

The Impact of Strategic Training and Development on Work performance: Empirical Evidence from Technical Colleges, Wuhu, China[†]

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Abstract

This research aims not only to explore the strategic teacher training and development on work performance at technical colleges in Wuhu city, China, but it also examines the impact of strategic training and development on work performance. This research used a quantitative questionnaire method through population and sampling design, data collection, data analysis using descriptive statistics, correlation and regression analyses. This research investigates the 2030 teachers of 3 local technical colleges in Wuhu, China, and the sample size of the research is 333 teachers. The finding indicates that the mean value of strategic training and development is 4.704, which indicates that the teachers have a positive attitude towards strategic training and development. It also shows that the mean value of work performance is 4.767, which indicates that teachers have a positive attitude towards improving work performance. Regression analysis indicates that is a positive impact between the 5 dimensions of strategic training and development and teachers' work performance in teaching positions in technical colleges in Wuhu. Accordingly, strategic training and development provides teaching teachers with more development opportunities to stimulate work motivation, promotion opportunities and motivation, and, at the same time, strengthens the knowledge and skills of teaching teachers' own competitiveness, improves teaching teachers' satisfaction on the basis of enhanced work performance, and makes the rise in satisfaction stimulate teaching teachers' work engagement.

Keywords: Work performance, Strategic training and development, Chinese higher education management

Introduction

Systematic training is a programme to enhance teachers' knowledge, skills, competencies and attitudes to achieve improved performance, organisational competitiveness and personal career development. Training includes 3 aspects: Human capital management, organisational behaviour, and educational psychology. The concept of training was first introduced by Taylor, the father of scientific management, in his book about the theory of scientific management, he proposed that workers should be educated to learn to be efficient, so that they can save time and cost to improve the output efficiency and create value (Castillo-Paredes et al., 2022).

Strategic training is a purposeful, planned and scientifically sound investment of human capital by a college or organisation (school). Teachers who participate in such activities are able to improve the relevant knowledge they need in their work environment and the skills they need to do their job (Maasoumi et al., 2024). The research implications of the impact of strategic training on Work performance are, firstly, to promote the understanding and promote the development of organisational learning theory on strategic training and teaching teachers' work performance in 3 local technical colleges in China-Wuhu Secondly, to provide guidance to the 3 local technical colleges in China. Secondly, the 3 local technical colleges were guided to actively use the organisational learning theory to develop training practices to enhance the performance of teachers in teaching positions through training practices.

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The main objective of this research is to explore the long-term effects of strategic training on teachers' Work performance among teachers in teaching positions in 3 local technical colleges in China-Wuhu. First, the strategic training factors in influencing the work performance of teaching teachers were investigated from the perspective of teaching teachers. Through the description of training and performance theories in human capital management, strategic training in training theory was used as the independent variable factor in this research, and work performance was used as the dependent variable in this research. And the independent variables in the research were divided into 5 dimensions to research the relationship of the independent variables on the dependent variables as a whole, and at the same time, to research the relationship of the 5 dimensions of the division on the work performance separately (see **Figure 1**).

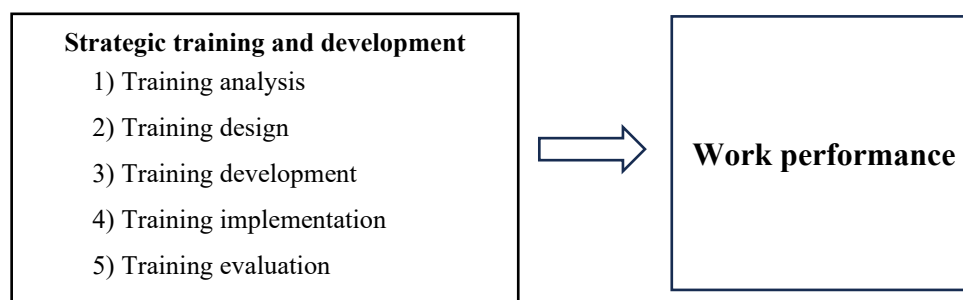


Figure 1 Conceptual framework notes on the impact of strategic training on work performance.

Training and development analysis are an important element in the implementation of strategic training and development, which is analysed by analysing the operational needs of the College, identifying operational gaps and analysing training and development needs. Training and development needs are analysed by analysing the business needs of the college, identifying business gaps and analysing training and development needs. In addition to analysing the current state of learners and data (Weiss et al., 2023), training and development analysis also includes analysing the college's training and development priorities, needs, training and development methods and costs. Training and development analysis ensure that training and development activities are aligned with the strategic goals of the organisation and improves the competence and performance of individual teachers. Thus, hypothesis 1 is that Training and development analyses have a positive impact on work performance.

