

POSITIVE STATES IN RELATION TO ENTREPRENEURSHIP ORIENTATION

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Keywords:

appreciative ability;
conviction that one's actions matter; irrepressible resilience; persistence; tolerance for ambiguity

Dates:

Received: 10 Sept. 2009
2010 Accepted: 30 Aug. 2010
Published: 03 Dec. 2010

How to cite this article:

Shein, M.L., Crous, F., & Scepers, J.M. (2010). Positive states in relation to entrepreneurship orientation. *SA Journal of Industrial Psychology*/SA Tydskrif vir Bedryfsielkunde, 36(2), Art. #931, 10 pages. DOI: 10.4102/sajip.v36i2.931

This article is available at:

<http://www.sajip.co.za>

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ABSTRACT

Orientation: The main issue of this article concerns the construction and evaluation of an instrument measuring positive states and its relationship with entrepreneurship orientation.

Research purpose: The principal objective of the study was the construction of a normative scale to measure the positive states associated with appreciative ability and to relate it to a scale of entrepreneurial orientation. A secondary objective was to determine whether there was a statistically significant relationship between the measures of the constructs and the biographical variables of gender and culture.

Motivation: As appreciative ability is a relatively new construct and no instrument exists for measuring the positive states emanating from this construct, it was decided to develop such an instrument and to relate it to entrepreneurship orientation.

Research design, approach and method: The primary data were obtained by means of the newly designed instrument, the Positive States Questionnaire and the Entrepreneurship Orientation Questionnaire. A convenience sample of 210 second year commerce students was drawn.

Main findings: From a principal factor analysis applied to the two instruments, two factors each were obtained. A significantly high correlation was found, indicating a strong relationship between entrepreneurship orientation and the positive states. No significant differences were found between gender or population in the entrepreneurship orientation and positive states measures.

Practical/managerial implications: The study produced an instrument with highly acceptable metrical properties which may be used in future studies and for entrepreneurship development.

Contribution/value-add: The results of the study suggest that positive states are invaluable attributes for the entrepreneur and should be explored in the assessment and development of entrepreneurs.

INTRODUCTION

Entrepreneurship

According to Bolton and Thompson, 'Entrepreneurs create and build the future' (2004, p. 1) and is accomplished by means of new venture creation (Shane, 2008). It has been suggested that successful exploitation of new business ventures is vital for economic development (Amanjee, Crous & Crafford, 2006; Tanas & Saeed, 2007). This has been recognised world-wide, including in South Africa, where government policy has been to encourage new ventures by self-starters. It has been acknowledged that, not only in growing economies such as South Africa's, but indeed in all economies, entrepreneurship contributes to a major part of national growth through individuals taking a proactive role in developing their own businesses and contributing to job creation; as these businesses flourish, entrepreneurship adds to the well-being of the country (Tanas & Saeed, 2007).

The word entrepreneur is of French origin; *entreprendre* means 'to undertake', as in undertaking a venture (Bridge, O'Neill & Cromie, 2003). The French word *entrepreneur* means a contractor, but today has acquired the meaning of a businessperson who senses a business opportunity and makes a success of it. The recognition of *opportunity* has been cited as a key element of successful entrepreneurial activity (Brown, Davidsson & Wiklund, 2001; Casson & Wadeson, 2007; Endres & Woods, 2007; Singh, Knox & Crump, 2008). Bolton and Thompson (2004, p. 16) define an entrepreneur as 'a person who habitually creates and innovates to build something of recognised value around perceived possibilities'. In her popular work, Allen (2001) notes that those embarking on entrepreneurial ventures recognise *opportunities* in areas very few others do and aim to exploit these *opportunities* to the fullest extent. Shane (2008) defines entrepreneurship as something imaginative, resourceful and focused around growth or *opportunity*. He further outlines entrepreneurship as the practice of starting new ventures as a result of having recognised an *opportunity*, whilst Singh, Knox and Crump (2008) assert that developing nascent ideas into full-blown business *opportunities* is a fundamental component of venture creation.

However, most entrepreneurial ventures are not successful (Baum, 2005; Shane, 2008). This has led to an increased study of entrepreneurship in an attempt to uncover its fundamentals. Psychological research investigating entrepreneurship and entrepreneurial behaviour has contributed significantly to the study of entrepreneurs and appears to have evolved over four eras (McWalter, 2008). In the *first era*, research focused on attempting to establish a correlation between certain personality traits and entrepreneurship. This was followed by the *second era*, which probed the demographic characteristics of entrepreneurs, such as socio-economic status, family history and role models. During the *third era* attitudes and behaviours were evaluated for being effective indicators of entrepreneurial performance. The present *fourth era* has risen out of the current focus on cognitive psychology and has seen investigation of cognitive processes which may influence entrepreneurial behaviour.

The cognitive approach to the study of entrepreneurship points to the possibility that entrepreneurial competency may be related to the construct of intelligence. However, there appears to have been little research correlating entrepreneurship orientation to any aspect of intelligence. An exception is Baum (2005), who examined the relationship between practical intelligence and entrepreneurship, finding a positive correlation between entrepreneurial competency, learning and intelligence. The research was based on Sternberg's practical intelligence, which refers to 'the skilled application of a store of relevant tacit knowledge within a personally important context, such as the entrepreneurship setting' (Baum, 2005, p. 6). Practical intelligence, however, does not contribute to a comprehensive understanding of the cognitive processes underlying the essence of entrepreneurship, namely, opportunity recognition and exploitation.

Thatchenkery and Metzker (2006) suggest that appreciative intelligence is a construct that may provide a clearer understanding of the cognitive processes underlying business successes such as entrepreneurship.¹ Appreciative intelligence is in line with Gardner's concept of multiple intelligences (Gardner, 1983, 2004). Seeing as this concept is controversial (Klein, 1999; Sternberg, 1999), the construct of appreciative intelligence will be referred to in the rest of this study as appreciative ability.

Appreciative ability

Thatchenkery and Metzker (2006, p. 4) define appreciative ability as 'the ability to perceive the positive inherent generative potential within the present', by being able to envisage the 'mighty oak in the acorn'. This metaphor refers to the ability to envision, from what exists in the present, the realistic potential of the future. This perspective provides one explanation of how successful people have dreamt up their creative, often extraordinary ideas, recognised the potential, envisioned their goals and drawn others in to join them, managing to overcome all obstacles and challenges in the process of achieving their goal successfully. Shane (2008) suggests that a venture is more likely to be successful if the entrepreneur has envisioned as part of their goals the desire for the business to survive, flourish and produce a good income.

Thatchenkery and Metzker (2006) postulate that people possessing high appreciative ability are able to perceive the positive aspects of a situation, thing or person and work out how to realise potential, often in innovative and creative ways. They suggest that people possessing high appreciative ability 'take new or challenging circumstances and turn them into golden opportunities and enriching experiences for themselves and those around them' (Thatchenkery & Metzker, 2006, p. 4).

Thatchenkery and Metzker (2006) proffer the example of a schoolgirl acquaintance of one of the authors who was regarded as less intelligent than the academic achievers as she sat at the back of the class and chatted, thus paying little attention to schoolwork and achieving low grades. Years later, however, she had emerged as a successful businesswoman in the following way: she had noticed that the traffic passing by a property she had inherited had, as the town grew bigger, increased and realised this as an opportunity to build a convenience store there. Continuing to look for opportunities created by changes and growth of the town, she let the remaining space on her property to a new limousine service. By using her appreciative ability she had seen hidden potential to create an opportunity from her existing situation.

1. Appreciative intelligence, or ability, should not be confused with Appreciative Inquiry. Appreciative Inquiry is a positive approach to organisational development and change (Cooperrider, Whitney & Stavros, 2003), whereas appreciative ability is a psychological construct. What they do have in common, however, is an emphasis on that which is valuable and positive (Thatchenkery & Metzker, 2006). Appreciative Inquiry aims at sourcing the positive values that give vibrancy to an organisation and working out how to enhance and encourage these. Appreciative ability is desired in entrepreneurs, leaders and stakeholders and can be utilised to guide the Appreciative Inquiry process to lead the organisation to new successes.

