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A Study on the Interaction among the Competence, Engagement and Job Performance of Professional Teachers in Technical Schools : A Case Study in Shandong Province China

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Abstract

The purpose of this study is to (1) impact of professional teacher engagement on the performance of technical schools. (2) impact of vocational teacher's ability on the performance of technical schools and (3) exploring the impact professional teacher engagement and ability on the performance of technical schools. The through quantitative research, we will combine the two independent hot topics of engagement and competence in the field of human resources research, with a focus on studying their impact on job performance. The data was collected through a questionnaire survey from a technical school in Shandong Province, China. The sample of 521 participants provided basic data for this study.

The results were as follows:

1. Within a certain range, excessive engagement may have a negative impact on performance.

2. The positive impact of competence on performance.

3. The interaction between engagement and ability has a positive impact on job performance.

Keywords: Competence, Engagement, Performance, Professional Teachers in Technical Colleges

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Introduction

With the development needs of China, the vast system of vocational education is constantly expanding and updating, and every technical college is facing opportunities and challenges. With the further promotion and deepening of education reform, teachers have gradually become the primary factor affecting the success or failure of education reform.(Marshall, J. H., & Sorto, M. A. ,2007) Believing that the teaching content and quality of teachers are directly related to the quality of students' learning, it is one of the important indicators of teachers' abilities.(Kahn, W. A. ,1990) Believing that engagement is the degree to which people are physically, cognitively, and emotionally involved in their work roles (Zhong, L.W. ,2002) .In the performance evaluation of American universities, the goal of performance evaluation is more to obtain positive feedback and opportunities for job improvement. (Bi, L., Fabbri, E., Sun, Z., & Traversa, E., 2011) concluded through empirical analysis that the interaction between emotional evaluation and cognitive evaluation can enhance its impact on consumer decision-making behavior. The theme of this paper is to combine the two independent hotspots of human resource management research, namely engagement and competence, to find their intersections. Currently, there is no relevant research on technical school teachers, and the impact of their interactions on technical school teachers is not yet clear.

Research's objective

1. To study on the impact of professional teacher engagement on the performance of technical schools.

2. To research on the impact of vocational teacher's ability on the performance of technical schools.

3. To exploring the impact professional teacher engagement and ability on the performance of technical schools

Hypothesis

H1: The engagement of professional teachers in vocational colleges has an impact on performance.

H2: The competence of professional teachers in vocational colleges has an impact on performance.

H3: Engagement and ability have a moderating effect on job performance.

Conceptual framework

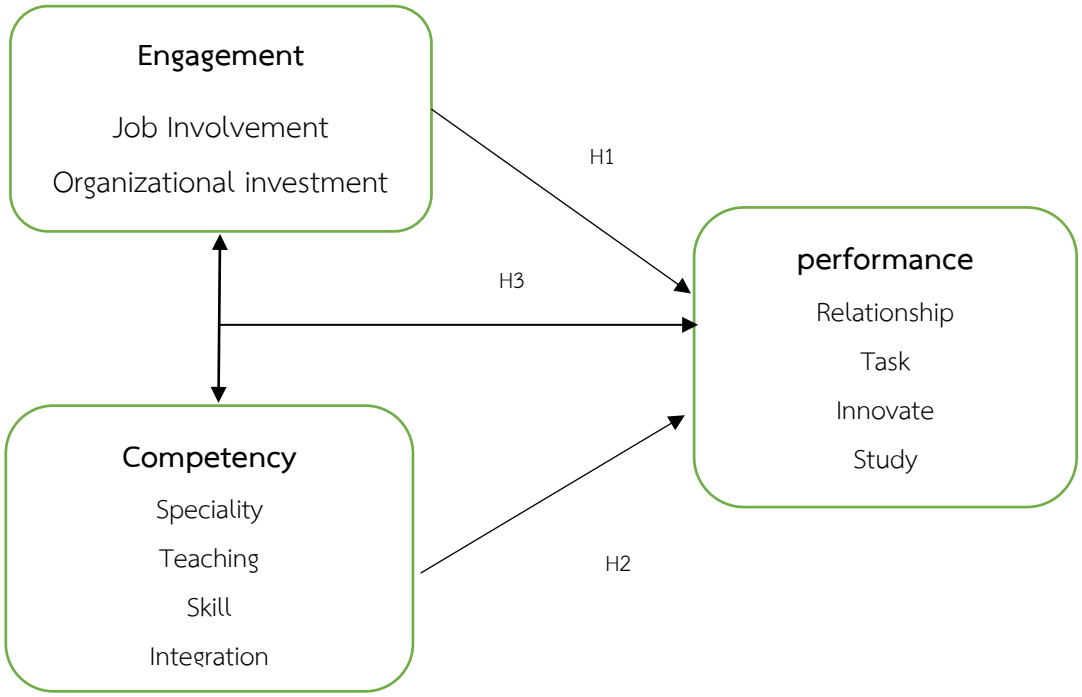

Figure 1 Conceptual Framework

Methodology

1. Population and sample

The research subjects were teachers from a technical school in Jinan, Shandong Province, China. 521 survey questionnaires were distributed through random sampling, and 521 valid questionnaires were collected, with an effective recovery rate of 100%.