Training and development design are an important part of the implementation of strategic training and development, which is designed through the setting of training and development performance objectives, the formulation of training and development course programmes, the development of training and development methods and the evaluation of training and development strategies. By, preparing scientific, reasonable and targeted training and development programmes and course plans on the basis of comprehensive consideration of work performance objectives Secondly, it is necessary to develop a sound training and development system to ensure that the training and development content provided can enhance teachers' abilities and performance (Tregon-Martin et al., 2021). Thus, hypothesis 2 is that training and development design has a positive impact on work performance.

Training and development are an important element of strategic training and development and is carried out through the development of training and development materials, the development of lesson plans and the development of quantitative assessment scales (Kenny et al., 2020). Training and development materials provide training and development for training and development activities. Training and development materials provide a framework for training and development activities, a detailed breakdown of training and development objectives, and the necessary conditions for scientific and systematic training and development. Thus, hypothesis 3 is that training and development have a positive impact on work performance.

Training and development implementation are an important element in the implementation of strategic training and development, and organisations adopt controls in the delivery of training and development in order to monitor training and development activities and determine the acceptance of

training and development by collecting evaluation forms from trainers (Colella et al., 2019). Control of the training and development process ensures that the training and development objectives are met and increases the effectiveness of the training and development. Thus, hypothesis 4 is that training and development implementation has a positive impact on work performance.

Evaluation of training and development is an important element in the implementation of strategic training and development, whereby feedback forms from trainees are reviewed and evaluated to assess the effectiveness of the training and development and provide a basis for subsequent continuous improvement (Tregon-Martin et al., 2021). Thus, hypothesis 5 is that training and development evaluations have a positive impact on work performance.

Literature review

Research on the relationship between strategic training and work performance has shown that strategic training contributes to improved work performance strategic training for teachers is expected to make them work harder and bring about performance improvements for individual teachers in teaching positions and for the college. Teachers who have undergone strategic training are able to better understand the strategic goals of the college and apply the content of the strategic training to perform their tasks proficiently and with high quality, thus improving their work performance. The researcher suggests that there is a process of high uncertainty when the training content needs to be translated into teachers' skills, attitudes, knowledge and other factors conducive to improving teachers' competence (Fan et al., 2023). Since the training is targeted at individual employees, the human being as a complex and uncertain whole will result in different aspects of the training outcome. Only good training efforts can help to improve the performance of individual teachers in teaching positions (Pardosi & Utari, 2021). The research found that the implementation steps of strategic training It has been found that the implementation of strategic training consists of 5 steps: Training analysis, training design, training development, training implementation, and training evaluation, each of which has an impact on work performance and contributes to the improvement of work performance.

Methodology

This research uses as a common method used in the creation of research, and in this research the questionnaire method of the survey method was used as the research method for this research. for the research methodology section of this research, a quantitative research methodology was used to research this research through quantitative data and statistical analyses. Subsequently, quantitative research is a mathematically and statistically based approach to validate the research questions of this research by means of quantitative data (Bermann et al., 2024).

The population, sample size and sampling for this research were designed to test the impact of the relationship between strategic training and development on work performance. This research chose to use the Taro-Yamane formula for selecting the number of researchers, which is calculated as $N = N/(1 + Ne^2)$. The total population is 2030 persons and the sample size of the research questionnaire for this research was calculated by the formula to be 333 teachers in the 3 colleges. The sampling method for this research was simple random sampling. Which is done by randomly sampling the subjects of this research in order to obtain the relevant data for the research (Ahmad et al., 2023). Random sampling is an important tool for large-scale surveys, which must need to ensure the representativeness of the sample in order to improve the reliability of the research (Peng et al., 2023).

The instrument for this research was a closed-ended questionnaire, which was administered to in-service teachers in 3 technical colleges in Wuhu. It was found that closed-ended questionnaires are the development of statistical and social science research methods, which are adapted to the needs of social surveys and the development of psychology (Bermann et al, 2024). At the same time, closed-ended questionnaires have a wide range of applicability, apply to a large number of groups, and the privacy of the teachers surveyed is safeguarded (MacIntyre et al., 2001).

The demographic questionnaire development part of the questionnaire of this research is research of the basic demographic characteristics and background information of the questionnaire of this research, which provides the analysis and comparison of the variable analysis and machine validation of this thesis. Subsequently, a comprehensive research of age, gender, education level, job title, and years of service in this work unit was conducted on the teachers in the 3 technical colleges in Wuhu in Wuhu, China, for this research, which then provided the basic assistance for the subsequent research. The questionnaire demographic questionnaire table is as follows **Table 1**.

Table 1 Research instrument.

