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# Harmonizing success: unraveling the interplay of principal entrepreneurial leadership, teacher efficacy, and organizational effectiveness in English training institutions of China

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For a long time, teacher efficacy and organizational effectiveness have been researched in primary, junior high schools or university settings. Training institutions are a special type of profit-making educational organization, there is relatively little research conducted on them. Entrepreneurial leadership is an innovative leadership concept that, to some extent, contributes to improving teacher efficacy and organizational effectiveness, which is rarely studied in the educational domain. In accordance with the tenets of the open social system theory, this study proposed a model that teacher efficacy has a mediation effect on principal entrepreneurial leadership and organizational effectiveness. To evaluate the proposed model and explore the relationships among principal entrepreneurial leadership, teacher efficacy and organizational effectiveness, this study researched 381 teachers in English training institutions via Pearson correlation analysis and mediation effect analysis. The findings showed that positive and significant relations among principal entrepreneurial leadership, teacher efficacy and organizational effectiveness, and confirmed that teacher efficacy has a mediating effect on principal entrepreneurial leadership and organizational effectiveness in training institutions. These findings contributed to expanding the implementation of open social system theory from the three perspectives, providing new comprehension for government educational departments, principals and teachers in the organizational effectiveness of training institutions.

## KEYWORDS

organizational effectiveness, entrepreneurial leadership, teacher efficacy, English training institutions, educational administration

## 1 Introduction

As one of the common international languages, English is extensively utilized in the worldwide. To cultivate English-speaking professionals, countries and universities have set up English majors. In China, more than 90% of students are learning English at schools or other training institutions (Ding and Yang, 2019). To gain higher English examination scores,

students will attend off-campus English classes after school (Wang, 2018; Gao and Xu, 2020). Currently, more than 70,000 organizations offer English language training in China (Gao and Xu, 2020). It is noteworthy that English training institutions are not like traditional schools as they combine business and educational patterns. The comprehensive evaluation to assess the success pertaining to this unique kind of profit-making educational institution for non-English speaking nations from both a business and educational standpoint remains an unexpected area within academic discourse.

The process of organizational management entails the coordination of financial, human, and social resources through departmental integration inside organizations. This process ultimately leads to the establishment of organizational, social, and individual values (Hitt et al., 2011). School based organizational management represents a global drive to improve educational quality and organizational effectiveness (Zheng, 2002). The effectiveness of an organization can be seen in how best it establishes and utilizes these resources (Zhang et al., 2020). Principal and teachers as key figures, previous research has established the correlation study between principals' leadership and organizational effectiveness, underscoring that entrepreneurial leaders adeptly navigate challenges associated with resource integration and value generation (Luo and Ye, 2012; Croucher et al., 2017; Zhu et al., 2023). And some literature also find that principal entrepreneurial leadership and teacher efficacy are related to organizational effectiveness (Khan, 2021). Few studies have investigated the mechanism of the influence of principal entrepreneurial leadership on teacher efficacy and organizational effectiveness, especially in profit-making educational organizations. Besides, some higher education institutions fail to adapt to the changing environment and expectations of social requirements, become less effective and disappear due to obsolescence (Demir, 2021; Zhu et al., 2023). To fully exploit the organizational effectiveness, the key programs for educational reform that have been implemented in numerous nations are to identify the influencing variables of effective schools. These programs prioritize a dedicated focus on the systematic examination of effective schools. However, there is little literature on the issue of improving organizational effectiveness in training institutions.

Empirical evidence indicates that principal leadership and teachers' self-efficacy impact the development of organizational effectiveness (Liu and Hallinger, 2018; Khan, 2021). In pace with leadership development, trait theory, attribution theory, contingency theory, transformational leadership theory, and instructional leadership theory, entrepreneurial leadership is a new type of leadership that combines entrepreneurial and leadership to organize resources strategically (Ireland and Hitt, 1999; Covin and Slevin, 2017) from both personal and organizational levels. Following the promulgation of educational policies, China has paid more attention to the measurement dimension of leadership behavior and teaching leadership (Zhu et al., 2023). And in some developed countries, fewer universities have implemented entrepreneurship education programs to teach entrepreneurial thinking (Eesley and Lee, 2021; Zhu et al., 2023; He et al., 2024). However, in general, the research on principal entrepreneurial leadership behavior in China is still in the initial stage and has not been thoroughly researched or implemented (Liu et al., 2022), and empirical research is also lacking (Zhang et al., 2020; He et al., 2024). Thus, in-depth analysis is required to fully comprehend the dimensions of principal entrepreneurial leadership in educational organizations and its impact on organizational effectiveness.

Teachers' self-efficacy is teachers' personal ability beliefs to prepare, manage, and carry out school teaching activities to influence desired students' performance (Bandura, 1995; Skaalvik and Skaalvik, 2007). Teachers with higher teacher efficacy will constantly update their knowledge base and teaching skills to ameliorate teaching quality and improve teaching service, enhancing students' study engagement and gradually promoting organizational performance and effectiveness (Khanshan and Yousefi, 2020). Past researchers studied teacher efficacy in various categories of school organizations, ignoring the efficacy performance of teachers in training institutions. Many empirical researches on teacher efficacy has been conducted in the West (Kuang and Deng, 2010; Minghui et al., 2018; Fackler et al., 2021; Ding and Hong, 2023), and mentioned the issues that considering the application of teacher efficacy taking different forms in varying cultures and the problem of cross-cultural adaptability (Liu et al., 2022; Wang et al., 2022). Based on the above limitations and previous research, the interactive relationship between principal entrepreneurial leadership and teacher efficacy has not been comprehensively studied. To address the influence factors in the profit-school organizations and fill the gap in the literature, this study investigated the relations among organizational effectiveness, principal entrepreneurial leadership, and teacher efficacy, examining the mediation effect of teacher efficacy in English training institutions in China. On the one hand, this study enriches and adds new knowledge on the implementation of open social system theory from the combination pattern of traditional schools with business organizations. Raising the context study and understanding of open social system theory from the perspective of organizational effectiveness involves integrating principal entrepreneurial leadership and teacher efficacy. On the other hand, the results of this study will encourage the government educational departments and educational organizations to gain a deeper understanding of organizational effectiveness. Strengthen its supervision mechanism to the service quality of English training institutions, reinforce the examination of teachers' qualifications and abilities. Contributing to create a better English learning environment, qualified services and higher education capacities for the young generation in China.

