

Modeling Personal Excellence Competences for Junior High School Principals Based on AHP Method

Hui-Wen Vivian Tang^{1*}, Mu-Shang Yin², Yuling Liu¹

¹Teacher Education Center, Ming Chuan University, Taiwan

²Department of Travel Management, Hsing Wu University, Taiwan

Email: ^{*}kshvt00@hotmail.com, yin_max@hotmail.com, yuling@mail.mcu.edu.tw

Received 12 May 2016; accepted 18 July 2016; published 25 July 2016

Abstract

The objective of the study is to prioritize training needs for the purpose of enhancing personal excellence (PE) competences among a group of nine junior high school principals in Taiwan. A hierarchical PE map with 16 factors clustered under four dimensions was developed as the research framework for further analysis. The utilization of analytic hierarchy process (AHP) technique for prioritizing perceived importance of PE competences aims to determine contextually specific training interventions for a target group of school leaders. A PE training course coverage is shaped with a focus on enhancing critical PE factors of emotional competence for the target group of school principals. The hierarchical structure of PE and method introduced by the present study would contribute to school leadership development, as well as a scheme for leadership selection and evaluations. Limitations and further explorations based on results of the study are discussed.

Keywords

Personal Excellence, Emotional Intelligence, Leadership Development, Analytic Hierarchy Process

1. Introduction

In 1979, the Personal Excellence Map (PEM) was incepted by Nelson and Low with specific focus on enhancing leadership performance and effectiveness [1]. Based on nearly thirty years of emotional intelligence (EI) research regarding how psychological factors and mental processing contribute to personal well-being and emotional health of educational leaders, the EI-centric construct of PEM was further validated as a priori model developed to assess one's self-defined and self-valued thoughts, feeling and personal strength. Empowering leaders with the ability to perceive and realize one's best self has been recognized as a potential attribute of effective leaders [2]. Despite much interest in relating experiential and cognitive minds to leadership effectiveness, few empirical studies can be found to date that explicitly focus on how personal well-being and emotional health of

*Corresponding author.

leaders can be strengthened based on contextually specific analysis for the prioritization of training needs. For the purpose of detecting the priority of personal excellence competences derived from the literature on the development of a scenario-based PEM training module for a target group of school principals, the analytic hierarchy process (AHP) technique, known as one of the multiple criteria decision making (MCDM) models will be used to snapshot aggregate demands for personal excellence assessed by a group of junior high school principals in Taiwan. The decision hierarchy framework and method introduced by the present study be further extended to assist in evaluating the relative weights of PEM competences considered to be critical for effective leadership development in any given school context. the specific purposes of this study are as follows:

1) To construct a decision hierarchy structure pertaining to the overall goal of the study regarding the development of an EI-centric personal excellence competence framework for school principal preparation program in Taiwan.

2) To synthesize outcome of personal excellence competence weights solicited from a group of participants' judgments for the purpose of shaping a training module for preparing and developing a specific group of junior high school principals in Taiwan.

Results of the study would have contributions to training interventions for developing school leaders' personal excellence competences in Taiwan, as well as other countries in general.

2. Literature Review

2.1. Conceptualizing Personal Excellence

Many studies have provided evidence to support the propositions that positive work attitudes, career success, leadership/management effectiveness and high-level performance in sports, management and career development were related to high level of commitment to personal excellence [2]-[4]. The sport psychology literature, for instance, has documented that previous trait research focused mainly on cognitive abilities, personality, motivation and social capacities as key attributes differentiating high performers from low performers. Spanning from 1980s, the emphasis has been placed on the effects of psychological interventions on performance [5].

To the best of our knowledge, few studies were found to date that targeted on the development of personal excellence construct. A personal excellence measurement tool was developed in 2006 to provide a set of behaviour- and cognitive-based self-assessments on six areas of personal growth for evaluating managerial competences [4]. The personal excellence measure developed by Sanghi seems most heavily based on the influence of cognitive domain on behavioral changes. As noted earlier, the "Personal Excellence Map" (PEM) is a recently developed EI-centric instrument to measure one's best self on the basis of nearly thirty years of inquiry into how psychological factors and mental processing facilitate or impede performance in career and leadership and management education [4]. Additional insight into the development and learning of PE competences was provided by Hammett in 2008. Key PE competences including Nelson and Low's EI-centric approach to PE were believed to be teachable through transformational learning process that that move learners forward in achieving increasing levels of personal success and excellence [2].