Three components make up the cognitive process underlying appreciative ability (Thatchenkery & Metzker, 2006). These are (1) reframing, (2) appreciating the positive and (3) seeing how the future unfolds from the present. These components are not independent of each other, but work together and are mutually reinforcing and self-enhancing so that each of them facilitates the use of the others.

Components of appreciative ability

Reframing

Framing is the psychological process used by individuals to interpret and understand a situation, person, context, action or object (Thatchenkery & Metzker, 2006). This is based on how each individual perceives a situation. As perception is subjective, situations are perceived differently and are influenced by factors such as background, attitudes, values and past experiences. Research has indicated that framing is not a passive process, but one where individuals actively interpret stimuli in their environment by utilising processes to select the most appropriate stimuli and disregard others in order to make sense of the reality they are experiencing (MacLean, 2008; McWalter, 2008). The interpretation of reality is thus made by individuals choosing which aspects of a situation to include, exclude or emphasise and then using this information to decide how to react.

Reframing is the process of framing the situation in a new or different way (Thatchenkery & Metzker, 2006). This concerns changing one's perception by understanding the situation differently in order to support the end goal or vision (Gonzales, Dana, Koshimo & Just, 2005; Kolb, 1984). Innovators and entrepreneurs investigated by Thatchenkery and Metzker (2006) who have high appreciative ability appeared to have a different way of assessing reality. They appear to have a more positive perception of the situation and see it as part of a greater context – as a step towards a greater vision. This entrepreneurial vision is what enables them 'not to flinch or deny but to learn from failure and the things we fear' (Thatchenkery & Metzker, 2006, p. 120). They are thus able to reframe a situation that could have been perceived as threatening into an opportunity. MacLean (2008) asserts that research indicates that information is processed in less inventive ways when a situation is perceived negatively, or as threatening.

By keeping their vision in mind, people with high appreciative ability are able to use both positive and negative experiences to learn from and to reframe these experiences. Social cognition theorists recognise that visions, described by leadership research as being 'a mental image of what a leader wants to achieve' (McWalter, 2008, p. 6), are important motivators for coping with doubt, ambiguity and dilemmas. This does not mean that people with high appreciative ability are unrealistic; they will frame their solutions after assessing both negative and positive facets of the situation, often assessing the bigger picture and finding a view of reality that is filled with opportunity.

Appreciating the positive

Appreciation refers to 'the ability to find, recognise and take pleasure in the existence of goodness in the physical and spiritual worlds' (Haidt & Keltner, 2004, p. 537). Adler and Fagley (2005, p. 81) described appreciation as 'acknowledging the value and meaning of something – an event, a person, a behaviour, an object – and feeling a positive emotional connection to it'.

Appreciative people value what they have in their lives, rather than focusing on what they do not have and take pleasure in their surroundings and the people they encounter. Reactions to excellence evoke an emotional response which is filled with admiration and awe. This concept of individuals possessing an intrinsic and powerful emotional reaction to goodness and excellence is one of the basic tenets of humanistic psychology. Carl Rogers (1951) postulated that openness to experience, a trait comparable to appreciation, is a natural human condition. Abraham Maslow's (1970) hierarchy of needs described each individual's desire to rise above deficiencies and then work

towards self-actualisation, characteristics which include openness and a fresh appreciation of the world.

In his model of appreciation, Vickers (1965, 1967) maintains that each individual develops an appreciative system wherein situations are perceived, a value judgement is made and actions are taken, based on that judgement. Forming a continuous loop, the actions constitute the foundation for ensuing values, judgements, perceptions and actions. The processes utilised include framing, appreciation and resulting behaviour. In this way, an individual's judgement of something worthwhile will predict how they will act. If the perception is framed appreciatively, or as something valuable, subsequent actions will reflect this, whilst the converse also applies.

Although Vickers suggested that each individual experiences reality subjectively, he did not consider why some are able to make more effective judgements than others. Adler and Fagley (2005) proposed the development of *appreciative disposition*, comprising trait and state qualities. Individuals possessing trait qualities are naturally disposed to be more appreciative than others, whilst everyone is able to experience a temporary state of appreciation. Thatchenkery and Metzker (2006) built on this to suggest an appreciative system where those with an increased level of appreciative disposition are able to frame everyday events (using positive value judgements) into grand possibilities (action judgements). With time and experience, this behaviour improves and individuals are able to recognise potential in ordinary everyday occurrences and generate opportunities and possibilities.

Haidt and Keltner (2004) and Thatchenkery and Metzker (2006) suggested that other advantages of appreciation include enhanced feelings of positivity, awe and wonder and subjective well-being. These feelings would facilitate coping with stressful situations and pressure.

Appreciating the positive is the ability, displayed by many successful people, to view events from a positive perspective – to reframe events, situations, problems, people and products from an appreciative perspective. Appreciative individuals therefore tend to focus on what they possess, rather than on what they lack; they are able to appreciate the present and keep an open minded curiosity about that which gives them the ability to reframe. Haidt and Keltner (2004) suggested that appreciation is related to curiosity and openness to learning, qualities which Thatchenkery and Metzker (2006) proposed influence the way in which entrepreneurs frame a solution to a challenging situation.

Seeing how the future unfolds from the present

Being able to view a situation positively is not enough; one must also have the ability to work out how to transform it into a successful outcome, that is, to perceive how the generative potential of the present can lead to the successful outcome of the future. This is achieved by identifying positive features from the situation and utilising available resources creatively to reframe a method for achieving the objectives. Thatchenkery and Metzker (2006) cite the example of Rotary International reframing the project of eradicating polio from a medical problem into an organisational challenge. Rotary specialised in organisational and leadership abilities and so envisioned the solving of the problem in terms of transporting, refrigerating and financing the medication and then educating communities about the disease. Throughout the project, they were able to face challenges and solve problems by utilising resources found in their environment combined with imagination to reframe the situation and keep on moving toward achieving their end goal.

Appreciative ability is connected to man's need for 'meaning, vision and value' (Thatchenkery & Metzker, 2006, p.12), which encompasses satisfying man's need for continuous improvement. People endowed with appreciative ability have a sense of purpose and the tenacity and resilience to overcome problems through reframing. They are able to reframe, appreciate the positive and see how to get to a future point from their present position. Even in the face of difficulties, they will believe in their

goal and, because of this, will not give up. Thatchenkery and Metzker (2006) proposed that appreciative ability leads to four positive state-like qualities.

Positive states emanating from appreciative ability

Four state-like qualities appear consistently in subjects possessing high appreciative ability (Thatchenkery & Metzker, 2006) and include:

1. developed persistence
2. conviction that one's actions matter
3. tolerance for uncertainty
4. irrepressible resilience.

Persistence

Vital to the success of any project is the ability to persist in the face of problems and difficulties that occur and to tenaciously seek solutions until completion is achieved (Thatchenkery & Metzker, 2006). Persistence is made up of behavioural and cognitive persistence. Behavioural persistence, the external manifestation of the behaviour, is exhibited by actions and behaviours sustained over a period of time, such as a child learning to walk where the child practices constantly until the act is mastered. Cognitive persistence is manifested by thinking behaviour, such as thinking about a goal long after the behaviour to accomplish it has stopped. Both types of persistence are necessary for success and are utilised by successful entrepreneurs.

Perez (1973) and Thatchenkery and Metzker (2006) maintained that persistence is influenced by self-esteem.² Self-esteem is the degree of confidence one has in one's own worth, regardless of whether or not one perceives oneself positively or negatively. Individuals possessing high self-esteem (HSE) tend to persist longer when faced with difficulties and obstacles than those with low self-esteem (LSE). However, Di Paula and Campbell (2002) found that after repeated failures, those with HSE tend to seek alternative strategies, thus making more efficient use of their environment and environmental cues than those with LSE. Karabenick and Knapp (1991) and McFarlin, Baumeister and Blascovich (1984) suggested that this might be because failure can be regarded as a transitory hiccup in the path toward achieving the final goal by HSE individuals, who expect success and are better able to determine whether failure is due to their own ability or to factors within the environment. They are also more likely to seek guidance after failure as they do not view this as failure of the primary goal, but as an obstacle encountered on the path toward the ultimate goal.