## 2 Literature review

Organizational management is a dynamic and interactive cyclical process. The open social system repotes that the school organization is an open system (Scott and Davis, 2008), the classroom is regarded as a social system by nature. The openness of the school means continuous interaction and communication with the external environment, the schools' output is the result of the interaction of teaching and learning. The effectiveness indicators can be derived from each stage of input, process, output in the open-social system cycle. Hence, this study discusses the relationship among principal entrepreneurial leadership, teacher efficacy, and organizational effectiveness.

### 2.1 Principal entrepreneurial leadership and organizational effectiveness

Das (2011) supported the idea that organizational effectiveness refers to its capability to utilize resources to achieve of organizational

goals. Youzi and Jian (2022) explained that organizational effectiveness can be regarded as the success achieved by the unique capabilities and values of the human resources of organizations. It involves coordination, cooperation, and full utilization of resources at all levels and departments within the organizations to achieve the established mission (Jacobsen et al., 2022). Cameron (1978) developed a scale to measure organizational effectiveness in terms of teacher performance, student learning outcomes, and principal resource utilization, which included eight dimensions. Student satisfaction with the educational services provided includes teaching quality and methods or other academic support services. The satisfaction of faculty and staff with the work environment, working conditions, institutional management and support. Students' academic progress refers to the development of knowledge understanding, academic skills and knowledge application. The professional development of faculty and staff in the teaching and academic fields, as well as their teaching quality, research level, and professional competence. Student personal development as well as career development. System openness and community interaction. The ability of institutions to acquire funding, manpower, and other resources to support the continuous improvement activities.

In educational organizations, principals arrange teaching syllabuses, control teaching quality, guarantee students' growth, and performance, as well as exploit development opportunities for improving organizational improvement and effectiveness (Leithwood and Jantzi, 2006). Roebuck (2011) defined entrepreneurial leadership as lowering risks, constantly innovating, seizing opportunities, taking personal responsibility, and managing change in a dynamic environment, which encourages more supporters to pursue shared objectives through proactive entrepreneurial leadership behavior. Thornberry (2006) proposed five dimensions to measure entrepreneurial leadership. Specially, principal miner behavior is to promote organization development by tapping into existing resources and opportunities. Principals accelerator behavior takes measures to accelerate the development of the organizations, includes quickly promoting the implementation of new projects, strengthening marketing and improving the speed of curriculum development to quickly respond to market demand and enhance the competitiveness of the organization. The explorer behavior of principals is to enhance the development of organizations by exploring new fields or external markets. Principal integrator behavior refers to improve the organizational operations by integrating various resources and stakeholders. General entrepreneurial leadership behavior is the broad entrepreneurial behavior exhibited by principals.

Entrepreneurial leadership will boost principal capability and behavior to accomplish various students' and faculties' needs. It is also beneficial to fulfill the constantly evolving needs of the organizational environment from the three main perspectives. First, it includes the way of thinking and actions in school administration (Kuratko, 2007). Secondly, it involves the ability to deal with challenges and constraints, continuous innovation, as well as flexibly responding to a competitive as well as rapidly changing environment (McGrath and MacMillan, 2000), and thirdly, exploring strategic value creation and effectiveness improvement (Gupta et al., 2004). Entrepreneurial leadership attributes enhance organizational performance, achievement and effectiveness for future development (Fontana and Musa, 2017; Liu and Xi, 2021). According to the literature findings, principal entrepreneurial leadership has a significant relationship with school effectiveness (Dahiru et al., 2017; Lope Pihie et al., 2018), performance,

and quality (Ruvio et al., 2010; Kasim and Zakaria, 2019; Ghazali et al., 2020). Nonetheless, the relationship between principal entrepreneurial leadership and organizational effectiveness in the education field has not received enough attention from scholars. Therefore, the focus of this study is to measure whether principal entrepreneurial leadership will have a direct or indirect impact on organizational effectiveness in the profit-making educational organization of training institutions.

