

Professional Competence Development of EFL Instructors in Private Colleges in Sichuan Province from the Perspective of Ecological Education

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Abstract

This paper focuses on EFL instructors' professional competence development in private colleges in Sichuan Province. 1) Research objectives: To investigate the impact of support from private colleges, society, and educational directors on EFL instructors' professional competence, including language application, teaching, and scientific research competence. 2) Research instruments: An explanatory sequential research design was employed, utilizing a questionnaire and semi-structured interviews. The questionnaire assessed nine main constructs, including professional competence and identity, while interviews explored specific strategies and perceptions. 3) Research Methodologies: Quantitative and qualitative data were collected and analyzed using descriptive statistics, regression analysis, structural equation modeling, and Lichtman's 3Cs steps of analysis. 4) Findings: Support from private colleges, society, and educational directors positively influences EFL instructors' professional competence and identity, highlighting the need for holistic and ecosystem approaches to support their development.

Keywords : *EFL instructors; professional competence; ecological education; support systems; professional identity; private colleges.*

1. Introduction

The enhancement of college instructors' professional competence is crucial for elevating education quality (Valentyna et al., 2020). For English as a Foreign Language (EFL) instructors, teaching, scientific research, and English language application competencies are fundamental (Kunter et al., 2022; Bagalay, 2023). These abilities are mirrored in instructors' teaching competence, impacting learning outcomes and student development (Rieckmann, 2018), while scientific research competence enables refinement of educational strategies (Kutsak & Zaskalieta, 2023). Previous research has emphasized the importance of these competencies (Xi et al., 2023; El-Sabagh, 2021; Toquero, 2021),

yet limited research exists on EFL instructors' professional competence development in private colleges in Sichuan Province from an ecological education perspective (Nam et al., 2023).

Ecological education theory, as developed by Bronfenbrenner, provides a comprehensive framework for understanding development within interrelated environmental systems (Elliott & Davis, 2020). This theory highlights the influence of various environmental systems on individuals' development (Reksiana et al., 2023; Graham et al., 2023; Guy-Evans, 2020). Research has shown that ecological education theory plays a significant role in guiding and developing EFL instructors' professional competence (Herrera et al., 2022). Incorporating this theory into language instruction improves instructors' responsiveness and flexibility (Zhi & Wang, 2023).

Social support is another critical factor in the development of college EFL instructors' professional competence (Carvalho & Santos, 2022; Li, 2022; Alwadi et al., 2020). A supportive work environment fosters motivation and belonging, increasing dedication to ongoing professional growth (Li, 2022). Furthermore, professional sense of belonging and self-efficacy positively influence the development of professional competence (Zonoubi et al., 2017; Le et al., 2023; Menon & Azam, 2021). Despite existing research, there is a noticeable gap in the literature regarding the integration of ecological education with internal support systems and various aspects of professional competence among EFL instructors at private colleges (Chen et al., 2022; Daly et al., 2020). This research aims to fill this gap by examining the professional competence development of EFL instructors in Sichuan Province from an ecological education perspective, considering internal support. The findings will provide comprehensive support and recommendations for EFL instructors' professional competence development, ultimately contributing to improved educational quality (Fernández, 2022; Qiu et al., 2024).

2. Research Objectives

2.1 To investigate the specific mechanisms and paths through which college internal support, social support, and educational directors' support impact the professional competence development of EFL instructors in private colleges

2.2 To explore the mediating role of professional identity in the relationship between support factors and EFL instructors' professional competence development in private colleges

2.3 To optimize the support of private colleges, society, and educational directors based on ecological education theory, aiming to enhance EFL instructors' professional identity and competence while considering their future changes and interactions at different ecosystem levels

3. Research Questions

3.1 What are the specific mechanisms and pathways through which internal support from private colleges, social support, and support from educational directors influence the professional competence development of EFL instructors in private colleges?

3.2 How does professional identity mediate the relationship between support factors (internal support from private colleges, social support, and support from educational directors) and the professional competence development of EFL instructors in private colleges?

3.3 How can the support provided by private colleges, society, and educational directors be optimized based on ecological education theory, to enhance the professional identity and competence of EFL instructors, while considering future changes and interactions at different ecosystem levels?

4. Literature Review

4.1 The Concept of Ecological Education

Education, grounded in Urie Bronfenbrenner's ecological systems theory, highlights the interdependence of individuals and their surroundings (Elliott & Davis, 2020). This theory suggests that development is influenced by multiple interconnected environmental systems, such as the microsystem, mesosystem, and exosystem (Reksiana, Rahmah & Rahayu, 2023). Ecological education applies this perspective, recognizing that learning is shaped by personal, social, and environmental factors (Thor & Karlsudd, 2020). Since its emergence in the 1970s, ecological education theory has become a pivotal framework, emphasizing the multifaceted nature of education and the interactions between teachers, students, the school environment, and sociocultural influences (Zhang & Wang, 2022; Weiss & Chatman-Nelson, 2013). Additionally, it underscores the importance of integrating ecological concepts into teaching to foster environmentally conscious individuals (Liu & Zhang, 2023).

4.2 The Development of Instructors' Professional Competence

The development of instructors' professional competence encompasses various aspects such as language application competence, teaching competence, and scientific research competence (Berger, 2022). These competencies are influenced by multiple factors, including private colleges, educational directors, and society (Kigwilu & Githinji, 2015).

Language application competence is the foundation of EFL instruction, involving not only linguistic proficiency but also cultural awareness (Bai, 2021). Teaching competence involves pedagogical skills, classroom management, and the ability to adapt to diverse learning needs (Kim, Raz & Seidman, 2019). Scientific research competence, on

the other hand, involves the ability to conduct scholarly inquiry and apply research findings to teaching practice (Hamzah, Hamzah & Zulkifli, 2022).

