

We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

186,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com



Positive Psychology: The Use of the Framework of Achievement Bests to Facilitate Personal Flourishing

Huy P. Phan and Bing H. Ngu

Additional information is available at the end of the chapter

<http://dx.doi.org/10.5772/intechopen.68873>

Abstract

The *Framework of Achievement Bests*, which was recently published in *Educational Psychology Review*, makes a theoretical contribution to the study of positive psychology. The Framework of Achievement Bests provides an explanatory account of a person's optimal best practice from his/her actual best. Another aspect emphasizes on the saliency of the psychological process of *optimization*, which is central to our understanding of person's optimal functioning in a subject matter. Achieving an exceptional level of best practice (e.g. achieving excellent grades in mathematics) does not exist in isolation, but rather depends on the potent impact of optimization. This chapter, theoretical in nature, focuses on an in-depth examination of the expansion of the Framework of Achievement Bests. Our discussion of the Framework of Achievement Bests, reflecting a methodical conceptualization, is benchmarked against another notable theory for understanding, namely: Martin Seligman's *PERMA* theory. For example, for consideration, one aspect that we examine entails the extent to which the Framework of Achievement Bests could explain the optimization of each of the five components of PERMA (e.g. how does the Framework of Achievement Bests explain the optimization of engagement?).

Keywords: Framework of Achievement Bests, best practice, personal flourishing, positive psychology, PERMA, well-beings, optimization

1. Introduction

The study of *positive psychology* has advanced theoretically and empirically with the work of Seligman (2011a, 2011b). The PERMA model [1, 2], for example, has provided grounding into the understanding of the positive psychology paradigm. Positive psychology, as noted, is not

a passing fad, but rather an inquiry that places strong emphasis on the *proactivity of human behaviour*. For example, one important aspect of this entails recognition of the achievement and experience of *optimal functioning*, which reflects maximization of a person's capability. Optimal functioning, in this sense, is concerned with a person's internal state of functioning (i.e. cognitive, motivational, emotional) that is maximized to his/her fullest potential. This theoretical approach of positive psychology differs from the traditional, deficit models of human behaviour that focus on preventive measures and rectification of maladaptive functioning.

Recently, the *Framework of Achievement Bests* [3, 4] was developed to provide further understanding into the positive psychology paradigm. This achievement best framework emphasizes on a person's quest to achieve *an exceptional level of best practice*. More importantly, though, the Framework of Achievement Bests attempts to account and explain how an individual reaches optimal functioning in a subject matter that reflects the maximization of capability. This focus of explanation regarding optimal functioning is achieved has, to date, received moderate theorizations from educators and researchers, alike. On this basis, it is postulated that more emphasis into the operational nature of optimal functioning is needed for clarity and understanding. The current chapter discusses a conceptualization that details the potential contribution of the Framework of Achievement Bests in the study of positive psychology. It is argued that the underlying structure of this framework is positive, in nature, and may complementarily support the PERMA theoretical model [1, 5] in its explanatory account of human optimal functioning. It is conceptualized, for example, that the achievement of exceptional best practice in a subject matter may itself serve to facilitate a person's state of flourishing.

2. The importance of positive psychology: in brief

Positive psychology, as the term connotes, emphasizes on the positivity and appreciative aspects of human behaviour [6, 7]. This 'branch' of psychology, credited to Seligman, Csíkszentmihályi, Diener, Maslow and others, emphasizes the importance of human proactivity, personal fulfilment and the aspiration to lead fruitful and meaningful lives. In this sense, positive psychology is a theoretical approach that focuses on virtues, inner strengths and resilience, and the achievement of optimal functioning. These attributes or characteristics are positive, in nature.

Why focus on the study of positive psychology? Positive psychology is noteworthy for long term research development as it serves as a complementary platform for the study of human weakness, healing and maladaptive functioning. Appreciation and the beauty in life are reflected in the positive psychology paradigm. Aside from accommodating shortcomings and damages with other theoretical orientations, positive psychology is able to bring out the best in people and society [8]. Preventive measures to rectify contextual situations and personal circumstances may, in this sense, benefit from the incorporation of positive psychology as an intervention. This theoretical contention is based on empirical documentations that detail the impact of positive psychology in instilling the following: *positive emotional functioning* (e.g. happiness), *positive learning experiences*, *positive social climates*, and *human strengths and virtues* [9].

The main question then, arising from this introduction, is not whether there is credence to accept the positive psychology paradigm. Rather, it is a methodical issue of how one continues to sustain the potent effects of positive psychology [10, 11], namely (i) providing a strong sense of resilience in order to assist a person to rise to life's challenges, (ii) encourage proactive engagement in social relationships with others, (iii) seeking self-gratification and self-fulfilment of enrichment in creativity and productivity and (iv) encourage a person to move beyond oneself and to assist others in their quests to find satisfaction, wisdom, and lasting meaning to life. Adopting positive psychology, in this sense, would enable individuals and society to approach life with collective conviction, personal resolute and confidence. A secondary school student, for example, may use his/her failures for improvement purposes, and to focus more on positive future outlooks rather than reflecting on past and/or current mediocracy.

With this in mind, it is argued that ongoing consideration and utilization of positive psychology may be facilitated by theoretical contributions, applications of different theoretical models (e.g. PERMA: [1, 5]), and continuing development and conceptualizations of understanding. Both individuals and society may benefit from the use of positive psychology theories in their daily functioning. The potency of positive psychology, in this instance, may be demonstrated by its explanatory and predictive effects. Students at school, for example, may focus on their positive emotions (e.g. happiness) for learning, in general. Rather than delving into anxiety and the negativities of school pressures, students may wish to direct their attention on positive outlooks for accomplishment. In a similar vein, individuals may wish to pursue and enjoy life in a non-materialistic sense, and not concentrate on the pursuit of wealth, and so on.