## 2.2 Teacher efficacy and organizational effectiveness

Bandura (1997) defined self-efficacy as beliefs in the person's capability to manage and implement courses of action required to organize prospective situations. Stemming from Rotter (1982) the locus of control concept in social learning theory, within the social cognitive theory, Gibson and Dembo (1984) opined the sense of self-efficacy is the teacher's evaluation capability to bring about positive behavior changes in students. Alternatively, Tschannen-Moran et al. (1998) raised a comprehensive integration model for teacher efficacy combining the concept of Rotter's locus of control and Bandura's self-efficacy to analyze the cyclical nature of the teacher efficacy process. In pedagogy, teacher efficacy is teachers' belief in their capability to provide effective instructional practices in achieving teaching objectives, control classroom management and improve students' learning performance (Tschannen-Moran and Hoy, 2001). Instructional practice is the teaching methods, strategies, and activities adopted by teachers in the teaching process. Student engagement is the level of student engagement and involvement in the learning process. Classroom management refers to the ability of teachers to manage and organize student behavior, course progress, and classroom order in the classroom. A higher teacher efficacy will indicate a higher enthusiasm for and consciousness for teaching (Xin et al., 1994), cultivate a positive learning atmosphere (Fackler and Malmberg, 2016; Xia, 2016), and guarantee the organization effectiveness performance (Hu et al., 2019; Waweru et al., 2021). Former studies have confirmed the direct influence relationship between teacher efficacy and some dimensions of organizational effectiveness in primary schools (Gowrie and Ramdass, 2014), middle schools, high schools (Ninković and Knezevic-Florinc, 2018) or universities (Lu, 2010) from different countries. Since they do not involve other type of schools, such as training institutions, further exploration is needed.

## 2.3 Principal entrepreneurial leadership and teacher efficacy

In educational settings, principals need to establish schools' future development directions and orchestrate resources to guarantee high-quality service for students. There is a hierarchical relationship between principals and teachers in the organizational structure, and constructing good interaction and cooperation between principals and teachers is the key to the effective operation of schools. This promotes create a positive teaching atmosphere to strengthen teachers' professionalism and improve teacher efficacy development. Principal entrepreneurial leadership positively impacts teachers' behavior, promoting teachers to be more motivated, productive, innovative, and

creative (Zainal and Mohd Matore, 2021; Brauckmann-Sajkiewicz and Pashiardis, 2022). This means that principal entrepreneurial leadership focuses more on the sustainability of the teachers and organizations. If the principal has a higher sense of entrepreneurial leadership behavior, it will be more conducive to improving teachers' work enthusiasm, thereby improving teacher efficacy. Thus, it is imperative to investigate the potential impact of principal entrepreneurial leadership on teacher efficacy in English training institutions.

## 2.4 Teacher efficacy as a mediator between principal entrepreneurial leadership and organizational effectiveness

Principals exert influence on teachers through the role of ideological leading, action guidance, and inspiring encouragement directly, and on students via curriculum goal planning, teacher teaching supervision, and school climate indirectly. Meanwhile teachers act as a bridge between principals and students directly affecting students' achievement and organizational performance. According to previous research, teacher efficacy is related to principal leadership and school performance (Denham and Michael, 1981; Burke and Reitzes, 1991). The characteristics as well as behaviors of principal entrepreneurial leadership supervise and control the teaching quality of teachers' classroom management and student engagement, also enhance the self management and self efficacy in teaching activities (Mishra and Misra, 2017). Student achievement progress and high satisfaction, faculty and teacher satisfaction represent the high organizational effectiveness (Croucher et al., 2017). High-practice leadership will facilitate teacher's working performance and achieve high teachers' self-efficacy, improving students' satisfaction with the organization's performance (Zheng, 2002; Zhang et al., 2020; Wang et al., 2022). Although there is no direct evidence that teacher efficacy has a mediating effect between principal entrepreneurial leadership and organizational effectiveness, some scholars have found that teacher efficacy mediates different types of principal leadership and organizational performance (Teh et al., 2015; Yasin, 2017; Liu et al., 2022). It is reasonable to infer that teacher efficacy is affected by principal entrepreneurial leadership, which in turn, affects organizational effectiveness. Therefore, this study propose four hypotheses:

H1: There is a significant relationship between principal entrepreneurial leadership and organization effectiveness in English training institutions.

H2: There is a significant relationship between teacher efficacy and organization effectiveness in English training institutions.

H3: There is a significant relationship between principal entrepreneurial leadership and teacher efficacy in English training institutions.

H4: There is a mediating effect of teacher efficacy on the relationship between principal entrepreneurial leadership and organizational effectiveness in English training institutions.

## 3 Measures

### 3.1 Participants

This study used a quantitative technique in accordance with the research objectives, via a survey research design to achieve the study aims. The data in this study was collected from the largest population of Henan province, located in the central part of China. To ensure sample representatives, this study selected two cities, Zhengzhou city and Xinxiang city of Henan province in China. Zhengzhou is the capital city of Henan province, which has various and competitive market conditions for the development scale of the English training institutions, and Xinxiang city represents the small-medium size city of Henan province. Using proportionate stratified random sampling, a total of 425 teachers from 35 English training institutions participated in the survey. After systematic shifting, 381 are considered valid with an effective rate of 95.73%, 306 are from Zhengzhou City and 75 are from Xinxiang City. There are 132 male (32.6%) and 249 female (65.4%) respondents, of whom half are participants under 30 years old. Most participants hold bachelor's degrees with less than 5 years of teaching experience.

### 3.2 Instruments

The organizational effectiveness scale was developed by Cameron (1978) and composed of 30 items for teachers to assess organizational effectiveness performance from eight dimensions. It includes Student Educational Satisfaction (4 items), Faculty and Administrator Employment Satisfaction (4 items), Student Academic Development (3 items), Professional Development and Quality of the Faculty (4 items), Student Personal Development (3 items), Student Career Development (4 items), System Openness and Community Interaction (4 items), and Ability to Acquire Resources (4 items). The five Likert scale items are denoted by 1 (never) and 5 (almost always). Participants were asked to provide an overall evaluation of the organizational management and operational effectiveness of the training institution. Consequently, the instrument shows an acceptable level of internal consistency with Cronbach's  $\alpha$  of 0.944.