Numerous studies have emphasized the importance of these competencies in enhancing teaching quality and student learning outcomes (Chu, Liu & Fang, 2021; Liu, 2022). The development of these competencies is often measured using various scales, such as the "Instructors' Professional Competence Scale" developed by Aldrup (2020) and the "English Instructors' Professional Competence Scale" by Li and He (2022).

4.3 Support for EFL Instructors' Professional Competence Development

Support for EFL instructors' professional competence development can come from various sources, including private colleges, society, and educational directors (Hannafin, Land & Oliver, 2013). Private colleges provide academic support through training programs, teaching research activities, and academic exchanges (O'Dowd & Dooly, 2022). Educational directors offer policy support by formulating and implementing policies related to instructor evaluation, incentives, and professional development (Lin, Yin & Liu, 2022). Society's support includes recognition, respect, and funding for educational initiatives (Almuqrin & Mutambik, 2021).

The measurement of support for instructor professional development often involves assessing the level of participation in development programs, instructors' satisfaction with such programs, and the implementation effects of these programs (He, 2022; Yang, 2023; Yin, 2022).

4.4 EFL Instructors' Professional Identity

Professional identity refers to instructors' sense of belonging, recognition, and value identification with their profession (Lin, 2022). It encompasses professional values, sense of belonging, and professional efficacy (Hansen, 2020). Professional values guide instructors' decision-making and behaviors, while a sense of belonging fosters a supportive professional community (Cheng, 2021). Professional efficacy, on the other hand, refers to instructors' beliefs in their ability to perform their roles effectively (Bandura, 1997).

Professional identity significantly influences instructors' professional development and competence. For instance, instructors with higher professional identity tend to exhibit greater professional competence and teaching effectiveness (Wang, 2021). The measurement of professional identity often involves scales such as the "Instructor Professional Identity Scale" developed by Xie and Cheng (2023) and Tian's scales (Tian, 2021).

4.5 Related Researches

Ecological education theory has been utilized in educational research, focusing on instructor competency and professional identity (Qi, Sorokina & Liu, 2021). The school, policy, and community environments significantly impact instructors' professional growth (Li & Liu, 2022). Developing professional competence, encompassing language application, teaching, and research skills, is vital for EFL instructors (Salehizadeh, Shabani & Malmir, 2020). Professional identity elements, such as professional value, sense of belonging, and efficacy, positively affect these competencies (Chen, Zhong, Luo & Lu, 2020). Support from private colleges, society, and directors is crucial in shaping EFL instructors' professional competence (Hoang, 2020). Mentorship programs, peer collaboration, and professional development opportunities enhance instructors' skills (Burhan, Mirayanti & Rusdin, 2024; Castillo-Cuesta, Ochoa-Cueva & Cabrera-Solano, 2022). Collectively, professional identity components interconnect and contribute to instructors' overall professional development (Rusilowati & Wahyudi, 2020; Fathi, Zhang & Arefian, 2023).

5. Research Methodology

5.1 Research Design

This study employed an explanatory sequential research design, as outlined by Creswell & Chase (2017), consisting of two phases. The first phase was quantitative, where the researcher initially developed a questionnaire based on the perspectives of professional competence development support, professional identity, and professional competencies of EFL instructors. Subsequently, the study population and sample were determined, followed by data collection and analysis. The second phase was qualitative, involving interviews with 10 administrators from 10 private colleges to validate the findings of the quantitative phase.

5.2 Population and Sample

The population for this study comprised 553 EFL instructors from 10 private colleges in Sichuan Province, including 165 instructors from Chengdu College of Arts and Science, 122 from Sichuan Technology and Business University, 108 from Southwest Jiaotong University Hope College, 72 from Geely University of China, 21 from Bazhong Vocational and Technical College, 15 from Sichuan Winshare Vocational College, 13 from Sichuan International Polus International College, 13 from Nanchong Vocational College of Science and Technology, 12 from Tianfu New Area of Aviation & Tourism Vocational College, and 12 from Tianfu Information Vocational College. This entire group formed the sample population for the investigation.

To obtain a qualified sample, Stratified sampling was employed to gather data and analyze the research model, which included nine main constructs. The ideal sample size was calculated based on the item's dimensions, with a preference for 80% of the population and a maximum sample size of 460 participants. A survey was issued online to 436 individuals, and classed sampling was adopted to ensure the sample's representativeness. Because of mixed methods, 1 representative administrator of each college is invited to take part in the interview, and 10 administrators were interviewed.

5.3 Research Instruments

The research systematically reviewed the conceptual connotation of EFL instructors' professional competence development and ecological education theory, aiming to explore effective ways to improve the professional competence of EFL instructors in private colleges from an ecological education perspective. Initially, a questionnaire was prepared and validated by a panel of experts using the Objective Alignment Index (IOC), ensuring strong alignment with objectives and content. Additionally, a pretest was conducted with 30 EFL instructors from private colleges in Sichuan to test the reliability and validity of the questionnaire, resulting in a refined version with good reliability and validity.

The study employed a questionnaire consisting of 46 questions, divided into three main scales: the College EFL Instructor Professional Competence Development Scale (18 questions), the Instructor Professional Competence Development Support Scale (15 questions), and the Instructor's Professional Identity Scale (13 questions). These scales were adopted from various sources including Li (2013), He (2022), Yang (2023), Yin (2022), and Tian (2021).

The Instructor Professional Competence Questionnaire evaluated three sub-dimensions: Language Application Competence (6 questions), Teaching English Competence (6 questions), and Scientific Research Competence (6 questions). Each sub-dimension assessed specific aspects such as proficiency in teaching English, mastery of teaching methods, and research effectiveness. The Instructor Professional Competence Development Support Questionnaire consisted of three sub-dimensions: Private College Support (6 questions), Social Support (4 questions), and Educational Director Support (5 questions), examining external resources and conditions for EFL instructor development.

