



The Effect of Inclusive Tutors on Postgraduate' Creativity Ability-Mediating Effect of Psychological Capital

Wang Yana¹, Mao Hanping¹, Xu Zhandong²

¹Faculty of Agricultural Equipment, Jiangsu University, Zhenjiang, China

²Department of Students' Affairs, Jiangsu University, Zhenjiang, China

Email address:

409700207@qq.com (Wang Yana)

To cite this article:

Wang Yana, Mao Hanping, Xu Zhandong. The Effect of Inclusive Tutors on Postgraduate' Creativity Ability-Mediating Effect of Psychological Capital. *Education Journal*. Vol. 8, No. 3, 2019, pp. 97-103. doi: 10.11648/j.edu.20190803.12

Received: November 4, 2018; **Accepted:** November 21, 2018; **Published:** May 27, 2019

Abstract: Based on the theory of inclusive leadership, we develop a new model to explain the mechanisms that how inclusive tutors influence postgraduate' creativity ability. 350 copies of the questionnaire has been distributed through questionnaire website, and 278 effective questionnaires have been collected from postgraduates in China. Structural equation model results showed that: inclusive tutors have a significant positive impact on postgraduates' psychological capital (path coefficient is 0.623); psychological capital have a significant positive impact on postgraduate' creativity ability (path coefficient is 0.804); inclusive tutors have no direct effect on postgraduate' creativity ability, however, they affect postgraduate' creativity ability through the mediation of psychological capital, and the total effect of inclusive tutors on postgraduate' creativity ability is 0.335. This study confirmed that as a positive psychological state in the process of growth, psychological capital plays an important role in the process of inclusive tutors influencing graduate students' innovative ability, so, it must be improved. It is also revealed the "black box" how inclusive tutor affects postgraduate innovative ability, and extended the leadership-creativity model. Based on the finding, this study gave some suggestions on how to improve inclusive level of tutor and psychological capital of postgraduate.

Keywords: Inclusive Mentors, Psychological Capital, Postgraduate, Creativity

1. Introduction

Postgraduate are active forces in scientific research and scientific innovation, and have made many contributions to national scientific and technological progress. However, there is still a gap between their creativity and social needs. The cultivation of students' comprehensive quality, international vision, scientific spirit, entrepreneurial consciousness and creative ability has been put forward by The State Council of China. Thus, it can be seen the promotion of postgraduate students' innovative ability is an important problem to be solved urgently.

Postgraduates are generally post-90s, and strong self-consciousness and self-superiority, poor in psychological endurance, pursuing equality and democratic are their characteristics. So, the authoritative style of guidance is no longer suited to them, and the inclusive tutors who are holding attitude of tolerance, recognition, respect, and

guiding students in an open and accessible manner are go down well with the students. Many studies have focused on the relationship between inclusive leadership and employee creativity. Recent studies have also verified the positive role of inclusive leadership in the new generation of employees. As a special interpersonal relationship, the relationship between postgraduates and tutors is not only the relationship between teachers and apprentices, but also between leaders and subordinates. Is the mechanism between inclusive leadership and employee creativity applicable for inclusive tutors and graduate students? This study will explore this problem, and verify the mediating effect of students' psychological capital in the process of cultivation of their innovative ability. Through the study, we will enrich the research of inclusive leadership in theory and provide reference for the cultivation of graduate students' innovative ability in practice.