The Framework of Achievement Bests, published recently [3, 4], focuses on the achievement of optimal best practice. This theoretical tenet is in accordance with the positive psychology paradigm, and places strong emphasis on an internal state of optimal achievement that reflects personal maximization of capability. In this section of the chapter, a conceptualization of this framework and its potential contribution to positive psychology is discussed.

3. Best practice: the Framework of Achievement Bests

The positive psychology paradigm places strong emphasis on proactive human endeavours in different domains of functioning. Proactive human endeavours involve strengths, aspirations, planning and the achievement of best practice. In this sense, achievements of best practice reflect the stamina, tenacity and growth of human endeavours. The notion of best practice, recently discussed [12], focuses on a person's internal state of functioning, academically and non-academically. Contrary to the reference 'best', best practice does not emphasize on exceptional or understanding qualities, nor does it emphasize on the highest standard in a subject matter. In a similar vein, best practice does not indicate automated or repeated actions, nor it is concerned with application of a key concept into practice. Rather, best practice in school contexts is non-unitary, and espouses three major elements:

- i. *Acquired knowledge*, which encompasses three different types, namely, *declarative* (i.e. knowledge about the world or of oneself), *procedural* (i.e. knowledge about application and procedure) and *conditional* (i.e. knowledge about one's own awareness of 'when' and 'why' to apply declarative and procedural knowledge) knowledge.
- ii. *Personal experience* is relatively complex, and encompasses both classroom-based academic (e.g. appreciation for *mastery*) and school-based non-academic (i.e. *emotional well-being*, *feelings for schooling*, a *perceived sense of needs* and *social relationships*) attributes.
- iii. *Personal functioning* emphasizes on the saliency of a person's an internal state of cognition, motivation and behaviour that may result in quality learning in an effective manner.

Best practice differs between individuals. Some individuals may demonstrate outstanding levels of best practice, whereas others may report low-to-average levels. In a society, for example, disparities in best practice may be observed from different levels of economic wealth. Similarly, in academic contexts, some students may show exceptional levels of best practice for different subject disciplines. At the same time, best practice also differs from an individual point of view. A 10th grade student may have exceptional knowledge (i.e. declarative, procedural and conditional) in mathematics, but moderate levels in personal experience or personal functioning. In another subject area, the same student may demonstrate an exceptional level in personal experience and personal functioning, but not in acquired knowledge.

The Framework of Achievement Bests [3, 4] explores best practice by focusing on the following: (i) discern and define different levels of best practice and (ii) an underlying psychological process that attempts to explain the achievement of optimal best practice. This framework is innovative for its explanatory account of how one reaches an exceptional level of best practice. More importantly, however, it is argued that this framework is meaningful in terms of its theoretical contributions and relatedness to the positive psychology paradigm. Specifically, in this argument, it is postulated that the achievement bests framework would assist in the execution of the PERMA model [1, 5]. **Figure 1** shows the potential interrelations between the Framework of Achievement Bests, the PERMA model and positive psychology.

3.1. Levels of best practice

The Framework of Achievement Bests focuses on two major levels of best practice: (i) *realistic achievement best*, which is defined as 'an individual's actual competence at any given time to

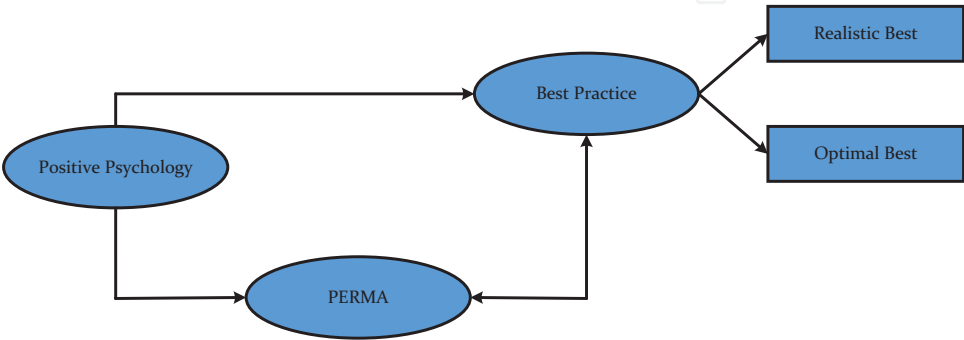


Figure 1. Proposed relations between positive psychology, PERMA and best practice.

learn and/or to solve a problem' [3], and (ii) *optimal achievement best*, which is defined as 'an individual's striving to demonstrate and/or to seek mastery in competence at any given time, reflecting his/her fullest capacity' [3]. Realistic achievement, in this sense, reflects a person's actual level of best practice (e.g. I am capable of writing a 2000-word essay about World War II). Optimal achievement, in contrast, emphasizes a person's aspired positioning to achieve an exceptional level of best practice (e.g. I can do much better and be able to write a 20,000-word thesis on the history of World War II), using his/her historical and realistic achievements as a source of information.

