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Developing a Model for EFL Teachers' Problem-Solving Skills

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A B S T R A C T

Purpose: The objective of this study was to investigate and model the problem-solving skills of Iranian EFL teachers through a mixed-methods design, aiming to develop a validated, context-specific framework for addressing classroom challenges.

Methods and Materials: The study employed an exploratory sequential mixed-methods approach conducted in three phases: a qualitative phase, a pilot study, and a quantitative phase. In the qualitative phase, semi-structured interviews were conducted with 30 Iranian EFL teachers from private language institutes in Hormozgan Province to extract key themes related to their classroom problem-solving strategies. These themes informed the development of a 24-item Problem-Solving Skills Questionnaire (PSSQ), which was piloted with 50 teachers and then distributed to a larger sample of 200 teachers in the final phase. Confirmatory Factor Analysis (CFA) was conducted using LISREL, and reliability indices were computed via SPSS (version 20). Six core dimensions were assessed: setting clear expectations, establishing a positive learning environment, active listening, positive reinforcement, managing behavior, and collaborating with parents.

Findings: The CFA confirmed the six-factor structure with excellent model fit indices (e.g., $\chi^2/df = .722$, RMSEA = .000, CFI = 1.00). All factor loadings were statistically significant ($p < .001$) and above .70, indicating strong item validity. Reliability was high across all subscales ($\alpha > .85$), with total instrument reliability at .920. Among the six dimensions, active listening received the highest mean score, followed by positive reinforcement and managing behavior, while collaborating with parents and establishing a positive learning environment scored lowest.

Conclusion: The study offers a robust model of EFL teachers' problem-solving skills in the Iranian context and highlights both strengths and areas for development. Emphasis on communicative strategies like active listening suggests cultural alignment, while lower emphasis on parental collaboration and classroom climate points to potential gaps in teacher training and institutional practice.

Keywords: *Problem-solving skills; EFL teachers; Confirmatory Factor Analysis; teacher development; Iranian education*

1. Introduction

Across global educational contexts, problem-solving in teaching has become a cornerstone of professional competence, particularly in EFL classrooms where linguistic and cultural barriers further complicate instruction. One critical factor influencing teachers' effectiveness is their work engagement, which is shaped by variables such as professional identity and teaching enjoyment (Fathi et al., 2024). These affective dimensions interact with cognitive attributes like grit and mindset to influence classroom behavior and instructional decision-making (Liu et al., 2023). Moreover, as the demands of 21st-century learning evolve, teachers are increasingly expected to integrate digital tools, adapt to student diversity, and maintain high standards of intercultural sensitivity (Egitim, 2024; Nurhidayat et al., 2023).

In the Iranian context, the EFL learning environment is characterized by distinct cultural and institutional conditions. English is considered a foreign language rather than a second language, resulting in limited exposure outside formal education (Salimi, 2023). Furthermore, EFL instruction in Iran often operates within a dual structure: public schools and private language institutes. Teachers working in these environments face not only resource constraints and curriculum limitations but also psychological challenges such as demotivation, burnout, and limited autonomy (Ren & Zhou, 2023; Zhang et al., 2023). These conditions underscore the necessity for Iranian EFL teachers to possess robust problem-solving skills to mitigate classroom difficulties, promote student engagement, and sustain their own professional well-being.

Problem-solving in educational settings refers to a structured cognitive-behavioral process where teachers identify a problem, explore its underlying causes, generate potential solutions, implement the most effective one, and evaluate its outcome. This cyclical process is vital when addressing challenges like managing student behavior, integrating new technologies, designing learner-centered activities, or collaborating with stakeholders such as parents and administrators. Importantly, teachers' perceptions of these challenges are informed by their training, experiences, and institutional culture (Sadeghi, 2024; Yusuf & et al., 2024).

Previous studies have shown that many EFL teachers feel underprepared to deal with classroom complexities, especially in relation to student engagement and technological integration. Teachers often cite a lack of institutional support, insufficient pre-service training, and limited opportunities for reflective practice as major obstacles (Drajatı et al., 2024; Zhang, 2023). At the same time, there is increasing recognition of the value of professional development programs that enhance teachers' problem-solving efficacy by focusing on growth mindset, autonomy support, and emotional self-regulation (Hu, 2023; Wang et al., 2024). These programs contribute to a broader culture of reflective teaching and self-directed learning, which are essential for sustainable teaching practices.