2. Literature Review and Research Hypotheses

2.1. Variable Definition

2.1.1. Inclusive Tutors

The definition of inclusive tutors is derived from the "inclusive leader style" proposed by education. In the early 1990s, to resolve the conflict between student diversity and educational differentiation, western schools put forward the concept of inclusive education, demanding fair treatment of disabled students and students of different social status, race, religion and gender, thus promoting inclusive leadership style in schools. At the same time, Komives put forward the "relationship leadership theory", [1] pointing out that "inclusiveness" is an important factor in relationship leadership, the relationship between leaders and employees has different impact on employee creativity. The concept of inclusive leadership was formally proposed by Nembhard in 2006. [2] It is considered that inclusive leadership is a kind of leadership that adept in listening to subordinates' opinions and recognizing their contributions. Under the social background of diversified human resources and the urgent need for innovation, the leadership style oriented by control, hierarchy and rules is not suited to the social development, so the inclusive leadership style is concerned. Carmeli who manifested inclusive leadership by openness, accessibility, and availability of a leader believes that inclusive leadership is adept in listening and paying attention to subordinates' needs, and subordinates can perceive that they can get leaders' help whenever they need. [3] Openness is a non-rejection of leadership to new ideas, new methods and new technologies, and it is simultaneously valuing all members for their unique attributes, perspectives, and contributions; accessibility is that leaders encourage subordinates to explore new problems with them; and availability indicates that leaders are ready to listen to and answer subordinates' questions and requirements. For the construct of inclusive leadership, this study used Carmeli's (2010) nine-item scale method. This method is effective in subsequent demonstration studies. Each question in the questionnaire was modified for the given context, and its contextual understanding was evaluated rigorously. The original scale was changed from "my superior" to "my tutor", such as "My tutor is open to new ideas" and "My tutor is focused on new opportunities to improve workflow."

2.1.2. Psychological Capital

Psychological capital is a positive mental state in which a person grows and develops. Luthans generalized the positive mental states of self-confidence, hope, optimism and resilience into higher-level concepts-psychological capital. [4] Based on "Effectiveness Measurement Scale", "Hope Scale", "Resilience Scale" and "Optimism Scale", Luthans developed a psychological capital scale (PCQ) which includes 24 items, and consist of 4 domains. Xiao Wen constructed a five domains mental capital scale for college students, including self-efficacy, optimism, resilience, gratitude and interest;[5]

Zhang Kuang constructed a positive mental capital questionnaire with four factors, including self-efficacy, resilience, optimism and hope. [6] Considering that the PCQ scale is the most widely used, we employed this scale and verified its applicability in China's postgraduates.

2.1.3. Postgraduates' Innovative Ability

Innovation is a variant of creativity in organizational behavior. The definition of innovation is mainly from the perspective of subjects' cognition and performance of innovation. Burns defined innovation as the ability of an organization to successfully adopt and implement innovative ideas, innovative processes and bring innovative products. [7] Scott and Bruce defined the individual innovative behavior as employees produce a new concept or problem solution in their work, and strive to find support for their concept or problem solution, and then apply it to practice. [8] Referring to the previous theoretical results, the innovative ability of postgraduates can be defined as the ability to generate innovative ideas, adopt innovative tools and means, and implement innovative ideas in scientific research and social practice. Previous studies examined employee's innovation ability usually regarded it as a single-dimension variable. [9] We adopted the single-dimension scale developed by Scott and Bruce, which included 6 items and has good reliability and validity. Items include: "I often generate creative ideas", "I introduce new ideas to others" etc.

2.2. Research Hypotheses

2.2.1. Inclusive Tutors and Postgraduates' Innovative Ability

Postgraduates conduct innovative research under the guidance of tutors when they are at school. Postgraduates' innovative ability is easily affected by the relationship between postgraduates and tutors. Inclusive tutors enable students to perceive high-quality teacher-student relationship, which can stimulate and enhance the level of individual intrinsic motivation. [10] According to the theory of intrinsic motivation of innovation, the promotion of individual intrinsic motivation level will drive the intrinsic motivation of innovation, create conditions for its creative work, stimulate individual show more innovative behavior. An inclusive tutor respects and accepts students, gives fair treatment to each student, and creates a harmonious and safe organizational climate for the cultivation of their scientific research and innovation ability. A sense of security is a necessary condition for dialogue between different cultures. With the sense of security, there will be a possibility they opening to each other, which will enable postgraduates to dare to put forward their own ideas. It is a supportive situational when tutors recognize students' efforts, appreciate students' progress, and are good at stimulating students' recognition of the role of scientific research. According to social cognitive theory, under the circumstances of support and encouragement, individual intrinsic pressure is released, and his innovative motivation is enhanced, and the level of creativity is also improved. Accordingly, we derive the following hypothesis:

H1: Inclusive tutor is positively related to postgraduates' innovative ability.