The Framework of Achievement Bests differs from previous theorizations of cognition and motivation, such as the *expectancy-value theory* [13–15] and/or the *zone of proximal development* [16]. For example, the expectancy-value theory emphasizes on a person's perception of his/her current competence, as well as his/her belief about upcoming tasks, either in the immediate or longer term future. What is problematic, however, is that the notion of calibration may arise [17], resulting in inaccuracy and erroneous outcomes. Realistic and optimal achievement bests, in contrast, are not concerned with *belief* about current ability (e.g. I believe that I can.....), and/or *expectancy* about the future (e.g. I expect to do well ...). Rather, these two levels of best practice emphasize on the saliency of a person's recognition of his/her current, actual best practice (i.e. what a person can do), and his/her indication of capability that reflects exceptionality (i.e. what a person is capable of in terms of maximization). In this sense, levels of best practice are indicative of precision and a person's state of quality, competence and enriched experiences.

Different levels of best practice form part of a person's repertoire of knowledge, competence and functioning. At any moment in time, a person may report on his/her levels of best practice. **Figure 2** shows the different levels of best practice that are in accordance with proximal time-frames. For example, at the present time, a student may indicate his/her realistic and optimal achievement bests. Achievement of optimal best, in this case, stipulates a contextual timeframe for accomplishment, based on the level of complexity (e.g. $x^2 + 10 = 26$ vs. $x^2 + y^2 = 25$). An exceptional level of best practice, for instance, may take a period of 1 week to undertake and accomplish (e.g. say, $x^2 + 10 = 26$). If this is the case, then by next week, as shown, a person's optimal best stated today would be considered as being realistic best. Likewise, a person's indication of his/her realistic best today would be considered as historical by next week. This theorized sequencing contends that over the course of time, a person evolves in his/her development of best practice.

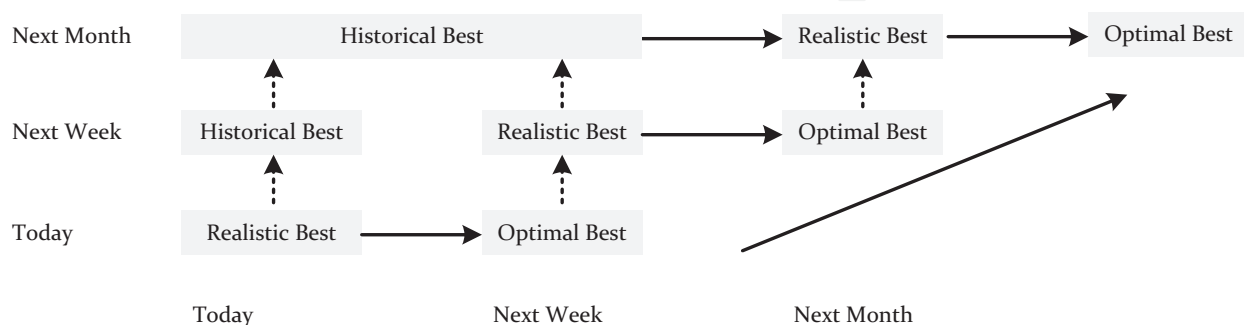


Figure 2. The Framework of Achievement Bests.

3.2. The psychological process of optimization

Realistic and optimal achievement bests differ in that the former is actual best practice, whereas the latter is non-actual, emphasizing instead on a positioning to demonstrate an exceptional level of best practice that reflects maximization in potential. In this analysis, as shown in **Figure 3**, the *zone of optimization* illustrates the striving of one level of best practice to that of another level (i.e. realistic best → optimal best). This achievement of optimal best (e.g. solving $4 + 5^2 = ? \rightarrow 4(x + y)^2 = 3x - 2y$) is explained by *the psychological process of optimization*, which visually is in the shape of a ‘funnel’. As illustrated, the funnel that enables matters (e.g. water) to pass through has a small mouth on the left-hand side, and a wide mouth on the right-hand side. A narrow funnel, in this instance, may deter matters from passing through the funnel quickly. Having said this, however, power-generated mechanisms that are located internally (e.g. a battery-operated pump) may facilitate the movements of matters across a funnel. This example is a mental representation of the underlying operation of optimization, which emphasizes on two important tenets: (i) matters as being a person's best practice and (ii) an internal battery-operated pump as an underlying mechanism that optimizes or energizes the movement of matters (i.e. a person's best practice).

This theorization reflects the totality of optimization, which emphasizes on the *energization in movement of matters across space*. The energization in movement of matters across a funnel (i.e. water flowing through a funnel) is facilitated by the *intensity* of the power-operated mechanism (e.g. an internal battery-operated pump), and the *volume* of the funnel (i.e. the size of the funnel). Intensity, from our conceptualization, is defined as the power of the internal mechanism that operates to facilitate the movement of matters across space (e.g. water). Some power-generated mechanisms (e.g. an internal water pump) are relatively weak in terms of