Individuals possessing high appreciative ability tend to persist longer, utilising both behavioural and cognitive persistence, but not for an indefinite period (Thatchenkery & Metzker, 2006). Faced with overwhelming challenges, they may seek other options and approaches to achieve their goal. Success is finally achieved through sheer tenacity and by adjusting strategies derived from paying attention to environmental cues, all the while focusing on the long term goal rather than the short term task.

Conviction that one's actions matter

Self-efficacy is central to this state and Thatchenkery and Metzker (2006) rely heavily on the work of Bandura (Bandura, 1977; Gist, 1987) who introduced the concept of self-efficacy, which concerns the belief people have in their ability to accomplish a task successfully; the stronger the belief, the greater the chances of actually accomplishing the task, even in the face of difficulties. A person with high self-efficacy will display greater persistence and resilience in overcoming obstacles and will accept greater challenges than someone with lower self-efficacy. Those with high self-efficacy take on more challenging tasks, increase their efforts if they think they might fail and recover quickly after unexpected failure. If they do fail, they assume that they failed because they did not try hard enough or did not have the

2. Seligman's (1998) caution against over-emphasising the importance of self-esteem has been noted.

relevant knowledge. In subsequent attempts, they try harder after acquiring the knowledge they believe is necessary for success.

Bandura (1983) also established the idea of 'reciprocal determinism', according to which behaviour is largely shaped by an interdependent system of environment, thoughts and behaviour, with behaviour affecting the environment, which in turn affects the individual's cognition which affects behaviour. Consequently, individuals measure their own performance and experiences through self-reflection. Although this may not necessarily reflect others' perceptions of them, it influences an individual's beliefs in their own capabilities and accordingly affects subsequent behaviour. Thatchenkery and Metzker (2006) maintain that this concept is similar to that of the 'self-fulfilling prophecy', where predictions or expectations influence outcomes. In their research on successful business people, Thatchenkery and Metzker (2006) found that these people often talked positively to themselves, which further motivated their actions. They cite the instance of the choreographer who founded a successful dance company. One of her aims was to dispel the myth that dancers must all look the same. Whenever she saw an advertisement promoting the idea that women must be thin to be beautiful she repeated to herself 'the students and dancers in my community won't feel that way' (Thatchenkery & Metzker, 2006, p. 25). This positive affirmation acted as a motivator for her to continue pursuing her goal.

Because individuals with high appreciative ability can see the end goal, they believe their actions and abilities will take them towards a successful conclusion. They believe they have the power within themselves to produce the desired results: 'This proactive, positive conviction that their actions matter is very much present in people with high appreciative intelligence' (Thatchenkery & Metzker, 2006, p. 25).

Tolerance for uncertainty

Also referred to as tolerance for ambiguity, this state refers to the propensity for interpreting uncertain or ambiguous situations as beneficial, challenging and positive (Clampitt & Williams, 2001). There is a correlation between ambiguity, uncertainty and cognitive dissonance (Thatchenkery & Metzker, 2006). Often occurring during periods of change, such as moving house or changing jobs, unease arises when two or more apparently differing ideas have to be dealt with at one time and finding a solution to this conflict is difficult. Possessing a tolerance for uncertainty enables an individual to view the situation more positively, take risks, confront the unknown and deal with the uneasiness that comes with uncertainty by using creative problem solving. Those with high appreciative ability will tend to respond in this manner, often coming up with their best creative ideas and solutions in challenging situations.

In his study of cultural similarities and differences in countries and the workplace, Hofstede (1990) identified some cultures as nurturing greater uncertainty avoidance than others. Cultures encouraging tolerance for uncertainty tend to be less conservative and dogmatic and accept change more easily. Clampitt and Williams (2001) add that research indicates that high tolerance individuals perceive ambiguous stimuli as desirable and challenging, rely less on authority for opinions, prefer objective information and are more flexible and more self-actualised. They do not try to avoid uncertainty, but encourage it to promote innovation.

Because people with appreciative ability can envision the way a positive future can unfold from the present, they can deal with the uncertainty that often accompanies a new venture, product or crisis (Thatchenkery & Metzker, 2006). People with high appreciative ability appear able to shelve feelings of discomfort and have a high tolerance for ambiguity which allows them to cope successfully with risky situations.

Irrepressible resilience

Remaining positive, or regaining a positive attitude when confronted with seemingly insurmountable problems or

apparent failure is the foundation of irrepressible resilience (Thatchenkery & Metzker, 2006). Gardner (1998) adds that this is the ability to convert the inevitable failures that occur in our lives into future successes. Thatchenkery and Metzker (2006) suggest that irrepressible resilience differs from persistence in that persistence refers to persevering with a particular action until an objective is reached, whereas the former applies to an individual making positive changes in response to a situation that has become problematic. Irrepressible resilience enables the individual to keep on going in spite of all odds and to bounce back to the same situation they were in, or to an even better one (Amanjee et al, 2006; Strumpfer, 2001). Although those with high appreciative ability might have been traumatised, depressed or angered by a situation, within a relatively short period of time they are able to regain a positive state of mind and begin work on the predicament. Often, they are able to benefit from the experience and achieve an even more advantageous position than they were in before the crisis.

Although resilient people are not immune to stress and still face the same degree of challenge as others, they are able to recover quickly after a shock, disappointment or defeat. This is achieved by managing the situation with appropriate skills, behaviours and qualities so that the problematic situation is changed and no longer seems stressful. Isaacs (2003, p.11) summarised these skills as follows:

- Resilient people are proactive, taking charge of the situation rather than waiting for others to do this for them.
- Resilient people are self-reliant and independent.
- Resilient people are socially skillful so that they can solicit help when needed as well as generate positive responses from others.
- Resilient people have initiative, which enables them to take charge of the situation utilising creative problem solving to generate constructive actions.
- Resilient people's life outlook is highly positive.
- Resilient people may view change or disruptions as uncomfortable but recognise them as an opportunity to grow and develop.

Higgins (1994) adds that those possessing resilience talk of an active faith and reliance upon personal meaning, which provides them with the conviction that they will succeed.

Entrepreneurs with high appreciative ability are able to reframe a difficult situation into a positive perspective and formulate a plan of action towards achieving a successful solution. Thatchenkery and Metzker (2006) add that this gives them the perception that positive consequences can follow from the most drastic and devastating circumstances. They have the belief that they are competent and able to succeed, but always bear in mind that success may take some time to be achieved and that there may be challenges and obstacles to be overcome in the process. Having a belief in one's own competence is what keeps the entrepreneur in a positive frame of mind, resilient and able to work harder.

Research problem

Although McWalter (2008) provided qualitative evidence that entrepreneurship can be interpreted by means of appreciative ability, no quantitative study of the correlation between appreciative ability and entrepreneurship has been undertaken. Whereas McWalter (2008) focused on the components of appreciative ability, the present research undertakes to correlate the state-like qualities emanating from appreciative ability, with entrepreneurship orientation.

The principal objective of the study was the construction of a normative scale to measure the four positive states (persistence, irrepressible resilience, tolerance for uncertainty and the conviction that one's actions matter) associated with appreciative ability and to relate it to a scale of entrepreneurship orientation. In order to rule out any differences of a biographical nature which could complicate or cloud the principle investigation, a

secondary objective therefore was to ascertain whether there was a statistically significant relationship between the measures of the constructs and the biographical variables of gender and culture.

It is hoped that this study will contribute towards a better understanding of the states which contribute towards the success of entrepreneurs. This concept can be used to educate and skill aspiring entrepreneurs into becoming more successful.

RESEARCH DESIGN

Research approach

The approach used was quantitative and took the form of a cross-sectional survey design.