2.2.2. Psychological Capital and Postgraduates' Innovative Ability

Carr demonstrated that optimists tend to have positive emotions, which make them more receptive to new ideas. [11] Sweetman verified the significant positive relationship between mental capital (including self-efficacy, hope, resilience and optimism) and creativity. [12] Psychological capital is helpful for researchers to build a key resource in their work. [13] Wei Jing pointed out that self-efficacy is an important part of postgraduates' psychological capital, and it is a series of positive psychological qualities to promote postgraduates to achieve good results in their continuous growth and development. [14] Avey stated that people with high self-efficacy are willing to take on challenging tasks and view difficult tasks as challenges rather than threats. [15] Accordingly, we derive the following hypothesis:

H2: Psychological capital is positively related to postgraduates' innovative ability

2.2.3. Inclusive Tutor and Psychological Capital

Edmondson believed that leadership style will affect the psychological safety of employees. When leaders show an open attitude to employees, they can communicate effectively, and employees' confidence and hope are improved. Inclusive leadership enables employees to feel the support and concern of the organization which has a positive impact on their psychological capital. Positive organizational support will stimulate employees' psychological potential, and then enhance their psychological capital. [16] Studies also confirmed that inclusive leadership style was positively related with employee's psychological capital, among which the effect of leaders' recognition and encouragement on employee psychological capital was the most significant. Therefore, it can be inferred that inclusive leadership can improve employees' psychological capital such as self-efficacy, hope, resilience, optimism.

Postgraduates attach more importance to the psychological support given by their tutors, which is an important support for

effective guidance. Guidance behaviors such as trust, respect, friendliness, equal communication, understanding and tolerance meet the psychological needs of postgraduates, such as self-affirmation, identity, academic belonging, and so on. Therefore, psychological capital of postgraduates can be improved. The post-90s college students who have not been criticized in their growth, have strong self-consciousness, and the commanding and reprimanding guidance methods will lead to resistance psychology. Inclusive tutors are good at listening to opinions, encouraging and appreciating students' efforts, recognizing students' contributions and letting students experience the joy of success, all of which can directly affect academic cognition, and run up to the effect of "close its division believe its way".

Accordingly, we derive the following hypothesis:

H3: Inclusive tutor is positively related to psychological capital

2.2.4. The Mediating Effect of Psychological Capital

Cole believed that psychological capital sometimes mediates the influence of other variables on employees' behavior. [17] His research on unemployed employees finds that psychological capital plays a mediating role in the relationship between subjective satisfaction and re-employment behavior after unemployment. According to the theory of organizational support, organization's concern and attention to employees is an important reason for their contribution to the organization. Supportive words and deeds of inclusive leadership can meet the social and emotional needs of employees, and therefore can promote employees to show greater creativity in return for the organization. The above conclusions provide a basis for the study of mediating effect of psychological capital in this study. Accordingly, we derive the following hypothesis:

H4: Psychological capital mediate the relationship between inclusive tutor and postgraduates' innovative ability.

This study constructs a research model based on the above analysis, as shown in Figure1.

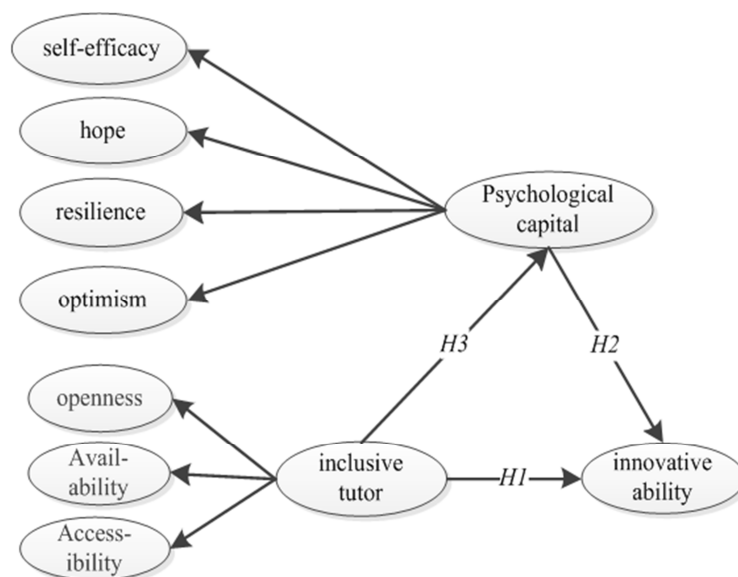


Figure 1. The theoretical model of influence mechanism of inclusive tutors on postgraduates' innovative ability.