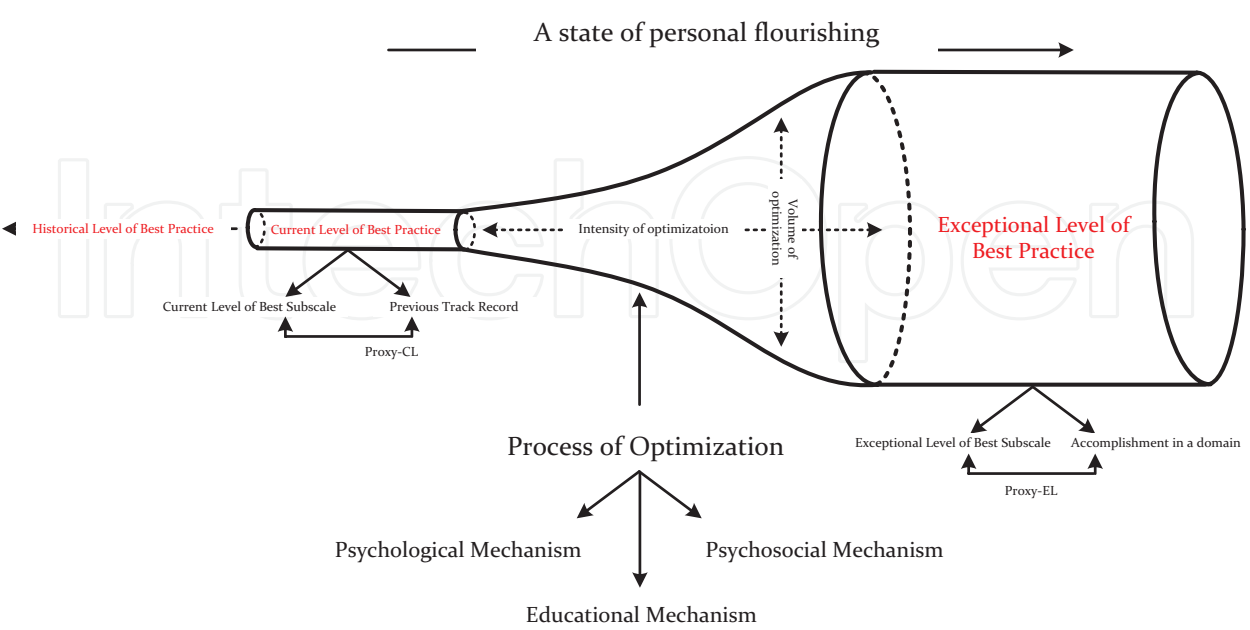


Figure 3. The Framework of Achievement Bests. Source: Adapted from Ref. [1].

power, whereas others are quite powerful given their sizes. Volume, in contrast, emphasizes on the shape and dimensions of a funnel. An elongated funnel that has as small base is likely to deter matters from passing through quickly. This observation also holds true, especially if the internal mechanism is weak in terms of generated power. A funnel that is less elongated and has a large base, in contrast, is more likely to facilitate the movement of matters more quickly. A more powerful internal mechanism, likewise, would assist in the rapid movement of matters across the funnel.

In the context of the present discussion, the example above illustrates the underlying mechanism of the psychological process of optimization. Optimization, based on our discussion of matters moving through a funnel, is an internal process that is intricate, and involves the importance of intensity and scope. The intensity of optimization, specifically, emphasizes on the *extent and amount of resources* needed to optimize a person's state of functioning. The scope (or volume) of optimization, in contrast, focuses on the *amount of effort and time* needed to optimize a person's state of functioning. In essence, drawing from this theorization, the psychological process of optimization encompasses the utilization of resources, and the expenditure of time and effort. There are three types of resources, which we coined as 'mechanisms' [4], that operate to optimize a person's state of functioning. The sequencing of this psychological process is as follows:

- i. The initiation and execution of *optimizing agents* (i.e. *psychological mechanisms*, *educational practices* and/or *psychosocial mechanisms*) that operate to influence the internal personal processes for learning and performance. There are three types of optimizing agents, namely (i) *psychological mechanisms*, such as a person's self-efficacy beliefs for learning [18, 19], hope [20, 21] and motivation, in general [22], (ii) *educational practices*, such as instructional efficiency and appropriate pedagogical approach that enable better comprehension and understanding of the unit materials [4, 23] and (iii) *psychosocial factors*, such as the impact of the home social environment that may shape a student's state of functioning [e.g. 24].
- ii. Upon the positive influences of optimizing agents, internal personal processes of *persistence* [25–27], *effort expenditure* [25, 28, 29] and *effective functioning* [30–32] are activated. This activation, in turn, plays a central role in motivating an organism to reach optimal functioning.

In academic settings, for example, the process of optimization may facilitate the achievement of exceptional best practice. This contention [4] expands on previous theoretical orientations (e.g. cognitive flow [33]) by providing an explanatory account of how an individual achieves an exceptional level of best practice. For example, in the context of mathematics learning, say, an appropriate instructional design (i.e. educational practice) that takes into account the negative impact of cognitive load imposition [23, 34] may enlighten comprehension and understanding of the unit material. This effective pedagogical approach, in turn, may initiate and sustain a heightened state of persistence, which then motivates a student to expend more effort in his/her mathematics study.

Non-academically, likewise, the process of optimization may operate to explain and facilitate in the achievement of optimal best. For example, consider the case of economic and social mobility, and a person's determination to do well, finally. Any person's ambition, in this case, may entail having a good paying job, residing in an affluent area and fulfilling personal and

materialistic needs. Realistic best practice, in this case, may reflect say, the following: (i) a person having an average job that is not well rewarding, financially, (ii) the person resides in area that is considered as being working class and (iii) the person has desires and aspirations to have other materialistic needs. Benchmarking against this realistic best practice level, the person is able to achieve an exceptional level of best practice in terms of his/her job (i.e. to get a better paying job, consequently as a result of his/her academic qualifications), residential area (i.e. moving to a better location) and the fulfilment of materialistic needs (i.e. improve in the quality of materialistic needs). This achievement, of course, may depend on the impact of psychosocial factors, such as the social environment. Opportunities introduced and provided by the community, in this instance, may assist the person to capitalize on his/her talent, qualifications, and so on, to achieve non-academic optimal functioning.