The entrepreneurial leadership questionnaire by Thornberry (2006) was used to measure principal entrepreneurial leadership. It is a five-point scale of 1 (almost never) and 5 (almost always) including 50 items on five dimensions: General Entrepreneurial Leadership (9 items), Explorer Behavior (10 items), Miner Behavior (6 items), Accelerator Behavior (11 items) and Integrator Behavior (14 items). Participants were asked to rate the principal's behavioral performance and management capabilities in the training institutions. The current instrument presents an acceptable level of internal consistency with Cronbach's  $\alpha$  of 0.950.

The teachers' sense of efficacy scale was designed by Tschannen-Moran and Hoy (2001) to describe teacher efficacy. The scale contained 24 items from three perspectives to describe the Efficacy in Instrumental Practice (8 items), Efficacy in Student Engagement (8 items), and Efficacy in Classroom Management (8 items). The 5-point rating scale was used to assess the respondent's responses ranging from 1 (nothing) to 5 (a great deal). Participants were asked to self-evaluate their ability to promote student learning engagement and studying performance. The instrument shows an acceptable level of internal consistency with Cronbach's  $\alpha$  of 0.976.



### 3.3 The analytical approach

The study applied SPSS (version 25) and AMOS (version 24) software to do statistical analysis. SPSS assessed the descriptive statistics, reliability test, and correlation analysis while AMOS measured the structural equation modeling. Descriptive statistics (frequencies, mean, and standard deviation values) indicated the distribution characteristics of the respondents and the level of principal entrepreneurial leadership, teacher efficacy, and organizational effectiveness in English training institutions. Besides, AMOS used confirmatory factor analysis to check the assessment for fit indices and individual factor loading by model fit, convergent validity, and construct reliability. The structure model was constructed to examine the relationship between principal entrepreneurial leadership and organizational effectiveness; teacher efficacy and organizational effectiveness; principal entrepreneurial leadership and teacher efficacy. Then, through bootstrap ( $B=5,000$ ) the mediation model was established to verify whether teacher efficacy is the intermediary between principal entrepreneurial leadership and organizational effectiveness. Figure 1 depicts the mediation of teacher efficacy on the relationship between principal entrepreneurial leadership and organizational effectiveness. Model (a) proposes the direct influence on the relationship between principal entrepreneurial leadership and organizational effectiveness, and model (b) proposes the mediation effect of teacher efficacy on the relationship between principal entrepreneurial leadership and organizational effectiveness.

## 4 Findings

### 4.1 Descriptive statistics and correlation analysis

The descriptive statistics in Appendix 1 list the gender, age, educational background, working years and monthly income distribution of the teacher participants. Most of the participants' working experience ranges from 0 to 5 years (57.7%), and their

monthly income is less than 8,000 CNY (1,000 USD) (79.2%). As presented in Table 1, the overall organizational effectiveness ( $M=3.672$ ,  $SD=0.850$ ) stands at a high level in English training institutions. Meanwhile, the overall entrepreneurial leadership ( $M=3.495$ ,  $SD=0.954$ ) in English training institutions is at a moderate level. The overall teacher efficacy ( $M=3.674$ ,  $SD=0.876$ ) stays at a high level in English training institutions. Appendix 2 lists each dimension's level of principal entrepreneurial leadership, teacher efficacy and organizational effectiveness.

To investigate the relationships among the three variables, Pearson correlation analysis was used. The findings demonstrate that there are statistically significant correlations between principal entrepreneurial leadership and organizational effectiveness ( $r=0.635$ ,  $p<0.01$ ), teacher efficacy and organizational effectiveness ( $r=0.463$ ,  $p<0.01$ ), and principal entrepreneurial leadership and teacher efficacy ( $r=0.479$ ,  $p<0.01$ ).

### 4.2 Measurement model and structural model results

After the confirmatory factor analysis process, organizational effectiveness consists of seven dimensions with 26 items (Appendices 3–5), and the model fit indices are decent (Chi-Square =  $\backslash$ CMIN = 906.404, CMIN/DF = 3.094, RMSEA = 0.074, CFI = 0.893, TLI = 0.882). Next, principal entrepreneurial leadership was structured with five dimensions with 48 items. The model fit indices are decent (Chi-Square =  $\backslash$ CMIN = 2540.080, CMIN/DF = 2.354, RMSEA = 0.060, CFI = 0.881, TLI = 0.876). Teacher efficacy consists of three dimensions with 16 items and the model fit indices are satisfactory (Chi-Square =  $\backslash$ CMIN = 327.737, CMIN/DF = 3.151, RMSEA = 0.075, CFI = 0.920, TLI = 0.908). Based on the total measurement model, the model fit indices are reasonable (Chi-Square =  $\backslash$ CMIN = 7057.278, CMIN/DF = 1.852, RMSEA = 0.047, CFI = 0.855, TLI = 0.847). The reliability and discriminant validity of the total measurement model are shown in Appendix 6. The structural model with 15 latent dimensions