Variable	Number of issues	Sources
Demographic studies	1) Q1 - Q5	
1) Training and development analysis	1) Q1 - Q5	
2) Training and development design	2) Q6 - Q10	
3) Training and development	3) Q11 - Q15	(Dwivedi, 2017)
4) Training and development implementation	4) Q16 - Q20	
5) Training and development evaluation	5) Q21 - Q25	
Work performance	Q1 - Q10	(Pardosi & Utari, 2021)

The design of the questionnaire was carried out by consulting the relevant literature. The experts reviewed the quality of the questionnaire, awarded the test of reliability and validity (IOC), the test results IOC results 0.980 points, which meets the conditions for the distribution of valid questionnaires. After a pre-distribution test of the questionnaire to 40 teachers in 3 technical colleges in Wuhu in Wuhu, China, it was used to collect and check the feasibility of the questionnaire. Relevant conclusions were drawn, cronbach's alpha for strategic training and development and was 0.980. Cronbach's alpha for work performance was 0.979. Training and development cronbach's alpha for training and development design is 0.979. Cronbach's alpha for training and development is 0.979. Cronbach's alpha for training and development implementation is 0.979. Cronbach's alpha for training and development implementation is 0.979. Cronbach's alpha for training and development evaluation is 0.979. The above values show that all of them are in line with the overall reliability needs. With the above data from the pre-issued questionnaire, the research concluded that the validity of the questionnaire is met. The questionnaire can be distributed as a final questionnaire.

Taking into account the factors of questionnaire distribution and recovery, 333 teachers in 3 technical colleges in Wuhu, China, were targeted for the questionnaire survey. Subsequently, the number of questionnaires distributed in this survey was initially planned with a more precise distribution volume due to the high stability and high professionalism of teachers' work. Then, the number of samples issued and the length of issuance time is appropriately increased, the total number of questionnaires issued increased to 60 %, reaching 534 questionnaires, questionnaires are valid for 15 working days, the recovery rate of the questionnaire is 80.5 %, which is also in line with some of the relevant research practice literature on the law of research (Peng et al., 2023) , providing data for subsequent data analysis.

This research conducted through the following steps: preparation of questionnaires, WeChat APP software, email surveys, etc. With, the popularity of web applications, web surveys are widely used questionnaires (Umer et al., 2023). Its main advantages include timeliness, interactivity, breaking through time and space, etc., which can save a lot of inputs in traditional surveys. This research used the statistical software SPSS and the visualisation software Office Excel sheet to statistically analyse the collected questionnaire data and the results were displayed (Valente et al., 2020) Subsequently, the relationship of variables between strategic training and development and work performance was analysed and determined. It is then evident from the results of the data display that strategic training and development has a significant positive impact on work performance.

The data analysis of this research consists of the following steps: first part provides descriptive data in the form of frequencies, percentages, means and standard deviations. It describes the extent of the research participants' attitudes towards each variable during the course of the research. The survey used a 6-point Likert attitude scale **Table 2** to collect data.

Table 2 Likert 6 level attitude scale.

Option answer to the question	Score
Strongly agree	6 point
Agree	5 point
Slightly agree	4 point
Slightly disagree	3 point
Disagree	2 point
Strongly disagree	1 point

Frequency reflects the number of times a type of response in the questionnaire occurs in the sample and in the total, and frequency is important in describing the data. Frequency is divided into absolute frequency is a specific value in the overall number of values, relative frequency reflects the percentage of the data, analysing the frequency of this research is a certain interpretation of the distribution and trend of the data of the population of the research object, strategic training and development, and work performance. Percentage is to describe the distribution, trends and characteristics of the data, to reflect, population, strategic training and development and work performance in this research have used the concept of percentage, where the population gender used a single value percentage, age and length of time of service in the job used range percentage, and for strategic training and development and work performance it used the category percentages. The mean value in this research reflects the concentration of the questionnaire data, and the standard deviation measures the extent to which each data point in this collection of questionnaire data deviates from the mean value, to judge the data information for particular variations in the questionnaire data.

Table 3 Attitude report form.

Range	Indicate
5.21 - 6.00	Strongly agree
4.37 - 5.20	Agree
3.53 - 4.36	Slightly agree
2.68 - 3.52	Slightly disagree
1.84 - 2.67	Disagree
1.00 - 1.83	Strongly disagree

The second part contains 2 parts of data: Correlation analysis data and regression data, and statistical data and data judgement. Using SPSS software on the data frequency, mean and standard deviation of the descriptive strategic training and development and work performance of the current situation. Analysed and concluded the hypothesis: Strategic training and development has a significant positive impact on work performance, which validates the research hypothesis.

The correlation between the variables of this research, the independent variable strategic training and development and the dependent variable work performance was measured and the correlation between the 2 was analysed. The Pearson correlation coefficient method was used in this research to analyse the strength of continuous linearity between the independent variable and the 5 dimensions of the dependent

variable, to help examine the relationship between strategic training and development and work performance, and to provide a basis for inferences from the data.