4. Positive psychology and best practice

An important question, which forms the basis of this chapter, is how the Framework of Achievement Bests relates to the positive psychology paradigm? That is, in other words, how does the achievement bests framework explain some of the attributes, characteristics and outcomes of positive psychology? Addressing these questions requires an in-depth analysis of the main tenets of both theoretical orientations. **Figure 1** presents a conceptualization by which best practice makes a direct contribution to the positive psychology paradigm, and a direct contribution to the PERMA theoretical model. Understanding of this conceptualization is facilitated by the identification of convergence and commonalities between best practice and positive psychology. From what has been discussed so far, it is noted that both theoretical orientations focus on the following: (i) enrichment of a positive state of cognitive and emotional functioning, (ii) intense concentration on the striving of personal endeavour (e.g. acquired knowledge), (iii) expenditure of strength, which reflects the maximization of capability, (iv) contemplation of success, rather than delving into the negativities of life and/or one's failures and (v) purposive attention towards positive outlooks regarding life, in general.

Best practice then, based on the assessment made, is indicative of the positive psychology paradigm. In this sense, understanding the overall arching focus of positive psychology may arise from the study of best practice, involving both realistic and optimal achievement bests. Striving to optimal best practice, in itself, reflects a positive psychological dimension of human agency. Indeed, the Framework of Achievement Bests is not negative and does not emphasize on personal failures, pessimism, and so on. Optimal best practice, regardless of its level, is positive and indicates personal resolute, a state of resilience and the maximization of one's full potential. For example, a child's indication of optimal best practice in creativity may explain his inner strength, resolute, and inspiration to strive and achieve exceptionality in this area of inquiry.

4.1. PERMA and best practice

One important line of inquiry in positive psychology involves the development of the PERMA theoretical model [2, 5]. The PERMA theoretical model attempts to understand a person's

state of happiness. Central to this idea is the fact the notion of *flourishing* consists of five core elements, namely:

- i. Feel joyful and to feel positive (**P**). This element of positive emotions emphasizes on the importance of *optimism*, whereby individuals view the past, present and future in an enlightened perspective. Be optimistic and be hopeful. At the same time, this element distinguishes between two *pleasure* and *enjoyment*. Pleasure is related to one's satisfaction to achieve physiological needs for survival (e.g. thirst, hunger). Enjoyment, in contrast, derives from intellectual curiosity, stimulation and creativity.
- ii. To be absorbed and excited in things we do (**E**). *Engaging* in different academic and non-academic activities, in this case, may facilitate and nurture our sense of happiness. Children at school, for example, may engage in a variety of activities, such as putting together jigsaw puzzles, drawing and colouring, playing computer games, and/or practicing ballet or a music instrument. Such engagement, according to Seligman (2011), is intellectually stimulating, and may stretch the child's emotional limits and endurance.
- iii. To feel being loved and be satisfied with personal relationships (**R**). This element suggests that a person's happiness and psychological health are inextricably linked to his/her *close, meaningful and intimate relationships with others*. As human beings, we often thrive for connection, love, intimacy and emotional and physical interactions with others. Social relationships with peers, friends, siblings, parents and extended family, either short-term or long-term, are sources of positive emotions. Social networks (e.g. Facebook), in this instance, have been noted to facilitate and spread happiness and other positive emotions.
- iv. To lead a purposeful and meaningful life (**M**). True happiness, according to Rollo May, an existential psychologist (Source: https://en.wikipedia.org/wiki/Rollo_May), comes from our understanding of having a *meaningful life*, rather than from the pursuit of pleasure and material wealth. Loving someone and helping others, in this sense, reflect meaningful purposes in life. Such engagement may involve, for example, preaching religious faith, doing community work, engaging in a political cause for the good of the people, and taking part in a charity (e.g. distributing food parcels at a local shelter). This dedication reflects the true meaning of life that is greater than oneself.
- v. To achieve important goals and handle responsibilities (**A**). It is important for us to have *aspirations and goals for accomplishment*. Effort expenditure and the accomplishment of realistic goals, in this sense, give us a sense of pride, satisfaction and self-fulfilment. Personal accomplishment (e.g. 'I did it, and I did it well') is a source of enriched well-being, happiness and motivation for us to thrive and to flourish further. At the same time, personal accomplishment, whether small or large, serves to heighten a person's sense of self-belief (e.g. self-esteem).

The PERMA theoretical model is positive, consisting of attributes and characteristics that are proactive, motivational and engaging. As a point of summary, the PERMA model recognizes the importance of optimistic thinking, active engagement, a perceived sense of meaningful and intimate relationships with others, understanding the meaning of living a fruitful, purposive life and a need to have aspirations and goals for accomplishment. This emphasis indicates that

achievements of such endeavours reflect a non-deficit, dynamic approach to human behaviour. It is important to note, however, that each mentioned attributes and characteristics vary in levels of intensity or achievement. For example, in daily settings, a person may vary in his/her optimistic thinking level. Likewise, in a classroom learning situation, a student may differ from his/her peers in relation to active engagement. On this basis, the Framework of Achievement Bests may offer a platform that could provide more information and explanation regarding the PERMA theoretical model.

Best practice, as explained by the Framework of Achievement Bests, entails different levels of achievement. More importantly, however, the achievement bests framework emphasizes the importance of personal striving to reach optimal best. Optimal best practice, reflecting an exceptional level of achievement, may situate and involve the combination of contexts and domains of functioning. Consider, in this case, the five elements of the PERMA theoretical model (i.e. domain of functioning) that are situated within secondary school mathematics learning (i.e. context). It is plausible, in this analysis, to consider different levels of best practice for each of the five core elements. This theorization postulates that each element (e.g. positive emotions) may vary in levels of complexity and development of best practice. The Framework of Achievement Bests, in this sense, provides more clarity into the differential levels of best practice (e.g. personal experience) for the PERMA model, in totality. **Table 1** presents a detailed example of how levels of best practice (i.e. realistic vs. optimal) explain the complexity of each of the five core elements.