2. Research instruments

Use quantitative research methods to test the hypotheses proposed in this article. Quantitative research methods allow researchers to collect data that can be

used for objective measurements. (Nordlund, M. M., Thorstensson, A., & Cresswell, A. G. ,2004).

In this study, the author used statistical methods to determine the impact between variables. The questionnaire is based on literature review, face-to-face interviews, and existing authoritative scales both domestically and internationally. Based on reliability and validity tests, the questionnaire is revised and improved according to the conceptual framework design.

3. Data analysis

This study used SPSS and AMOS to collect and analyze data. After collecting data on independent and dependent variables, conduct differential, descriptive, correlation, reliability and validity (confirmatory factor analysis, exploratory factor analysis), and structural equation modeling to validate research hypotheses and answer research questions.

Results

The descriptive statistical analysis of teachers shows that : In terms of gender, there are 240 males (46.1%) and 281 females (53.9%); In terms of age, 111 people aged 51 and above (21.305%), 93 people aged 40-50 (17.85%); 228 people aged 30-40 (43.762%), 89 people under 30 (17.083%); In terms of teaching experience, 170 students (32.63%) have over 16 years, 165 students (31.67%) have 6-10 years, 117 students (22.457%) have 1-5 years, and 69 students (13.244%) have 11-15 years; In terms of professional titles, there are 180 lecturers (34.549%), 158 teaching assistants (30.326%), 147 associate professors (28.215%), 31 professors (5.95%), and the other 5 professors (0.96%); In terms of whether to concurrently hold administrative positions, 344 (66.027%) did not have part-time jobs, while 177 (33.973%) had part-time jobs; In terms of their respective majors, 109 were in the service category (20.921%), 91 were in the electrical and electronic category (17.466%), 88 were in the transportation category (16.891%), 83 were in the information category (15.931%), 76 were in the mechanical category (14.587%), and 74 were in the finance, commerce, and pharmaceutical categories (14.203%); 261 (50.096%) were not class teachers in terms of whether to serve as class teachers; There are 260 class teachers (49.904%).

Table 1 Show Factor Covariance matrix

F	F	NSEC	SE	z	p	SEC	F
WPQ	EMT	0.215	0.035	6.204	0.000	0.616	WPQ
WPQ	CW	0.226	0.033	6.856	0.000	0.833	WPQ
EMT	CW	0.325	0.039	8.254	0.000	0.645	EMT

Note :

F = Factor

NSEC = Non Standard Estimation Coefficient (Coef.)

SE = Standard Error (Std. Error)

SEC = Standard Estimation Coefficient (Std. Estimate)

WPQ = Work Performance Quantity

EMT = Engagement Measurement Table

CW = Competency Workload.

In the factor covariance matrix in Tables 1, it can be seen that the non-standard estimation coefficient between the number of job performance and the engagement measurement table is 0.215, with a standard error of 0.035.The z-value is 6.204, the p-value is 0.000, and the standard estimation coefficient is 0.616. This indicates a significant positive relationship between the quantity of job performance and the engagement measurement table.Similarly, the non-standard estimation coefficient between the number of job performance and the workload of competence is 0.226, with a standard error of 0.033. The z-value is 6.856, the p-value is 0.000, and the standard estimation coefficient is 0.833. This indicates a significant positive relationship between the quantity of job performance and the workload of competency.

Secondly, the non-standard estimation coefficient between the engagement measurement table and the competency workload is 0.325, with a standard error of 0.039. The z-value is 8.254, the p-value is 0.000, and the standard estimation coefficient is 0.645. This further indicates a significant positive relationship between the engagement measurement table and the workload of competency.

Through the analysis of the factor covariance matrix, we can conclude that there is a significant positive relationship between the quantity of job performance, the engagement measurement table, and the workload of competency. This series of relationships reveals the complex internal relationship between engagement, ability, and job performance, providing important clues for us to better understand research questions.