2.2. An Emotional Intelligence Framework of Personal Excellence

The influence of emotional intelligence (EI) on holistic personal well-being and health has received much attention in recently years. Based on thirty years of scholarly inquiry into the relevance of emotional cognition to enhancing personal well-being and emotional health, the EI-centric model of PE initiated by Nelson and Low's emotional learning system was psychometrically examined as a priori construct based on which a new PE measurement tool was developed [2]. The PE measurement, together with a transformational learning model of emotional intelligence, paves the way to a synthesis of positive psychology and transformational approach to arise self awareness of the mind, emotion, and behavior [1] [2].

The five major PE domains, or key systems, measured by the PEM are (a) Guidance and Vision, (b) Commitment and Power, (c) Purpose and Beliefs, (d) Relationships and Support, and (e) Change and Balance [1] [2]. Key skills grouped into each system are shown in **Figure 1** below. Definitions of the five key systems and their corresponding PE skills are tabulated in **Table 1**. Worth noting is that a Chinese version of the short-form Personal Excellence measure for use with university students in Taiwan was translated and psychometrically tested [6]. To ensure quality of the translation, content validity of the translated version was achieved through the

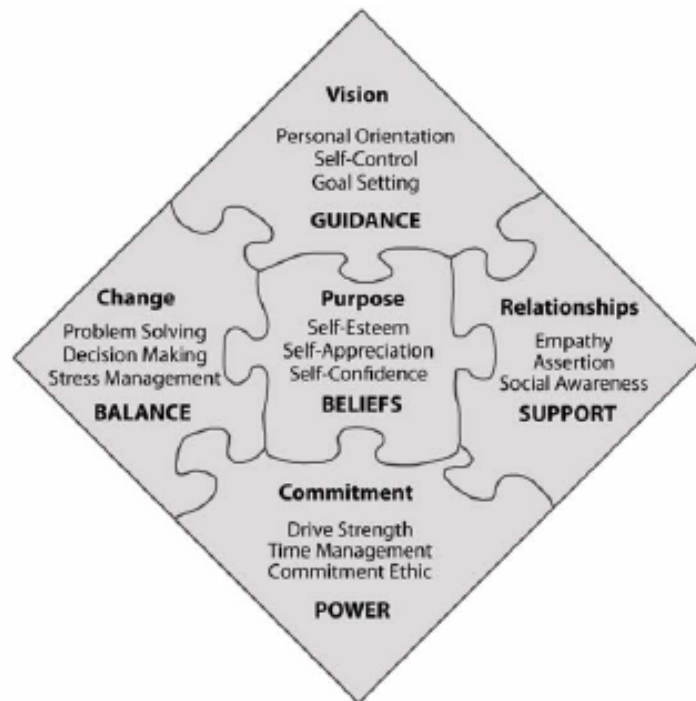


Figure 1. The a priori model of personal excellence. (Note. From *Emotional intelligence: Achieving academic and career excellence* (p. 140), by D. B. Nelson and G. R. Low, 2003, Upper Saddle River, NJ: Prentice-Hall. Copyright 2003 by Pearson Education, Inc. Reproduced with permission of the authors.).

Table 1. The conceptual framework of personal excellence.

Key Systems & Skills	Definitions
I. Belief System: the purpose principle primarily to define our levels of achievement and excellence.	
I-a. Self-Esteem	The learned ability to view self as positive, competent, and successful in achieving personal goals.
I-b. Congruence	The learned ability to clarify important personal values related to goals and beliefs, as well as align behaviors and choices in a self-developing way
I-c. Self-Appreciation	The learned ability to value yourself positively and to be in touch with your strengths as a person
I-d. Self-Confidence	The learned ability to focus on competence and feel positive about your potential to perform effectively
II. Support System: the relationships principle and functions to provide support with others.	
II-a. Assertion	The learned ability to communicate your needs and wants to others in a direct and honest manner.
II-b. Teambuilding	The learned ability to add synergy and contribute constructively in cohort activities.
II-c. Empathy	The learned ability to accurately understand the thoughts/feelings of others.
II-d. Leadership	The learned ability to affect positive influence in others.
III. Guidance System: the personal vision principle and intelligent self direction.	
III-a. Personal Orientation	The learned ability to see oneself as a positive person with potential to continually learn and change.
III-b. Goal Setting	The learned ability to set clear and specific personal goals. Achievable goals provide focus for personal motivation.
III-c. Self-Control	The learned ability to exercise choice and control over the strength of your emotional responses.
IV. Balance System: the change principle which functions to maintain balance in our achievement and consistency in our performance and lives	
IV-a. Decision Making	The learned ability to make good choices while being decisive.
IV-b. Stress Management	The learned ability to positively manage stress while keeping yourself physically and emotionally healthy
V. Power System: the commitment principle, serving to supply direct energy for goal achievement. Internal motivation and focused energy leads to high levels of personal achievement and excellence.	
V-a. Drive Strength	The learned ability to persist and accomplish goals that are meaningful and satisfying.
V-b. Self-Management	The learned ability to manage life and responsibilities proactively.