3. Methodology

3.1. Measures

This paper gathered data using a questionnaire survey. All the variables, except for the basic situations regarding tutors and students, were measured using a six-point Likert-type scale ranging from 1 (very strongly disagree: negative) to 6 (very strongly agree: positive).

To ensure adequate reliability and validity of the measurement scales, instruments used to operationalize the constructs in this study were employed from previous studies, and each question in the questionnaire was modified for the given context, and its contextual understanding was evaluated rigorously. A pretest was conducted to ensure the validity of measures. We performed an exploratory factor analysis to determine the formal questionnaire. Considering the sample size in the structural equation modelling, we cited the 10X rule proposed by Barclay *et al.* [18] which states that the sample size in SEM must be 10 times greater than the number of variables to ensure the effectiveness of the significance test. 350 copies of the formal questionnaire has been distributed through questionnaire website, and 278 effective questionnaires have been collected from postgraduates in

China. Students' gender, categories and disciplines were evenly distributed, and tutors were also involved in different titles and the number of students under their guidance was different. The survey data is thus widely representative.

3.2. Reliability and Validity

This study used AMOS 21.0 software to conduct a confirmatory factor analysis to test the latent variable measurement models. Table 1 displays the measurement model's fit indexes. According to the requirements of the model fitness index, [19, 20] the following indexes are reported: chi-square value (χ^2 , the smaller, the better), degree of freedom (or "DF"; the larger, the better), relative chi-square ($\chi^2 / DF < 3$), comparative fit index (CFI > 0.9), goodness of fit index (GFI > 0.9), adjusted goodness of fit index (AGFI > 0.9), and root mean square error of approximation (RMSEA < 0.08). The model's fit indexes from the five measurement models all fall in range of the recommended values. This demonstrates that the measurement models exhibit a good degree of matching; thus, the model is correctly defined, and the samples can be used to estimate the matrixes.

Table 1. Analysis results of Measurement model.

Latent variables	Goodness of fit indexes				Composite reliability			Convergent validity	
	χ^2	DF	χ^2 / DF	GFI	AGFI	CFI	RMSEA	C.R.	Cronbach's α
Inclusive tutor	87.701	24	3.654	0.934	0.877	0.971	0.098	0.973	0.975
Psychological capital	744.913	221	3.371	0.813	0.767	0.914	0.009	0.965	0.934
postgraduates' innovative ability	9.585	8	1.098	0.989	0.970	0.997	0.027	0.896	0.9008

Reliability refers to the measurement model's consistency and stability, and the paper measures this using composite reliability (C.R.) and Cronbach's α coefficient. It demonstrates the measurement model's good composite reliability when the value of C.R. and Cronbach's α are both greater than 0.70. [21] Validity including convergent validity and discriminant validity, refers to the extent to which the observed variables reflect the latent variable. The average variance extracted (AVE) reflects the latent variables' proportion of variation as derived from all the questions regarding the latent variables. The latent variables demonstrate good convergent validity when the AVE value is greater than 0.50. [22] Discriminant validity refers to whether there are differences among latent variables. It shows the latent variables have good discriminant

validity when latent variables' AVE square root larger than the correlation coefficient between this latent variable and other latent variables. Table 2 displays the measurement models' reliability and convergent validity test results, which indicate that the C.R. and Cronbach's α from each latent variable's measurement model was greater than 0.7, or that the measurement model has good reliability. Further, all the measurement models' AVE were greater than 0.5 Table 2 displays the measurement models' discriminant validity test results. All the variables square roots of AVE are larger than the correlation coefficient between the latent variable and other latent variables, so latent variables have a good discriminant validity.

Table 2. Measurement models' discriminant validity test results.

	Inclusive tutor	Psychological capital	postgraduates' innovative ability
Inclusive tutor	0.950		
Psychological capital	0.623	0.884	
postgraduates' innovative ability	0.4306	0.744	0.775

Note: The values on the diagonal line are square roots of AVE, and the other values are the correlation coefficients.