Research participants

The participants comprised 210 second year commerce students from a South African metropolitan university. All the participants had completed a course in entrepreneurship prior to administration of the questionnaires. The mean age of the sample was 20.74 years; 57.6% of the participants were female and 39.1% were male, with 3.3% of the participants not specifying their gender. In terms of ethnicity, 56.6% of the participants were Black and 40.5% were White, with 2.9% of the participants not specifying their ethnicity. As most candidates chose English as their language, it was decided to define the cultural groups in terms of population group, rather than language, as this seemed to be more representative of ethnicity. Seeing that there were only a small number of Indian and Coloured participants, it was decided to exclude them from the assessment of ethnicity. Therefore, Black and White participants were compared based on their ethnicity. Participation was voluntary and the information was used exclusively for research purposes.

Measuring instruments

Two instruments were used. These were the Entrepreneurship Orientation Questionnaire (EOQ) developed by Venter, Crous and Schepers (2004) and the Positive States Questionnaire (PSQ), which was developed specifically for this study.

Entrepreneurship Orientation Questionnaire: Based on the contextual theory of entrepreneurship of Crous and Roodt (2004), the EOQ was used to measure entrepreneurship orientation. Having been used previously in South Africa, the EOQ yielded a Cronbach alpha reliability of 0.972. The instrument consists of 97 items phrased as questions and scored on a seven-point interval scale, ranging from 1 ('never') to 7 ('always'). Only 88 items were used in the present study, as nine items were discarded in a previous study. The scale comprises three subdomains, namely the career context, organisational context and consumer milieu.

As the EOQ had been applied previously to a sample that differed from the present one; a brief analysis was made to assess its structure and reliabilities.

Positive States Questionnaire: No existing scale was available to assess positive states. Accordingly, it was decided that a normative scale would be constructed for this purpose.

Theoretically, the PSQ is based on 'appreciative ability theory' (Thatchenkery & Metzker, 2006). The instrument measures the positive states that emanate as a result of appreciative ability, namely, persistence, irrepressible resilience, conviction that one's actions matter and tolerance for uncertainty. Each subdomain was represented by 25 questions, totalling 100 items. The items are in the form of questions, which can be self-scored on a seven-point interval scale, ranging from 1 ('never') to 7 ('always'). Brief statements listed in Table 1 reflect the essence of the items in the questionnaire. These statements are used for the sake of saving space. The items from the four subdomains were randomised to prevent any response set being established.

The recommendations for scale development proposed by Netemeyer, Bearden and Sharma (2003) were followed.

RESULTS

The statistical analysis of the study was carried out by the Statistical Consulting Services of the University of Johannesburg. The IBM Statistical Package for the Social Sciences (SPSS) statistics computer programme was used. Both instruments were subjected to factor analysis and item analysis, making use of standard techniques.

A brief analysis was carried out on the EOQ, involving a factor analysis of the scale and estimates of its reliability. The findings were so similar to those of Venter *et al.* (2004) that they will not be reported on here in detail, but are available on request. Two factors were identified, which were called Entrepreneurial Ideas (EI) and Entrepreneurial Practices (EP). Cronbach's alpha coefficients of 0.919 and 0.961 were obtained respectively and 0.969 was obtained for the combined scale. In the study of Venter *et al.* (2004) it was decided that the two factors would be combined into one, as they were highly correlated with each other. However, in this study it was decided to keep the two factors separate as well as to combine them. The minor differences that were observed can be ascribed to the fact that the samples differed in insignificant ways: the first sample consisted of nursing students as well as commerce students whilst the sample for this study comprised only commerce students.

For the PSQ, the anti-image correlation matrix indicated a Kaiser-Meyer-Olkin measure of sampling adequacy of 0.859 and a Bartlett Test of Sphericity of 11973.168 ($p = 0.000$). From this it was clear that the correlation matrix had a proper structure and could be subjected to factor analysis. A procedure of doing factor analysis, twice devised by Schepers (2004), was followed to overcome the possible confounding effects of differential skewness.

The size of the intercorrelation matrix (100 x 100) is too considerable for reproduction in this article, but is available on request. The eigenvalues of the unreduced intercorrelation matrix were determined, yielding 24 eigenvalues greater than unity. Twenty-four factors were extracted accordingly following Kaiser's (1961) criterion, using principal factor analysis. From an inspection of the obtained factor matrix, after an orthogonal rotation with varimax, it was clear that there were seventeen factors; seven factors were rejected as each factor had less than two loadings. Subscores were calculated for each of the seventeen factors that were determined, by adding the scores of the items on each factor together across all persons. Care was taken to ensure that the items were reflected in a positive direction before the subscores were formed. The seventeen subscores were intercorrelated and are shown in Table 2.

The subscores were subjected to a principal-axis factor analysis. The eigenvalues of the intercorrelation matrix were calculated and are shown in Table 3. Two eigenvalues were greater than unity and accordingly two factors were extracted according to Kaiser's criterion and rotated obliquely (direct oblimin) to simple structure. Sixty-five per cent of the variance was accounted for by the two factors. The rotated factors are shown in Table 4. The first factor was interpreted as Positive States (POST) and the second as Quitting States (POSQ).

Two scales were formed representing Factors I and II. These scales were subjected to item analysis. Corrected item-total correlations were computed for each of the 79 items of Factor I; Cronbach's alpha coefficients were estimated for each item in order to determine the reliability of the scale as a whole if a particular item was omitted. The corrected item-total correlations ranged from 0.368 to 0.676, with the Cronbach alpha reliability coefficients remaining at 0.978. Two options were now open. The first option was to reject the lowest items, thus reducing the number of items which had no effect on the overall reliability, but which could adversely affect the overall validity. In order to maintain high reliability and good validity it was decided that all the items would be kept and is presented in Table 5. A similar procedure was carried out for the 15 items of Factor II. The corrected item-total correlations ranged from 0.309 to 0.691.

TABLE 1
Statements embedded in the items of the positive states questionnaire

Item	Statements
1	Willingness to venture into unknown territory to achieve goals
2	The extent to which a challenge inspires one to do things never thought possible
3	The extent to which setbacks are regarded as a challenge to work harder.
4	Willingness to return to a project after experiencing a major setback.
5	Extent of one's ability to solve sticky problems that occur unexpectedly.
6	Confidence in finding a way of resolving tough situations successfully.
7	When pursuing a goal, importance of having a focus before starting a task.
8	Extent of adaptability.
9	When faced with a challenge, strength of motivation to follow through and complete tasks.
10	Extent of keenness to explore unknown opportunities.
11	Ability to create new opportunities out of bad experiences.
12	Ability to turn catastrophe into a positive outcome.
13	Determination to achieve goals when faced with opposition.
14	Confidence in ability to achieve success.
15	The extent to which a definite target is needed in the pursuit of a goal.
16	Willingness to make decisions based on a hunch.
17	The importance of experiencing new challenges.
18	Extent of determination to find a way of accomplishing a task if at first this is unknown.
19	Ability to remain positive when faced with what seems like failure.
20	Ability to find solutions to serious obstacles or threats.
21	The ability to remain calm when facing serious challenges.
22	Conviction that one's actions can make a difference.
23	Degree of comfort in using intuition to make decisions.
24	Perceptiveness in noticing changing conditions.
25	Ability to cope with unexpected problems.
26	Importance of remaining positive despite repeated setbacks.
27	Importance of adapting to challenging situations.
28	Ability to bounce back from difficulties.
29	Belief in ability to cope with a crisis.
30	Belief in one's ability to cope with challenging situations.
31	Quickness in spotting changing trends.
32	Extent of enjoyment of change and variety.
33	Willingness to ask for help when struggling with a task.
34	Willingness to complete a project after having experienced unexpected difficulties.
35	Ability to discover new challenges from negative experiences.
36	Ability to cope with difficulties in hard times.
37	Determination to find a way of achieving goals successfully.
38	Importance of pursuing goals when faced with serious resistance.
39	Willingness to take realistic risks.
40	Importance of knowing what will happen next.
41	Importance of not quitting.
42	Ability to deal with problems that come up whilst trying to achieve a goal.
43	Duration of remaining sad after a setback.
44	Ability to find meaning or purpose in life.
45	Extent of consideration of others.
46	Confidence that one's actions make a difference towards the greater good of society.
47	Extent to which one is challenged by uncertainty.
48	Extent of need to follow rules.
49	Ability to find alternate ways of overcoming obstacles, whilst trying to achieve a goal.
50	Ability to think up different ways of solving problems that threaten to block progress.
51	Ability to recover from a setback.
52	Ability to adapt to setbacks.
53	Degree of confidence in ability to successfully deal with challenges.
54	Degree of confidence in ability to complete a difficult task successfully.
55	Extent of flourishing in unfamiliar circumstances.
56	Degree of anxiety when facing strange situations.
57	The extent to which one is tempted to give up when experiencing little support.
58	Having failed to solve a problem, the extent to which one is tempted to give up.
59	Ease of recovering from unpredictable events that threaten a goal.