Elements	Realistic best practice	Optimal best practice
1. Positive emotions	Relatively optimistic in terms of achieving understanding of the topical theme of 'factorization' in Algebra.	Extremely optimistic in terms of achieving success in other activities in Algebra. Also understand the difference in engagement for the purpose of pleasure vs. enjoyment.
2. Engagement	Moderate engagement in learning different activities (e.g. engaging in in-class work exercises) for the topical theme of 'factorization' in Algebra.	Show extreme engagement, reflecting personal interest, perceived value and intense flow for the learning of Algebra.
3. Relationships	Working interactively with other peers in class, where appropriate, to understand the topical theme of 'factorization'.	Working interactively with peers, teachers and capable others to learn and understand different topical themes for a variety of subject disciplines, where possible.
4. Meaning	Learning for the purpose of seeking knowledge and understanding of a topical theme, in this case, the importance of 'factorization'.	Appreciating successes, but also recognizing that failures are part of life. Perceive and view failures as sources for improvement.
5. Accomplishment	Seeking to fulfil and achieve the goal of mastering this understanding of 'factorization'.	Seeking to fulfil and achieve the goal of helping others to understand the importance of 'factorization'. Helping less capable peers, in this sense, reflects a sense of accomplishment.

Table 1. Best practice and PERMA.

As shown in **Table 1**, each element of the PERMA theoretical model may reflect different levels of best practice. A realistic level of best practice, for example, shows mediocrity in terms of experience of positive emotions, engagement, relationships, meaning and accomplishment. A student who experiences a moderate level of realistic best for emotional functioning may, in this instance, have an aspired positioning to achieve an optimal level of best practice (e.g. an extreme state of optimism, especially in terms of seeking learning for enjoyment purposes). Likewise, another student may experience a low level of realistic best in terms of engagement—his/her optimal level of best practice may reflect proactivity and intense concentration and cognitive flow. An important issue here, in this analysis, is to consider strategies and programs that may facilitate optimal functioning in the PERMA theoretical model.

5. Caveats and recommendations

One main inquiry of positive psychology that has gained traction in recent years is the undertaking of rigorous scientific studies to validate its theoretical tenets. The PERMA theoretical model [1, 5] has, to date, received moderate research attention from educators and scholars, alike [35, 36]. This limited focus has been noted, and questions have been raised regarding the relevance, appropriateness and validity of the PERMA theoretical model. In social sciences, acceptance of a particular theory or theoretical variable requires rigorous scientific testing, and empirical validation. This scientific inquiry may be in the forms of experimental interventions and/or implementation of a program to validate the effectiveness and predictive effects of the theory [37].

The development of an articulation that amalgamates positive psychology, best practice and the PERMA theoretical model has also resulted in the identification of caveats for research development. Firstly, expanding on the work of Seligman and colleagues [5, 38, 39], it is important for researchers to focus on different methodological approaches to validate the PERMA theoretical model. As previously discussed, the PERMA model is perceived as being questionable by some researchers, especially in terms of its ability to remain steadfast under scientific scrutiny. Considering the importance of structural validity of the PERMA model is one important line of inquiry. One possibility, for example, may involve the cross-validation (e.g. the use of confirmatory factor analysis [40]) of different positive psychology and mindfulness. **Figure 4** presents a conceptualization that depicts the cross-cultural validation between positive psychology, best practice and the PERMA model. Based on *structural equation modelling* (SEM) procedures [40, 41], each of the three theoretical orientations is treated as a latent variable (e.g. 'Positive Psychology'), which is then represented by a number of measured indicators. In this example, it is conceptualized that: (i) the latent variable titled 'Positive Psychology' is represented by three measured indicators, namely: 'happiness', 'optimal functioning' and 'flourishing', (ii) the latent variable titled 'PERMA' is represented by five measured indicators, namely: 'positive emotions', 'engagement', 'relationship', 'meaning' and 'accomplishment' and (iii) the latent variable titled 'Best Practice' is represented by three measured indicators, namely: 'acquired knowledge', 'personal experience' and 'personal functioning'.