The Questionnaire of Instructor's Professional Identity encompassed three sub-dimensions: Professional Values (5 questions), Professional Sense of Belonging (4 questions), and Professional Efficacy (4 questions). These sub-dimensions explored EFL instructors' recognition of the profession's value, emotional attitude towards teaching, and beliefs about their competence as private college instructors.

Table 1. The Structure of the Questionnaire

Dimensions	Location
Language Application Competence	Items 1-6
Teaching English Competence	Items 7-12
Scientific Research Competence	Items 13-18
Private College Support	Items 19-24
Social Support	Items 25-28
Educational Directors Support	Items 29-33
Professional Values	Items 34-38
Professional Sense of Belonging	Items 39-42
Professional Efficacy	Items 43-46

Although the researcher was able to collect a significant amount of data by distributing and analyzing questionnaires, there were certain pieces of additional information that proved to be inaccessible through this particular data collection method. Recognizing these limitations, the researcher deemed it necessary to adopt a complementary approach. Therefore, the interview method was carefully chosen and subsequently utilized in order to compensate for the inherent constraints and deficiencies of the questionnaire-based data gathering process.

Table 2. Semi-structured Interview Questions

Number	Prompt Questions
1	What specific strategies has your college implemented to enhance the professional competence of EFL instructors, and how effective have these measures been in practice? Additionally, which of these strategies do you believe have been the most beneficial for your personal professional development?
2	What kind of support and help do you think is needed to promote the professional competence development of EFL instructors?
3	How do you and those around you (friends, family, neighbors, etc.) view your career?
4	What measures have the educational directors of your college taken for the professional competence development of EFL instructors? How does it work? What are the problems?
5	In addition to your personal efforts, what conveniences do you think the college should provide for you?
6	How do you understand the relationship among EFL instructors, private colleges and educational directors of your city?
7	As an EFL instructor in a private college, how do you think EFL instructors, colleges and educational directors should coordinate to promote teachers' professional competence development more effectively?

In this study, the content analysis and coding system comprising Coding, Categorizing, and Concept (Lichtman, 2013) was employed to systematically organize and interpret data, ensuring rigorous analysis and deeper insights into the study's subject matter.

5.4 Validity and Reliability

To guarantee that the instruments conform to the requisite standards, the Item Objective Congruence Index (IOC) was utilized in this study. This involved inviting five experts to evaluate the questionnaire items and semi-structured interview questions based on a scoring system of +1, 0, and -1, assessing their alignment with the study's objectives. Prior to the distribution of the final questionnaires, a pilot test was conducted. Before the data collection commenced, the research received ethical approval from the Research Ethics Review Board of Rangsit University. Throughout the data collection process, meticulous and rigorous procedures were followed to ensure ethical treatment of all research participants.

The reliability of the scales used in the questionnaire was confirmed through SPSS26 statistical analysis software. The reliability coefficients, represented by Cronbach's Alpha, for each dimension in the three scales were all above 0.8, with values ranging from 0.816 to 0.918. This indicates excellent consistency in the outcomes evaluated by the scales. Specifically, the Private College Support (PCS) dimension had a Cronbach's Alpha of 0.918, the Social Support (SS) dimension had 0.816, and the Educational Directors Support (EDS) dimension had 0.864. Similarly, the Professional Values (PV), Professional Sense of Belonging (PB), and Professional Efficacy (PE) dimensions had Cronbach's Alpha values of 0.846, 0.890, and 0.819, respectively. Lastly, the Language Application Competence (LAC), Teaching English Competence (TEC), and Scientific Research Competence (SRC) dimensions had Cronbach's Alpha values of 0.908, 0.903, and 0.882, respectively. These high reliability coefficients suggest that the scales used in the questionnaire are highly reliable.

The validity of the questionnaire scale was ascertained through confirmatory factor analysis using Amos24 software. The model fit indicators, including X^2/DF , RMSEA, SRMR, GFI, AGFI, NFI, TLI, and CFI, were all in line with the reference values, indicating a well-fitted model. Specifically, the measured values were 1.313 for X^2/DF , 0.027 for RMSEA, 0.031 for SRMR, 0.894 for GFI, 0.880 for AGFI, 0.898 for NFI, 0.971 for TLI, and 0.973 for CFI, all of which met or exceeded the reference values. Additionally, the combined reliability (CR) and average variance extracted (AVE) of each scale dimension were determined, with AVE values larger than 0.5 and CR values greater than 0.7, satisfying the pertinent norms. Furthermore, the discriminant validity of the scale was confirmed by comparing the values of each dimension with the correlation coefficients among the dimensions, with all dimension correlation coefficients being lower than the corresponding values. Overall, the confirmatory factor analysis verified that the scale's factors aligned with theoretical assumptions and that the inter-factor correlations were dependable and steady, demonstrating strong validity.

5.5 Data Analysis

In the data analysis section, the research employed various methods including frequency analysis, descriptive statistics, regression analysis, and structural equation modeling. Descriptive analysis was used to examine demographic variables and the development status of English instructors' professional competence in private Sichuan colleges, with specific criteria for interpreting mean scores. Regression analysis tested the impact of support for instructor professional development on their competence, while the structural equation model explored the mediating role of instructors' professional identity between support and competence development, as outlined in the research hypothesis.

For the qualitative data derived from the semi-structured interviews, content analysis was adopted. The three analysis steps are adopted from Litchman's Three Cs (Coding-Category-Concept) Process (Lichtman, 2013). The following table displays how the qualitative data were analyzed.

Table 3. Three Cs (Coding-Category-Concept) Steps

Steps	Content and Goal
Step 1: Coding	Break down the interview transcripts into manageable units of analysis, usually referred to as codes.
Step 2: Categorizing	Group similar codes together to create broader categories that reflect the main themes emerging from the data.
Step 3: Conceptualizing	Develop an overarching conceptual framework that explains the relationship between the categories and the central phenomenon being studied.