translation technique suggested by the IQOLA group consists of five stages: the translation, the synthesis, the back-translation, the expert committee review and the pre-testing [7]. The short-form Chinese PEM, thus, offers promise as a psychometrically sound and pedagogical feasible alternative to enhance personal excellence levels.

3. Methodology

3.1. Hierarchy Model Development

Delphi technique was employed to conduct the AHP survey. The Delphi panelists formed by 9 junior high school principals in Taiwan were invited in the pilot study to identify a three-level PE hierarchy for AHP judgment. Panelists were first asked to qualitatively examine the conceptual framework constructed by Nelson and Low [1] [2]. As a result of the expert panel discussion, the dimensions of Guidance System and Power system were merged into one. In conclusion, four categories (dimensions) inclusive of 16 factors were selected for further AHP analysis. A summary of the hierarchical framework was plotted below in **Figure 2** based on the 9 Delphi panelists' discussions.

3.2. Procedure and Design

The same group of 9 experts was invited to conduct AHP judgments in pair-wise comparisons of dimensions and factors structured based on the research hierarchy. A total of 16 factors were included clustered under four dimensions pertaining to the PEM. Saaty [8] explained that pairwise comparisons of AHP questionnaires allow participants to judge a value on a 1 to 9 scaling to rate the relative importance between pairs of 2nd-level factors under particular 1st-level factors (dimensions) with respect to a given goal. The pairwise comparison procedure facilitates experts independently evaluate the relative importance of factors at each level which contribute to the overall weights to the goal [8].

3.3. AHP Data Analysis Procedure

Expert Choice 11.5, a software package, was used to perform this stage of the analysis for obtaining dimension/factor weights and ranking. AHP questionnaire survey result was examined for its validity based on Saaty's consistency test, which provides a measure of consistency of AHP judgments by the participants. A consistency ratio (*C.R.*) is computed to measure how far decision-makers' judgments are from perfect consistency. It is calculated by dividing *C.I.* by Random Index (*R.I.*) [8].

According to Saaty [8], the 1st-level factor matrix size in the present study is 3, and the *R.I.* is 0.58. Therefore, if the *C.R.* is less than 0.10, the judgments are reasonably consistent and the pair-wise comparisons of the present study were acceptable. If the *C.R.* is larger than 0.10, the decision-makers are required to reevaluate their judgments. **Figure 3** above showed that the overall inconsistency = 0.08 (*i.e.* *C.I.* = 0.08), indicating that the

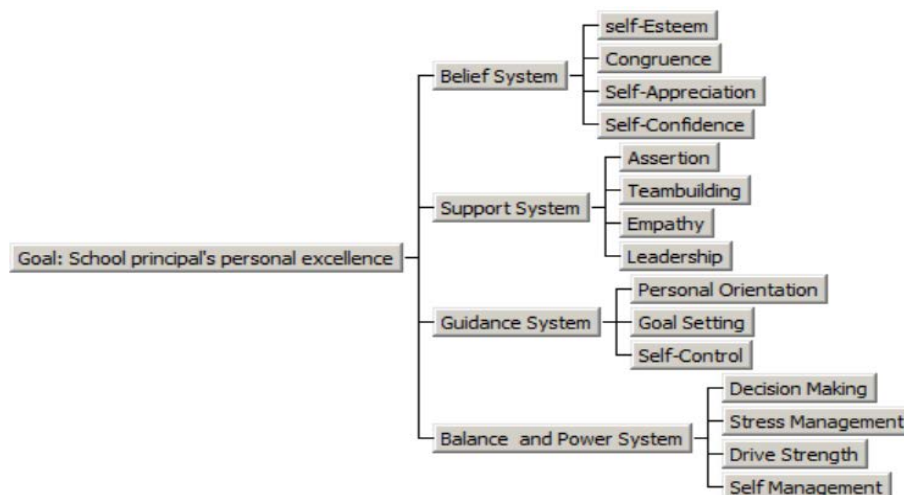


Figure 2. An AHP hierarchy pertaining to personal excellence map.