For this research regression analysis is used between strategic training and development and work performance variables to predict the extent of influence of strategic training and development variables on work performance variables and to make inferences and predictions about the results of the research.

Results and discussion

Basic information of respondents

Firstly, the demographic descriptive statistics were analysed on the recovered valid questionnaire data. The research organisation of this research is China - Wuhu, 3 technical colleges in Wuhu, teachers working in teaching positions, according to the basic characteristics of the teachers involved in the research, the collection of the teachers receiving the research personal gender, age status, the educational background of the final formal education, the teacher's current title level of the length of time of service engaged in teaching work in this unit Basic demographic information, the statistical results are shown in **Table 4**. below.

Table 4 Descriptive statistics of demographic information of participating teachers at 3 technical colleges in Wuhu.

	Frequency	Valid Percent	Cumulative percent
Gender			
Male	132	39.6	39.6
Female	201	60.4	100.0
Age			
Under 30	84	25.2	25.2
30 - 40	83	24.9	50.1
41 - 50	114	34.2	84.3
Above 50	52	15.6	100.0
Highest formal education			
Below undergraduate	84	25.2	25.2
Bachelor's degree	183	55.0	80.2
Master degree	39	11.7	91.9
Doctoral degree	27	8.10	100.0
Title			
Junior teacher	84	25.2	25.2
Intermediate teacher	145	43.5	68.8
Deputy senior teacher	88	26.4	95.2
Advanced teacher	16	4.8	100.0
Working experience for this organization			
Less than 1 year	42	12.6	12.6
1 - 5 years	46	13.8	26.4
6 - 10 years	78	23.4	49.8
11 - 15 years	55	16.5	66.4
16 - 20 years	38	11.4	77.8
21 years and over	74	22.2	100.0

In terms of gender, as shown in **Table 4** above, 132 male teachers accounted for about 39.6 % of the total, 201 female teachers accounted for about 60.4 % of the total, and the number of female teachers participating in the questionnaire was higher than the number of male teachers 69. This research focuses on the questionnaire survey and conducts research on the participation of 333 teachers from 3 technical colleges in Wuhu in this survey, and the survey sample is mainly centred on a random sampling questionnaire survey of teachers at 4 different age levels.

In the age breakdown in **Table 4**, the majority of teachers were in the age bracket of 41 to 50 years totalling 114 teachers or 34.2 % of the total number of teachers. This is followed by 84 teachers below the age of 30 years, representing about 25.2 % of the total. Then, there were 83 teachers in the age group of 30 to 40 years, representing about 24.9 % of the total. With regard to the final educational background of formal education, as shown in **Table 4** above, the portion of those with less than a bachelor's degree accounts for 84 or about 25.2 % of the total, followed by a bachelor's degree of 183 or about 55 % of the total, then a master's degree of 39 or about 11.7 % of the total, and a doctoral degree of 27 or about 8.1 % of the total.

In terms of titles, as shown in **Table 4** above, the part of intermediate teachers' titles, 145, accounted for about 43.5 % of the total, followed by 88 teachers' titles at the deputy senior level, which accounted for about 26.4 % of the total, and then 84 teachers' titles at the junior level, which accounted for about 25.2 % of the total, of which 16 teachers' titles at the junior level accounted for about 4.8 % of the total.

With regard to the length of service of teaching jobs in this unit, as shown in **Table 5** above, the division of the length of service in terms of the part of 6 to 10 years accounted for about 23.4 % of the total number of 78 people, followed by a total of 21 years and above, which accounted for about 22.2 % of the total number of 74, and then a total of 11 to 15 years, which accounted for about 55 people, which accounted for about 16.5 % of the total number of people.

Descriptive statistics for strategic training and development. This research adopts descriptive statistics of the independent variable strategic training and development in this research, and the results are shown in **Table 5**, below.

Table 5 Results of descriptive statistics on strategic training and development.

Question	Mean	Standard deviation	Level of perception	Rank
Training and development analysis	4.724	0.531	Agree	
1) I think there is a need to know what the school requires of teachers in terms of skills, knowledge and competence.	4.580	1.063	Agree	4
2) I think there is a need to know what specific skills, knowledge is crucial for success at work.	4.500	1.171	Agree	5
3) It is important to have annually determine what is immediately needs to be trained.	4.900	1.092	Agree	1
4) It is important to have a standard procedure to determine how to train staff effectively.	4.820	1.130	Agree	2
5) It needs clear analysis in the areas where additional training and development would enhance job effectiveness.	4.820	1.216	Agree	2
Training and development design	4.729	0.566	Agree	
6) I believe that staff need to get on with skills, knowledge, and abilities to complete the work task.	1050	1.135	Agree	5
7) I think it is necessary to evaluate the individual's performance to determine types of training and development to attend.	1090	1.171	Agree	3
8) I believe that training and development should be based on the differences of participants.	4.800	1.091	Agree	2