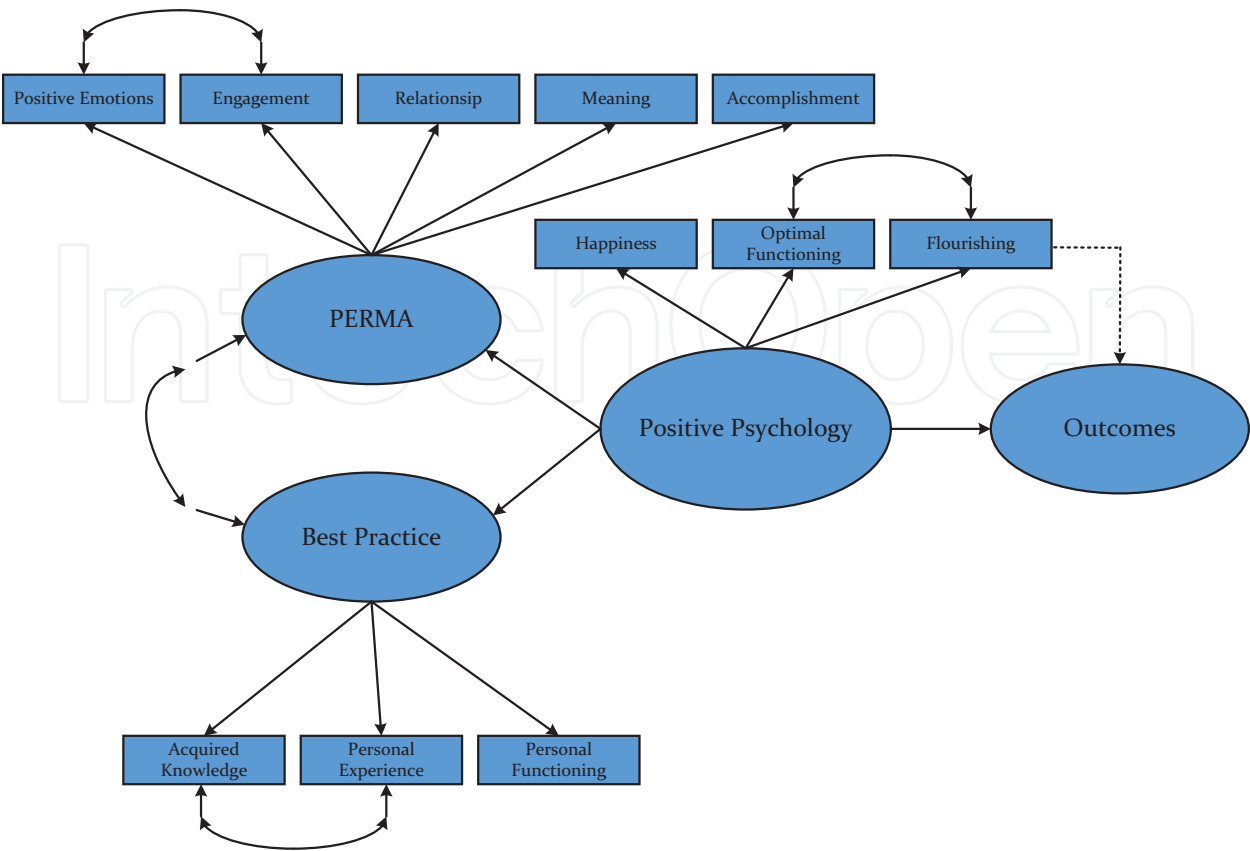


Figure 4. A conceptualization of cross-validation. Note: Due to the complexity of the a priori model, not all paths (i.e. correlated variances between measured indicators and direct structural paths from measured indicators to latent factors) have been included.

The conceptualization detailed in **Figure 4** is a second-order factor representation—that is, the latent factor of ‘Positive Psychology’ is hypothesized as second-order, and is defined by two first-order latent factors: ‘PERMA’ and ‘Best Practice’. For research investigation, it is plausible to consider validating both the structural and measurement models of the proposed conceptualization. The measurement model involves examination of the factorial loadings between the latent factor and its corresponding measured indicators. Strong factor loadings (e.g. $\alpha > 0.70$) and the overall fit of the a priori model may indicate sound psychometric properties, and support the conceptualized theorization. In line with this, statistical assessment is the possible correlated variances that could exist between measured indicators of the different latent factors (e.g. ‘positive emotions’ \leftrightarrow ‘happiness’).

One important line of inquiry, as shown, entails the structural predictive influence of the latent factor of ‘Positive Psychology’ on different types of latent outcomes. This examination (e.g. ‘Positive Psychology’ latent factor \rightarrow academic performance) may add credence to the validity of the positive psychology paradigm. The complexity of SEM procedures also enables statistical testing of the direct structural paths from the measured indicators of the ‘PERMA’, ‘Best Practice’ and ‘Positive Psychology’ latent factors to that of educational outcomes (e.g. ‘flourishing’ \rightarrow outcomes). This inquiry, likewise, is significant for its emphasis on the structural validation of conceptualized theoretical tenets (e.g. positive emotions from the PERMA

theoretical model, acquired knowledge from the best practice theoretical model, happiness from the positive psychology paradigm, etc.).

Secondly, it is a similar line of inquiry for the theory of best practice. One important focus that has, to date, received some empirical evidence concerns the psychological process of optimization. Optimization, involving the activated relationships between optimizing agents (e.g. psychological mechanisms) and internal personal processes (e.g. persistence) is relatively complex and requires further research development. Aside from what has been established [3, 4], to date, very little is known about the initiation, sustainability and activation of the overall process of optimization. For example, the initiation of a particular psychological mechanism (e.g. a sense of hope [42, 43]) and its subsequent activation on an internal personal process (e.g. persistence [25, 26]) have been inferred from individual strands of research.

Author details

Huy P. Phan* and Bing H. Ngu

*Address all correspondence to: hphan2@une.edu.au

University of New England, NSW, Australia

References

- [1] Seligman M. Flourish: A Visionary New Understanding of Happiness and Well-being. New York, NY: Simon & Schuster. 2011
- [2] Seligman M. Flourish: Positive psychology and positive interventions. In: The Tanner Lectures on Human Values. Ann Arbor, Michigan: The University of Michigan; 2010
- [3] Phan HP, Ngu BH, Williams A. Introducing the concept of optimal best: Theoretical and methodological contributions. *Education*. 2016;**136**(3):312-322
- [4] Phan HP, Ngu BH, Yeung AS. Achieving optimal best: Instructional efficiency and the use of cognitive load theory in mathematical problem solving. *Educational Psychology Review*, doi:10.1007/s10648-016-9373-3. 2017
- [5] Seligman M. Flourish. North Sydney, NSW: Random House Australia; 2011
- [6] Sheldon KM, King I. Why positive psychology is necessary. *American Psychologist*. 2001;**56**:216-217
- [7] Gable SL, Haidt J. What (and why) is positive psychology. *Review of General Psychology*. 2005;**9**(2):103-110
- [8] Seligman M. Authentic Happiness. New York, NY: Free Press; 2002
- [9] Lyubomirsky S. The How to Happiness. London: Sphere; 2007