Table 2 Show Model Path Coefficients and Significance Testing

			E	S.E.	C.R.	P	
P	<---	D	-.480	060	-7.952	***	L
P	<---	C	.355	064	5.540	***	
P	<---	D-CP	.123	.013	9.217	***	
OI	<---	D	1.000				
JI	<---	D	1.036	026	39.454	***	
TC	<---	C	1.000				
FC	<---	C	.991	025	39.536	***	
WI-T	<---	D-CP	1.000				
WI-SC	<---	D-CP	1.001	016	62.716	***	
RP	<---	P	1.000				
TP	<---	P	.820	035	23.526	***	
IP	<---	P	1.069	042	25.724	***	
LP	<---	P	.920	038	24.077	***	
WI-SQC	<---	D-CP	1.004	016	60.917	***	
WI-IC	<---	D-CP	.963	021	45.319	***	WI-IC
OI-TC	<---	D-CP	.989	017	59.620	***	OI-TC
OTII-TC	<---	D-CP	.990	016	61.639	***	OTII-TC
OI-TC	<---	D-CP	.994	017	57.761	***	OI-TC
OI-IC	<---	D-CP	.956	022	43.592	***	OI-IC
SC	<---	C	1.049	027	38.633	***	SC
IC	<---	C	960	036	26.728	***	IC

Note :

P=Performance
D=Dedication;C-Competency
D=Cp=Dedication Competent Power
OI=Organizational Input
E=Estimate;L-Label
JI=Job Involvement
TC=Teaching Competence
FC=Feature Competency
WI-T=Work Input _ Teaching Competency
TP=Task Performance
WI-Sc=Work Input _ Special Quality Competency
RP=Relationship Performance
IP=Innovative Performance
LP=Learning Performance
SC=Skills Competence
WI-Sqc=Work Input _Special Quality Competency
IC=Integration Competency
WI-Ic=Work Input _ Integrated Competence
OI-Tc=Organizational Input _ Trait Competency
OTII-Tc=Organize The Investment In _ Teaching Competency
OI-Tc=Organizational Input _ Trait Competency
OI-IC=Organization Investment _ Integration Competence

The results of Table 2 indicate that the hypothesis testing path coefficient between job engagement and job performance is -0.480 (P<0.001). Therefore, the results accepted hypothesis 1: The engagement of professional teachers in vocational colleges has an impact on performance.

The results of Table 2 indicate that the path coefficient between competence and job performance is 0.355 (P<0.001). The result accepted hypothesis 2**:** The competence of professional teachers in vocational colleges has an impact on performance.

The results of Table 2 indicate that the path coefficient between engagement, ability, and performance is 0.123 (P<0.001). The results accepted the hypothesis 3 : that the interaction between engagement and ability has a positive impact on job performance.

Conclusions and Discussion

The hypothesis test results between professional teacher engagement and performance in technical schools indicate that professional teacher engagement in technical schools has a negative impact on performance. That is to say, within a certain range, excessive teacher engagement may actually affect the improvement of performance.(Beal, D. J., Weiss, H. M., Barros, E., and MacDermid, S. M. , 2005; Demerouti, E., and Cropanzano, R. , 2010; Snir, R., and Harpaz, I. , 2012) The situation where employees overwork for a long time is called (Heavy Work Investment) This refers to the phenomenon of individuals dedicating themselves to their work, maintaining a strong focus on work tasks, or exhibiting a high level of dedication to their work.

(Birkeland, I. K., and Buch, R. , 2015 ; Del Líbano, M., Llorens, S., Salanova, M., and Schaufeli, W. B. ,2012 ; Di Stefano, G., and Gaudiino, M. , 2019 ; Gorgievski, M. J., Bakker, A. B., and Schaufeli, W. B. , 2010 ; Schaufeli, W. B. , 2016 ; Schaufeli, W. B., Bakker, A. B., and Salanova, M. , 2006 ; Snir, R., and Harpaz, I. , 2012) There are two different types of common heavy work engagement:Workaholism & Work Engagement.

(Schaufeli, W. B., Shimazu, A., and Taris, T. W. ,2009) workaholics refers to individuals who have a strong internal drive to work and work hard, including two dimensions: firstly, excessive work in behavior; The second is cognitive forced work.

(Tabassum, A., & Rahman, T., 2013) Previous scholars' conclusions on the relationship between workaholism and job performance were not consistent. (Krulder, L., 2010) believing that the longer an employee's working hours, the higher their human capital investment, and their performance may be better than other colleagues, there should be a positive relationship between workaholism and work performance; (Shimazu, A., & Schaufeli, W. B., 2009) Research suggests that workaholics may not necessarily exhibit good work performance. (Shimazu, A., Schaufeli, W. B., Kubota, K., & Kawakami, N. 2012; Shimazu, A., Schaufeli, W. B., Kamiyama, K., & Kawakami, N., 2015) High levels of forced work and excessive working hours can increase individual attrition, affect individual psychological and physical health, and thus affect work performance.