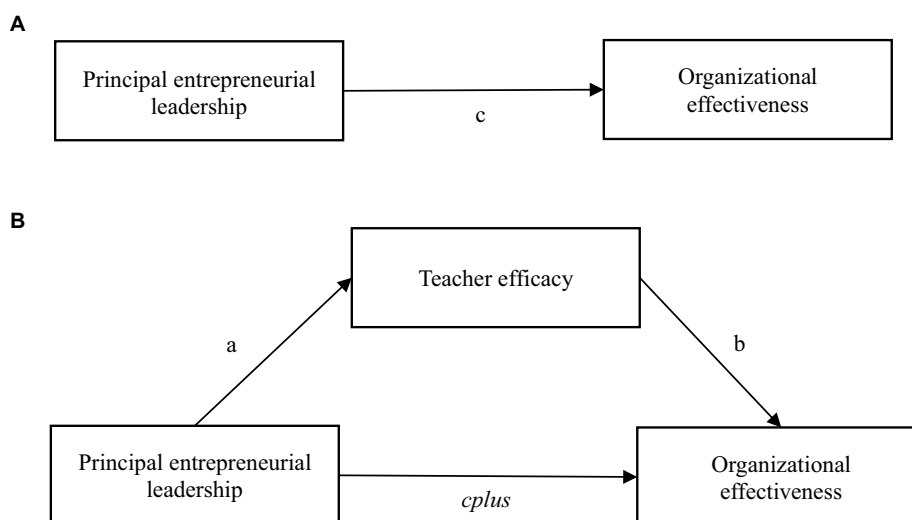


FIGURE 1  
Direct model and mediation model.

TABLE 1 Descriptive statistics and inter-correlation matrix.

	Mean	SD	Entrepreneurial leadership	Teacher efficacy	Organizational effectiveness
Entrepreneurial leadership	3.672	0.850	1		
Teacher efficacy	3.495	0.594	0.479**	1	
Organizational effectiveness	3.674	0.876	0.635**	0.463**	1

\*\*At the 0.01 level (double tailed), the correlation is significant.

TABLE 2 Path relationship verification of the structural model.

Path relationship		Estimate	S.E.	C.R.	p-value	Label
<i>Model without mediators</i>						
Entrepreneurial leadership	--->	Organizational effectiveness	0.675	0.038	10.072	*** c
<i>Model with mediators</i>						
Entrepreneurial leadership	--->	Teacher efficacy	0.509	0.046	9.197	*** a
Entrepreneurial leadership	--->	Organizational effectiveness	0.582	0.056	10.440	*** cplus
Teacher efficacy	--->	Organizational effectiveness	0.183	0.063	3.544	*** b

indicates that the model fit indices are at an acceptable level as well (Chi-Square =  $\chi^2 = 330.922$ , CMIN/DF = 3.804, RMSEA = 0.086, CFI = 0.947, TLI = 0.936). Table 2 presents the path correlation verification. And Figure 2 shows the structural model result.

The results are based on the positively significant Pearson correlation and path relationship analysis among principal entrepreneurial leadership, teacher efficacy and organizational effectiveness. The first hypothesis is supported where principal entrepreneurial leadership has a significant positive relationship with organizational effectiveness in English training institutions ( $\beta = 0.582$ ,  $p < 0.001$ ). For the second hypothesis, it is also supported where the finding shows that teacher efficacy has a significant positive relationship with organizational effectiveness in English training institutions ( $\beta = 0.183$ ,  $p < 0.001$ ). The third hypothesis is supported where principal entrepreneurial leadership has a significant positive relationship with teacher efficacy in English training institutions ( $\beta = 0.509$ ,  $p < 0.001$ ).

### 4.3 Mediation analysis

To analyze the teacher efficacy mediation effect on the relationship between principal entrepreneurial leadership and organizational effectiveness in English training institutions, the bootstrap method (B = 5,000) was used using AMOS, and the results are shown in Table 3.

In Table 3, both direct effects and indirect effects are significant ( $p < 0.05$ ), and the mediation model is a partial mediating effect. The indirect effects (IE) estimate value is 0.094, with a 95% confidence value (0.037, 0.155) that does not include 0, thus the indirect effect is valid. The direct effects (DE) estimate value is 0.583, with a 95% confidence value (0.468, 0.698) that does not include 0, the direct value is also valid. The effect proportion of indirect effect is 13.9% and the effect proportion of direct effect is 86.1%. The direct effect of principal entrepreneurial leadership on organizational effectiveness is

significant without the teacher efficacy mediator ( $\beta = 0.675$ , SE = 0.038,  $p < 0.001$ ). Hence, for the fifth hypothesis, it is evident that teacher efficacy plays a partial mediates the relationship between principal entrepreneurial leadership and organizational effectiveness in English training institutions. Figure 3 shows the direct model and mediation model results.

## 5 Discussion

Organizational effectiveness and principal entrepreneurial leadership are increasingly receiving attention from researchers. However, only a few researchers pay attention to the organizational effectiveness of training institutions, and even fewer studies focus on the joint impact of principal entrepreneurial leadership and teacher efficacy on the organizational effectiveness of training institutions. Figure 4 depicts the finding results.

This study finds that there is a positive relationship between principal entrepreneurial leadership and organizational effectiveness. Principals full play to the explore ability, miner ability, integrator ability, and accelerator ability to enhance organizational effectiveness from a student development perspective, teachers' satisfaction perspective, and organization management perspective. This result also resonates with the previous argument, which confirmed entrepreneurial leadership impacts on school performance and school effectiveness (Dahiru et al., 2017; Lope Pihie et al., 2018; Kasim and Zakaria, 2019; Ghazali et al., 2020), as well as organizational performance and effectiveness (Ruvio et al., 2010; Fontana and Musa, 2017; Sari and Ahmad, 2022). Other than that principals in organizations with a high level of entrepreneurial leadership behavior are more willing to enhance the organizational adaptability of the uncertain environment, discover and explore strategic value creation, and create new operating models to lead to an increase in the level of organizational effectiveness. Entrepreneurial principals typically possess a strong understanding of risks and adaptability. Regular risk