3.3. Hypothesis Test of Structural Equation Model

AMOS 21.0 software was used to verify the theoretical model and its hypotheses. Figure 2 shows the details of structural equation model's analysis results.

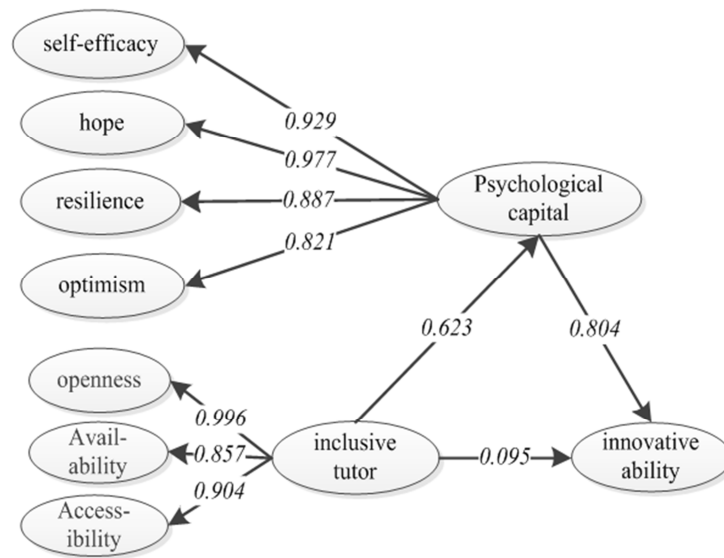


Figure 2. Structural equation model analysis results.

Table 3 illustrates the structural equation models' fitness index, and the fit in this study is acceptable.

Table 3. Structural equation models' fitness index.

Index	χ^2	DF	χ^2/DF	CFI	GFI	AGFI	RMSEA
Fitted values	1766.063	650	2.717	0.899	0.949	0.919	0.079
Recommended values	The smaller the better	The bigger the better	<3	>0.9	>0.9	>0.9	<0.08

Table 4 notes the hypothesis tests' results, which reveal that inclusive tutor has insignificant impact on postgraduates' innovative ability ($\gamma = 0.095$; $Z = 1.525$); psychological capital is positively related to postgraduates' innovative ability ($\gamma = 0.804$; $Z = 0.089$); Inclusive tutor is positively related to psychological capital ($\gamma = 0.623$; $Z = 0.042$). Therefore, H2 and H3 are supported, however, H1 is not supported.

Table 4. Hypothesis tests' results.

Path	Standardized factor loading (γ)	Standard error S. E	Z	P	Conclusion
H1: postgraduates' innovative ability<--Inclusive tutor	0.095	0.052	1.525	0.127	fail
H2: postgraduates' innovative ability<--Psychological capital	0.804	0.089	10.067	0.000	pass
H3: psychological capita<--Inclusive tutor	0.623	0.042	10.943	0.000	pass

Note: The Z-value is a quotient of the non-standardized factor loading divided by the standard error. When $|Z| > 1.96$, the test result is significant at a significant level of 5%.

3.4. Mediating Effect

The coefficient multiplication and bootstrapping methods were then used to examine the mediating effects of students' psychological capital [23]. When $|Z| > 1.96$ and a 95% confidence interval excluding 0, the test result is significant at a significant level of 5%. Table 5 displays the test results. According to the results, when it come to the effect of students' psychological capital on the relationship between inclusive

tutor and postgraduates' innovative ability, the total effect is significant ($|Z| > 1.96$ and a 95% confidence interval excluding 0); the direct effect is insignificant ($|Z| < 1.96$ and a 95% confidence interval including 0); and the indirect effect is significant. Thus, the psychological capital has a completely mediating effect on the relationship between inclusive tutor and postgraduates' innovative ability. Therefore, H4 is supported.

Table 5. The results of mediating effects of psychological capital.