Due to the unique nature of teaching positions, Chinese middle school teachers not only have to complete heavy work tasks, but also bear pressure from parents, leaders, and other aspects. Therefore, they have to devote more time and energy to their work, which is not only overworked but also highly compulsive.(Hu, Q., Schaufeli, W. B., Taris, T. W., Hessen, D. J., Hakanen, J., Salanova, M., et al., 2014) Culture can have an impact on workaholism. The degree of workaholism is more severe in collectivist cultural backgrounds, while the degree of workaholism is relatively low in individualistic cultural backgrounds.

(Weng,Q.X., Zang,Y.W., 2016) Excessive effort is sometimes futile. According to the attention capacity theory, when the level of effort and attention exceeds the available capacity, the allocation of attention becomes uneven and imprecise. When employees are at a high level of workaholism, their work occupies too much attention and cognitive resources, which can become unstable and actually reduce their work performance.High level workaholics are often associated with negative emotions and work family conflicts (Clark, M. A., Michel, J. S., Zhdanova, L., Pui, S. Y., & Baltes, B. B., 2016) Interpersonal relationships (Burke, R. J., Oberklaid, F., & Burgess, Z., 2004), To some extent, these factors can hinder employees' work performance.There fore, this study suggests that within a certain range, there is a negative correlation between excessive teacher engagement and performance.

Therefore, the conclusion of this study found that different views on the positive correlation with previous studies are valid, but at different stages and levels,

there will be different relationships between Workaholism or Work Engagement and performance.

According to the findings of this study, schools should promote and motivate teachers to pay attention to and engage in their work; On the other hand, it is also necessary to strengthen intervention and guidance for severely workaholic teachers, implement employee assistance plans (such as paid leave, flexible work system, etc.) or conduct psychological disengagement training to promote the psychological disengagement of severely workaholic teachers.

The hypothesis test results between the competence of professional teachers in technical schools and job performance indicate that the competence of professional teachers in technical schools has a significant impact on performance. In other words, the improvement of personal competence of professional teachers contributes to the improvement of job performance.

Schools can improve work performance by enhancing the personal qualities, teaching abilities, skills, and comprehensive abilities of professional teachers, thereby achieving more effective education and teaching, and promoting better development of students. Schools should have a fair and open promotion mechanism to provide teachers with good career planning, a sound teacher training system, space for their growth, and sufficient training opportunities. For example, specialized training such as professional skills training, digital ability training, industry cutting-edge knowledge training, and on-the-job practical training can make teachers more competent, improve work efficiency, and improve work performance.

The hypothesis test results between professional teacher engagement, competence, and job performance in technical schools indicate that when both engagement and competence are improved, the impact on performance is more significant. And due to the existence of interaction, it will weaken the engagement and ability of the impact on work performance. This means that when both participation and ability increase, the impact on performance becomes more significant. There may be a synergistic effect where the combination of participation and ability has a greater impact on performance. When training professional teachers, colleges should consider the abilities and participation of candidates. The talent balance achieved from these two aspects may be more suitable for the work of professional teachers.

Technical college teachers need to possess good technical skills, interpersonal skills, and job awareness in order to guide students to learn effectively together. But the dimensions of trait ability, teaching ability, skill ability, and comprehensive ability are basically the same. Therefore, schools should consider it as one of the evaluation criteria for candidates to be competent in selection and training.

Recommendation

This study indicates that high levels of forced work and excessive working hours can lead to poor job performance within a certain range. Positive psychology believes that the higher a person's level of psychological capital, the more likely they are to remain optimistic, confident, not afraid of failure, and willing to learn new knowledge and share gains. More attention should be paid to the physical and mental health of such teachers, strengthened intervention and guidance, implemented paid leave, etc., to ensure that teacher engagement is maintained at a reasonable level and optimal work performance is achieved

Lifelong learning is the key to improving teachers' abilities. Teachers are disseminators of knowledge, persisting in learning, constantly improving their knowledge system, improving education and teaching levels, adhering to fairness and integrity, and loving students like children. This study proves that teacher competence can improve teaching performance. Learning should conduct personal competence level tests on teachers, identify weak links, carry out targeted training and learning, and ensure learning effectiveness, in order to continuously improve performance levels.

Engagement, ability, and the interaction between engagement and ability have a significant impact on performance. Attention should be paid to the relationship between engagement and competence, and teacher development and performance management strategies should be developed to help coordinate and balance engagement and enhance competence. Support and encourage teachers to leverage the synergy between the two to achieve higher levels of performance.

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