6. Results

Based on the sample data, a descriptive analysis was conducted to examine the demographic characteristics of EFL instructors in private colleges in Sichuan Province, China. The results show that the sample is predominantly female (70.18%), married (87.39%), and middle-aged (60.78% in the 36-45 age bracket). Most instructors have some work experience, with 80% having worked for 1-10 years, and a significant portion (60.55%) holding master's degrees. The job title distribution is relatively balanced, with lecturers (43.35%) and teaching assistants (35.32%) making up the largest proportions, while 21.33% hold positions of associate professor or above. Overall, the sample group consists mainly of female, married, middle-aged instructors with certain work experience and high educational attainment, the detail is shown in table 4.

Table 4. Demographic Variable Characteristics

Variable	Options	Frequency	Valid Percent
Gender	Male	130	29.82%
	Female	306	70.18%
Marriage Status	Unmarried	55	12.61%
	Married	381	87.39%
Age	25-35years old	96	22.02%
	36-45years old	265	60.78%
	46-55years old	40	9.17%
	56and above	35	8.03%
Work Experience	1-5years	173	39.68%
	6-10years	170	38.99%
	11-15years	67	15.37%
	16 and above	26	5.96%
Educational background	Bachelor Degree	113	25.92%
	Master Degree	264	60.55%
	Doctor Degree	59	13.53%
Professional Title	Teaching Assistant	154	35.32%
	Lecturer	189	43.35%
	Associate Professor and Above	93	21.33%
Total		436	100%

6.1 Quantitative Findings

In the quantitative section, there are 12 hypothesis, here are the hypothesis and quantitative findings.

Initially, it's necessary to understand the acronyms of terms referred.

PCS: Private Colleges Support

SS: Social Support

EDS Educational Directors Support

PV: Professional Value

PB: Professional Sense of Belonging

PE: Professional Efficacy

EFL PCD: EFL Instructors' Professional Competence Development

PCD: Professional Competence Development

LAC: Language Application Competence

TEC: Teaching English Competence

SRC: Scientific Research Competence

6.1.1 Research Hypothesis

H1: The internal support of private colleges has a significant positive impact on the professional competence development of EFL instructors.

H2: Social support has a significant positive impact on the professional competence development of EFL instructors in private college.

H3: The support from educational directors has a significant positive impact on the professional competence development of EFL instructors in private colleges.

H1a: The professional values of EFL instructors in private colleges play a mediating role in the influence of college internal support on their professional competence development.

H1b: The professional belonging of EFL instructors in private colleges plays a mediating role in the influence of college internal support on their professional competence development.

H1c: The professional efficacy of EFL instructors in private colleges plays a mediating role in the influence of college internal support on their professional competence development.

H2a: The professional values of EFL instructors in private colleges play a mediating role in the influence of social support on their professional competence development.

H2b: The professional belonging of EFL instructors in private colleges plays a mediating role in the influence of social support on their professional competence development.

H2c: The professional efficacy of EFL instructors in private colleges plays a mediating role in the influence of social support on their professional competence development.

H3a: The professional values of EFL instructors in private colleges play a mediating role in the influence of the educational directors' support on their professional competence development.

H3b: The professional belonging of EFL instructors in private colleges plays a mediating role in the influence of the support from the educational directors on their professional competence development.

H3c: The professional efficacy of EFL instructors in private colleges and universities plays a mediating role in the influence of the support of educational directors on their professional competence development.

6.1.2 Descriptive Analysis and Correlation Analysis

EFL instructors in private colleges in Sichuan Province, China, generally perform well without extreme scores. Their mean scores across various dimensions such as internal support, professional competence development support, and professional identity are concentrated between 3.00 and 3.40. Notably, internal support within private colleges is relatively high (3.36), while social support (3.24) and educational directors' support (3.16) are somewhat lower. The instructors' sense of professional value (3.10) and professional belonging (3.01) are relatively weak, although they feel effective and confident in their job (3.38).

Regarding professional competence, the instructors' average teaching score is 3.27, indicating a certain level of professionalism but with room for improvement. Linguistic ability and scientific research competencies are particularly low (3.18). Overall, while EFL instructors exhibit a moderate degree of satisfaction, their satisfaction with social support, support from education directors, and a sense of professional belonging is low. Relevant departments should address these issues and focus on enhancing language competence, teaching proficiency, and scientific research proficiency, particularly through training and development in scientific research and language skills.

Table 5. Descriptive Analysis

Dimension	Minimum	Maximum	Mean	Std. Deviation
PCS	1.00	5.00	3.36	1.22
SS	1.00	5.00	3.24	1.14
EDS	1.00	5.00	3.16	1.15
PV	1.00	5.00	3.10	1.12
PB	1.00	5.00	3.01	1.27
PE	1.00	5.00	3.38	1.14
LAC	1.00	5.00	3.18	1.20
TEC	1.17	5.00	3.27	1.20
SRC	1.00	4.83	3.18	1.08

From the Pearson correlation analysis between variables, it can be seen that there is a positive correlation between each dimension, and it is significant at the 0.05 level. Therefore, this result preliminarily shows that the hypothesis of this study is established, but the final conclusion requires further hypothesis verification, as is shown in table 6.

Table 6. Correlation Analysis

Dimension	PCS	SS	EDS	PV	PB	PE	LAC	TEC	SRC
PCS	1								
SS	0.311**	1							
EDS	0.100*	0.270**	1						
PV	0.216**	0.319**	0.273**	1					
PB	0.249**	0.294**	0.165**	0.352**	1				
PE	0.353**	0.402**	0.272**	0.314**	0.161**	1			
LAC	0.402**	0.361**	0.273**	0.351**	0.362**	0.392**	1		
TEC	0.303**	0.332**	0.289**	0.361**	0.430**	0.361**	0.663**	1	
SRC	0.461**	0.443**	0.337**	0.438**	0.456**	0.427**	0.721**	0.682**	1

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

6.1.3 Hypothesis Test Result of Private College Internal Support and Professional Identity

The development of professional competence at private colleges is positively impacted by internal support, as demonstrated by the study of structural equation models ($\beta = 0.245, p < 0.01$). At the same time, private colleges have a strong internal support system for professional efficacy, professional value, and professional belonging. It has a major mediating influence on the professional competence of EFL instructors; the respective mediating effect sizes are 20.32%, 28.83%, and 33.55%. The findings indicate that internal assistance at private colleges can enhance professional development competences directly and indirectly by strengthening their awareness of themselves as professionals.

