, a meta-analysis of 39 PPIs targeting various populations found them to be effective in enhancing well-being and in significantly reducing depression (Bolier et al., 2013). Overall, it is estimated that 32% of university students are dealing with a mental illness at any given time (Kognito, 2015). Interestingly, neuroscientific research has located the seat of positive emotions in the brain's left prefrontal cortex and has discovered that this area of the brain renews itself throughout life in response to the environment, life's experiences, and whatever stimuli is fed to it (Begley, 2007), hence it is vulnerable to positive manipulation. Given the high level of depression reported amongst both school and university students, the countering affect to depression of developing well-being could play a crucial role in retention.

### *4.1.2 Thriving based interventions*

Thriving students are more likely to succeed than non-thriving ones. Independent of any intervention, in research using a tool developed to measure student thriving Schreiner (2010) found that regardless of ethnicity, academic ability, institution attended, or previous background (frequently cited as some of the main reasons for lack of success and dropout) thriving students achieved between 8% and 18% higher grades and overall performance than their matched counterparts.

### *4.1.3 Strengths-based interventions*

Strengths recognition, focusing on the positive attributes of a student and moving away from conventional academic models which have tended in the past to highlight student academic deficits, has shown much success. To focus exclusively on the academic deficit model ignores the fact that non-academic factors claim more student dropouts than academic factors (Alkan, 2014). Leveraging students' natural talents and developing them into strengths tend to be energising, engaging and motivating for students leading to increases in well-being, resilience, productivity and greater goal achievement (Linley et al., 2010; Marks & Wade, 2015).

In an attempt to establish whether awareness of one's strengths indicated retention of first to second year, 5 122 university students were given the option to take the *Strengthfinder* test (Rath, 2007) to reveal their top five strengths. Results showed that of those who had chosen to take the test, 91.5% were retained, whilst from those who declined only 80.8% were retained, suggesting that being aware of one's strengths had a positive impact on retention (Soria & Stubblefied, 2015). In a further study by the same authors, focusing on various strengths-based interventions during the university Welcome Week created a sense of belonging amongst first-year students, raised their confidence levels, helped them make friends, and made them feel more connected to the university, all essential conditions for student success according to some notable theorists (Draper, 2010; Fowler & Boylan, 2010; Tinto 1993). In Soria and Stubblefied's (2015) study a common language of strengths was built and correlation was found with retention to second year. Similarly, in research conducted in the corporate world it was found that employees not working within their strengths zone, were six times less likely to be engaged in their work environment (Rath, 2007) proving the value of the application of strengths in potentially any environment.

Various terms refer to students who fall outside of the narrow band of middle-class students who until recently were considered the standard university attendees. First-generation and non-traditional are two often-used terms and many of these students are classified as at-risk and according to volumes of research have higher dropout rates (Harrison & Hatt, 2010; Mallmann, 2017; Stephens, Hamedani, & Destin 2014, Top-up programme, n.d.; Zhang, Fei, Quddus, & Davis, 2014). The term **achievement gap** is used to describe this chasm which exists between the classes and is described as "any significant and persistent disparity in academic performance or educational attainment between different groups of students, such as ethnic groups or students from higher-income and lower-income households" (Edglossary, n.d.). Mallman (2017, p. 235) explored this concept and used the term "inherent vice" to describe how the working class students interpret their university struggles as personal inferiority. Like interlopers in a strange land they view their university education as a privilege and not an entitlement as some middle-class students do. They often see themselves as the "wrong kind of person for higher education" (Mallmann, 2017, p. 236), and are more likely to drop out despite being in equal academic standing with their middle-class peers. In a study by Stephens et al. (2014), these disparities were addressed by having first-generation students think about their attitude to the university experience in a different way by re-programming their thinking to see their diverse backgrounds as a positive and not the negative that most first-generation students bring to the university journey. They were taught to view their differences as strengths and were given strategies for success that the middle-class students instinctively understood, such as that it is expected that students should approach their professors for support and direction

when needed. This aided first-generation students to psychological adjustment and academic and social engagement. The students learned that backgrounds “like mine” (Stephens et al., 2014, p. 4) can succeed by capitalising on their strengths and the intervention reduced the social-class achievement gap against the matched control group by 63% on psychosocial issues.

In another study specifically targeting African-American students, aimed at re-framing adversity in university as shared by all and short-lived, a strengths intervention was found to reduce the achievement gap between African-Americans and European-Americans by 52%, measured against a control group (Walton & Cohen, 2011). Bourdieu (1984) confirmed that people perceive themselves as the established order perceives them, in this instance, creating feelings of illegitimacy. Strategies introduced to re-define themselves caused these students to counter the often self-fulfilling prophecy that their background had imposed on them. Vincent and Idahosa’s (2014) research conducted in South Africa found that, for some students disadvantage was used as a weapon to over-ride their backgrounds and to drive the low graded to success. Although additional input was given in the form of academic literacy the participants were taught to draw on their poverty and understand it as a failing of the system and not a deficit of self. This removed the pressure and allowed them to take advantage of what the institution had to offer and freed them to exercise their strengths. This study shares elements of Dweck’s mind-set theory and Ryan & Deci’s self-determination theory. Almost all of the participants chose a new identity for themselves in order to succeed, drawing on real or imagined strengths. Similarly, in China it was found that a disproportionate number of children of Chinese peasants appeared in the top 25% of the high achiever group (Postiglione, Ailei, Jung, & Yanbi, 2017) proving that adversity and disadvantage can be converted into a strength to propel some to success. Of course this raises the question: could it be that disadvantage is secondary to character in the drive for achievement in some individuals?

#### *4.1.4 Self-determination-based interventions*

Self-determination theory (SDT) is a theoretical framework of motivation and when applied effectively can steer higher quality learning. In sparking interest and curiosity in students, Ryan and Deci’s (2000) theory identifies the inner motivational resources that all students possess, in order to nurture student engagement. Applying this autonomous motivation approach in schools to teach adolescents how to take responsibility for their lives by helping them identify their needs and developing strategies to meet those needs, plays an active role in educational planning and enhances learning (Reeve, 2012).

Supportive of the SDT approach, it was found in a small study in the USA with a sample of 137 medical students, that those students who took informed decisions based on autonomous (intrinsic) motivation enjoyed the course more and their self-determination was

a direct indicator of which students would drop out of the course (Black & Deci, 2000). In Alarcon and Edwards's (2013) research exploring motivation and academic ability as determining factors of student retention, it was found that although the lack of ability made it twice as likely that students would drop out, motivational factors such as conscientiousness had more influence on the dropout decision, clearly implying the affective aspect in university retention. Anderson (2003) claimed that the best predictor of student retention is motivation, which was confirmed in research conducted across several Scottish universities in which it was found that the lack of motivation was cited as a reason for 51% of the students who discontinued their university education (Christie, Munro, & Fisher, 2004). In agreement, and further challenging the social integration theorists, Morrow and Ackermann (2012) found that motivation was a stronger predictor of retention than social belonging.

### *4.1.5 Mind-set-based interventions*

Shaping students beliefs about themselves and their environments can influence their performance and help them achieve their goals (Lin-Siegler, Dweck, & Cohen, 2016), hence the implementation of psychologically informed interventions can be critical to student success and retention. Setting aspiration for success involves reconsidering automatic responses and actively changing mind-sets to a more positive and optimistic outcome. Changing students' mind-sets promotes resilience since a student's interpretation of adversity can affect outcomes and addressing beliefs can change the situation and lead to achievement (Yeager & Dweck, 2012).

Success has also been shown in an online Stanford intervention targeting mind-set in which the GPA of underperforming students was shown to increase by 6.4% in those who took the test (measured against a control group) (Pauneska et al., 2015). In Simpson's (2008) UK research he merged a combination of Dweck's mind-set theory, Boniwell's strengths approach, and Anderson's taking-the-initiative-to-contact-students intervention, and developed a theory that he called Proactive Motivational Support. He conducted an introductory course in his own Open University class incorporating the three aspects and improved retention over two years by around 25% average. (Of note is that distance-learning classes boast the highest dropout rates of all categories globally.)

### *4.1.6 Goal-setting-based interventions*

Closely aligned to mind-set theory is goal setting that has been shown to aid persistence and consequently success. In Neumann's (1985) research with at-risk students, the cohort made use of the metaphor of having made the transition successfully from school to university to remind themselves to persist. Students with goal commitment were actively found to engage with faculty and peers and seek out assistance when confronted with problems (Tinto, 1993) which is known to increase the likelihood of retention. Goals create altered levels of well-

being, increase engagement, provide meaning and purpose, and without them students seem to be directionless without reason to act (Lambert & Pasha-Zaidi, 2015). Morrow and Ackermann's (2012) research found that those students with goals were more likely to persist.