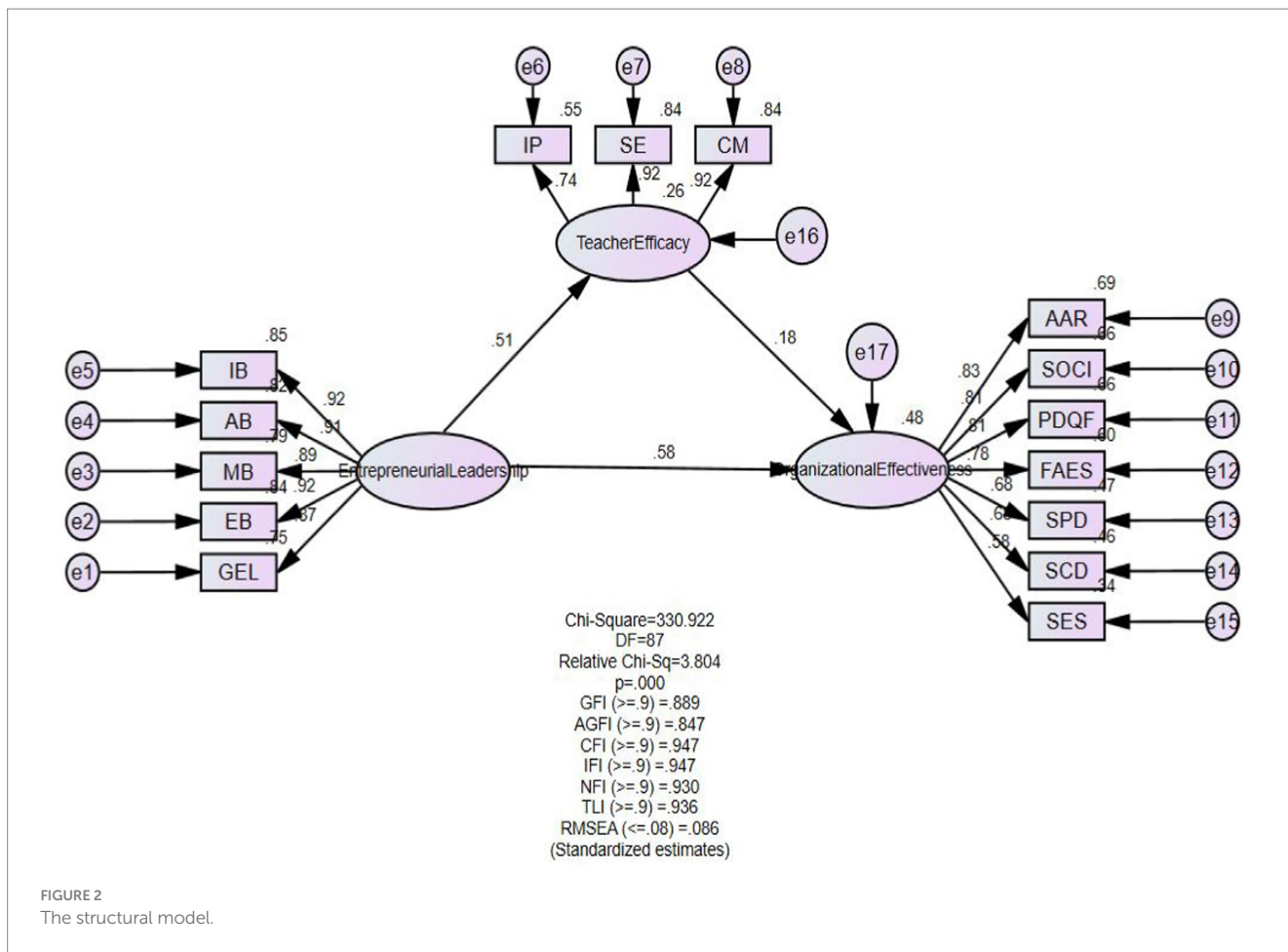


FIGURE 2 The structural model.

TABLE 3 Bootstrap mediation effect result.

Parameter	Estimate	Lower	Upper	p-value	Effect proportion
IE	0.094	0.037	0.155	0.002	13.9%
DE	0.583	0.468	0.698	0.001	86.1%
TE	0.677	0.585	0.783	0.001	

assessments will be conducted to immediately identify and respond to potential risks and difficulties, ensuring the steady operation of training institutions. Therefore, specific initiatives and practices jointly promote the improvement of organizational effectiveness of training institutions. Through the entrepreneurial leadership of principals, training institutions can better respond to changes and challenges in the external environment, improve education quality and service levels, and achieve the long-term goals of the organization.

Teacher efficacy is positively related to organizational effectiveness. Note that teachers with a high level of teacher efficacy tend to provide high-quality teaching services and are responsible for promoting student engagement in studying and learning activities. Past studies have pointed to the positive relationships between teacher efficacy and organizational effectiveness within different types of schools (Lu, 2010; Gowrie and Ramdass, 2014; Minghui et al., 2018; Ninković and Knezevic-Florici, 2018). This current study is aligned with these past studies. Teacher efficacy directly affects the instructional practice and student learning outcomes. It positively influences the cohesion of the

teacher team, teacher career development and the virtuous cycle of organizational development in the training institution, ultimately enhancing the organizational effectiveness of the entire training institution and contributing to the ongoing advancement of the organizations. This study denotes that there is a significant relationship between teacher efficacy and organizational effectiveness in the profit-making educational organizations of English training institutions in China. On the other hand, it also stresses the significance of high teacher efficacy for teachers, students, as well as organizations in strengthening organizational effectiveness and student development.