Table 7. H1,H1a,H1b,H1c Hypothesis Test Results

	Hypothesis		Estimate	S.E.	C.R.	Lower	Upper	P	Proportion of indirect effect
H1	PCD<-PCS	Regression Weights	0.245	0.057	4.298	0.131	0.353	0.001	-
		Total effects	0.251	0.052	4.827	0.147	0.351	0.001	
H1a	PCD<-PV<-PCS	direct effects	0.200	0.049	4.082	0.105	0.295	0.001	20.32%
		Indirect effects	0.051	0.018	2.833	0.022	0.094	0.001	
		Total effects	0.281	0.050	5.620	0.182	0.372	0.001	
H1b	PCD<-PB<-PCS	direct effects	0.200	0.049	4.082	0.105	0.295	0.001	28.83%
		Indirect effects	0.081	0.021	3.857	0.044	0.129	0.001	
		Total effects	0.301	0.045	6.689	0.210	0.386	0.001	
H1c	PCD<-PE<-PCS	direct effects	0.200	0.049	4.082	0.105	0.295	0.001	33.55%
		Indirect effects	0.101	0.026	3.885	0.059	0.164	0.001	
		Total effects	0.301	0.045	6.689	0.210	0.386	0.001	

In conclusion, the study's research hypotheses (H1, H1a, H1b, and H1c) about the interplay between professional identity, private college support, and professional competence are all validated, as is shown in figure 1.

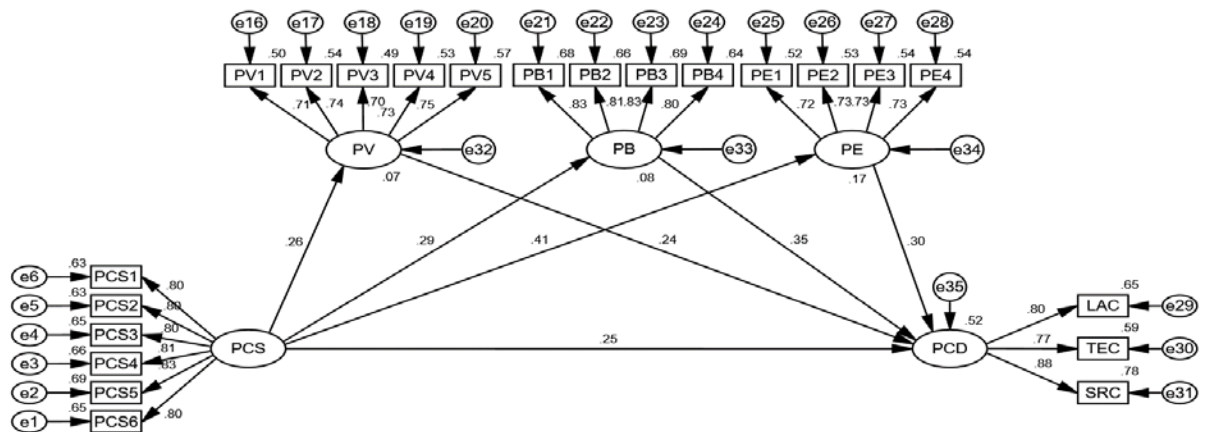


Figure 1. The SEM Diagram of PCS,PI,PCD Test Result

6.1.4 Hypothesis Test Among Social Support, Professional Identity and Professional Competence

It is evident from structural equation model analysis that social support directly benefits the development of professional competence of EFL instructors ($\beta=0.175$, $p<0.05$). In the interaction between social support and EFL instructors, professional efficacy, professional value, and professional belonging all play a significant part. The mediating impact sizes of the major mediating role were 33.77%, 42.26%, and 47.24%, respectively, for professional competence. This finding indicates that social support can strengthen EFL teachers' professional identities, which in turn strengthens their professional competences in a way that is both direct and indirect, shown in table 8.

Table 8. H2,H2a,H2b,H2c Hypothesis Test Results

	Hypothesis		Estimate	S.E.	C.R.	Lower	Upper	P	Proportion of indirect effect
H2	PCD<-SS	Regression Weights	0.175	0.075	2.333	0.022	0.315	0.027	-
		Total effects	0.231	0.067	3.448	0.092	0.348	0.003	
H2a	PCD<-PV<-SS	direct effects	0.153	0.066	2.318	0.018	0.275	0.028	33.77%
		Indirect effects	0.078	0.027	2.889	0.033	0.142	0.001	
		Total effects	0.265	0.063	4.206	0.136	0.384	0.001	
H2b	PCD<-PB<-SS	direct effects	0.153	0.066	2.318	0.018	0.275	0.028	42.26%
		Indirect effects	0.112	0.027	4.148	0.067	0.179	0.001	
		Total effects	0.290	0.061	4.754	0.165	0.401	0.001	
H2c	PCD<-PE<-SS	direct effects	0.153	0.066	2.318	0.018	0.275	0.028	47.24%
		Indirect effects	0.137	0.034	4.029	0.083	0.221	0.001	

Overall, the study's research hypotheses (H2, H2a, H2b, and H2c) on the interplay between professional competence, professional identity, and social support are all validated, as is shown in figure 2.