Path	Effect type	Coefficient multiplication method			Bootstrapping method				Conclusion
		Point estimate	S.E.	Z	Correction deviation (95% confidence level)	Percentile (95% confidence level)			
H4	Total Effects	0.335	0.092	3.641	0.199	0.563	0.197	0.559	significant
	Direct Effects	-0.079	0.093	-0.849	-0.329	0.076	-0.257	0.118	insignificant
	Indirect Effects	0.413	0.082	5.037	0.276	0.601	0.262	0.585	significant

4. Discussion

This study constructed a mechanism model of "inclusive tutor--postgraduates' psychological capital--postgraduates' innovative ability", the results showed that inclusive tutors have a significant positive effect on postgraduates' psychological capital (path coefficient is 0.623); psychological capital have a significant positive effect on postgraduate' creativity ability (path coefficient is 0.804); inclusive tutors have no direct effect on postgraduate' creativity ability, however, they affect postgraduate' creativity ability through the mediation of psychological capital, and the total effect of inclusive tutors on postgraduate' creativity ability is 0.335. This study also verified postgraduates' psychological capital have a completely mediating effect on the relationship between inclusive tutor and postgraduates' innovative ability. That is, the effect of inclusive tutor in enhancing postgraduates' innovative ability must be realized indirectly through postgraduates' psychological capital. This study confirmed that as a positive psychological state in the process of growth, psychological capital plays an important role in the process of inclusive tutors influencing graduate students' innovative ability, so, it must be improved. It is also revealed the "black box" how inclusive tutor affects postgraduate innovative ability, and extended the leadership-creativity model.

5. Conclusion

The conclusion of this study also provided implications to practice for building harmonious teacher-student relationship and improving graduate students' innovative ability.

5.1. Improving the Guidance Level of Tutors

The imperative management mode based on position and status is no longer suitable for the post-90s students. In the practice of management, school should actively create an inclusive and harmonious organizational climate; increasing the training intensity to improve the inclusive level of teachers; and help teachers effectively supervise students. Tutors should actively construct operation mode of scientific research with characteristic of equality, democracy, autonomy and self-reliance and show strong working ability and charisma, win the trust and respect of the students, influence them from bits and pieces to enhance the effectiveness of communication between tutors and students.

5.2. Improving the Psychological Capital of Students

Firstly, enhance the sense of owner of postgraduates. If postgraduates are in a dominant position, their independent role in scientific research and the cultivation of their innovative ability will be inhibited to a certain extent. Through the "participatory management" pattern, fully mobilizing students' enthusiasm to participate in team management. Secondly, tutors should pay more attention to the equal communication between teachers and students, hold an open

and acceptable attitude towards the information put forward by graduate students as far as possible, encourage students to think independently and put forward their own opinions, reduce their dependence on teachers and eliminate the psychological barriers that inhibit creativity. Through communications with tutors, students can form a correct understanding of their abilities and roles, and become more effectively cooperate with their tutors. Third, enhance students' sense of pride in the team. Timely inducements should be offered to encourage students' periodic achievements, enthusiasm and creativity, effectively inhibit individual negative emotions and behaviors, improve students' psychological capital, and then improve their innovative ability.

6. Limitations

While this study makes several important contributions to inclusive leadership, it also has several limitations.

This study used self-administered questionnaires to collect data. This may lead to homologous variance. A variety of data collection methods should be considered in future study, such as tutors or classmates should be investigated on the graduate students' innovative ability. It constructed and verified the mediating effect of psychological capital between inclusive tutors and graduate students' innovative abilities. It only opened one corner of the "black box" of the mechanism between tutors and innovative abilities. In the future, we should identify other moderating variables or mediating variables, such as individual initiative, individual characteristics, and so on, so as to improve the explanatory power of the conclusion.

Foundation Projects

Presiding over the key project of postgraduate education and teaching reform in Jiangsu Province (JGZZ17_054): research on innovative postgraduate cooperative training mode of agricultural engineering discipline;

Presiding over the project of Jiangsu higher education reform project (2017JSJG158): research on innovative undergraduate training mode of agricultural equipment under the background.

Presiding over the project of research and innovation program of academic degree postgraduates in Jiangsu province (KYZZ_0285): The formation mechanism of new generation employees' innovative behavior

References

- [1] Komives S R, Lucas N, Mc Mahon T R. Exploring leadership: For College Students Who Want to Make a Difference [M]. San Francisco: Jossey Bass, 1998.
- [2] Nembhard I M, Edmondson A C. Making It Safe: The Effects of Leader Inclusiveness and Professional Status on Psychological Safety and Improvement Efforts in Health Care Teams [J]. Journal of Organizational Behaviour, 2006(27): 941-966.