- [10] Keyes CLM, Haidt J, editors. *Flourishing: Positive Psychology and the Life Well Lived*. 1st ed. Washington DC: American Psychological Association; 2003
- [11] Keyes C, Haidt J. *Flourishing: Positive Psychology and the Life Well-Lived*. Washington DC: American Psychological Association; 2002
- [12] Phan HP, Ngu BH. *Teaching, Learning and Psychology in the School: An Applied Approach*. South Melbourne, VIC: Oxford University Press; In press
- [13] Wigfield A, Eccles JS. Expectancy-value theory of achievement motivation. *Contemporary Educational Psychology*. 2000;**25**(1):68-81
- [14] Eccles JS, et al. Expectancies, values and academic behaviors. In: Spence JT, editor. *Achievement and Achievement Motives*. San Francisco: W.H. Freeman; 1983. pp. 75-146
- [15] Eccles JS. Subjective task value and the Eccles et al. model of achievement-related choices. In: Elliot AJ, Dweck CS, editors. *Handbook of Competence and Motivation*. New York, NY: Guilford; 2005. pp. 105-121
- [16] Vygotsky L. *Mind in Society: The Development of Higher Psychological Processes*. Cambridge, MA: Harvard University Press; 1978
- [17] Pajares F. Self-efficacy beliefs in academic settings. *Review of Educational Research*. 1996;**66**(4):543-578
- [18] Bandura A. *Self-Efficacy: The Exercise of Control*. New York, NY: W.H. Freeman & Co.; 1997
- [19] Bandura A. Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*. 1977;**84**(2):191-215
- [20] Snyder CR. Conceptualizing, measuring, and nurturing hope. *Journal of Counseling and Development*. 1995;**73**:355-360
- [21] Snyder CR. Hope, goal blocking thoughts, and test-related anxieties. *Psychological Reports*. 1999;**84**:206-208
- [22] Franken RE. *Human Motivation*. 6th ed. Belmont, CA: Thomson Wadsworth; 2007
- [23] Ngu BH, Phan HP. Comparing balance and inverse methods on learning conceptual and procedural knowledge in equation solving: A Cognitive load perspective. *Pedagogies: An International Journal*. 2016;**11**(1):63-83
- [24] Daulta MSN. Impact of home environment on the scholastic achievement of children. *Journal of Human Ecology*. 2008;**23**(1):75-77
- [25] DeBacker TK, Nelson RM. Variations on an expectancy-value model of motivation in science. *Contemporary Educational Psychology*. 1999;**24**(2):71-94
- [26] Fenollar P, Román S, Cuestas PJ. University students' academic performance: An integrative conceptual framework and empirical analysis. *British Journal of Educational Psychology*. 2007;**77**(Pt 4):873-891

- [27] Martin AJ, Marsh HW. Academic resilience and its psychological and educational correlates: A construct validity approach. *Psychology in the Schools*. 2006;**43**(3):267-281
- [28] Chouinard R, Karsenti T, Roy N. Relations among competence beliefs, utility value, achievement goals, and effort in mathematics. *British Journal of Educational Psychology*. 2007;**77**(3):501-517
- [29] Dupeyrat C, Mariné C. Implicit theories of intelligence, goal orientation, cognitive engagement, and achievement: A test of Dweck's model with returning to school adults. *Contemporary Educational Psychology*. 2005;**30**(1):43-59
- [30] Phan HP, Ngu BH. Introducing the concept of optimized functioning: Establishing evidence for further consideration. *The International Journal of Pedagogy and Curriculum*. 2015;**22**(4):1-19
- [31] Phan HP. Maximizing academic success: Introducing the concept of optimized functioning. *Education*. 2015;**135**(4):439-456
- [32] Fraillon J. Measuring Student Well-Being in the Context of Australian Schooling: Discussion Paper. Carlton South, VIC: The Australian Council for Research; 2004
- [33] Csíkszentmihályi M. *Flow: The Psychology of Optimal Experience*. New York, NY: Harper Perennial; 1990
- [34] Ngu BH, Phan HP. Unpacking the complexity of linear equations from a cognitive load theory perspective. *Educational Psychology Review*. 2016;**28**:95-118
- [35] Kern ML, et al. Assessing employee wellbeing in schools using a multifaceted approach: Associations with physical health, life satisfaction, and professional thriving. *Psychology*. 2014;**5**:500-513
- [36] Kern ML, et al. A multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*. 2015;**10**(3): 262-271
- [37] Meiklejohn J, et al. Integrating mindfulness training into K-12 education: Fostering the resilience of teachers and students. *Mindfulness*. 2012;**3**:291-397
- [38] Seligman MEP, et al. Doing the right thing: Measuring well-being for public policy. *International Journal of Wellbeing*. 2011;**1**(1):79-106
- [39] Diener E, Seligman M. Very happy people. *Psychological Science*. 2002;**13**(1):81-84
- [40] Kline RB. *Principles and Practice of Structural Equation Modeling*. 3rd ed. New York, NY: The Guilford Press; 2011
- [41] Bollen KA. *Structural Equations with Latent Variables*. New York, NY: Wiley; 1989
- [42] Snyder CR, Shorey H. Hope in the classroom: The role of positive psychology in academic achievement and psychology curriculum. *Psychology Teacher Network*. 2002;**12**:1-9
- [43] Snyder CR, et al. Hope and academic success in college. *Journal of Educational Psychology*. 2002;**94**(4):820-826