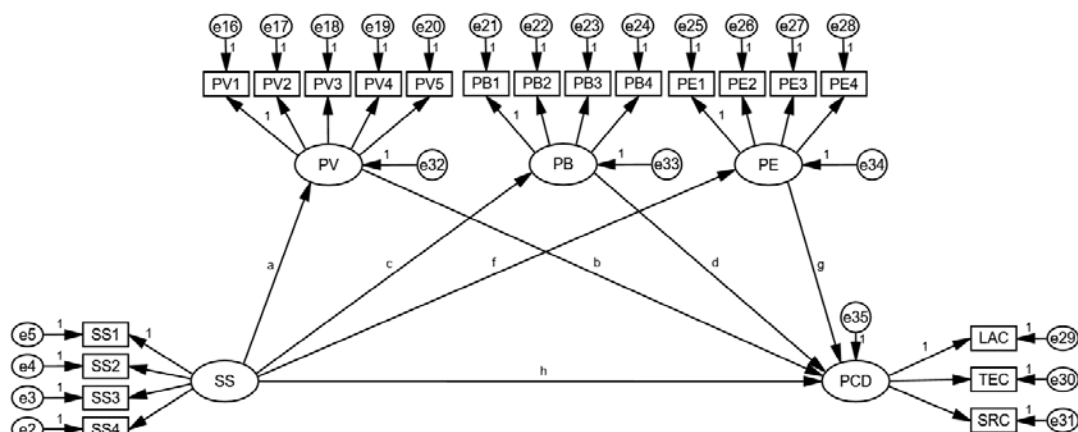


Figure 2. The SEM Diagram of SS,PI,PCD Test Result

6.1.5 Hypothesis Test Result Among Educational Directors' Support, Professional Identity and Professional Competencies of EFL Instructors.

Based on the examination of structural equation models, it is clear that educational directors' support directly contributes to the professional competence development of language instructors ($\beta=0.149$, $p<0.05$). Simultaneously, professional efficacy, professional value, and professional belonging are crucial components of social support. It has a substantial mediating influence on the professional competence of EFL instructors, with corresponding mediation effect sizes of 33.68%, 35.35%, and 44.83%. This finding indicates that support from educational directors may enhance EFL teachers' professional identities, which in turn can boost their professional competence development both directly and indirectly as is shown in table 9.

Table 9. H3,H3a,H3b,H3c Hypothesis Test Results

	Hypothesis		Estimate	S.E.	C.R.	Lower	Upper	P	Proportion of indirect effect
H3	PCD<-EDS	Regression Weights	0.149	0.055	2.709	0.022	0.315	0.027	-
H3a	PCD<-PV<-EDS	Total effects	0.193	0.050	3.860	0.099	0.293	0.001	33.68%
		direct effects	0.128	0.048	2.667	0.041	0.220	0.007	
		Indirect effects	0.065	0.023	2.826	0.027	0.118	0.001	
H3b	PCD<-PB<-EDS	Total effects	0.198	0.051	3.882	0.106	0.298	0.001	35.35%
		direct effects	0.128	0.048	2.667	0.041	0.220	0.007	
		Indirect effects	0.070	0.023	3.043	0.034	0.124	<0.000	
H3c	PCD<-PE<-EDS	Total effects	0.232	0.050	4.640	0.136	0.335	0.001	44.83%
		direct effects	0.128	0.048	2.667	0.041	0.220	0.007	
		Indirect effects	0.104	0.025	4.160	0.063	0.161	<0.000	

In closing, the study's research hypotheses H3, H3a, H3b, and H3c which centre on the interplay between professional identity, professional competence, and educational directors' support have all been proven, seen in figure 3.

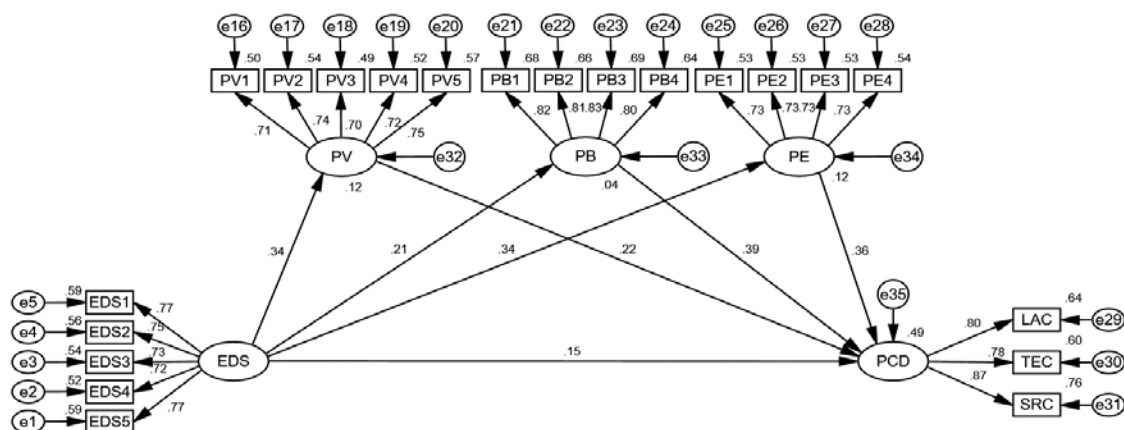


Figure 3. The SEM Diagram of EDS,PI,PCD

6.2 Qualitative Findings

The opinions of administrators were analyzed by the Lichtman's 3Cs Steps of Analysis. There were 12 categories emerged: Educational Resources; Teaching Skills ; Training Opportunities; Collaboration; Financial Support ; Innovation; Mentoring; Recognition and Rewards; Research More; Communication and Feedback; Incentives; Work Atmosphere. These themes can be further categorized into 5 concepts: 1) College internal support; 2) College internal support; 3) Educational directors support; 4) Professional identity and 5) Collaboration of different Systems.

6.2.1 Private College Internal Support

Speaking on internal support from their respective colleges, those administrators noted how important it is to have sufficient support internally to maintain their professional competence. The following interviewed data point out to the internal support that could help EFL instructors improve their professional competence development.