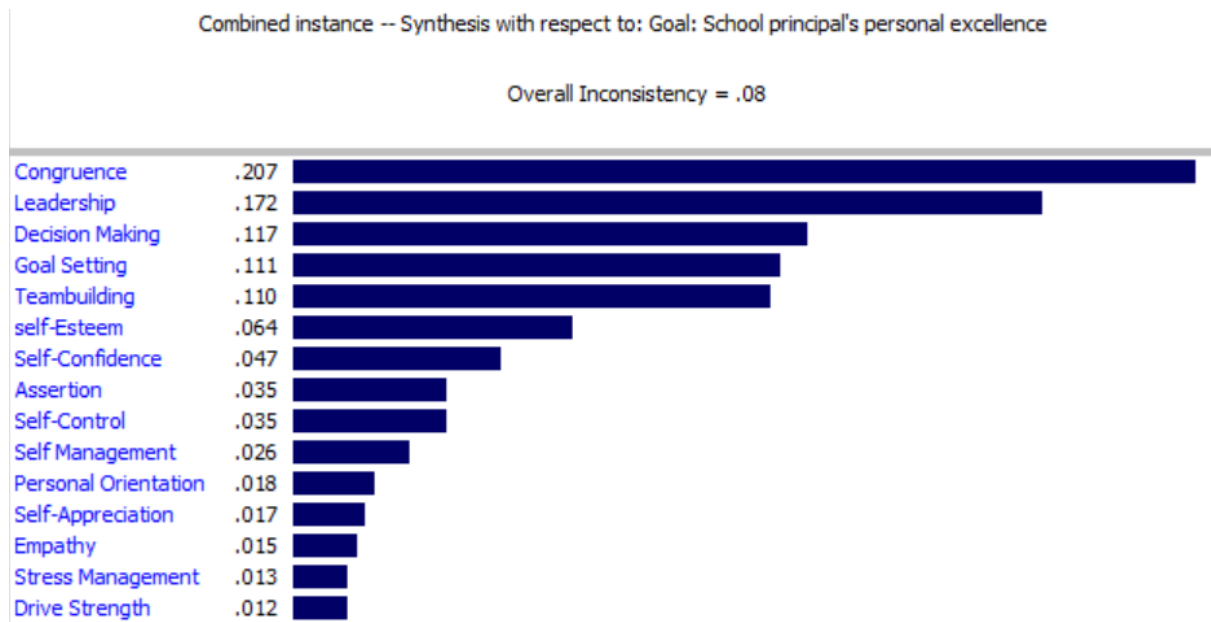


Figure 3. Overall prioritization of factors.

present AHP judgments received an overall *C.R.* of 0.13, which exceeded the acceptable level of consistency. The researchers, therefore, conduct the 2nd round expert panel for the purpose of qualitatively modifying the ranking result. Result of the 2nd round Delphi showed that no further comments and opinions were provided by the 9 experts participating in the study. It was concluded that the 9 panelists reached consensus on the final weights and rankings of factors computed by the Expert Choice 11.5.

4. Data Analysis Result

The priority weights shown in **Figure 3** depict the 2nd-level dimensional factors and their ranking. The result executed by Expert Choice graphed in **Figure 4** shows the overall weights for the 1st-level criteria (dimensions), and local and global weights for the 2nd-level factors. “Belief System”, gains an overall weight of 34.1%, plays an important role in experts’ judgments of critical dimension selection. The dimension of “Support System” accounts for 288.4%, and the dimension of “Balance System” for 19.2%. Among the 2nd-level factors plotted in **Figure 3**, the top five critical factors in ranking order include: “Congruence” with the highest weight (20.7%), followed by “Leadership” (17.2%), “Decision Making” (11.7%), “Goal Setting” (11.1%) and “Teambuilding” (11.0%), respectively.

5. Conclusion, Limitation and Implications

Striving for personal excellence as one of the key determinants of junior high school principals’ overall leadership performance has gained interest in recent years. The study was one of the first attempts to model PE competences perceived to be important to school leadership effectiveness with a focus on personal excellence competences. The results indicate that the ranking of PE competences perceived to be critical to leadership effectiveness are: “Congruence”, “Leadership”, “Decision Making”, “Goal Setting” and “Teambuilding”.

