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Impact of positive education psychology on the first-year student experience

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Abstract

Positive Psychological Interventions (Positive Education) uses a multi-dimensional approach that includes fostering beliefs and developing a growth mindset to reduce anxiety and psychological distress and improve well-being. Positive education has been shown to improve secondary students' engagement, well-being and self-efficacy, impacting achievement. Seligman's (2011) PERMA framework with its elements of positive emotions, engagement, relationship, meaning and accomplishment has been successfully used to assess positive education strategies in schools. However, the model has not been tested at the tertiary level. We used the PERMA model framework to create a survey that was suitable for the tertiary level and implemented positive education strategies in a class of mainly foreign on-campus students to determine the usefulness of the model. Results showed a strong relationship between positive emotions and engagement, engagement and relationship, engagement and meaning and engagement and accomplishment, but a lack of association between accomplishment and: positive emotions, relationship and meaning.

Background and Rationale

Positive psychology is grounded in an understanding of how the human mind works and offers an approach that helps to foster mental well-being and resulting actions. In high-performing workplaces, approaches to employer/employee relations and performance management that foster a sense of well-being are increasingly acknowledged as a factor in improving productivity and workplace success (Avey et al., 2010).

Given the above, and in order to address the stresses of modern society, there is growing interest in applying positive psychology interventions designed to promote well-being. Arguments have been made for applying positive education, as it has come to be known, in schools to enable resilience in our young. Waters (2011), suggests that Seligman's PERMA model is a useful framework that can be used to guide schools in employing positive education. The PERMA acronym stands for the five essential elements required for wellbeing.

Positive emotions (P) such as joy, gratitude, hope and inspiration is the most obvious link to happiness. According to Waters (2011) there is a clear link between emotions and cognitive skills such as brainstorming, problem-solving, perspective taking and creativity. When students feel good their brain releases dopamine which enhances attention and improves various aspects of memory. If they enjoy the tasks they are involved in they are more likely to persevere and battle challenges through creative and alternative solutions.

Another crucial element of the model is **engagement (E)**. Being fully immersed in what we are doing, absorbed in the present moment in a state of “flow”, is important to stretch our intelligence, skills and emotional capabilities (Nakamura & Csikszentmihalyi, 2000). There is substantial evidence that engagement is associated with wellbeing, learning and accomplishment of important goals. Classrooms flourish as learning environments when teachers and students are engaged, curious, and motivated. Engagement fosters development and growth as individuals invest time in worthwhile activities, learn new skills, and build resources for future success.

Research suggests that a positive teacher-student **relationship (R)** has an especially powerful influence on student engagement and intrinsic motivation (Anderson et al., 2004). A powerful strategy for promoting positive relationships is developing emotional and social intelligence. Emotional intelligence has been empirically linked with wellbeing (Gallagher & Vella-Brodick, 2008) and academic performance (Parker & Creque, 2004).

Meaning (M) is the next element of Seligman’s model. It is in the very nature of humans to constantly search for it and a sense of meaning and purpose is a key element of wellbeing. Meaning is derived from the understanding the perceived relevance and purpose of activities. (Seligman, 2011).

The final element of the model is **accomplishment (A)**. Positive accomplishment is defined as the development of individual potential through striving for and achieving meaningful outcomes and involves the capacity to work towards valued goals, the motivation to persist despite challenges and setbacks, and the achievement of competence and success in important life domains (Norrish et al. 2013). Academic life is certainly one of those domains.

The Seligman model was used by Butler and Kern (2016) to develop the PERMA Profiler, a brief measure of PERMA. It has been proven to effectively measure secondary students’ engagement, well-being and self-efficacy, impacting achievement (Butler & Kern, 2016, Kern et al. 2015). To the best of our knowledge, this model has not yet been tested in the tertiary environment, and this raised a few questions in our minds.

Why hasn’t Seligman’s model been applied widely in higher education settings yet? Is the model’s usefulness limited to primary and high school settings? Is the wellbeing of university students less important? According to Stallman (2010) mental health of university students is an important issue, and a comparison with the general population data proves they are at much higher risk, calling for early interventions to prevent the development of severe mental illness. Another study by White (2016) suggests that the majority of students report elevated stress levels and most of them do not seek medical attention as they accept stress as part of the student experience. Although the Profiler was developed in the high school context, we believe it is flexible enough to be adapted for use in the university setting as recommended by Oades et al., 2011.

Our initiative

We wanted to explore the potential for similar positive outcomes of the PERMA model to be achieved in the tertiary environment. Students often feel disconnected/disorientated when first entering university, particularly if they are first in the family or international students (Zare et al., 2011). We acknowledge that in Australia, with a large percentage of international students in the class, there are several other issues in the learning environment such as culture shock, homesickness or stress in settling into the new environment in class, not being engaged in class,

issues with critical thinking, limited computer skills and language barriers. These students all start their new journey being very enthusiastic but very quickly feel overwhelmed by the changes and adaptations required of them, causing them to feel inadequate and to doubt whether they can succeed (based on a study of Norrish et al. 2013). This affects their learning experience in class and also the retention and progression rates, which is persistent with Waters (2011). Implementing a wellbeing program such as Seligman's PERMA model could be a powerful preventative measure in addressing retention, progression and wellbeing of higher education students (following Butler & Kern, 2016). We believe that the model is applicable to a university setting with cohorts such as ours and especially with the high fee payment by international students onshore (FPON) numbers in the Masters of Professional Accounting course (MPA).