- [3] Carmeli A, Reiter -Palmon R, Ziv E. Inclusive Leadership and Employee Involvement in Creative Tasks in the Workplace: The Mediating Role of Psychological Safety [J]. *Creativity Research Journal*, 2010, 22(3): 250-260.
- [4] Luthans, F. and Youssef, C M. Human, social, and now positive psychological capital management : Investing in people for competitive advantage [J]. *Organizational Dynamics*, 2004, 33 (2).
- [5] XIAO Wen, LI Lin-ying Primary Development of College Students' Psychological Capital Questionnaire [J]. *Chinese Journal of Clinical Psychology*, 2010, 18(06): 691-694.
- [6] Zhang Kuo , Zhang Sai, Dong Yinghong. Positive psychological capital: Measurement and its relationship with mental health [J]. *Studies of Psychology and Behavior*, 2010, 8(01): 58-64.
- [7] Burns T., Stalker G. The management of innovation [M]. London: Tavistock, 1961: 131-135.
- [8] Scott S G, Bruce R A. Determinants of creativity behavior: a path model of individual innovation in the workplace [J]. *Academy of Management Journal*, 1994, 37(3): 580-607.
- [9] Farmer S M P. Tierney and Kung -Mcintyre. Kate. Employee creativity in Taiwan: An application of role identity theory [J]. *Academy of Management Journal*, 2003, 46(5): 618-630
- [10] Atwater, L., & Carmeli, A. (2009). Leader-member exchange, feelings of energy, and involvement in creative work. *The Leadership Quarterly*, 20(3), 264-275.
- [11] Carr A. Positive psychology : The science of happiness and human strengths [M]. New York: Brunner-Routledge, 2004.
- [12] Sweetman J W, Torrecallas S, Dimitroglou, etal. Enhancing the natural defence and barrier protection of aquaculture species [J]. *Aquac. Res.*, 2010, 42(3): 345-355.
- [13] Luthans, F., Youssef, C. Human, Social, and Now Positive Psychological Capital Management: Investing in People for Competitive Advantage. *Organizational Dynamics*, 2004, 33: 151-152.
- [14] Wei Jing, Wei Rong. Research on Postgraduates' psychological capital and its cultivation *Academic Degrees & Graduate Education*, 2015(03): 41-46.
- [15] AveyJB, Luthans F, etal. Psychological Capital A Positive Resource For Combating Employee stress and Turnover [J]. *Human Resource Management*, 2009, 48 (5).
- [16] Avolio, B. J. *Leadership Development in Balance: Born/Made*. Mahwah, NJ: Lawrence Erlbaum, 2005: 431.
- [17] Cole, K. Wellbeing. Psychological Capital and Unemployment: An Integrated Theory. Paper Presented at the Joint Annual Conference of the International Association for Research in Economic Psychology (IAREP) and the Society for the Advancement of Behavioral Economics (SABE). Paris. France, 2006: 14-28.
- [18] Barclay, D. W., Higgins, C. A., & Thompson, R. (1995). The partial least squares approach to causal modeling: personal computer adoption and uses as illustration [J]. *Technology Studies*, 2, 285-309.
- [19] Dawn Iacobucci. Structural equation model: Fit Indices, sample size and advanced topics [J]. *Journal of consumer psychology*, 2010, 20(1): 90-98.
- [20] Hooper, D, Coughlan, J, Mullen, M. R. Structural equation modeling: Guidelines for determining model fit. *The Electronic Journal of Business Research Method*, 2008 , 6(1): 53-60.
- [21] Fornell, C. and Larcker, D. F. Structural Equation Models with Unobservable Variables and Measurement Error: Algebra and Statistics. *Journal of Marketing Research*, 1982, 18(1): 39-50.
- [22] Dawn Iacobucci. Structural equation model: Fit Indices, sample size and advanced topics [J]. *Journal of consumer psychology*, 2010(20): 90-98.
- [23] MacKinnon DP, Lockwood CM, Hoffman JM, et al. A comparison of methods to test mediation and other intervening variable effects. *Psychological Medicine*. 2002.