Question	Mean	Standard deviation	Level of perception	Rank
9) There are specific learning activities that are effective for individual learning.	4.820	1.168	Agree	1
10) I think efficiency training and development can be done in a variety of ways, such as listening to lectures, watching videos, or doing hands-on exercises.	1080	1.197	Agree	4
Training and development	1064	0.537	Agree	
11) I believe training and development programmes are solving recurrent challenges faced by employees in their day-to-day work.	890	1.142	Agree	5
12) I think team training and development should be structured to ensure that team goals align closely with the overall objectives and mission of the college.	4.510	1.176	Agree	4
13) I think the methods implemented in training and development programmes provide a comprehensive understanding of the school's policies, promoting better adherence and compliance. The Government should also ensure that the training and development programmes are not subject to any adverse impact on the quality of education.	4.930	1.108	Agree	1
14) I think regular training and development sessions contribute to a deeper and sustained comprehension of the school's policies among staff members.	4.710	1.195	Agree	2
15) I think present duration of training and development sessions in ensuring their relevance over time.	1080	1.136	Agree	3
Training and development implementation	1072	0.583	Agree	
16) Implementing the planned training and development to ensure it aligns with our goals effectively is very important.	890	1.161	Agree	5
17) Training and development programmes should not be altered to suit the preferences of individuals.	4.550	1.196	Agree	4
18) I believe that institutions should continuously facilitate self-service learning platforms to accomplish the goal.	4.820	1.140	Agree	1
19) I think institutions need to align and structure their training and development efforts based on different experiences.	4.780	1.201	Agree	2
20) Align the goals of both direct and indirect beneficiaries of training and development, fostering a shared vision.	4.720	1.221	Agree	3
Training and development Evaluation	1099	0.525	Agree	
21) I think training and development participants' performance needs to be assessed in order to determine future training and development.	4.510	1.080	Agree	4
22) I think it needs to be determined if the training and development programme is appropriate.	890	1.161	Agree	5
23) I think it is necessary to evaluate the strengths and weaknesses of training and development.	5.020	1.046	Agree	1
24) I think training and development needs to determine the ratio of costs and benefits.	4.820	1.087	Agree	2
25) I think there is a need to evaluate the rate of return on training and development before the training and development starts.	1060	1.243	Agree	3

From **Table 5**, the analysed data shows that the mean value of strategic training and development is 4.704, which indicates that the teachers of teaching positions in the 3 technical colleges in Wuhu City, China, have a positive attitude towards strategic training and development. Analytical data from the 5 dimensions of the independent variable X, and according to the average value of each dimension data for data sorting, sorting according to the average value of the value of the size of the descending order, sorting results were X1.2 training and development design is 4.729, X1.1 Training and development analysis is 4.724, X1.5 training and development evaluation is 1099, X1.4 training and development Implementation is 1072, and X1.3 Training and development design is 1064. The table also reflects that the independent variables were divided into 5 dimensions, each of which presented 5 questionnaires. For each dimension, the questions were ranked in descending order of the mean value. This sorting can reflect the data of the questionnaire questions' recovery more significantly. The mean values of the strategy training and development can be used to make a preliminary judgement on the attitude of the teachers of the 3 schools towards the implementation of the strategy training and development, and most of the teachers have a positive attitude towards the strategy training and development.

Descriptive statistics of work performance. This research adopts descriptive statistics of the dependent variable work performance in this research, and the results of the analysis are shown in **Table 6** below.

Table 6 Results of descriptive statistics on work performance.

Question	Mean	Standard deviation	Level of perception	Rank
1. I am aware of the duty that I have to accomplish.	4.740	1.014	Agree	7
2. I am able to carry out my work efficiently.	4.780	1.102	Agree	5
3. I am able to start new tasks even when my old tasks are not yet done.	1090	1.163	Agree	8
4. I always keep my job-related knowledge up-to-date.	4.820	1.108	Agree	3
5. I worked on my work-related skills up-to-date.	4.830	1.122	Agree	2
6. I came up with solutions once I faced new challenges.	4.810	1.122	Agree	4
7. I am willing to take on extra responsibilities.	1090	1.118	Agree	8
8. I regularly sought new challenges in my work.	4.780	1.167	Agree	5
9. I am always invited to participate in meetings.	4.850	1.055	Agree	1
10. I can fix complex problems better than my colleague.	1060	1.118	Agree	10
Work performance	4.767	0.514	Agree	

Table 6 shows that the mean value of work performance is 4.767, which indicates that teachers in 3 technical colleges in Wuhu in China-Wuhu City have a positive attitude towards improving work performance. The dependent variable Y in the theoretical framework of this research is not dimensionalised and only 10 questionnaire questions about the dependent variable are presented, which are denoted by the letter Q. The numerical size of each questionnaire question was ranked in descending order according to its mean value, which resulted in the following rankings: the mean value of Q9 was 4.850, the mean value of Q5 was 4.830, the mean value of Q4 was 4.820, the mean value of Q6 was 4.810, the mean value of Q8 and Q2 was 4.780, the mean value of Q1 was 4.740, the mean value of Q3 and Q7 was 1090, and the mean value of Q10 was 1060. This ranking can reflect the data of the questionnaires more significantly. The mean value of work performance can be used to make a preliminary judgement on the attitude of teachers in the 3 schools towards improving work performance, and most of the teachers have a positive attitude towards improving work performance.