Our pilot study was designed to investigate the effect of embedding positive education in the curriculum for 70 MPA students in a first-year statistics unit traditionally described by students as 'challenging'. We hoped the positive education model would mitigate the negative impact of student expectations about the difficulty of the course. The cohort consisted of mostly international students studying full time, for whom English is a second language.

We embedded the above-described model through class strategies such as:

- **Positive emotions** – affirming students' capability and a growth mindset by bringing positive emotions and enjoyment into the classroom routine, by focusing on talents and strengths of each individual student
- **Engaging** - having activities that utilise current skills and also extend and challenge students; working collaboratively so that there is a sense of all moving forward together; emphasising that every individual's skills are important in achieving learning goals.
- **Relationships** – connecting with individual students, getting to know them as individuals, not as just a cohort. Resolving troubling issues on the spot, not allowing doubts/anxieties to linger. Students were made to work together, getting to know each other as individuals and valuing diverse skills, cultures and knowledge.
- **Meaning** – by organising activities that have meaning and relevance to all.
- **Accomplishment** – by setting up 'ways of working' at the start and organising activities that offer scaffolded challenges to encourage all students to work to their maximum capacity.

Research method

A paper-and-pencil 30-item questionnaire was used to collect data. The main focus is placed on 25 items for the PERMA model and 5 which are related to retention (negative emotions). Respondents were asked to rate each item on a five-point Likert scale, ranging from 1 (not important) to 5 (very important). We used mostly short questions to keep our questionnaire survey brief to avoid putting respondents off. A total of 67% responses were collected.

The survey was created based on PERMA surveys used in primary and high schools that were sourced from the relevant literature. We modified those surveys for use at the tertiary level. This was the first purpose of our research, to test the modified PERMA model.

Our initial findings

We tested the 25-items in a confirmatory factor model. All PERMA model variables were measured with five items each, and for all, Cronbach's alphas were found at a reasonable level.

Model fit was evaluated using the root mean square error of approximation (RMSEA), and the Root Mean Residual (RMR), which are population-based measures not affected by sample size. A RMSEA of 0.10 or lower combined with an RMR of 0.50 or lower are considered acceptable. We also examined the goodness of fit index (GFI), adjusted goodness of fit index (AGFI), and Comparative Fit Index (CFI) for which values over 0.90 are considered a good fit. In addition we looked at the parsimony goodness of fit index (PGFI); where values over 0.50 are considered a good fit.

The CFA was applied to the original PERMA model first, followed by the goodness of fit indices analysis. Unfortunately, it was noticed that only one index met required criteria (RMR). We then conducted a detailed analysis of the covariance structure of all items, resulting in 9 items being removed from the original model. It appears that some of the items were incorrectly defined/written, and did not fully reflect the PERMA elements. Even after modifications, some of the remaining loadings were below the expected value of 0.6. We are of the opinion that the reduction of items per category would be desired, but the lower number of items should still cover fully and correctly define the PERMA element applicable to tertiary education. Our data analysis showed a strong relationship between positive emotions and engagement, engagement and relationship, engagement and meaning and engagement and accomplishment. What surprised us is the lack of association between accomplishment and: positive emotions, relationship and meaning.



Figure 1: Relationship between positive and negative emotions

The other part of this analysis focused around the retention aspect. Retention was measured by negative emotions items of: ‘I feel sad’, ‘I feel lonely’, ‘I feel angry’, ‘I feel anxious’, ‘I feel overwhelmed’. The results showed that there is a relationship between importance and frequency of the items. The figure below shows that negative emotions are considered as part of the study journey, where the feeling of being sad, angry and overwhelmed are the dominant items.

Conclusion and questions for discussion

Our data showed clear and expected correlation between positive experiences/emotions and students’ intention to persist in the unit. The findings show great engagement in the unit, which was mostly based on the strong and open relationship between the teacher and the peers. The

positive emotions increased students' involvement in class life and their focus on defining and achieving goals in the unit (the purpose/meaning of the study). However, we found some unexpected results in the lack of correlation between accomplishment and positive emotions, relationship and meaning. Also results showed that negative emotions are still present.

Questions we would like to pose:

- Are the questions appropriate for the cohort, i.e. are they easily understood by different cultures/age groups/English fluency
- Is the number of questions appropriate, and how the survey could be improved?
- Is there an inverse correlation between negative emotions and retention level? How can we find out more about this? Should we use semi-structured exit interviews?
- What other explanations might there be for the unexpected results?
- Who would like to join us in an expanded study across disciplines, institutions, countries?

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