This study also verifies that principal entrepreneurial leadership has a positive effect on teacher efficacy. The former researchers, Hipp and Bredesqn (1995), Ross and Gray (2006), Al-Mahdy et al. (2018), and Cansoy et al. (2022) studied different kinds of leadership causing an effect on teachers' sense of efficacy. Some other researchers like Brauckmann-Sajkiewicz and Pashiardis (2022) and Wibowo and Saptono (2018) studied the influence of entrepreneurial leadership on teachers' creativity, innovation, and practice. Neither of these

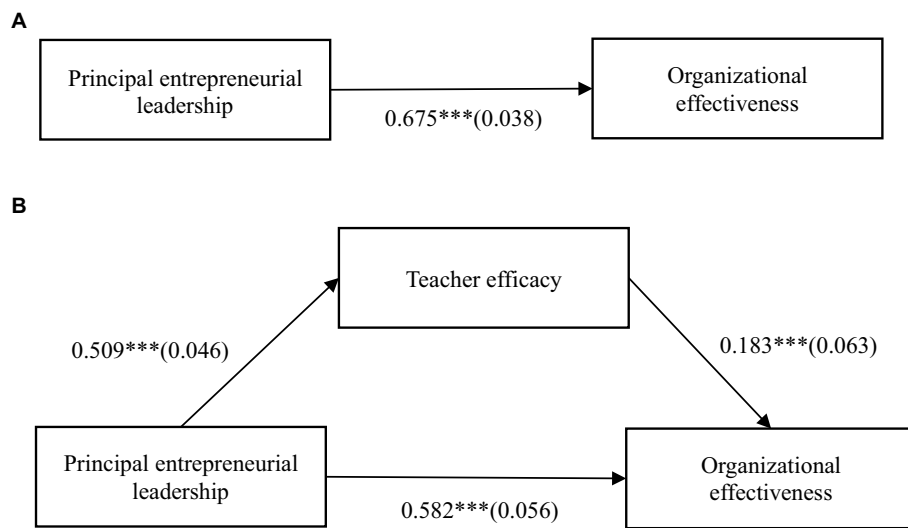


FIGURE 3 Analytical direct model and mediation model.

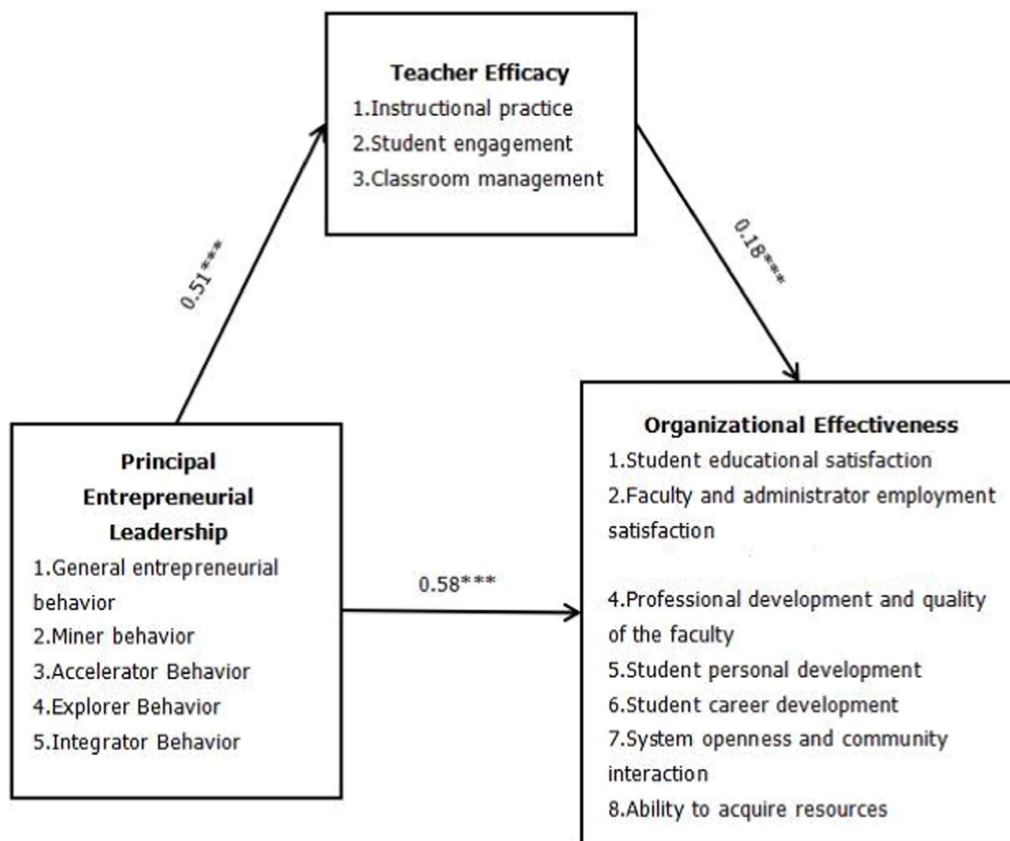


FIGURE 4 Finding result.

researchers directly studies the relationship between principal entrepreneurial leadership and teacher efficacy. This research finding shows that principal explorer behavior stimulates teachers to be more

creative and productive in new educational ideas and instructional methods for teaching activities. Principal miner’s behavior analyzes organizational resources and management operations to enhance



teachers' performance and improvement. Principal accelerator behavior motivates teachers to learn new skills and strategies about employing facility resources, teaching modes, and classroom management for upgrading school as well as student performance. All of these present the important role of principal entrepreneurial leadership in school organization and lay the foundation for teachers' professional development and value creation.