In an online goal setting exercise, self-regulation appeared to be enhanced and it was found that the intervention substantively increased retention (Schippers, Scheepers, & Peterson, 2015). One of the key social problems plaguing universities is the gender and ethnicity gap and in the same study conducted at a European business school, it was found that the goal-setting intervention boosted grades and increased retention by 54% in ethnic minority males (Schippers, Scheepers & Peterson, 2015). This study also found that simply writing about goals clarified and strengthened self-regulation.

### *4.1.7 Self-discipline based interventions*

Duckworth's (2011) claim that "*a major reason for students falling short of their intellectual potential is their failure to exercise self-discipline"* (p.86) is supported by research that shows self-discipline to be more predictive of positive academic outcomes than IQ. (Duckworth & Seligman, 2005). In Duckworth's study she found that self-discipline was responsible for twice as much variance as IQ in final grades in a measurement study which included a delay of gratitude intervention.

Academic self-discipline underpinned by motivation, was found to be the strongest predictor of retention and success by Allen, Robbins, Casillas and Oh (2008) in their study of 23 universities. Academic performance, comprising both attitude and psychosocial factors, has been shown to predict persistence better than ability, while academic goals, self-efficacy and academic skills predict persistence (Schippers, Scheepers & Peterson, 2014). Self-regulatory learning strategies and learning styles have also been found to predict academic performance, controlling for the effects of intelligence and personality (Chamorro-Premuzic & Furnham, 2008). Conscientiousness was found to add as much to the prediction of tertiary academic performance as did intelligence (Robbins, Le, Oh, & Button, 2009). In the same research it was found that whilst academic skills were essential for raising grades, self-management skills were more indicative of retention. Regulation of one's own actions is an important strategy for student success.

### *4.1.8 Hope-based interventions*

Hope theory integrates motivation, goal-setting, and strategies to achieve set goals. Consequently interventions that raise hope, are determinants of the success of students. In a study conducted in the USA, levels of hope and engagement were found to accurately determine which students would return after the winter break (a crucial drop-out time in the student cycle) (Gallagher & Lopez, 2009). In Snyder et al.'s (2002) six-year longitudinal

study, it was reported that hope scores of students entering university predicted that hopeful students were more likely to achieve higher GPAs and were more likely to be retained until graduation. High-hope students were found to seek multiple routes to achieve their goals, were open-minded and unafraid of challenges, and showed high motivation. They were also found to graduate at 16% higher rates than low-hope students. In other hope manipulation research involving one 90-minute intervention, measured against a control group, students who belonged to the hope manipulation group were the most successful in advancing towards their goal, measured one month after the intervention had been given (Faria, n.d.). In this same study, hope was also found to spark motivation and optimism.

#### *4.1.9 Optimism-based interventions*

Optimists see positive outcomes as likely and they often work harder and longer to achieve their goals and are likely to persist to graduation according to Faria (n.d.). Faria's study (n.d.) showed that those students high in both dispositional and academic optimism were likely to be more conscientious and persist and engage until their goal was accomplished. The research offered compelling support, through structural equation models, for the impact of optimism on student retention. Faria (n.d.) further proposed that an optimism measure could be taken at the admission stage on students entering the system as it might have incremental predictive validity for academic outcomes. Academic and dispositional optimism were associated with higher levels of motivation and conscientiousness, better grades, and lower dropout rates (Demetriou & Schmitz-Sciborski, 2012). Optimism is a dispositional tendency but can be developed, and Chemers, Hu, and Garcia (2001) found compelling support thereof in their study of first year adjustment and success.

#### *4.1.10 Self-efficacy-based interventions*

Self-efficacy influences how one deals with goals and challenges, and is a learned skill, not an inherited one. Students who believe that they have the skills and abilities to succeed at academic tasks perform better than those with lower efficacy expectancies (Bandura, 1977). A strong sense of self efficacy promotes student success and persistence to goals whilst a low sense of self-efficacy is likely to cause a person to withdraw and become discouraged (Chemers et al., 2001). In a systematic review of 13 years of research on 7 167 articles into antecedents of university students' GPA, the largest correlation was found with performance self-efficacy, followed by grade-goal and effort regulation, all malleable areas (Richardson, Abraham, & Bond, 2012). In a meta-analytical investigation conducted by Multon, Brown, and Lent (1991) results revealed positive and statistically significant relationships between self-efficacy beliefs and academic performance and persistence outcomes across a wide variety of subjects, experimental designs, and assessment methods. In research into the effects of positive mood on self-efficacy and maths performance, two separate studies (Bryan & Bryan, 1991) reported that students in the positive mood condition completed

significantly more problems than the no-treatment group and reported greater self-efficacy. Students showing positive academic expectations, known as academic self-efficacy, performed better than their less confident counterparts, and their positive self-efficacy was found to be more predictive than past performance of academic success (Chemers et al., 2001) confirming a need to apply those interventions which encourage self-efficacy beliefs in students.

#### *4.1.11 Resilience-based interventions*

Closely linked to self-efficacy, resilience enables students to weather academic storms and can be key to persistence to graduation. According to Munoz, Brady, and Brown (2017), resilience is largely dependent on how students perceive control over their decisions, differentiating between an internal locus of control and an eternal locus of control. Two distinct thinking patterns are at play; the degree to which a person believes himself to be in control of his life's outcomes distinguished by an internal locus of control (ILOC) and an external locus of control (ELOC), or the extent to which external influences control life's outcomes. Those students who master their own decisions are more likely to succeed and persist to completion. In Hupfeld's (2010) research on graduating high school students in the USA it was found that in teaching resiliency skills comprised of goal-setting, building confidence and increasing well-being to pupils deemed at risk (even from violence in their personal circumstances) they were able to re-frame adversity as challenge and recognise that adversity is temporary and can be overcome, improving grades by 52% and retention by 64%.

In analysing the discourse of resilient and dropout students in a high school class, Lessard, Fortin, Butler-Kisber, and Marcotte (2014) found that resilient students were able to draw on their own resources, had positive relationships with teachers and friends, could set limits and cut off those friends who would lead them astray, could set goals, and could reach out for help when required, all precursors for university success. Resilient students are also aware that they can succeed.

#### *4.1.12 Humour-based interventions*

Even such innocuous interventions as developing humour in one's situation has been shown to decrease dropout rates and moderate loneliness and a sense of not belonging to the university (Alkan, 2014).

#### *4.1.13 Gratitude-based interventions*

Trait gratitude and grateful coping strategies improved student success and retention in a USA university and the authors proposed the implementation of gratitude-enhancing techniques as a possible strategy for improving integration, commitment, persistence, and retention (Mofidi, El-Alayli, & Brown, 2014).

## 4.2 A review of university-led interventions

Several themes emerged from the literature which clearly showed that university –led programmes have had much success in retaining students. An essential starting point is that universities should admit only those students who are capable of completing, if retention is to be stemmed. Tools exist to aid in pre-entry assessment and have been successfully used to determine who will succeed. Summer schools, effective course choice, mentorship programmes and the many interactive communication programmes have all shown great success in lowering dropout rates according to the research.

The advent of widening participation has obliged universities globally to re-think their strategies in order to stay competitive and current. According to Turner (2004), a statistic that serves to remind them of the magnitude of the problem widening participation brings, is that whilst the percentage of 23-year olds with university experience increased by 31 percent between 1971 and 1999, degree completion by this age group increased by only 4 percent, and the statistics are climbing. In the face of this, universities cannot remain detached and must proactively seek solutions and engage appropriately with the changes happening around them. The dilemma of widening participation's association to higher attrition rates creates a problematic truth, on the one hand holding potential repercussions for many hope-filled students and on the other, beset with enormous challenges for the institutions.

At the outset, it needs to be highlighted that without effective ***student recruitment***, attrition is highly likely to occur. Cook (n.d., p. 1) advised that the universities have to work harder at the recruitment stage "in order not to lose students that they should be recruiting honestly in the first place". Influential researchers have shown that university admission standard must be maintained on peril of high attrition rates (Dodge et al., 2009; Harrison & Hatt, 2010; Marks & Wade, 2015; Tinto, 1975, 1993). Pascarelli and Terenzini (1980) found that higher graded students were almost 2.5 times more likely to persist than lower graded students, and Alarcon and Edwards (2013) showed that students, one standard deviation below the mean in grades, were twice as likely to drop out of university. Govender (2017) cautioned against South African universities accepting students who are not university ready, and Tinto (1993) provided compelling figures to indicate that the more selective an institution is, the less of a problem retention is. Repeated research shows that the higher the GPA, the more likely a student is to persist. In Australia, 95% of high GPA students will complete university and those admitted to university on a basis ***other than*** completion of secondary school (from seven different pathways tested such as via diploma course or mature age category), were twice as likely to drop out, while from students in the lowest category of GPA, 45% discontinued their studies (Chesters & Watson, 2016). A reminder that widening participation is about extending the opportunity to those who have the potential (Harrison & Hatt, 2010). Woodrow (2001) stressed accurate targeting as an essential

component of any good practice into widening access, and highlighted the problems of projects that adopted a catch all approach.