"Our college boosts professional competence through internal training, expert exchanges, and teaching seminars. These update teaching skills and philosophy. Attending seminars and peer exchanges keeps me informed on latest methods, enhancing my teaching." (Participant 1, July 28)

"Our college enhances EFL instructor competence with regular training, expert workshops, and conference participation. These update methodologies, provide insights, and foster global peer learning. Workshops and conferences are especially helpful for idea exchange." (Participant 3, July 28)

6.2.2 Social Support

The administrators also talked about social support. Social support mainly comes from the other peer colleges, family and friends. Social support can increase their professional identity, hence stimulate their willingness and provide more opportunities to strengthen their professional competence. The following data demonstrate that social support has a positive effect on professional competence development of EFL instructors.

"Boosting teachers' development requires peer institution exchanges, mutual visits, corporate learning bases, and more certification opportunities." (Participant 2, July 28)

"As an EFL instructor, my career is respected. Peers and family appreciate language education's importance and my dedication." (Participant 3, July 28)

"My EFL career is respected and fulfilling, recognized for its role in cross-cultural communication, especially in Chengdu's educational environment." (Participant 3, July 28)

6.2.3 Educational Directors Support

When talked about the professional competence development of EFL instructors, they also mentioned educational directors support. The support includes relevant policy, enough fund etc. The support of educational directors has very positive impact on professional competence development of EFL instructors. The following interview data point out the positive effect of educational directors.

"Directors promote teachers' development with policies, training, and recognition. While helpful, there are issues like limited coverage and skewed incentives. Equitable pathways are needed." (Participant 6, July 28)

"Directors arrange training and foster collaboration, but face challenges like limited funding and scheduling conflicts. Despite this, they support EFL instructor advancement." (Participant 7, July 28)

6.2.4 Professional Identity

The administrators from those private colleges also talked about professional identity, which includes: professional value, professional sense of belonging and professional efficacy. These factors also have positive influence on professional competence development through adequate professional competence development support from private colleges, social support and educational directors support. The following interviewed data show positive effect of professional identity through various supports.

"As an EFL instructor, I find satisfaction and belonging. Recognition and support boost my morale, reducing burnout and fueling my desire to enhance competence. Teaching is my passion and calling." (Participant 2, July 28)

"My profession is respected for its societal value. It fulfills my purpose and allows positive impact, giving me a sense of accomplishment and pride. Loved ones appreciate my dedication and achievements." (Participant 5, July 28)

6.2.5 Collaborations of Different systems

In the interview, these administrators talked about the collaboration of private college, society and educational directors. The cooperation among them provide positive atmosphere to the professional competence development of EFL instructors and formulate a positive ecosystem. The following interviewed data point out to the collaboration of different levels could help the professional competence development of EFL instructors.

"EFL instructors, private colleges, and directors form an Qinterdependent system. Teachers nurture students, schools provide support, and directors guide policy and growth. Collaboration ensures progress." (Participant 2, July 28)

"A tripartite mechanism is key: teachers engage in development, colleges provide resources, and directors guide. Regular communication ensures alignment and growth." (Participant 6, July 28)

"Close collaboration among teachers, colleges, and directors is crucial. Clear goals, diverse platforms, effective policies, and enhanced communication will promote teacher growth and elevate teaching quality." (Participant 7, July 28)

In summary, the analysis of the semi-structured interview data has verified the favorable impact of support for professional competence development provided by private colleges, society, and educational directors.

6.3 Responses to Research Questions

This part includes both quantitative and qualitative data, which complement each other in providing a holistic understanding of the study. This section compared and contrasted the findings from both types of data, so to answer each research questions from both quantitative and qualitative perspective.

6.3.1 Responses to Research Question 1

Internal support from private colleges, social support, and support from educational directors influence the professional competence development of EFL instructors in private colleges through various mechanisms and pathways. Internal support, such as training programs, mentorship opportunities, and access to advanced educational resources, directly enhances EFL instructors' teaching and research competences. Social support from peers, family, and the community reinforces instructors' professional identity and motivation, providing emotional and motivational support that instills pride in their

profession. Educational directors' support, including policy formulation, funding, and recognition mechanisms, provides strategic direction and resources, enabling instructors to pursue professional growth opportunities. Qualitative data from interviews further validates these mechanisms, showing that EFL instructors perceive these support factors as critical in fostering their professional competence through enhanced skills, motivation, and a sense of belonging.

6.3.2 Responses to Research Question 2

Professional identity acts as a mediator between support factors (internal support from private colleges, social support, and support from educational directors) and the professional competence development of EFL instructors. According to the quantitative analysis, professional identity components such as professional values, sense of belonging, and professional efficacy play significant mediating roles. Support from private colleges, society, and educational directors positively impacts these identity components, which in turn influence instructors' motivation and commitment to professional development. Qualitatively, interviews revealed that instructors who felt supported and valued developed a stronger professional identity, viewing themselves as effective and important contributors to their field. This heightened sense of identity translated into increased motivation to enhance their language, teaching, and research competencies, demonstrating the crucial role of professional identity in mediating the relationship between support and professional competence development.

6.3.3 Responses to Research Question 3

To optimize the support provided by private colleges, society, and educational directors based on ecological education theory, a holistic and ecosystem approach is essential. Private colleges should establish comprehensive internal support systems tailored to EFL instructors' needs, including continuous professional development programs, mentorship opportunities, and access to advanced educational resources. Society should foster a positive image of the teaching profession and recognize the contributions of EFL instructors through public acknowledgment and support networks. Educational directors should formulate supportive policies and allocate adequate funding to ensure equitable access to professional development opportunities for all instructors. Regular communication and feedback mechanisms among private colleges, society, and educational directors are crucial to align resources and policies effectively. Additionally, considering future changes and interactions at different ecosystem levels, a dynamic and adaptive approach is necessary. This involves regular assessments and adjustments of support initiatives based on instructor feedback and evolving educational landscapes. By fostering a supportive ecosystem that nurtures professional growth and identity, private colleges, society, and educational directors can collectively enhance EFL instructors' professional competence and contribute to improved educational outcomes.