TABLE 1 (Cont...)
Statements embedded in the items of the positive states questionnaire

Item	Statements
60	Ability to adapt to conflict experienced during the pursuit of a goal.
61	Ease with which a goal is given up on if one feels it will not be achieved.
62	Ability to remain with an unpleasant task.
63	Degree of enjoyment of exploring unfamiliar territory.
64	Efficiency of performance when conditions are not clear cut.
65	Ability to resist the urge to give up after a setback has occurred which threatens a goal.
66	Ability to work effectively towards long term goals.
67	Degree of difficulty in overcoming obstructions in the pursuit of a goal.
68	Readiness to turn an obstacle into an opportunity in the pursuit of your aim.
69	Readiness to attempt a task if it appears to be very complex.
70	Extent of attempt made at mastering a task that is believed to be too difficult.
71	Ability to remain positive when things become uncertain.
72	Ability to remain optimistic.
73	Extent of tendency to give up, having missed a deadline.
74	Extent to which outside pressure influences one to give up on a goal.
75	Ability to find alternate ways of pursuing a goal when confronted with problems.
76	Ability to overcome setbacks that occur whilst trying to reach a goal.
77	Confidence in ability to find a solution to most challenges.
78	Belief that one's actions have an impact on surroundings.
79	Extent to which one feels that things are working out for one in the achievement of the goal.
80	The extent to which one feels everything is against one in the achievement of the goal.
81	Degree of preparedness in taking on new opportunities.
82	Extent to which unexpected opportunities are welcomed.
83	Ability to bounce back after experiencing serious threats to the completion of a mission.
84	Ability to turn obstacles threatening a goal into opportunities.
85	Degree of confidence that one can cope with all realities.
86	The extent to which one feels one's actions affect others.
87	The extent to which one feels one will not achieve a goal, when things seem doubtful.
88	Extent to which one feels it is time to give up when things have started going wrong.
89	The ease of accepting that failure may be because of one's own poor performance.
90	The ability to complete difficult tasks that have been started.
91	The extent to which one finds alternative ways of reaching a goal, when bad experiences have occurred.
92	Extent of conviction that overcoming difficult experiences is strengthening.
93	Extent of belief that one can solve most problems that come one's way
94	Strength of conviction that one will achieve one's goal.
95	Extent of preference for remaining in an unchanging environment.
96	Importance of working according to well set rules and regulations.
97	The ease with which one gives up on a task, if it is proving to be difficult.
98	Ability to cope with a task when times are hard.
99	Strength of belief that one's actions can influence the success of one's mission.
100	Importance of having precise plans to follow for a project.

with the Cronbach alpha reliabilities ranging from 0.852 to 0.869. It was decided that all these items would be kept as well and is presented in Table 6. The Cronbach alpha reliability for Factor I was 0.987 and for Factor II 0.867. The overall Cronbach alpha reliability was 0.974.

The means for the items of the PSQ ranged from 4.17 to 5.93 and the standard deviations of the items ranged from 1.110 to 1.689.

To test the predictive power of the PSQ, multiple regressions were run with EI, EP and the combined entrepreneurship score (EM) as criteria with POST, POSQ and the combined positive states score (POM) as predictors. Firstly, the predictor variables and the criteria were intercorrelated. The matrix of intercorrelations is given in Table 7. From this table it is clear that entrepreneurship Factor I (EI) and entrepreneurship Factor

TABLE 2
Intercorrelation matrix of subscores of Perceived organisational support (17x17)

Subscores	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	19*
1	1.000	0.354	0.753	0.575	0.711	0.639	0.732	0.580	0.703	0.712	0.635	0.645	0.392	0.649	0.66	0.660	0.430
2	0.354	1.000	0.297	0.083	0.355	0.100	0.371	0.237	0.231	0.295	0.236	0.217	0.497	0.219	0.245	0.245	0.267
3	0.753	0.297	1.000	0.68	0.745	0.654	0.718	0.593	0.732	0.768	0.673	0.633	0.286	0.695	0.632	0.632	0.446
4	0.575	0.083	0.68	1.000	0.647	0.630	0.571	0.540	0.651	0.717	0.566	0.560	0.177	0.632	0.529	0.529	0.365
5	0.711	0.355	0.745	0.647	1.000	0.620	0.671	0.552	0.643	0.758	0.568	0.583	0.340	0.686	0.646	0.646	0.484
6	0.639	0.100	0.654	0.63	0.620	1.000	0.524	0.542	0.683	0.663	0.542	0.635	0.208	0.569	0.599	0.599	0.451
7	0.732	0.371	0.718	0.571	0.671	0.524	1.000	0.529	0.678	0.636	0.599	0.519	0.373	0.550	0.638	0.638	0.399
8	0.580	0.237	0.593	0.540	0.552	0.542	0.529	1.000	0.624	0.621	0.548	0.591	0.259	0.512	0.546	0.546	0.350
9	0.703	0.231	0.732	0.651	0.643	0.683	0.678	0.624	1.000	0.713	0.618	0.597	0.229	0.616	0.628	0.628	0.411
10	0.712	0.295	0.768	0.717	0.758	0.663	0.636	0.621	0.713	1.000	0.641	0.637	0.256	0.692	0.671	0.671	0.459
11	0.635	0.236	0.673	0.566	0.568	0.542	0.599	0.548	0.618	0.641	1.000	0.551	0.277	0.601	0.585	0.585	0.387
12	0.645	0.217	0.633	0.560	0.583	0.635	0.519	0.591	0.597	0.637	0.551	1.000	0.217	0.584	0.612	0.612	0.355
13	0.392	0.497	0.286	0.177	0.340	0.208	0.373	0.259	0.229	0.256	0.277	0.217	1.000	0.294	0.292	0.292	0.324
14	0.649	0.219	0.695	0.632	0.686	0.569	0.550	0.512	0.616	0.692	0.601	0.584	0.294	1.000	0.61	0.610	0.448
15	0.660	0.245	0.632	0.529	0.646	0.599	0.638	0.546	0.628	0.671	0.585	0.612	0.292	0.610	1.000	1.000	0.354
16	0.706	0.354	0.667	0.537	0.702	0.572	0.654	0.502	0.612	0.642	0.549	0.532	0.355	0.585	0.594	0.594	0.384
19	0.430	0.267	0.446	0.365	0.484	0.451	0.399	0.350	0.411	0.459	0.387	0.355	0.324	0.448	0.354	0.354	1.000

*, Subscores 17, 18, 20, 21, 22, 23 and 24 were omitted as they had less than two substantial loadings. Accordingly, 17 subscores were created.

TABLE 3
Eigenvalues of unreduced intercorrelation matrix (17x17)

Root	Eigenvalue	Percentage	
		Variance	Cumulative
1	9.696	57.038	57.038
2	1.418	8.340	65.378
3	0.755	4.442	69.820
4	0.603	3.547	73.367
5	0.538	3.165	76.532
6	0.507	2.984	79.515
7	0.488	2.872	82.387
8	0.469	2.762	85.149
9	0.395	2.325	87.474
10	0.373	2.192	89.667
11	0.339	1.993	91.660
12	0.320	1.881	93.541
13	0.267	1.573	95.114
14	0.231	1.356	96.470
15	0.217	1.276	97.746
16	0.204	1.197	98.943
17	0.180	1.057	100.00
Trace	17.000		

TABLE 4
Rotated factor matrix of the positive states questionnaire

Subscores	POST	POSQ	h ² _j
10	0.879	-0.019	0.760
3	0.863	0.031	0.767
4	0.859	-0.216	0.636
9	0.856	-0.062	0.693
6	0.847	-0.172	0.629
14	0.778	0.004	0.607
5	0.772	0.151	0.713
1	0.768	0.191	0.744
12	0.768	-0.059	0.557
15	0.748	0.046	0.589
11	0.731	0.028	0.552
8	0.700	0.005	0.493
7	0.681	0.232	0.644
16	0.672	0.210	0.609
19	0.442	0.180	0.292
2	0.003	0.750	0.564
13	0.097	0.612	0.432

INTERCORRELATION MATRIX

	FACTOR I	FACTOR II
FACTOR I	1.000	0.401
FACTOR II	0.401	1.000

POST, positive states; POSQ, quitting states

II (EP) are substantially positively correlated with positive states Factor I (POST) and significantly positively correlated with positive states Factor II (POSQ). EM is also highly correlated with POM.