Likewise, the correct **choice of courses** can be overwhelming, so informed assistance at inception is crucial if students are to be retained to graduation. Iyengar and Lepper (2000) showed that people having six options to choose from were happier with those choices than those who were offered 30 options, which threw them into the confusion of choice overload. Research has found that many students have little knowledge of course requirements and are unsure if their courses will meet their requirement needs, both in terms of self-fulfilment and in the working world (Goldrick-Rab, 2010). In addition, students often make dominated choices arbitrarily or whimsically decided upon by the available degree options, friends' choices or family loyalties, based on little knowledge of the contents of the course.

Mismatch between the student's expectations and actual experience of the subject caused 36% of the student dropout in a study in a Scottish university (MacAskill, 2012). In a UK survey it was found that 30% of students felt ill-prepared to select a university course upon leaving school (Booth, 1997). Based on this, Thomas (2012) recommended that school lesson time should be allocated to research and discussion on higher education choices. In a further UK survey, it was found that 65% of students who dropped out of university attributed the wrong course choice, at least in part, to their decision (Christie et al., 2004), and half of the students surveyed in a longitudinal Australian attrition study, wished that they had been given more insight into the programmes before committing (Danaher, Bowser, & Somasundaram, 2006). Prompt intervention and advice from student support at the introductory stage could address this problem, likely pre-empting considerable dropout.

Strengths-based advising, a recent introduction in institutions, has been shown to have much to offer to the student particularly at an early stage. Helping the students identify their strengths and goals ensures that the course selection process becomes clearer and it is easier for the student to select courses that are compatible with their natural talents and interests (in line with Lyubomirsky's (2007) person-activity fit recommendation) thereby retaining their commitment to complete (Schreiner & Anderson, 2005). Since many students classified as dropouts do return to the university to study a different course, or go to a different university and complete (McCormick & Lucas, 2014), identifying and matching these students at the outset through thorough assessment of skills and talents, could potentially prevent this cycle of dropout and return.

Inadequate vocational advice from the institutions is a major cause of student attrition. In many European countries, rising dropout levels are attributed to widening participation, however, not because of the often repeated direct reasons such as academic unpreparedness, but due to the indirect reason of student apathy and disillusionment regarding the futility of completing their chosen degree. This happens in part because

students witness the overcrowding in many degree programmes, consequently narrowing job opportunities for graduates to, at best, administrative positions and at worst, a lifetime of call-centre toil. Cabrera et al. (2006, p. 178) stated in this regard that “the direct consequence of educational overcrowding from students drifting into easier degrees just to get any degree for which they qualify, is a very saturated labour market at those levels”. Realising that they will never be able to work professionally, they drop out. Students hope that a degree will give competitive advantage in the work-place, but because of widening participation many degrees have less value and can lead to an over-education effect thereby lessening their opportunities. Involving universities in assistance with course choice and vocational guidance at the outset, would better prepare the student not only for the university journey, but for life beyond the university, in the real world, armed with a marketable degree. Changing the university culture to accommodate the students may ultimately be doing them a disservice if it fails to accommodate the necessary guidance on course choice (Danaher et al., 2006). Effort dedicated to enrolling students for the most appropriate course is likely to pay dividends in lowered attrition rates.

### *4.2.1 Pre-entry course interventions*

Many schools, especially in South Africa, perceive their responsibilities to be to prepare their students for matriculation, leaving the universities to deal with the fallout from inflated school marks (Jacobs & Pretorius, 2016) and students academically ill-prepared for the transition. This problem requires its own solutions and addressing it is critical to building a foundation for university success, as according to Adelman and Gonzalez (2006), taking rigorous courses in high school counts “more than anything to providing momentum for completing a degree” (p. 22). Demetriou and Schmitz-Sciborski (2012) agreed, providing evidence in their research that challenging high school courses are a strong predictor of university retention, With South Africa’s crumbling education system, poor infrastructure and problematic rural schools this creates a major challenge for learners, leaving them ill-prepared for university entrance and the academic challenges they are likely to encounter.

Pre-entry summer schools, or enabling courses as they are known, have shown much success globally in bridging the gap to prepare students both academically and socially for the university journey ahead. These courses normally run between school leaving and university entrance and vary in length and content, with some focusing on academics and others incorporating both academic and non-academic programmes. For example, in a recent South African study (Jacobs & Pretorius, 2016), an enabling course in maths saw failing students increase their mean scores by almost 19%. In an Australian study it was found that those students, who (despite having a lower GPA flagging them as potentially at-risk) took a university-led enabling course, were 1.7 times more likely to be retained than

those who did not and that mature students proved to be 2.5 times more likely to graduate (Chesters & Watson, 2016).

It is well-documented that disadvantage negatively impacts student achievement. A Scottish study was conducted on the *Top-Up* programme that provided a mini university experience prior to university entrance over a period of 4 months, by postgraduate students on deep learning, critical thinking skills, writing skills, conceptual thinking, and social integration. The results confirmed that the students attending the *Top-Up* programme, despite their disadvantaged backgrounds were passing at a higher rate and were 7% more likely to pass exams than the matched control group who did not attend the pre-entry course. Fowler and Boylan (2010), in their controlled USA study, found that a mandatory participation programme incorporating a pre-entry enabling course teaching transition into higher education, academic and non-academic skills, and intrusive advising throughout the first-year university journey, increased the retention rates from first to second year from 29% to 52%.

### *4.2.2 Assessment tool interventions*

Singell and Waddell (2010) stated that predicting performance depends on being able to assess it and before embarking on expensive retention programmes offering blanket solutions, the institutions could engage the help of some of the many diagnostic tools showing promise in identifying not only which interventions students require, but which students are likely to benefit from support and which are unlikely to require intervention. The prediction of attrition is not a perfect science but tools exist to identify and tailor the needs of the individual student to targeted interventions. In their research, Singell and Waddell (2010) found that the likelihood of students completing second year was 3.5% for the highest-risk students, compared to 35% for the lowest-risk. According to the authors the university's dilemma becomes one of a trade-off between type 1 errors of not treating those students who will leave without treatment, against type 2 errors of treating those needlessly who are unlikely to leave. They made the further point that before wasting resources which could be better deployed elsewhere, universities should consider that any treatment should be student sensitive and who they are dealing with, is essential knowledge and as important as the efficacy of the treatment. Those most at risk might be least sensitive to intervention, hence assessment tools could provide useful insight at the outset (Singell & Waddell, 2010).

An often-ignored point is that around one-third of students who drop out are actually high achievers (Hanover Research, 2014), who might not be lost to the system if available tools were used to identify and engage with them early enough to intervene. A lot of focus is put on at-risk students whilst ignoring high achievers, therefore Hanover Research's (2014) Canadian research recommends early identification and more focus on expanded programmes to target and retain such high achievers.

On a construct level, optimism, hope, and self-efficacy scores assessed at entry point have been shown to accurately predict those who are likely to drop out of university. Research measuring students' optimism levels found that those with higher levels were more likely to have higher grades and were more likely to be retained until graduation (Demetriou & Schmitz-Sciborski, 2012) and assessment of student hope accurately predicted those students likely to be retained (Gallagher & Lopez, 2009; Snyder et al., 2002). Self-efficacy scores taken at the start of the course could correctly predict 81.3% of the students who subsequently withdrew and could be used to identify and support students at risk of dropout (Devenport & Lane, 2006). An interesting observation made by Gore (2006) was that students' mid-term self-efficacy score was more predictive of performance than a measure taken at the beginning of the course, which the author proffers is perhaps an indicator of how well the student is handling the work, advising that regular assessment checks could detect and support early problems.

Several assessment tools such as the *College Learning Effectiveness inventory* (CLEI) (Kim et al., 2010) can be used by the universities to identify potential students' strengths and weaknesses even before admission. The CLEI can locate the level of functioning across various dimensions such as academic risk, attitudes, behaviours and dispositions. Students can be at-risk for many reasons and programmes can be tailored to suit whatever the risk factor might be. Having detected any areas of potential risk, these can be highlighted and red flagged on a system designed to offer supportive measures in the necessary at-risk area. Singell and Waddell's (2010) research confirmed that at-risk students can be identified before they arrive on campus and the authors further suggested that this information could be used to maintain an institution's low attrition rate, by informing the admissions decision based on the student's predicted probability of retention.

An early assessment and intervention system, the *College Student Inventory* (CSI), was combined with a first-year seminar and found retention rates in an institution in USA to increase from 67% to 84.6% in first to second year transition, the most vulnerable time for student succession. The CSI examined student background information, assessed social and academic motivation, coping skills and receptivity to support services. The results were discussed with the student, support was offered in the areas of lack and course credit was given if the student completed the referrals given by the instructor within two weeks, making the responsibility a shared one (Van der Schee, 2011).