Correlation analysis. This research analyses the correlation between the dimensions of strategic training and development and work performance in this research, and the results of the analysis are shown in **Table 7** below.

Table 7 Correlation analysis of strategic training and development to work performance.

Strategic training and development	1	2	3	4	5	6
1) Training and development analysis	1					
2) Training and development design	0.618**	1				
3) Training and development	0.568**	0.575**	1			
4) Training and development implementation	0.607**	0.608**	0.603**	1		
5) Training and development evaluation	0.585**	0.588**	0.577**	0.630**	1	
6) Work performance	0.677**	0.621**	0.616**	0.665**	0.638**	1

**At the 0.01 level (two-tailed), the correlation was significant.

The analysed data from **Table 8** shows that the correlation coefficient between strategic training and development and work performance is above 0.01, which has research significance as a positive correlation, and the correlation value ranges between $-1 \sim 0 \sim 1$. According to the data in **Table 8**, the Pearson correlation coefficients between the 5 dimensions of the independent variable of strategic training and development: 1 training and development analysis, 2 training and development design, 3 training and development, 4 training and development implementation, 5 training and development evaluation and the dependent variable work performance are as follows the maximum value is 0.677, the minimum value is 0.616, and the values of the 5 dimensions remain within the range of correlation. From the correlation coefficients of the 5 independent variable dimensions and the dependent variable respectively, it can be seen that each value is higher than the medium positive correlation value of 0.5 for the medium-high positive correlation, so for the hypotheses H2, H3, H4, H5 and H6 proposed in this research, it can be verified. At the same time, the average value of the correlation coefficient of the 5 dimensions is 0.676 which also belongs to the medium positive correlation, so it can be preliminarily verified for the hypothesis H1 proposed in this research.

Regression analysis, this research used regression analysis to verify whether there is a role between strategic training and development and work performance. To test whether there is a significant effect of strategic training and development (independent variable) on work performance (dependent variable) among teachers of teacher positions in 3 technical colleges in Wuhu in China.

The regression analyses for specific data are shown in **Table 8** below.

Table 8 Regression analysis of strategic training and development on work performance.

	Unstandardised Coefficients		Sig.	VIF
	B	Std. Error		
Constant	0.563	0.187	0.003	***
Training and development analysis	0.269	0.047	0.000	***
Training and development design	0.113	0.045	0.012	**
Training and development	0.148	0.045	0.001	***
Training and development implementation	0.191	0.045	0.000	***
Training and development evaluation	0.173	0.048	0.000	***

$R^2 = 0.617$, Adjusted $R^2 = 0.611$, $F = 105.446$, Sig. = 0.000 ***

From the regression analysis of strategic training and development on work performance, **Table 8** shows that. Model equation. The adjusted R^2 value was 0.611, the table suggests that strategic training and development explains 61.7 % of the variance in work performance. From the table, it is found that the VIF value for each dimension is less than 5, indicating that there is no covariance problem in the model. For the

F-test, $F = 105.446$ and $Sig = 0.000$ is less than 0.01 indicating that strategic training and development has an effect on work performance.

1) The β coefficient of strategic training and development analysis is 0.269, which is below the t-value of 5.681, indicating that there is a significant positive impact of strategic training and development analysis on work performance, which tests hypothesis H2.

2) The β coefficient of strategic training and development design is 0.113, which is below the t-value of 2.538, indicating that there is a significant positive effect of strategic training and development design on work performance, which verifies hypothesis H3.

3) The β coefficient of strategic training and development is 0.148, which is below the t-value of 3.265, indicating that strategic training and development has a significant positive impact on work performance, which verifies hypothesis H4.

4) The β coefficient of strategic training and development implementation is 0.191, which is below the t-value of 4.261, indicating that there is a significant positive impact of strategic training and development implementation on work performance, which verifies hypothesis H5.

5) The β coefficient of strategic training and development evaluation is 0.173, which is below the t-value of 3.617, indicating that there is a significant positive impact of strategic training and development evaluation on work performance, which verifies the hypothesis H6.

Summarise the research findings. based on the results of the research analysis, it was found that there is a positive correlation between training and development analysis, training and development planning, training and development, training and development implementation and training and development evaluation among the 5 factors of strategic training and development affecting work performance, and the same positive correlation exists between the impact of strategic training and development on work performance.