In order to determine whether the two instruments were correlated, a regression was performed. The results of the relationship between EI and the two PSQ factors, POST and POSQ, are given in Table 8. Table 8 shows that a multiple correlation of 0.796 was obtained. This coefficient is statistically highly significant ($F(2,190) = 164,382; p = 0.001$) and means that approximately 63% of the variance of the criterion (EI) is accounted for by the predictors (adjusted $R^2 = 0.630$); B is the unstandardised regression coefficient, with $SE\ B$ the standard error of B . Beta is the standardised regression coefficient and indicates that POST has by far the greater weight ($Beta = 0.708$) and POSQ has almost no significance ($Beta = 0.112$) for EI.

Table 9 shows the relationship between EP and the two PSQ factors, POST and POSQ. A multiple correlation of 0.771 was obtained; $R^2 = 0.595$, adjusted $R^2 = 0.591$ implies that about 59% of the variance is shared by the criterion and the predictors (almost 60%), which is also statistically highly significant ($F(2,190) = 139.557; p = 0.001$). All the regression coefficients are statistically significant indicating a strong relationship between the two instruments. Beta indicates that POST has by far the greater weight ($Beta = 0.826$) and POSQ has almost no weight ($Beta = -0.090$) for EP.

Table 10 reflects the relationship between the overall entrepreneurship orientation scale and POST and POSQ. This indicates a multiple correlation of 0.821, with $R^2 = 0.675$ and adjusted $R^2 = 0.671$, indicating a common variance of 67% between the predictors and the criterion. Beta indicates that POST has a much higher weight ($Beta = 0.827$) than POSQ, which has almost no weight as it is close to zero ($Beta = -0.0140$), although POSQ is significant.

To test whether there is a difference between men and women, their mean scores were compared by utilising a t -test. The t -test is based on the assumption that the variances do not differ. If they do differ, an adjustment has to be made to the degrees of freedom. With the exception of the Levene F variance ($P = 0.050$) for EP, none of the variances (P) differed. However, the mean difference was not significant once the degrees of freedom ($DF = 152.035$) were adjusted ($P = 0.089$). The gender results are given in Table 11. From this table it is clear that there were no gender differences. Similarly, to test whether there were differences based on ethnicity, the mean scores of Black and White participants were compared by means of a t -test. The results of the comparison are shown in Table 12. It is clear that

TABLE 5
Item statistics in respect of scale I

Item	If item deleted		Corrected item	If item deleted
	Scale Mean	Scale Variance	Total correlation	Cronbach's Alpha
20	413.92	3509.120	0.613	0.978
25	413.90	3508.526	0.622	0.978
6	413.89	3500.808	0.636	0.978
29	413.77	3501.538	0.676	0.978
31	413.99	3525.554	0.483	0.978
21	413.86	3502.618	0.628	0.978
22	413.60	3497.278	0.664	0.978
5	413.97	3506.053	0.615	0.978
23	413.74	3514.966	0.549	0.978
30	413.87	3501.681	0.648	0.978
42	413.71	3509.146	0.63	0.978
1	413.85	3494.658	0.626	0.978
3	413.55	3518.839	0.563	0.978
10	413.80	3501.919	0.636	0.978
38	413.73	3502.246	0.650	0.978
39	413.57	3509.596	0.623	0.978
13	413.70	3487.380	0.683	0.978
4	413.98	3514.915	0.556	0.978
51	413.75	3509.873	0.621	0.978
52	413.86	3511.172	0.609	0.978
36	413.95	3501.425	0.654	0.978
50	413.88	3500.034	0.653	0.978
53	413.68	3515.076	0.608	0.978
60	413.95	3522.365	0.568	0.978
54	413.74	3503.978	0.666	0.978
59	413.99	3521.108	0.567	0.978
35	414.11	3497.053	0.610	0.978
49	413.99	3496.934	0.604	0.978
62	414.25	3534.765	0.368	0.978
83	413.95	3501.998	0.659	0.978
55	414.06	3519.671	0.526	0.978
63	414.04	3514.956	0.519	0.978
64	414.16	3526.964	0.514	0.978
12	414.20	3496.184	0.644	0.978
11	414.08	3496.378	0.655	0.978
17	413.87	3505.802	0.581	0.978
28	413.92	3498.993	0.656	0.978
19	413.90	3493.364	0.656	0.978
24	413.93	3505.098	0.627	0.978
37	413.49	3506.998	0.661	0.978
77	413.82	3508.955	0.653	0.978
85	413.82	3512.040	0.616	0.978
70	413.99	3513.265	0.590	0.978
26	413.72	3502.888	0.582	0.978
34	413.82	3497.413	0.652	0.978
27	413.68	3499.907	0.678	0.978
45	413.46	3537.876	0.423	0.978
46	413.67	3511.017	0.571	0.978
44	413.53	3510.841	0.583	0.978
99	413.41	3525.568	0.530	0.978
94	413.70	3493.368	0.67	0.978
100	413.20	3533.621	0.482	0.978
68	414.13	3516.958	0.577	0.978
69	414.01	3517.879	0.582	0.978
91	414.00	3511.699	0.622	0.978
75	414.02	3499.939	0.640	0.978
84	413.98	3515.982	0.607	0.978
14	413.45	3507.984	0.556	0.978
15	413.76	3500.545	0.581	0.978
9	413.71	3498.965	0.602	0.978
7	413.54	3518.671	0.543	0.978
2	413.69	3505.915	0.656	0.978
93	413.79	3504.359	0.621	0.978
90	413.80	3508.175	0.573	0.978
92	413.83	3495.996	0.660	0.978

TABLE 5 (Cont...)
Item statistics in respect of scale I

Item	If item deleted		Corrected item	If item deleted
	Scale Mean	Scale Variance	Total correlation	Cronbach's Alpha
82	413.89	3498.362	0.610	0.978
18	413.85	3502.875	0.633	0.978
86	413.85	3505.092	0.638	0.978
40	413.75	3513.310	0.534	0.978
66	413.86	3509.112	0.582	0.978
33	413.72	3503.297	0.625	0.978
81	413.77	3510.321	0.598	0.978
79	413.82	3510.907	0.613	0.978
8	413.75	3510.912	0.557	0.978
71	413.83	3527.972	0.520	0.978
78	413.76	3523.822	0.529	0.978
72	413.81	3519.445	0.554	0.978
47	414.07	3542.621	0.354	0.978
32	413.85	3525.477	0.518	0.978

Mean, 419.13; Variance, 3598.922; *SD*, 59.991; *N* of items, 79; Cronbach's alpha, 0.978

TABLE 6
Item statistics in respect of scale II

Item	If item deleted		Corrected item	If item deleted
	Scale Mean	Scale Variance	Total correlation	Cronbach's Alpha
88	66.27	152.367	0.691	0.849
97	66.30	153.961	0.628	0.852
80	66.35	155.263	0.554	0.856
74	66.25	155.131	0.606	0.854
95	66.28	156.667	0.545	0.857
87	66.01	162.403	0.482	0.860
61	66.38	155.795	0.548	0.857
58	66.42	154.655	0.607	0.854
89	65.89	163.528	0.447	0.861
73	66.14	160.656	0.535	0.858
16	66.02	163.937	0.407	0.863
67	66.16	158.763	0.503	0.859
48	65.94	166.167	0.324	0.867
56	66.11	163.130	0.478	0.86
43	66.77	165.497	0.309	0.869

Mean, 70.95; Variance, 181.026; *SD*, 13.455; Number of items, 15

TABLE 7
Matrix of intercorrelations of the Entrepreneurial orientation and Positive states questionnaires

Variables	EI	EP	EM	POST	POSQ	POM
EI	1.000	0.759**	0.896**	0.786**	0.434**	0.796**
EP	0.759**	1.000	0.950**	0.765**	0.222**	0.733**
EM	0.896**	0.950**	1.000	0.817**	0.321**	0.804**
POST	0.786**	0.765**	0.817**	1.000	0.405**	0.984**
POSQ	0.434**	0.222**	0.321**	0.405**	1.000	0.559**
POM	0.796**	0.733**	0.804**	0.984**	0.559**	1.000

** Correlation is significant at the 0,01 level (2 tailed); *N*, 193

EI, entrepreneurial issues; EP, entrepreneurial practices; EM, entrepreneurial score; POST, positive states; POSQ, quitting states; POM, positive states score

there was no statistically significant difference in respect of the two ethnic groups.