### *4.2.3 Information and communication system interventions*

Unsurprisingly, collaborative interventions supported by state-of-the-art communications yielded the best overall retention results in promoting student retention. The majority of the successful programmes follow a similar modus operandi, incorporating both academic and non-academic aspects and used some form of student tracking and compulsory response

system linking the student to the necessary support as soon as someone was risk-flagged. Many of the interventions also insist on a mentor for students either in the form of an instructor or an advanced student, a practice that has shown excellent results in student engagement, success, and retention.

Some interventions have focused on improving the efficacy of students' academic habits, time management, and study skills. For example, Zeidenberg, Jenkins, and Calcagno (2007) found that enrolment in a student success course (classes that focus on time management, note taking, learning styles and long term planning) at Florida community colleges corresponded to an increase in persistence rates of 8%. Critical thinking skills, in another USA study, taught to 1 900 participants measured against a matched control group saw retention rates double (Ahuna, Tinnesz, & Van Zile-Tamsen, 2011). Self-regulated training programmes, comprising of goal-setting, self-reflection, and self-control techniques to overcome procrastination implemented in university, aided transition from dependent to independent learning in a cohort of students (DiFrancesca, Nietfield, & Cao, 2016). High achieving students reported using more of these skills than lower achieving students who rely on rehearsal and memorisation strategies (Dorrenbacher & Perels, 2016).

A number of on-line or institutional-based strategies or programmes are used to prevent or address factors that may lead to student attrition or retention, such as the following.

- ***Pounce.*** Of students set to enter university, 20% do not arrive to start their university course, a term known as *summer melt* in university circles. In Georgia, USA, artificial intelligence is being used to do the grunt work through a chat-bot named *Pounce* aimed at making sure this attrition number is reduced by sending out reminder messages to students and responding to their questions regarding often confusing administration and faculty issues. The lack of easily navigable administration and support services can often overwhelm students at inception and Owen (2002) found that students appreciate information when they needed it, as a wealth of information at the outset, is often forgotten a few months later. In this instance, students communicating with Pounce were 3.3 percentage points more likely to enrol than their control group counterparts, which translates to a 21% reduction in *summer melt* (Page & Gelbach, 2017).
- ***Horizons.*** The *Student Support Program* conducted at Purdue University in the USA, targets low-income, first generation and physically disabled students and has been running since 1978. These students entering the programme are already well below the university average but thanks to a compulsory five hours a week class offering academic skills, affective skills, personal development and scheduled instructor

meetings, the graduation rate was 85%, measured against a matched control group whose graduation rate was 47% (Dale, 1995).

- ***The Accelerated Study in Associated Programmes (ASAP).*** The ASAP conducted in three New York universities substantially improved students' academic outcomes over three years, almost doubling graduation rates. ASAP increased enrolment in college and had especially large effects during the winter and summer intersessions, which are notorious for high dropout rates. The programme provides comprehensive advising, career services and tutoring, incorporating university wide initiatives to improve academic, social and mentoring aspects. ASAP offers blocked or linked courses for the first year and a seminar for the first few semesters, covering topics such as goal-setting and study skills. By the end of the third year study period tested, 40 percent of the programme group had received a degree, compared with 22 percent of the control group (Scrivener et al., 2015).
- ***Track and Connect.*** This (in Barnes et al., 2015) is another example of one of the many interactive university-wide communication collaborative programmes bringing together tutors, mentors, administrative staff and institutional practices to best optimise the student experience. Proactive and preventative, this tool identifies at-risk students through stored demographics and on-going academic and engagement data that is fed into the system at the outset and updated as the semester progresses. Email follow ups are sent out at previously identified key times in the timetable or when an at-risk behaviour such as non-attendance at class is detected, and the necessary support is given. This Australian programme has yielded excellent results and in Barnes et al.'s (2015) study not only was the attrition rate lowered from 19% to 7%, but passing grades increased from 67% to 73%.
- ***Student Success Programme.*** The *Student Success Programme* (SSP) is a holistic initiative introduced in an Australian university that was designed to create a bridge between students identified as being at-risk of disengaging. Based on a pre-determined range of descriptive and academic factors such as grades and attendance, and the services they need to succeed, such as assistance with their learning or management of their personal issues, the SSP showed a marked increase in retention. Of those who were at-risk and were contacted by phone by a trained advisor and put in touch with the necessary support, 76.9% were retained to the following year, whilst from those who were at-risk and not contacted by phone 45.8% were retained (Nelson et al., 2012).
- ***Access Plus.*** In a review of *Access Plus*, a USA-led programme aimed at faculty, staff, and all college personnel, past student profiles provided baseline data to predict future student profiles, particularly those at risk, and all information was fed into the system at registration stage and updated throughout the university year. Like many of

the other programmes discussed, *Access Plus* offers a full range of services from compulsory intrusive advising in the form of a mentor, to academic support and social introductions. The programme statistics showed a 10% increase in first to second-year retention and a 21% increase in retention of at-risk students. The cohort of students on academic probation and academic suspension also dropped by 13% and 6% respectively (Wang & Grimes, 2001).

- ***Pathways to Success (PWAY).*** The *Pathways to Success* programme, a USA-developed intervention incorporates time management, learning strategies, goal-setting, intrusive advising, and is linked to a full gambit of known student successors for support if necessary. Students on the programme are required to seek tutoring if their grade falls below a C on a single assessment, and the intervention has been found to increase retention rates from 29% to 52% (Fowler & Boylan, 2010).
- ***Education Advisory Board (EAB).*** The Education Advisory Board in the USA have developed comprehensive technology that integrates faculty, staff, and advisors in a student care system which saw an increase in retention of up to 12% across USA universities (Education Advisory Board, n.d.).
- ***Summer Fireside Experience Programme (SEPF).*** The *Summer Fireside Experience Programme* in USA is a five-day adventure- based orientation programme incorporating social interaction and goal reinforcement, and was measured against the standard freshman four-day question and answer orientation programme, and a control group not involved in either programme. After three years, the SEPF graduation rate was 15% higher than the freshman group and 25% higher than the control group (Gass, 1990).
- ***Learning to Learn.*** Success factors are learnable and in USA the *Learning to Learn* camps have shown great success across many educational institutions from schools, to nursing colleges and universities. The camp consists of a five-day activity-filled learning experience incorporating problem-solving, self-assessment, and critical thinking. Many of the attendees are at-risk students and the follow up on retention rates has shown increases in the various colleges surveyed, of between 9% and (in one college) an increase of 66% (Apple, Ellis, & Hintze, 2015).
- ***Summer Orientation Parent Transition.*** In a programme with a slightly different twist, Boyd, Hunt, Magoon, and Van Brunt (1997) assessed the impact of a *Summer Orientation Parent Transition* programme, targeting the parents of first year students of a large university in USA. The programme was designed to show the parents of students how to support their children through any academic or social difficulties they might have in the transition, and two semesters later the overall retention rate for the students (of the parents who attended the course) was 73% compared with 60% for those in the control group.

- ***Other.*** Even so called *light-touch* or *nudge* interventions consisting of two strategically-timed emails from professor to student showing their interest in the student and offering a schedule of when the professor was available for support, impacted favourably on grades, assignments, and had a lower likelihood of dropout (Carrell, Kurlaender, & Bhatt, n.d.) Several simple web-based interventions have shown increases in self-efficacy, self-regulated learning and knowledge (Bellhauser, Losch, Winter, & Schmitz, 2016). A proactive strengths-approach telephone call to learners at the start of the course saw a retention increase of up to 7.6% measured against a matched control group in the Open University in the UK which serves distance-learning students (Simpson, 2008). Similarly, in another controlled experiment in a Mississippi university, in which a single phone call was made offering support to students who had missed two classes, an increase in the number of students getting grade 'C' or better rose from 55% to 87%. Interestingly, when quizzed, students also claimed that they did not find the attendance monitoring process intrusive but a comfort by creating boundaries to their freedoms (Parmar & Trotter, 2004).

### *4.2.4 Mentorship interventions*

The labels mentorship, counselling, advising, intrusive advising and life coaching are often used interchangeably and the terms suffer from a lack of clarity in definition. Even within the genre interventions vary greatly. Some are strictly academic and others focus on study skills and social needs. What is clear however is that whatever term is used, the process works in student retention and mentorship programmes are one of the interventions which, either singly or collaboratively, have shown a large measure of success in student retention. Their merit lies in their ability to aid social and academic integration whilst setting boundaries within which the student can successfully perform (Collings, 2009).

Many students leaving home for university are prone to feelings of isolation and anonymity, with 87% of them reporting difficulties in transition (Seldon & Martin, 2017). Mentors can help with the transition. Sometimes students are unaware that they might need help, hence they do not seek it out, and do not know who to approach or what questions to ask, which was confirmed by evidence suggesting that those who are most in need of support are the least likely to seek it out until it is too late (Harris, 2001). In addition, many of these students see asking for help as proof that they are not cut out for university (Tinto, 2006).