Table 9 Regression analysis of strategic training and development on work performance.

Research Hypothesis	Result
H1: Training and development analysis have a positive impact on Work performance.	Support
H2: Training and development design have a positive impact on Work performance.	Support
H3: Training and development have a positive impact on Work performance.	Support
H4: Training and development implementation have a positive impact on Work performance.	Support
H5: Training and development evaluation have a positive impact on Work performance.	Support

As can be seen from the findings in **Table 9**, all 5 hypotheses are recognised, indicating that strategic training and development is positively related to work performance. This also answers the research question of This research: Does strategic training and development affect work performance? The question of the impact of strategic training and development and training and development on the work performance of teachers in China-Wuhu Technical colleges in Wuhu? Therefore, the hypotheses were formulated based on the theoretical framework of this research and H1, H2, H3, H4 and H5 were accepted and analysed in this research.

Conclusions

Discussion, this research conducted a questionnaire survey of teachers in 3 technical colleges in Wuhu in Wuhu, China. The hypotheses of this research were tested and the following conclusions were drawn. The impact of strategic training and development on work performance was positively related. Strategic training and development analysis were significantly positively related to work performance. Strategic training and development design were significantly positively related to work performance.

Strategic training and development were significantly positively related to work performance. Strategic training and development implementation were significantly positively related to work performance. Strategic Training and development evaluation were significantly and positively related to work performance. The above findings are presented after careful consideration to provide empirical conclusions for the research of the positive impact of strategic training and development on work performance (Incoll et al., 2020).

Through the above conclusions, based on the process of the research, it was found that the impact of strategic training and development on work performance is significantly positive, and the subdivided 5 dimensions of strategic training and development also have a significant positive impact on work performance, respectively, which is a summary of the results of this research. For the research hypotheses proposed by the independent variables and independent variables dimensions corresponding to the variables of the research were effectively verified, while this research verified the research questions posed, compared with related studies to add to the knowledge, and verified the research theory of the impact of strategic training and development on work performance, and proposed the significance of the practice. For this research due to the limitations of the sample size and the limitations of the research population, the scope of the research will be increased in the future to expand the impact of the research. Also providing assistance in performance management and training and development programmes for 3 technical colleges in Wuhu is a specific contribution of this research. The recommendations of the findings of this research are expected to be used by all types of local colleges to incorporate the contents of this research in the scientific planning and implementation of strategic training and development efforts to improve organisational performance for the future development of the colleges (Lu & Ishak, 2022)

This research will help 3 technical colleges in Wuhu, China, to understand and develop the theories of strategic training and development and work performance. Strategic training and development theory were used to develop training and development practices and improve the performance of teaching staff. In the research, the relationship between strategic training and development and work performance was empirically analysed by reviewing the literature on training and development, strategic training and development, work performance, etc. and combining it with the data from the research (Lalani et al., 2020).

The practical significance of the research of the impact of strategic training and development on work performance research is to enhance the college sub-development, the performance of teachers, the construction of the teacher team, the development of training and development and the promotion of school development. In terms of performance enhancement of 3 technical colleges in Wuhu in Wuhu, China, the overall college performance can be influenced to rise through the individual improvement of the performance level of teaching teachers, the core competitiveness of colleges and adaptation to environmental changes through strategic training and development to improve the competence of teaching teachers, optimise the workflow and the efficiency of the work operation, and also improve the significance of the research on the impact of strategic training and development on work performance at the college level (Forcadell-Diez et al., 2023).) On the individual level, strategic training and development provides teaching teachers with more development opportunities to stimulate work motivation, promotion opportunities and motivation, and, at the same time, strengthens the knowledge and skills of teaching teachers' own competitiveness, improves teaching teachers' satisfaction on the basis of enhanced work performance, and makes the rise in satisfaction stimulate teaching teachers' work engagement (Buonomo et al., 2021) The For the management strategy aspect of identifying and developing excellence, not only will it improve teaching faculty team performance, but it will also improve college leadership and productivity. It provides impetus for exploring theories and practices affecting faculty performance and guide colleges to develop training and development, performance, and development programmes in a scientific and effective manner (Wu & Greig, 2022).

References

- Ahmad, S., Ullah, K., Zahid, E., Shabbir, J., Aamir, M., Alshanbari, H. M., & El-Bagoury, A. A. H. (2023). A new improved generalized class of estimators for population distribution function using auxiliary variable under simple random sampling. *Scientific Reports*, 13(1), 5415.