DISCUSSION

The principal objective of the study was the construction of a normative scale to measure the positive states associated with appreciative ability and to relate it to a scale of entrepreneurship orientation.

The EOQ yielded highly acceptable metric qualities, manifesting a Cronbach alpha coefficient of 0.969, as did the PSQ, which yielded a Cronbach alpha of 0.974.

The instruments were subjected to a principal factor analysis and yielded two factors each. The two factors identified from the EOQ reflected entrepreneurial ideas and practices and

TABLE 8

Multiple regression of positive states on entrepreneurship orientation factor i (dv)
analysis of variance

	Source of variation	DF	Sum of squares	Mean square
Multiple R: 0.796	-	-	-	-
R Square: 0.634	Regression	2	67.381	33.691
Adjusted R Square: 0.630	Residual	190	38.941	0.205
Standard error of Estimate: 0.45272	Total	192	117.994	-

F, 164.382; *p*, 0.001, *DF*, degrees of freedom

Variables in the equation					
Independent variable	<i>B</i>	<i>SE B</i>	Beta	<i>t</i> -value	<i>p</i>
Constant	0.789	0.243	-	3.247	0.001
Positive states (POST)	0.708	0.047	0.730	15.206	0.000
Quitting states (POSQ)	0.112	0.039	0.138	2.877	0.004

TABLE 9

Multiple regression of positive states on entrepreneurship orientation factor ii (dv)
analysis of variance

	Source of variation	DF	Sum of squares	Mean square
Multiple R: 0.771	-	-	-	-
R Square: 0.595	Regression	2	70.204	35.102
Adjusted R Square: 0.591	Residual	190	47.79	0.252
Standard error of Estimate: 0.50152	Total	192	117.994	-

F, 139.557; *p*, 0.001, *DF*, degrees of freedom

Variables in the equation					
Independent variable	<i>B</i>	<i>SE B</i>	Beta	<i>t</i> -value	<i>p</i>
Constant	1.628	0.269	-	6.045	0.000
Positive states (POST)	0.826	0.052	0.808	15.998	0.000
Quitting states (POSQ)	-0.09	0.043	-0.105	-2.074	0.039

TABLE 10

Multiple regression of positive states on entrepreneurship orientation factor ii (dv)
analysis of variance

	Source of variation	DF	Sum of squares	Mean square
Multiple R: 0.821	-	-	-	-
R Square: 0.675	Regression	2	67.775	33.887
Adjusted R Square: 0.671	Residual	190	32.702	0.172
Standard error of Estimate: 0.41487	Total	192	100.476	-

F, 196.888; *p*, 0.001, *DF*, degrees of freedom

Variables in the equation					
Independent variable	<i>B</i>	<i>SE B</i>	Beta	<i>t</i> -value	<i>p</i>
Constant	1.3	0.223	-	5.832	0.001
Positive states (POST)	0.78	0.043	0.827	18.265	0.000
Quitting states (POSQ)	-0.011	0.036	-0.014	-0.300	0.765

TABLE 11

t-test: Comparison of gender groups in respect of entrepreneurship orientation

	Males			Females			Levene <i>F</i>	<i>P</i>	<i>t</i>	<i>DF</i>	<i>P</i>
	Mean	<i>SD</i>	<i>N</i> 1	Mean	<i>SD</i>	<i>N</i> 2					
Entrepreneurial issues (EI)	5.090	0.729	80	5.064	0.731	120	0.009	0.926	0.251	198.000	0.802
Entrepreneurial practices (EP)	5.466	0.846	81	5.655	0.715	120	3.903	0.050	-1.656	152.035	0.089
Positive states (POST)	5.280	0.755	75	5.280	0.755	118	0.094	0.759	-0.346	191.000	0.730
Quitting states (POSQ)	4.610	0.960	71	4.757	0.894	117	0.086	0.770	-1.063	186.000	0.289

SD, standard deviation; *N*, number; *P*, probability value; *DF*, degrees of freedom

TABLE 12

t-test: Comparison of cultural groups in respect of entrepreneurship orientation

	Black			White			Levene <i>F</i>	<i>P</i>	<i>t</i>	<i>DF</i>	<i>P</i>
	Mean	<i>SD</i>	<i>N</i> 1	Mean	<i>SD</i>	<i>N</i> 2					
Entrepreneurial issues (EI)	5.186	0.707	80	5.095	0.751	85	0.183	0.67	-0.801	163	0.425
Entrepreneurial practices (EP)	5.783	0.729	80	5.581	0.782	85	0.133	0.716	-1.72	163	0.087
Positive states (POST)	5.435	0.772	76	5.35	0.697	81	0.623	0.431	-0.727	155	0.468
Quitting states (POSQ)	4.674	0.926	74	4.67	0.936	80	0.337	0.562	-0.024	152	0.981

SD, standard deviation; *N*, number; *P*, probability value; *DF*, degrees of freedom

were named EI and IP respectively. The two factors from the PSQ were called POSQ and POST. POST represented the four positive states. The second factor, POSQ, was a surprise as it was composed of items that represented quitting and may indicate recognition that there is a point where it is time to give up pursuing one's goal.

Multiple regression analyses were done to establish the relationships between the two instruments. Statistically, all factors were found to correlate significantly with one another. The correlation of EOQ with PSQ is 0.804. The correlation of POSQ and the other factors, although significant, was the least significant. Beta, the standardised regression coefficient indicates that POST has by far the greater weight (*Beta* = 0.827) while POSQ has almost no weight (*Beta* = -0.0140), although POSQ is significant.

These results confirm that there is a meaningful relationship between positive states and entrepreneurship orientation.

It is interesting to note that no gender or ethnical differences were found between Black and White participants. This is encouraging, especially within the multicultural South African context, because, at least at student level, it appeared that there are no significant differences between gender or ethnical groups in respect of entrepreneurship orientation and the positive states measures. As there were no biographical differences, the major findings of the study were not clouded by extraneous factors.

There were some limitations to the study. Firstly, the sample consisted of university students, who, although having the advantage of providing an adequate sample size, have yet to realise their entrepreneurial ability in a real-life situations. It would be desirable to conduct a similar study in the organisational context that would assess real-life situations as well as to conduct a study on larger samples. Secondly, it must be noted that a relationship was established between two measures. Further research is needed to establish whether this correlation is confirmed between entrepreneurship ability and the positive states themselves.

Luthans, Youssef and Avolio (2007) suggest that positive states may be regarded as positive psychological capital. The results of this study indicate that positive states (as independent variable) are positively correlated with entrepreneurial orientation (dependent variable). This suggests that for the purposes of entrepreneurship development the investment of positive psychological capital (in the form of positive states) is as important as traditional forms of capital. It must not be forgotten, however, that the positive states emanate as a result of practising appreciative ability theory (Thatchenkery & Metzker, 2006) and so this should be the preferred method of enhancing these abilities, as shown in McWalter's (2008) study of a successful South African entrepreneur.