Although social and academic integration has been lauded by theorists as critical to student success, consideration needs to be given to differing needs when applying this as a blanket solution. Particularly when related to social integration it was found that some students prefer to work alone (McKenzie & Schweitzer, 2001) claiming that social

distractions were detrimental, while for others the social aspect was crucial. In Mihaly's (2009) research, in which it was shown that the more socially integrated the participating students were the lower their marks, the students claimed that they were not willing to trade their active social life for a higher GPA (Petrie, van der Zanden, Denessen, Cillessen, & Meijer, 2018). Popularity can have a significant positive effect on academic achievement, but beyond a certain point it becomes a distraction and prove detrimental. Recognising that there are different degrees of engagement students feel comfortable with, is an important distinction as a uniform approach may create pressure and result in disengagement (Thomas, 2012) and mentors need to develop sensitivity to this.

Mentorship most often has elements of academic preparation, information gathering, and social integration. For example, one of the goals of a college mentor is to help a student academically prepare for their courses and academic preparation has long been acknowledged as a contributing factor to college retention (Adelman & Gonzalez, 2006). Student mentoring may also be a way for universities to reach out to students who may not otherwise be connected to their respective institutions, particularly those students with less social know-how, such as first generation college students and those from lower socio-economic backgrounds (Deli-Amen & Rosenbaum, 2003). Those universities with established peer mentoring schemes have been shown to have higher retention rates than their expected benchmark with their students three times less likely to want to dropout at the end of the first term. Peer mentors can help individuals become integrated and adjusted to university which then leads them to stay at university rather than leave within their first term (Collings, 2009). In addition, mentors can help set realistic expectations, an important role as students as often out of touch.

Under the banner of counselling, retention rates have been shown to lower student dropout by 12% (Turner & Berry, 2000) and 14% (Wilson, Mason, & Ewing, 1997) respectively in two studies at two separate American universities. In addition, Bowling Green University in Ohio has turned its graduation rate from an expected 46% to 58% through proactive advising (Clayton, 2002). Florida State University improved retention by 7% through introducing advising, coaching, tutoring and bridging programmes, proactive contact through SMSs and emails and the introduction of expanded programmes for smart students (Hanover Research, 2014). In another study at a university in the USA, in a course taken which included interventions such as life-coaching, academic advising, and required in-class attendance, retention increased by three to six times their previous rates (Hossler, Ziskin, & Gross, 2009). In research testing the impact of early intervention strategies it was also found that those students who proactively sought out advising had higher retention rates of 10.8% against a control of 3.3% (Zhang et al., 2014). Although it is possible that the success found

might be a factor of the student and their proactive attitude to learning and not necessarily of the intervention.

One of the most successful interventions in mentorship occurred at Edith Cowan University in Australia (Draper, 2010) in which dropout was reduced from 23% to 5% The scheme consisted of compulsory sessions for all, of 20 minutes on alternate weeks and mentees participated as part of their course work, taking out any shame element of what might be seen as extra lessons. The students were linked to peers, staff members and a more experienced student for guidance. Academic skills, social integration, transition to university and peer assisted learning were all included in the programme.

Another successful intervention is *Inside Track* (in Bettinger & Baker, 2011) introduced in the USA. The motivating principle at *Inside Track* is that student coaching can lead to engagement, learning, retention and an increased probability of completing a degree. *Inside Track* is a communication programme which has access to course syllabi, transcripts, and additional information on students' performance and participation. A coach is assigned who regularly contacts the students via phone, email, text messages and social networking sites throughout their first year in university and can assess each student's daily status for the purpose of reaching out to them on the right issues at the right times. This intervention has been conducted on 13 500 students and showed an overall increase of 15% percent in retention, even when controlled for age, gender, scores, off-campus residence, maths and English remediation.

In a UK university study the introduction of a similar system, the *Peer Assisted Study Sessions (PASS)*, tutorials comprising a compulsory academic skills module, the appointment of a mentor and recommendations to any specialist help such as a counsellor should it be required, saw the retention rate rise from 83% to 92% (Thomas, 2012).

Salinitri (2005) in his research on a one-year mentoring programme in Canada and its effects on attrition found a decrease in dropout from 32.7% to 8.6%, measured against the matched control group. Additionally, 71.4% of mentored students were in good academic standing at year end compared to 34.5% in the non-mentored control group.

In a meta-analysis of interventions conducted in The Netherlands, Sneyers and De Witte (2018) found that mentoring had most effect in the studies that they considered, improving retention by 7.5%. Kot (2014) reported that centralised advising showed an increase in year mark of 25% and retention of 4%.

The most successful mentorship programmes shared specific elements that stood out and these elements were all present in the programmes discussed above. It was compulsory that all students at the beginning of the semester be given a mentor obviating any stigma which might be attached to an 'extra lessons' student. Mentors needed to be properly trained and were required to be in touch at least once a week based on the mentee's needs. The

mentor was actively involved in the mentee's social and academic engagement and skilled enough to recognise when deeper-seated issues arose which required referral to a professional.

Identifying at risk students early is crucial to the success of mentoring interventions, preferably with compulsory participation since students often do not know they are in trouble until it is too late for them to recover the lost ground. In a study in Scotland where it was found that wrong choice of course, low motivation levels and problems with the social and institutional environment were the main reasons cited for early departure (all aspects covered by mentoring programmes), only one third of the students sought advice or support from lecturers, making the case for compulsory mentorship all the more compelling (Christie et al., 2004).

### *4.2.5 Teaching practice interventions*

Feld, Duffy, and Huggins, (2015) called into question that students know how to learn and argue that deliberate instruction is often required, teaching students how to become independent thinkers and not just parrots. They called upon tertiary education teaching staff to share the responsibility of contributing to the development of strategies to support students towards academic success.

Teachers are in a position to observe the early warning signs of attrition with students typically showing signs of disengagement or disenchantment before dropping out, but according to Tinto (2006), tutors do not view student retention as part of their job description. McCormick and Lucas (2014) claim that a shift must be made from teaching to learning, calling upon the institutions to take more responsibility for student retention through their proactive teaching input and shared learning platforms. Research by Hupfeld (2010) found that supportive relationships with teachers can cut the dropout rate by half and it has been argued that teachers should act as mentors (Kaarina & Satu, 2012). Confirming this concept, 66% of the pupils who dropped out in a UK study said they would have worked harder if more had been expected of them (Hupfeld, 2010).

The maxim *to teach is to change a life forever* demonstrates the influence that teachers have over their students and the importance of the teacher-student dyad. Saeed and Zyngier (2012) showed that struggling students can be re-motivated by enthusiastic and encouraging instructors and those students not autonomously motivated often rely upon the instructor's motivation to help them perform well. In Black and Deci (2000), students who believed their workshop leaders were supportive of them performed better on the course, over and above the variance explained by students' abilities, confirming the value of motivated professors as instrumental to student success. In addition, as students' self-efficacy is increased by feedback based on progress, Gore (2000) recommended that classroom assessments should be structured to provide periodic evaluations against

predetermined objectives. Equally important is that students benefit from perceiving a connection between their coursework and their lives and engaging them at this level begets better performance and more connection to their subject (Levesque, 2018). Engagement is the antithesis of burnout and engaged students make a psychological investment in their learning.

Research has shown that the complexity of the subject chosen can itself be the problem and correspondingly, some universities have taken the approach that attrition is sometimes attributable to high-risk ***subjects*** not only high-risk students. Customised programmes can introduce interventions to improve the learning of these subjects. A large measure of the success of Boyle and Nicole's (2003) intervention which decreased the dropout rate from 20% to 3%, was due to innovative classroom restructuring, creating a shared learning experience reminiscent of Tinto's (1999) learning communities, which introduced peer-learning for mastery of difficult engineering concepts, in what is known as a high-risk subject.

Face-to-face training can only reach a limited amount of people and with teachers becoming more encumbered and classes becoming more congested time is of the essence. Technology has some answers. The International Telecommunication Union (2013) posted mobile phone statistics showing that there is over 100% penetration of the South African mobile phone market and with the rapid development of mobile technologies and applications, gamification has become the norm for the current generation of students. With a student population well versed in instant gratification the education market is exploiting this medium for teaching and learning purposes by creating applications and selecting those elements which captivate the user, and ensure their loyalty and engagement with their gamified subject matter. A useful by-product of these systems is that a levelling-up reward programme triggers the competitive drive in students to the extent that standardised test results showed a 22% improvement in maths, in one study of gamification in education. The addictive nature of gaming in this case was a bonus. Students graded against themselves, driving their own learning environment (Khaddage, Lattemann, & Acosta-Diaz, 2014).

## 5. Summary of the findings

The variable nature of the concept of student retention makes it impossible to pin the results down to one solution but despite the magnitude of the on-going problem, it is apparent from the preceding results that much can be done to resolve the situation. Successes in both individual interventions (such as developing positive emotions) and collaborative programmes (such as *Track and Connect*) are available to offer a lifeline to both student and university in a bid to quash the outflow.