Leadership development course coverage for junior high school principals should include specific contents and activities to strengthen their “Congruence”, or their ability to clarify important personal values in accordance to self-defined goals and belief. Activities that help them enhance leadership can be included by practicing how to affect positive influence in others. Opportunities should also be given to them to make good choices while being decisive (Decision Making) and achieving personal excellence. The key to improving “Goal Setting” skills is to focus and direct personal energy and effort toward accomplishing goals that enhance self-esteem, self-efficacy and self-responsibility. With regard to “Teambuilding”, opportunities should be given to them to add synergy and contribute constructively in cohort activities [1] [2].

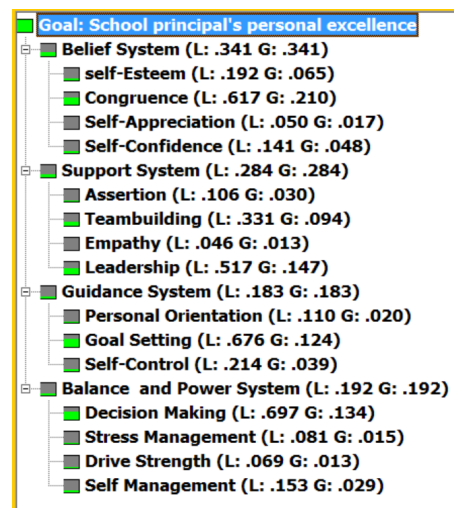


Figure 4. Local and global weights of dimensions and factors.

The study is limited by several factors. First, results yielded by the sample of 9 school principals from northern Taiwan are with limited generalizability to all school principals in Taiwan. Sampling extending to different geographical areas in Taiwan will provide chances for further contextually specific investigations for PE training needs of different groups of participants. Secondly, follow-on experimental studies are recommended to examine the extent to which school principals are able to heighten their personal excellence competences after such interventions are implemented. Future studies could also be conducted to examine whether positive correlations exist between school leaders' personal excellence competences and leadership effectiveness. Through the extension of AHP analysis and intervention processes, the study would provide a new venue for school leadership course design, program development, as well as a scheme for leadership selection and evaluations.

Acknowledgements

This research was funded by a research grant from the Ministry of Science and Technology in Taiwan ((MOST 104-2410-H-130 -038-)).

References

- [1] Nelson, D.B. and Low, G.R. (2003) *Emotional Intelligence: Achieving Academic and Career Excellence*. Prentice Hall, Upper Saddle River.
- [2] Hammett, R.D. (2007) *Personal Excellence: The Development and Validation of a New Measure of Emotional Intelligence*. Unpublished Doctoral Dissertation, Texas A&M University-Kingsville.
- [3] Cavallo, K. and Brienza, D. (2006) Emotional Competence and Leadership Excellence at Johnson & Johnson. *Europe's Journal of Psychology*, 2. <http://ejop.psychopen.eu/article/view/313/221>
<http://dx.doi.org/10.5964/ejop.v2i1.313>
- [4] Sanghi, S. (2006) *Towards Personal Excellence: Psychometric Tests and Self-Improvement Techniques for Managers*. Sage Publications Pvt. Limited.
- [5] Miller, P.S. and Kerr, G.A. (2002) Conceptualizing Excellence: Past, Present, and Future. *Journal of Applied Sport Psychology*, 14, 140-153. <http://dx.doi.org/10.1080/10413200290103464>
- [6] Tang, H.W.V., Chang, K. and Chou, T.C.R. (2015) Developing a Short-Form Measure of Personal Excellence for Use among University Students in Taiwan. *Total Quality Management & Business Excellence*, 27, 560-580. <http://dx.doi.org/10.1080/14783363.2015.1016870>
- [7] Eremenco, S.L., Cella, D. and Arnold, B.J. (2005) A Comprehensive Method for the Translation and Cross-Cultural Validation of Health Status Questionnaires. *Evaluation & the Health Professions*, 28, 212-232. <http://dx.doi.org/10.1177/0163278705275342>
- [8] Saaty, T.L. (2006) The Analytic Network Process, Decision Making with the Analytic Network Process. *International Series in Operations Research and Management Science*, 95, 1-26. http://dx.doi.org/10.1007/0-387-33987-6_1



Submit or recommend next manuscript to SCIRP and we will provide best service for you:

Accepting pre-submission inquiries through Email, Facebook, LinkedIn, Twitter, etc.

A wide selection of journals (inclusive of 9 subjects, more than 200 journals)

Providing 24-hour high-quality service

User-friendly online submission system

Fair and swift peer-review system

Efficient typesetting and proofreading procedure

Display of the result of downloads and visits, as well as the number of cited articles

Maximum dissemination of your research work

Submit your manuscript at: <http://papersubmission.scirp.org/>