The important finding is that teacher efficacy has a mediating effect on principal entrepreneurial leadership and organizational effectiveness. Teachers, as a crucial part of the entire school operation process, manage and arrange daily teaching activities based on the school's development goals and teaching policies. Principals practicing high-level entrepreneurial leadership will facilitate a high level of teachers' working performance and teacher efficacy, influencing organizational performance and effectiveness. The three constructs form a circulatory system in the open social system, influencing and interacting with each other creating personal value, organizational value, and social value. The research of [Dahiru et al. \(2017\)](#), [Khan \(2021\)](#), [Liu and Hallinger \(2018\)](#), and [Yasin \(2017\)](#) all side verified the relationships between the three relevant variables. Other than that this study resonates with previous research and reemphasizes that English training institutions as profit-making education organizations, need more ambitious and innovative principals. This element is the key to leading the organization to discover new market opportunities, strengthen resource integration capabilities, and improve competitive strength and risk resistance capabilities for organizations what's more, English training institutions is profit-making education organizations. This educational institution is essential for providing knowledge services in contemporary society and has been gaining popularity among individuals throughout time. In this training institutions, it need more ambitious and innovative principals to lead the organization to discover new market opportunities, strengthen resource integration capabilities, and improve competitive strength and risk resistance capabilities for organizational sustainability when comparing with the traditional schools.

Therefore, in the development process of the entire educational organization, more attention should be paid to the development and connection of principal entrepreneurial leadership, and teacher efficacy to promote a well-developed organizational operating system.

## 6 Limitations and future research directions

Referring to the data collection process and the research findings, the study has several limitations. Firstly, this study measures the level and the relationship of organizational effectiveness, principal entrepreneurial leadership, and teacher efficacy in English training institutions in the Henan province of China. China has a population of 1.4 billion and 34 provincial levels covering 9.6 million square kilometers of territorial area. Yet, the sampled teachers are all from the same province in China. Differences in policies, customs, and economic development will lead to different understandings of the same issue. Hence, the general applicability of research results needs to be viewed rigorously. Secondly, all questions in the questionnaires are based on teachers self-reporting data. Principal's personal experience in applying entrepreneurial leadership in organizations

and how the principals evaluate teachers' efficacy are needed to adopt a qualitative research technique for further exploration. Thirdly, this study researched the relationship between principal entrepreneurial leadership and organizational effectiveness via teacher efficacy mediating effect. It is suggested that other variables could be regarded as mediators in the future investigation.

## 7 Conclusion

The purpose of this study is to reveal the extent to which organizational effectiveness is influenced by principal entrepreneurial leadership and teacher efficacy in such profit-making institutions. This study's findings denote several important matters. First, it measured a more scientific and comprehensive school organizational development model in training schools. Principal entrepreneurial leadership and teacher efficacy have large direct impacts on organizational effectiveness, which emphasizes the function and significant role of principals as well as teachers in training organizations. This study also recommends verifying the adaptation of the three models' application in different educational organizations.

Second, the study adds new evidence for the teacher efficacy model applied in non-traditional schools in the Chinese context and proves the reliability of the teacher efficacy instruments. In addition, entrepreneurial leadership is a theory that has not been developed for a long time. This research validated the model and related entrepreneurial leadership linking to teacher efficacy and organizational effectiveness, proving entrepreneurial leadership's cutting-edge and scientific nature compared with other leadership theories.

However, the finding results also hint at an existing issue in training institutions in China. The principal focuses more on the management and sustainable development of the organization, which improves the organization's competitive advantage and explores market opportunities, compared to students studying results and performance. This study stressed the primary position of academic performance in organizational development, revealing the current shortcomings of English training institutions in their development and operation in China. Nevertheless, overly pursuing economic benefits while neglecting students' needs and academic performance is not conducive to the long-term development of these training schools.

To conclude, the study establishes a dynamic mechanism among principals, teachers, and organizations. Referring to the research findings, training organizations should enhance the application of material and human resources. They should also promote, and improve the connection between principals and teachers, making it easier for teachers to follow the principals' guidance. Meanwhile, principals can also receive timely feedback from teachers for further adjustments in the future. In addition, training organizations should prioritize improving and progressing students' academic performance, job satisfaction and recognition of teachers. This is crucial to provide more opportunities for teachers' career development and skill training to boost the social responsibility of training organizations and actively participate in community activities. Consequently, the government's education department should establish a regulatory mechanism, and establish strict

educational conditions, and review rules for training organizations, alongside recruitment requirements and qualification reviews for teachers in training institutions. They also should supervise and control the service quality and operating performance of training organizations from a macro level. These aspects are equally important to establish a more effective English training and learning environment for the young generation in China.

## Data availability statement

The original contributions presented in the study are included in the article/[Supplementary material](#), further inquiries can be directed to the corresponding author.

## Ethics statement

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent from the participants was not required to participate in this study in accordance with the national legislation and the institutional requirements.

## Author contributions

LJ: Writing – original draft, Writing – review & editing. NA: Project administration, Supervision, Validation, Visualization, Writing – review & editing. SK: Supervision, Validation, Visualization, Writing – review & editing.

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## Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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## Supplementary material

The Supplementary material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/feduc.2024.1414640/full#supplementary-material>

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