## 6. Concluding discussion

Through the means of a scoping review, this study intended to explore what works in student retention, a global problem impacting many layers of society. The aims were to expose PPIs which have been shown to positively address student retention in either an individual or group context, to make recommendations where possible, and to collate them into an intelligible whole.

The main findings suggest that there is much that can be done to improve student success and retention both on an individual level targeting aspects of the student and in collaborative university-led interventions adopting a holistic approach. Many individual and collaborative programmes were found which have been tested in a university environment and have shown pronounced success in retention. Nevertheless, a disparity exists, with the implementation of the successful programmes lagging far behind what would be expected given the enormity of the retention problem. A review of the findings is reported below.

### 6.1 Student-centred successes

The results show that there are several constructs which have a direct link with student success and there may well be more, as yet un-researched. Of importance to note is that many constructs co-occurred or functioned optimally in combinations, making it challenging to extricate and apportion causality.

- PPIs focusing on **well-being** in large-scale research were found to increase student retention. In addition, several of these studies were also found to increase mood, grades and lower depression, all aspects which research shows contribute to retention.
- Substantially higher grades likely to increase student retention, were found in those students considered to be **thriving** than their less buoyant counterparts.
- Capitalising on students' **strengths** was shown to increase student retention, give them more confidence, and made them feel more connected to the university, reducing the achievement gap by 63% on non-academic issues.
- A measurement of the **self-determination** aspect of internal locus of control was a direct indicator of retention and a lack of **motivation** was cited as the reason for 51% of dropout in one study.
- Shaping students' **mind-sets** impacted positively on their decision to stay or go, and when combined with other constructs showed a 25% increase in retention.
- **Goal-setting** improved retention rates by 54% in ethnic minority males in European research.
- **Self-discipline** was found to be indicative of retention.
- **Hopeful** students were 16% more likely to be retained to graduation and optimistic students and those students with strong **self-efficacy** were less likely to drop out.

- **Resilience** was found to overcome even such adverse influences as violence in high school students' background, and when combined with other constructs such as goal-setting, retention improved by 64%.

Some of the success of the above PPIs can be explained by Fredrickson's Broaden and Build theory, in which Fredrickson (1998, 2001) asserted that generating positive emotions can broaden one's thought-action repertoire during moments of stress, triggering upward spirals to relieve negative emotion, and support positive coping mechanisms. In addition, proponents of positive emotional states are less likely to exercise antisocial behaviours and engage in stereotyping. Individuals are better able to adapt to their environments, have more meaningful relationships and are more open-minded and flexible, making them more resilient to everyday life stressors (Cohn, Fredrickson, Brown, Mikels, & Conway, 2009; Fredrickson & Cohn, 2010). All, or any, of these aspects if sparked, are likely to have enabled the students in the studies listed, to the university success evidenced. Encouraging students to focus on the positive can become a self-fulfilling prophecy, enhancing the feelings of mastery, paving the way for academic success. Positive student well-being has been associated with a number of positive effects including better learning, productivity and resiliency (Marks & Wade, 2015), hence is a precursor to success and achievement both at university and beyond. The veracity of Ryan and Deci's (2000) self- determination theory is also apparent in several of the above *individual* successes. Without intrinsic motivation students are unlikely to succeed either academically, or to continue to graduation, as evidenced by the fallout of 51% through lack of motivation in Christie et al.'s (2004) study.

### 6.2 University-led successes

The evidence indicates that there are successful programmes being tested in the university environment and that there are marked similarities in the way programmes with high retention rates are run. From the review several criteria for success were apparent.

- One of the solutions showing success globally is **pre-enabling courses**, conducted between leaving school and entering university, integrating both academic and non-academic aspects in a mini-university experience. Not only does this method increase graduation rates but was also found to increase grades, with students in several studies up to 2.5 more likely to graduate if they had gone through the programme. These programmes have also shown excellent results in closing the achievement gap, positively impacting disadvantaged students.
- Being able to assess the potential of a student and knowing the likelihood of them dropping out in advance is a useful resource for any university attempting to control attrition rates. Effective **assessment tools** exist to aid in student retention. For instance, the CSI (a collaborative assessment and intervention programme) when combined with a

first-year seminar was shown to increase retention rates by 18%. In other studies, assessment of students' self-efficacy taken at the outset were able to predict 81.3% of the students who subsequently dropped out and hope and optimism levels likewise were able to predict who would most likely be retained.

- University-led **communication systems** incorporating multidimensional aspects are proving themselves in the student retention field. These systems typically combine both academic and non-academic aspects, including student tracking, mentorship programmes, and a full range of support services. Results indicate increases in retention of up to 38%, and in one particular college the measured increase was 66%. Other studies showed that one email from the professor introducing himself raised grades and lowered retention, and a telephone call saw increases in retention of almost 8%.
- **Mentorship programmes** incorporating academic preparation, social integration and a compulsory seminar running for a few hours each month, lowered attrition rates from 23% to 5%. Other studies have shown the similar impressive attrition decreases, from 33% to 9%.
- The importance of developing engagement between student and tutor is deemed a priority and is well documented in the research. In a ground-breaking study the insight and influence of teachers and **teaching practices** also came under the spotlight in retention issues with such interventions as re-structuring the learning environment to create more interactive classrooms cutting the dropout rate from 20% to 3%.

In addition to the above interventions, some pointers were highlighted in the research as being critical to any discussion surrounding the issue of student retention. Several noted theorists have emphasised the importance of **grades** in the university selection process, stressing that they are both a determinant and an indicator of the ultimate success of the student. Without a proven level of competence it is unlikely that the student will make it through to graduation, confirmed by statistics indicating that lower-graded students are 2.5 times more likely to drop out. Widening participation and indiscriminately accepting under-prepared students has resulted in exponentially increasing the number of failing students, hence cognisance must be taken of the necessity of either receiving students who are academically university ready or investing in those less-prepared students to get them university ready. Likewise, given that 65% of the students who dropped out of university blamed the wrong **course choice** for their failure, it is imperative that this is addressed at the outset if dropout is to be averted. **Strengths-based advising** has been shown to assist students to capitalise on their strengths by finding subjects compatible with their talents, and creating the engagement necessary to complete the degree. Although this may not directly resolve the over-crowding in certain degrees, vocational advice given at the outset might help the student make informed choices on whether they want to change course or decide to

forego the university opportunity, in itself affecting the retention outcome by preventing the student dropping out a later stage.

Central to the success of the university-led PPIs listed lies Seligman's (2011) PERMA model of well-being in which positive emotions, engagement, relationships, meaning and accomplishment are all deemed to be necessary for a flourishing life. It is speculated that all of the five pillars on which the PERMA model is built would, or could have been, affected by the successful university-led interventions discussed above. It is likely that any, or all, of the interventions would have created positive emotions adding to the students' psychological wellbeing. Students are susceptible to influence in both positive and negative directions and by proactively creating a compulsory positive environment which monitored and supported the student (as most of the programmes did) engagement would be the likely result. Building positive relationships through mentorship programmes and teacher connections would further build on the likelihood that the student would find meaning in the challenge of their course, giving them a sense of accomplishment. Through the relatedness developed on both an academic and social level, and through developing their own competence and autonomy, it is likely that a genuine self-determined interest towards their studies and their university journey would be sparked in line with Ryan and Deci's (2000) SDT. In addition, the positive emotions likely to have been acquired as the student feels a sense of accomplishment, is likely to inspire them to more of the same, in line with Fredrickson's (2001) Broaden and Build theory of positive emotions, making the student more liable to complete his or her studies. Tinto's (1999) Student Integration model can explain much of the success achieved through mentorship and integrated university-led programmes, giving the student a sense of belonging and connection to the university. Ensuring that the student is both socially and academically integrated has been shown to be an essential tool for student retention.

## 7. Limitations and recommendations of the study

Although this study reached its aims in answering the research question, it was not without limitations. Some are given below.

### 7.1 Limitations

Poetic license may have been considered by some to have been taken with the definition of what constitutes a PPI but the researcher believes that the use of Sin and Lyubomirsky's (2009) definition combined with Parks and Biswas-Diener's (2013) argument validates the use of the studies reported on in the research. A desire to find out what works drove this research and this decision made it necessary to *scope* what was out there to effectively answer the research question. Hence time, space, and choice of review style determined that the author was limited in the ability to explore in more depth some related areas found (such as the apathy surrounding implementation in universities of the most obviously

successful programmes) which might have deserved better attention. In addition, all the limitations of a scoping review, particularly its inability to consider the robustness or quality of the studies reviewed, are equally the limitations of this research. And finally, although the intention was not to provide an exhaustive list of successful programmes and constructs, there may have been important and relevant studies missed in the search, due to the choice of potentially biased databases or inadequate search.