- Bermann, M., Legarra, A., Munera, A. A., Misztal, I., & Lourenco, D. (2024). Confidence intervals for validation statistics with data truncation in genomic prediction. *Genetics Selection Evolution*, 56(1), 18.
- Buonomo, I., Farnese, M. L., Vecina, M. L., & Benevene, P. (2021). Other-focused approach to teaching. the effect of ethical leadership and quiet ego on work engagement and the mediating role of compassion satisfaction. *Frontiers in Psychology*, 12, 692116.
- Castillo-Paredes, A., Nunez-Valdes, K., Dianta, C. V., Olivares, N. V., Nunez, M. L., Fuentes-Rubio, M., & Nunez-Valdes, G. (2022). Teacher training and development in Chile: Where are universities looking? A narrative review. *International Journal of Environmental Research and Public Health*, 19(19), 12802.
- Colella, M., Bisanzo, M., Farquhar, C., Nambaziira, R., Carter, E., Gimbel, S., & O'Malley, G. (2019). Implementation and evaluation of an innovative leadership and teacher training program for non-physician emergency medicine practitioners in Uganda. *African Journal of Emergency Medicine*, 9(1), 25-29.
- Dwivedi, F. (2017). A Study on the significance of strategic training for human resources development in India. *International Journal of Human Resource Studies*, 6(1), 1-12.
- Fan, S., Yu, Z., Zheng, X., & Gao, C. (2023). Relationship between psychological adaptability and work engagement of college teachers within smart teaching environments: the mediating role of digital information literacy self-efficacy. *Frontiers in Psychology*, 14, 1057158.
- Forcadell-Diez, L., Bosch-Aris, M., Espinel-Flores, V., Abietar, D. G., Puig-Barrachina, V., Juarez Martinez, O., & Perez, G. (2023). An evaluation of teacher training and development to promote healthy and equitable relationships: Transforming or reproducing? *Gaceta Sanitaria*, 37, 102338.
- Incoll, I. W., Atkin, J., Owen, J., Keane, A., Khorshid, O., Cosenza, A., & Frank, J. (2020). Australian orthopaedic surgery training and development: Australian orthopaedic association's strategic education review. *ANZ Journal of Surgery*, 90(6), 997-1003.
- Kenny, M., Luck, P., & Koerbel, L. (2020). Tending the field of mindfulness-based programs: The development of international integrity guidelines for teachers and teacher training. *Global Advances in Health and Medicine*, 9, 1-10.
- Lalani, M., Bussu, S., & Marshall, M. (2020). Understanding integrated care at the frontline using organisational learning theory: A participatory evaluation of multi-professional teams in East London. *Social Science & Medicine*, 262, 113254.
- Lu, Q., & Ishak, N. A. (2022). Teacher's emotional intelligence and employee brand-based equity: mediating role of teaching performance and teacher's self-efficacy. *Frontiers in Psychology*, 13, 901019.
- Maasoumi, R., Azin, S. A., Nedjat, S., Parto, M., Zamani Hajiabadi, A., & Gelehkolaee, K. S. (2024). The effect of sexuality education based on the information, motivation, and behavioral skills model on improving the teachers' professional competence. *Heliyon*, 10(2), e24170.
- MacIntyre, U. E., Venter, C. S., Vorster, H. H., & Steyn, H. S. (2001). A combination of statistical methods for the analysis of the relative validation data of the quantitative food frequency questionnaire used in the THUSA study. Transition, Health and Urbanisation in South Africa. *Public Health Nutrition*, 4(1), 45-51.
- Pardosi, J., & Utari, T. I. (2021). Effective principal leadership behaviours to improve the teacher performance and the student achievement. *F1000Res*, 10, 465.
- Peng, S., Roth, A. R., & Perry, B. L. (2023). Random sampling of alters from networks: A promising direction in egocentric network research. *Social Networks*, 72, 52-58.
- Tregon-Martin, N., Valero, M. V., Buils, R. F., & Miedes, A. C. (2021). Educational guidance for functional visual diversity in Nicaragua. Design and evaluation of a teacher-training program. *Evaluation and Program Planning*, 88, 101948.
- Umer, M., Aljrees, T., Ullah, S., & Bashir, A. K. (2023). Novel approach for quantitative and qualitative authors research profiling using feature fusion and tree-based learning approach. *PeerJ Computer Science*, 9, e1752.

- Valente, M. J., Rijnhart, J. J. M., Smyth, H. L., Muniz, F. B., & MacKinnon, D. P. (2020). Causal mediation programs in R, Mplus, SAS, SPSS, and Stata. *Structural Equation Modeling*, 27(6), 975-984.
- Weiss, J. K., Bottling, M., & Karner, T. (2023). Professional identification in the beginning of a teacher's career: a longitudinal study on identity formation and the basic psychological need for autonomy in VET teacher training and development. *Frontiers in Psychology*, 14, 1196473.
- Wu, H., & Greig, M. (2022). Adaptability, interdisciplinarity, engageability: critical reflections on green social work teaching and training and development. *Healthcare*, 10(7), 1245.