6.4 Results to Corresponding Research Objectives

6.4.1 Results to Research Objective 1

The research reveals that college internal support, social support, and educational directors' support each have direct and significant impacts on the professional competence development of EFL instructors in private colleges. Specifically, internal support, such as training programs, mentorship opportunities, and access to advanced educational resources, is crucial for instructors to enhance their language application competence, teaching competence, and scientific research competence. Similarly, social support, which may encompass recognition and networks within the community, also contributes positively to their professional growth. Educational directors' support, including policy formulation and funding allocation, plays a pivotal role in fostering a conducive environment for professional competence development. These support mechanisms work through various pathways, including providing necessary resources, fostering a supportive atmosphere, and enabling continuous learning opportunities.

6.4.2 Results to Research Objective 2

The study finds that professional identity, comprising elements such as professional values, sense of belonging, and efficacy, serves as a significant mediator between the support factors and the professional competence development of EFL instructors. Instructors who possess a strong professional identity are more likely to perceive and utilize the available support effectively, leading to enhanced professional competence. The research demonstrates that professional identity not only directly influences professional competence development but also moderates the relationship between support factors and competence development, amplifying the positive effects of support on competence growth.

6.4.3 Results to Research Objective 3

Based on ecological education theory, the research proposes that to optimize support for EFL instructors, a holistic and ecosystem approach is essential. Private colleges should tailor comprehensive internal support systems to instructors' needs, encompassing continuous professional development programs, mentorship, and access to advanced educational resources. Society should foster a positive image of the teaching profession and recognize EFL instructors' contributions through public acknowledgment and support networks. Educational directors should formulate supportive policies and allocate funds specifically to nurture a supportive ecosystem for instructors. This optimized support system considers future changes and interactions at different ecosystem levels, ensuring sustained and effective professional competence development for EFL instructors in private colleges.

7. Discussion

This section explores the various factors influencing the professional development of English as a Foreign Language (EFL) instructors in private colleges, focusing on private college support, social support, and educational directors' support. These factors significantly impact EFL instructors' professional values, sense of belonging, and efficacy, which are crucial for their professional competence development. Demographic variables are also considered to gain a comprehensive understanding of these relationships.

Quantitative findings reveal that private college support plays a vital role in enhancing EFL instructors' professional competence, although there is room for improvement. To bolster this support, targeted measures such as comprehensive training programs, mentorship programs, and financial support for professional development are proposed. Social support from peers, family, and the community also positively influences EFL instructors' professional competence. Private colleges can enhance social support by facilitating networking opportunities, encouraging community engagement, and publicly recognizing instructors' accomplishments. Educational directors' support is also crucial, but it lags behind the other two types of support. Comprehensive development policies aligned with EFL instructors' needs, recognition and reward systems, and regular feedback from educational directors are essential to strengthen this support.

The study underscores the interconnectedness of professional values, sense of belonging, and efficacy in shaping EFL instructors' professional identities. To improve their professional identity, self-reflection exercises, cultivating a shared vision and values, and creating a positive and supportive work environment are suggested. Collaboration between private colleges, educational directors, and the broader education system is crucial for EFL instructors' professional development, fostering a supportive ecosystem providing resources, policies, and recognition. Implementing these actionable suggestions has the potential to significantly enhance EFL instructors' professional competence and overall well-being.

8. Conclusion and Recommendations

8.1 Conclusion

The professional competence development of EFL instructors in private colleges is significantly influenced by internal support from colleges, social support, and support from educational directors. Internal support, including training programs, mentorship, and access to advanced resources, directly enhances teaching and research skills. Social support from peers, family, and the community strengthens instructors' professional identity and motivation. Educational directors' support, such as policy formulation and funding, provides strategic direction and resources for professional growth. Interviews with instructors validate these mechanisms, emphasizing their critical role in fostering competence through enhanced skills, motivation, and a sense of belonging.

To optimize this support based on ecological education theory, a holistic and ecosystem approach is crucial. Private colleges should tailor comprehensive internal support systems to instructors' needs, while society should foster a positive image of teaching and recognize EFL instructors' contributions. Educational directors must formulate supportive policies and allocate funding for equitable professional development. Effective communication and feedback among all stakeholders are essential for resource and policy alignment. Moreover, a dynamic and adaptive approach, involving regular assessments and adjustments based on instructor feedback and educational trends, is necessary. By nurturing a supportive ecosystem, private colleges, society, and educational directors can collectively enhance EFL instructors' professional competence and improve educational outcomes.

8.2 Recommendation for Future Research

Longitudinal studies are needed to comprehend the dynamic growth of EFL teachers' professional competence. In-depth qualitative case studies focused on specific private colleges or areas would offer nuanced insights into contextual elements impacting career development. Comparative studies between different educational organizations and the role of digital tools in enhancing support networks are also potential research directions.

8.2 Recommendation for the Use of Findings

Private colleges should prioritize comprehensive, customized professional development initiatives for EFL instructors, including continuing education, mentorship programs, and access to advanced learning materials. Regular assessments and modifications of these programs are imperative. Social support networks should be encouraged through planned events and community involvement.

8.4 Implications for Practice

The study's findings have significant implications for enhancing EFL instructors' professional competence in Sichuan's private colleges. Private colleges should establish internal support systems tailored to EFL instructors' needs. Society should foster a positive image of the teaching profession and recognize instructors' contributions. Educational directors should formulate policies and allocate funding for professional development. Collaboration among stakeholders is crucial, and continuous monitoring and adaptation of support structures are essential to maintain relevance and impact. A holistic and ecosystem approach is emphasized for fostering continuous professional development and improving teaching quality.

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