## 7.2 Recommendations for further research

Aside from the recommendations calling for a clearer definition for PPIs and a clearer definition for the terms of a scoping review already being debated in the literature (and which are undoubtedly required) following are a few of the recommendations which flow specifically from the findings.

### *7.2.1 Recommendations*

- The successes uncovered have already been detailed in the research and it goes without saying that the successful PPIs should be isolated, implemented in a university setting, and further explored under a high standard of empirical control. Some of the quality of the research reviewed may be questionable due to the scoping nature of the review requiring no quality assessment, but as evidence for specific PPIs such as goal-setting and mentorship programmes (for example) would appear to be quite overwhelming, these PPIs are deserving of further attention to test the veracity of the findings.
- Given South Africa's high attrition rates, it would be of interest to explore which (if any) of South African universities have implemented any of the successful programmes uncovered in the research and what (if any) successes have been found.
- Further study on the impact of widening participation and the *#FeesMustFall* movement in South Africa could potentially reveal, and add weight to, a push for policy counter-measures (as it has internationally) to the growing dropout problem, and the compounding problem of indiscriminate access to those incapable of completing.
- Investigations into the reasons for non-implementation of the successful programmes should be conducted. Recommendations for practice
- Universities and business should operate more closely to make degrees relevant to the business environment and should consider linking hands on degree-appreticeships which have shown great success overseas.
- Redesign the first year (where most of the dropout happens) to be an introductory course to see if the student and university are compatible.
- Make the successful programmes compulsory and incorporate them into a class, maybe even for credit.
- Lecturers should introduce some of the simpler PPIs into the learning environment.

- Conduct effective and appropriate marketing and select students likely to complete.
- Interview exiting students to better uncover reasons for leaving and to obtain better quality information to inform policy and procedure.
- Involve schools in shaping students expectations of university life and dedicate classes to the introduction and discussion of these expectations.
- Compel the institutions (either by honour or government decree) to share their information on peril of losing their university status, and establish a common bank of best practices.
- On a practical teaching level not enough is being made of social media. PPIs could be introduced as assignments through social media with little impact on the over-worked professors or the budget. Students appreciate the emotional distance of a text or an on-line assignment and often, the competitive aspect of grading against themselves.

## 8. Conclusion

This study met the criteria of a scoping review as delineated by Arksey and O'Malley (2005) in that it scoped the vast field of positive psychology interventions and student retention, made representative suggestions, offered no quality assessment, nor passed judgement on the robustness of the findings. It also made recommendations for practice and further study of those interventions suggestive of success in student retention. In observing the trustworthiness of the research, Aristotle's advice (in McGinnis, n.d.) that one must "look for precision in each class of things only so far as the nature of the subject permits", was heeded.

In conclusion, it is believed that this study met the aims of the research and answered the research question appropriately and in line with the proposal. This review uncovered what works, and offers a collation of the evidence of what was uncovered and is suggestive of best practice in the field of PPIs, in a university environment.

The researcher is indebted to those whose work has made this study possible, and to paraphrase Sir Isaac Newton, "for the view from having stood on the shoulders of giants".

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# CHAPTER 3

## CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS OF THE STUDY

***Key terms:*** Positive education, positive psychology interventions, scoping review, student retention, student success.

## 1. Introduction

This chapter consists of the conclusions drawn from this review, in line with the specific research aims. In addition, the limitations are considered, and recommendations for further research and practical application are proposed.

## 2. Conclusions of the research

This review aimed to:

- Identify, by means of a scoping review PPIs which have been shown to positively address student retention in either an individual or group context (exploring both individual constructs under the students' control and university-led collaborative programmes).
- Collate those PPIs found.
- Make recommendations for application in the university environment.

It is considered that these aims were successfully met by the research conducted and the below conclusions were drawn from the findings:

- Firstly, studies were identified which prima facie demonstrated impressive increases in not only student retention, but also in student grades.
- Secondly, the findings clearly showed that addressing ***individual*** constructs in the student produced marked increases in both retention and grades. In addition there was evidence to show that the constructs often worked optimally in tandem with one other.
- Thirdly, university-led ***collaborative*** programmes showed impressive increases in both retention and grades and unsurprisingly, appeared to produce the best overall results.

## 3. Further conclusions

In order to guide this study, a wide-ranging review of literature associated with good practice in retention and student success was undertaken which included both published and unpublished material. Many assumptions have been made and theories proposed over the countless years that this topic has been dissected as to why the problem of student attrition refuses to die, and speculation continues. Reasons for dropout change with the zeitgeist of the age. In the early days of researching the retention problem (for example) it was found that once married, a woman was expected to concentrate on her home and family, with all thoughts of education quashed, contributing to the high attrition rate amongst women at that time. What does not change though, is the dropout rate, despite all the causes proposed such as parenting styles, school systems, first-generation students, social integration, academic unpreparedness, outdated universities, teaching styles, living in residence or not,

and the list goes on. It seems that there is no end to what could be deemed accountable for student attrition according to the research. In addition, it was found that there was little by way of collations detailing successful programmes and very limited sharing of knowledge between the institutions.

From the scoping review results it is clear that student success requires an institute-wide collaboration. Effective solutions consist of incorporating all aspects from the overhaul of the high school system to ready the student for university (and not just prepare them for an escape with a suspect matriculation pass) to entry through a summer school if necessary to better prepare the students for the academic leap they are about to take. Recognising that the universities cannot be responsible for the required change in the schooling system (a vital component in the success of the student) compensation must be made for the gaps that students bring to their university journey. Developing the individual constructs within the student which have shown success in the research, conducting a university entrance interview, vocational guidance advice, assessment testing, a tracking programme and individualised support are all necessary antecedents for success for many students. In addition, the research shows that admitting those students with the potential to make it through to graduation and investing in them with a full range of support services should greatly increase the retention figures.

One of the surprises uncovered in the scoping review was the apparent lack of implementation of successful findings which seemed disproportionate to the magnitude of the problem. Despite 150 page government reports recommending what ***should*** work, few institutions seemed to be applying the research suggesting an inability to bridge the research-practice gap. Peculiarly, equal vigour had not been put into the implementation and follow up of those successes which have been found. Reading through the volumes, at times it seemed as if academia had gotten lost in the retention problem and was oblivious to PPIs many successes. Throughout the research process the author's driving mantra was *what works?* which soon morphed into *why are these solutions not being used in every university?* Despite the endless theories, research and proposals, beyond the shores of the USA, Australia and the UK, not much was being implemented and apparently little in South Africa, where arguably the largest concentration of dropouts in the world, amass. Although volumes of research on both individual constructs and collaborative programmes exist, it appeared to stop there. Marx's (1845, p. 1) observation that "*the philosophers have hitherto only interpreted the world, the point however is to change it"*, came to mind.

Likewise, given that this topic is so extensively researched, surprisingly, no recent collations were found detailing the successful programmes and practices of value, in one volume. Constructs were studied separately or in pairs and individual programmes evaluated on their own terms. Government reports pulled together opinions. Parks (2011) highlighted

this issue and saw this as an important next necessary step in positive psychology's growth, calling for a volume to pull PPIs together. This review has attempted to close the gap in some small way.

Linley, Nielsen, Gillett, & Biswas-Diener, (2010) warns against the field of positive psychology descending into "popularist science" that produces "relevant and highly interesting research questions" but is lacking in scientific rigour. Drawing on Linley's critique and being ever mindful of the further accusation levelled against the positive psychology movement by Simmons (2013, p. 50) that positive psychology makes "grandiose claims without supporting evidence", an attempt has been made in the research to select those studies showing measurable results in the hope that they might be found to be more concrete than the vague terms such as *success was found* which so often couched the results in some of the studies reviewed.

Also, in the interest of giving the best possible coverage of the topic, the scoping review was supplemented by similar studies of PPIs applied to school-going adolescents if it was felt that they had wider applicability and were deemed appropriate to the research. The study did not provide a narrative about what every paper found, but in the interests of context and relevancy, some studies were reported on more fully than others.

If widening participation and *#FeesMustFall* (in South Africa) succeed and is to be the way forward for the universities then finding ways to close the social-class achievement gap is one aspect which needs to be addressed to retain what is destined to become a large portion of the student population, and PPIs have some answers. The recent global changes calling for governments to widen participation and in South Africa with greater access being given to previously-denied students, requires equal change from the institutions. This new wave of students is less attuned to the higher education environment, requiring more support and direction (Crosling, 2017). Being mindful of Argentina's low 2013 retention rate (Kelly, 2013) after the unrestricted open admission policy, effective steps must be taken to accommodate the change. In addition, students must understand the universities' need to maintain institutional autonomy. Nevertheless, widening participation, where implemented, should be viewed as a commitment to continuing support and not just an access route as it has been shown that at-risk students remain at-risk throughout their entire university journey. Creating a culture of hope should be high on the university agenda to make widening participation about success and not just numbers, but that said, despite best efforts from the university it is important to recognise that some students will refuse to help themselves no matter what help is offered and will be lost to the system.