REFERENCES

- Adler, M.G., & Fagley, N.S. (2005). Appreciation: Individual differences in finding value and meaning as a unique predictor of subjective well-being. *Journal of Personality*, 73(1), 79–114.
- Allen, K.A. (2001). *Entrepreneurship for dummies*. New York: Wiley.
- Amanjee, B.A.E., Crous, F., & Crafford, A. (2006). *South African Journal of Industrial Psychology*, 32(3), 26–34.
- Bandura, A. (1977). Self-efficacy: Towards a Unifying Theory of Behavioural Change. *Psychological Review*, 84(2), 191–215.
- Bandura, A. (1983). Temporal dynamics and decomposition of reciprocal determinism: A reply to Phillips and Orton. *Psychological Review*, 90(2), 166–170.
- Baum, J.R. (2005). The practical intelligence of high potential entrepreneurs. Retrieved 04 September, 2007, from www.rhsmith.umd.edu/entrepconf/2005/pdfs/Baum%20Practical%20intelligence%20of%20high%20potential%20entrepreneurs.pdf
- Bolton, B. & Thompson, J. (2004). *Entrepreneurs: Talent, temperament, technique* (2nd edn.). Oxford: Elsevier.
- Bridge, S., O'Neill, K. & Cromie, S. (2003). *Understanding enterprise and small business* (2nd edn.). Hampshire: Palgrave Macmillan.
- Brown, T.E., Davidsson, P., & Wiklund, J. (2001). Entrepreneurship as opportunity-based firm behaviour. *Strategic Management Journal*, 22(10), 953–968.
- Casson, M., & Wadeson, N. (2007). The discovery of opportunities: Extending the economic theory of the entrepreneur. *International Journal of Entrepreneurial Behaviour and Research*, 28(4), 285–300.
- Clampitt, P.G., & Williams, M.L. (2001). Communicating organizational uncertainty. In G. Erreygers (Ed.) *Economics and interdisciplinary exchange*. London: Routledge.
- Cooperrider, D., Whitney, D., & Stavros, J. (2003). *Appreciative inquiry handbook*. San Francisco: Jossey-Bass.
- Crous, F., & Roodt, G. (2004). 'n Kontekstuele teorie van entrepreneurskap. *South African Journal of Industrial Psychology*, 30(3), 1–7.
- Di Paula, A., & Campbell, J. (2002). Self-esteem and persistence in the face of failure. *Journal of Personality and Social Psychology*, 83(3), 711–724.
- Endres, A.M., & Woods, C.R. (2007). The case for more 'subjectivist' research on how entrepreneurs create opportunities. *International Journal of Entrepreneurial Behaviour & Research*, 13(4), 222. Retrieved April 08, 2008, from <http://0-proquest.umi.com.ujlink.uj.ac.za:80/pqdweb/?did=1366219711&sid=6&Fmt=2&clientId=57200&RQT=309&VName=PQD>
- Gardner, H. (1983). *Frames of mind: The theory of multiple Intelligences*. New York: Basic Books.
- Gardner, H. (1998). *Extraordinary minds; Portraits of 4 exceptional Individuals and an examination of our own extraordinariness*. New York: Basic Books.
- Gardner, H. (2004). *Changing minds: The art and science of changing our own and other people's minds*. Massachusetts: Harvard Business School Press.
- Gist, M.E. (1987) Self-Efficacy: Implications for organisational behaviour and human resource management. *Academy of Management Review*, 12(3), 472–485.
- Gonzales, C., Dana, J., Koshimo, H., & Just, M. (2005). The framing effect of risky decisions: Examining cognitive functions with fMRI. *Journal of Economic Psychology*, 26(1), 1–20.
- Haidt, J., & Keltner, D. (2004). Appreciation of beauty and excellence. In C. Peterson & M.E.P. Seligman (Eds.) *Character strengths and virtues. A handbook and classification* (Ch23). New York: Oxford University Press.
- Higgins, G.O. (1994). *Resilient adults: Overcoming a cruel past*. San Francisco: Jossey-Bass.
- Hofstede, G. (1990). Problems remain, but theories will change: The universal and the specific in the 21st-century global management. *Organizational Dynamics*, Summer 1999, 34–44.
- Isaacs, A.I. (2003). *An investigation of attributes of school principals in relation to resilience and leadership practices*. Unpublished DLitt et Phil dissertation, Florida State University. Retrieved April 08, 2008, from http://etd.lib.fsu.edu/theses/available/etd09212003212500/unrestricted/Dissertation_Isaacs_full.pdf
- Kaiser, H.E. (1961). A note on Guttman's lower bound for the number of common factors. *British Journal of Statistical Psychology*, 14(1), 1.
- Karabenick, S.A. & Knapp, J.R. (1991). Relationships of academic help seeking the use of learning strategies and other instrumental achievement behaviour in college students. *Journal of Educational Psychology*, 8(2), 221–230.
- Klein, P. (1999). Multiplying the problems of intelligence by eight: A critique of Gardner's theory. *Canadian Journal of Education*, 22(4), 377–384.
- Kolb, K. (1984). *Experiential Learning*. Englewood Cliffs: Prentice-Hall.
- Luthans, F., Youssef, C.M., & Avolio, B.J. (2007). Psychological capital: Investing and developing positive organizational behaviour. In D.L. Nelson & C.L. Cooper (Eds.), *Positive organizational behaviour* (pp. 9–24). London: Sage.
- Maslow, A.H. (1970). *Motivation and personality*. New York: Harper & Row.
- MacLean, T.L. (2008). Framing and organisational misconduct: A symbolic interactionist study. *Journal of Business Ethics*, 78, 3–16.
- McFarlin, D.B., Baumeister, R.F., & Blascovich, J. (1984). On knowing when to quit: Task failure, self esteem, advice and non-productive persistence. *Journal of Personality* 52(2), 138–155.
- McWalter, A. (2008). *The appreciative intelligence of Herman Mashaba: A psychobiography of a South African entrepreneur*. Unpublished master's thesis, University of Johannesburg.
- Netemeyer, R.G., Bearden, W.O., & Sharma, S. (2003). *Scaling procedures: Issues and applications*. London: Sage.
- Perez, R.C. (1973). The effect of experimentally induced failure, self-esteem and sex on cognitive differentiation. *Journal of Abnormal Psychology*, 81(1), 74–79.
- Rogers, C.R. (1951). *Client-centered therapy: It's current practice, implications and theory*. Boston: Houghton Mifflin.
- Schepers, J.M. (2004) Overcoming the effects of differential skewness of test items in scale construction. *South African Journal of Industrial Psychology*, 30(4), 27–43.
- Seligman, M.E.P. (1998). The American way of blame. *APA Monitor Online*, 29(7). Retrieved August 27, 2008, from www.apa.org/monitor/jul98/pc.html
- Shane, S.A. (2008). *The illusions of entrepreneurship*. New Haven: Yale University Press.
- Singh, R.P., Knox, E.L., & Crump, M.E.S. (2008). Opportunity recognition differences between white and black nascent entrepreneurs: a test of Bhavé's model. *Journal of Developmental Entrepreneurship*, 13(1), 59–76.
- Sternberg, R.J. (1999). Successful Intelligence: finding a balance. *Trends in Cognitive Sciences* 3(11), 436–412.
- Strumpfer, D.J.W. (2001). Psychometric evaluation of an instrument to measure resilience in adults. *South African Journal of Psychology*, 31(1), 36–44.
- Tanas, J.K. & Saeed, J. (2007). Entrepreneurial cognition and its linkage to social capital. *Journal of American Academy of Business, Cambridge*, 11(1), 179–182.
- Thatchenkery, T., & Metzker, C. (2006). *Appreciative intelligence: Seeing the mighty oak in the acorn*. San Francisco: Berrett-Koehler.
- Venter, C., Crous, F., & Schepers, J.M. (2004). Die ontwikkeling en evaluering van 'n entrepreneurskaporientasie-vraelys. *SA Journal of Industrial Psychology*, 30(3), 8–20.
- Vickers, G. (1965). *The Art of Judgment: A study of policy making*. London: Chapman & Hall.
- Vickers, G. (1967). *Towards a Sociology of Management*. London: Chapman & Hall.