In light of all the research available in the literature and the many successes found, why are these tools not compulsory in all universities as a matter of course? Some possible

insights were uncovered in the research and are mentioned below, although this is by no means an exhaustive list.

Is it cost? To implement the programmes discussed need not be a costly exercise when weighed against the loss of students to the institution. It is far more cost effective to retain current students than it is to go out and recruit new ones (Hanover Research, 2014). By way of example, Georgia State invested $1.8m in retention programmes but are seeing a $3m return for every 1% increase in retention (an achievable number according to the PPI studies quoted herein (Niemtus, 2017). Intense, competitive and costly marketing is being conducted but in the meantime the universities are haemorrhaging students (in South Africa's case a loss of 85%) in what would appear to be a false economy.

Is it secrecy or embarrassment? An argument has been made by Johnston (2002) that it is the embarrassment of institutions afraid to admit their failings (which might be seen as a poor indicator of the university's value as a selling tool) which marks their reluctance to share. Or, on the other hand perhaps secrecy protects their successes, giving a competitive edge. It has also been suggested that there is a risk that staff will be unwilling to engage with data that expose internal issues (Danaher, Bowser, & Somasundaram, 2006). Johnston (2002) further suggests that in part, few institutions are comfortable admitting their failings, highlighting that the result of this is that useful information is left unshared. Burns, Crow, and Becker (2015) agree, maintaining that a means of sharing this information is the most sorely needed innovation in higher education. In 2013, a group of American universities proved the benefits of collaboration by deciding to pool their resources creating an alliance of those practices that work. Eight hundred indicators from lecture attendance to assignment grades were tracked and every week any student deemed to be at risk was red-flagged for intervention. Based on this system Georgia State university (as one example from the alliance) doubled its graduation rates (Niemtus, 2017).

The criticality of the student retention problem brings with it repercussions for students, academia and society alike, set to become even bigger with widening participation and #*FeesMustFall*, if not curtailed and resolved. Students enter university in part for the economic benefits of an increased education. In return, a nation's economic standing relies on the quality of its graduates and people with higher levels of income contribute to the tax pool, hence everyone has a vested interest in lowering the student dropout rate.

One of the decisions that the universities might have to make is whether they are being run as a business, or an institution of quality higher learning. Allowing indiscriminate access to those unlikely to succeed helps no-one, least of all the students themselves. Over-marketing and running the institution as a business with disregard for student outcomes engages the business in the endless cycle of constantly replacing the departing students with fresh bodies. Combine this with the important fact that the universities need to preserve

their value if they are to retain their place in society as a credible seat of higher learning and a dependable source of qualified candidates equipped to enter the working world, and it becomes imperative for solutions to be implemented as a matter of urgency. This is a topic whose time has come and it is deserving of best attention to profit all concerned.

Finally, there is a counter-argument to be made, from the students. In a UK review of student satisfaction, an interesting perspective was observed. When asked about their experience at university the students complained a lot; poor teaching, absent academics, out-of-date facilities, and a long list of other gripes, real or imagined, but despite all this, they insisted they had a wonderful *experience*. However, they gave *themselves*, not the university, most of the credit, leaving the interviewer under no uncertain terms that it was what *they* brought to the experience and not corporate customer-care that made it so. The interviewer concluded philosophically by saying he suspects that is what universities should really be about, students building their own "experiences" within the welcoming embrace of their institutions (Scott, 2014).

## 4. Limitations of the research

- PPIs themselves are confounded by problems of definition and therefore the author chose to adopt Sin and Lyubomirsky's (2009) and Parks and Biswas-Diener's (2013) definitions (as detailed in the research) as the most applicable classifications. This may have affected the choice of research considered for inclusion and exclusion.
- Equally, although it could be argued that highlighting student deficits is negative, this author would challenge a perspective that adopts this attitude preferring to consider that if the intention of the intervention is to the positive and brings about positive results, in line with Parks and Biswas-Diener's (2013) comment, this refutes an initial focus on a student's perceived deficit. Although not a direct limitation of the research a criticism might be made that highlighting deficits is itself a negative, and some of the studies used adopted this approach in order to apply the interventions. (Positive psychology, under whose theoretical model this research is based, does not negate or ignore the influence of negative feelings and experiences but attempts to counteract them with interventions to the positive.)
- Some relevant studies may have been missed through database selection, foreign language rejection and time and size limitations of the research.
- The *secrecy* of institutions not sharing their successful findings in a public forum may have impacted on what might have been available.
- Several limitations are those intrinsic to a scoping review. Particularly, although no quality assessment is called for in a scoping review according to the Arksey and O'Malley (2005) framework, this leaves a question mark as to the quality of the research. Without the uncalled for quality assessment, any low quality studies will have been included in the

research. One of the challenges of this study was to find an appropriate categorisation framework under which to quantify the uncovered studies, a need expressed by others, such as Cowen and Kilmer (2002) who claim that a common vocabulary, classification system and guiding theory are essential to the success of reviews. In some studies it was difficult to identify how the researcher had concluded causality when correlation might have been the best possible conclusion, but the author had to ignore this in favour of the claims in the research and report on them accordingly. Also, the inability to explore the topic and engage deeply with the research is another limitation of the scoping genre. In addition, a further fault from within the genus makes it likely that many of the findings in the research papers reviewed were based on self-reports which allow for no objectivity and suffer from their own limitations.

- The inclusion of non-peer reviewed articles and grey literature may have impacted on the quality of the findings but was deemed necessary for maximum coverage of the topic. To have left them out might equally have skewed the research and narrowed the coverage of the topic.
- Researcher's bias cannot be ruled out entirely, and publication bias could have been a threat given that the searches took place in specific positive psychology-rich data bases.
- In the interests of space, little distinction was made (beyond indicating the country of study) between the different types of colleges such as community colleges and universities in USA studies. (Although not crucial to this study, it was a fairly important distinction as many community colleges have a higher number of disadvantaged attendees which might have made the retention results all the more impressive.)
- Likewise, in the interests of maximum coverage, studies conducted on some school successes, first to second-year retention successes, and retention to graduation were all lumped together and discussed as success, although they were differentiated in the main discussion.
- Although some studies claiming success did not directly show statistical proof of retention increases in the constructs and interventions known to be precursors of graduation, they were discussed and assumptions were made of the likelihood that retention would be positively affected, but this speculation was highlighted in the study.
- The studies researched had a high level of heterogeneity, making it challenging to draw absolute conclusions. Drawing on different types of studies such as meta-analyses, qualitative research and surveys was challenging to quantify.

## 5. Recommendations for further research

- Research should be undertaken to explore how many South African universities have implemented retention programmes, how many of the successful aspects of this review have been implemented in those programmes, and what their success rates are (if any).

- Further research on why some students remain at university despite facing the same challenges as those who drop out, would benefit institutions in understanding their 'client' and how to best manage them.
- An exploration to find out if institutions are reluctant to share information amongst themselves, and if so, why, would shed insight.
- An exploration of selected constructs or programmes from the review yielding good results, for the purposes of high-quality research in order to gain robust conclusions, would give more certainty to the findings and pave the way for a sharing of retention knowledge.
- One aspect that has not been given much exposure in the literature viewed through the lens of student retention is the high levels of depression amongst students, where it relates to attrition. Investigation into this would aid by early identification of those in need of clinical help, before attrition occurs.
- The over-education effect and the vocational relationship to it is deserving of further study given the large number of students who mentioned this as a deciding factor in discontinuing their studies.

## 6. Recommendations for practice

- Any, or all, of the successful interventions uncovered in the research should be implemented. (As mentioned above, if still in doubt about the veracity of the interventions then select some of the constructs or programmes yielding positive results for the purposes of more high-quality research.)
- Universities and business should operate more closely to make degrees relevant to the business environment and should consider linking hands on degree-appreticeships which have shown great success overseas.
- Redesign the first year (where most of the dropout happens) to be an introductory course to see if the student and university are compatible.
- Make the successful programmes compulsory and incorporate them into a class, maybe even for credit.
- Lecturers should introduce some of the simpler PPIs into the learning environment.
- Conduct effective and appropriate marketing and select students likely to complete.
- Interview exiting students to better uncover reasons for leaving and to obtain better quality information to inform policy and procedure.
- Involve schools in shaping students expectations of university life and dedicate classes to the introduction and discussion of these expectations.
- Compel the institutions (either by honour or government decree) to share their information on peril of losing their university status, and establish a common bank of best practices.

- On a practical teaching level not enough is being made of social media. PPIs could be introduced as assignments through social media with little impact on the over-worked professors or the budget. Students appreciate the emotional distance of a text or an on-line assignment and often, the competitive aspect of grading against themselves.

## 7. Conclusion

The last word goes to Leonardo da Vinci (brainyquote, n.d.)

**“I have been impressed with the urgency of doing. Knowing is not enough; we must apply. Being willing is not enough; we must do”.**

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