Technological advancements have added another dimension to the problem-solving landscape. Virtual reality, artificial intelligence, and blended learning environments have introduced new opportunities but also complex challenges for EFL teachers (Al Musawi, 2025; Dian Toar & Hamied, 2023). While such innovations can increase engagement and personalize instruction, they also require teachers to continuously adapt, often without adequate institutional or pedagogical support. Therefore, understanding how teachers perceive and respond to technology-related problems is a critical aspect of this study.

Another important consideration is the role of teacher emotions and professional identity in shaping their response to classroom challenges. Teachers' emotion labor and identity construction, particularly in culturally constrained or exam-oriented contexts, affect how they perceive student behavior and navigate institutional expectations (Zhang et al., 2023; Zhang, 2023). For instance, teachers who identify strongly with their professional role are more likely to approach challenges as opportunities for growth rather than as threats to their competence. Conversely, teachers with limited self-efficacy may resort to avoidance behaviors or disengagement when faced with difficulties (Hu & Hemchua, 2023; Tang & Zhu, 2023).

Moreover, the influence of school culture and climate on teachers' problem-solving capacity cannot be overstated. A supportive school climate, characterized by collegiality, shared leadership, and effective communication, fosters collaboration and innovation in problem-solving (H. Zhang & S. Luo, 2022). On the contrary, bureaucratic rigidity and lack of trust can hinder reflective practices and reduce teacher agency. In this regard, the concept of the professional learning community (PLC) has gained traction as a means to enhance collective efficacy and intercultural teaching competence (Hu, 2023).

Despite growing awareness of these issues, empirical studies on EFL teachers' problem-solving skills in Iran remain limited. Most available research focuses either on

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student performance or general teacher challenges without proposing a structured model of problem-solving. For instance, while studies have explored Iranian teachers' use of dynamic assessment or intercultural competence (Egitim, 2024; Nushi & Momeni, 2022), they have not sufficiently addressed how teachers diagnose and respond to instructional problems in real-time classroom scenarios. This gap is especially critical given the rising expectations placed on teachers to promote learner autonomy, adapt curricula, and engage with digital innovations.

In conclusion, the increasing complexity of language teaching in Iran, driven by cultural, technological, and institutional factors, necessitates a deeper understanding of how teachers resolve classroom challenges. The current study emerges from this pedagogical imperative, aiming to develop a comprehensive model of problem-solving skills specific to Iranian EFL teachers.

2. Methods and Materials

2.1. Study Design and Participants

This study employed a mixed-methods design comprising three sequential phases: a qualitative exploratory phase, a pilot testing phase, and a final quantitative phase. The primary aim was to investigate the nature and dimensions of problem-solving skills among Iranian EFL (English as a Foreign Language) teachers, culminating in the development and testing of a structural model tailored to the Iranian educational context.

The qualitative phase was conducted through semi-structured interviews with 30 English language teachers (15 male, 15 female) from four private language institutes in Hormozgan Province, Iran, during the 2022–2023 academic year. Hormozgan, located in southern Iran, has witnessed considerable growth in private English education over the past two decades. The setting was particularly suitable for studying communicative-oriented pedagogy, as English instruction in private institutes tends to emphasize real-life language use and teacher-student interaction more than in state schools. Participants were selected using purposive sampling to ensure the inclusion of diverse teaching experiences, age ranges, and professional backgrounds. All participants were Persian-speaking Iranian nationals with relatively homogenous socio-economic status. The goal of sampling was to reach data saturation and capture the breadth of strategies used in problem-solving across varying contexts.

Following the qualitative phase, a pilot study was conducted with a different group of 50 EFL teachers from the same region. This phase was designed to evaluate the psychometric properties—particularly the reliability—of a questionnaire developed based on themes extracted from the qualitative interviews.

The main quantitative phase involved 200 EFL teachers, selected based on availability from multiple private language institutes across Hormozgan. The larger sample aimed to test the validity of the developed model using inferential statistical techniques and structural equation modeling.

2.2. Measures

Two primary data collection tools were used across the three phases of the study. During the qualitative phase, data were collected via semi-structured interviews. These interviews were guided by open-ended questions that had been developed based on a comprehensive review of literature on problem-solving skills in educational settings and the personal teaching experiences of the researcher. The questions were designed to elicit detailed narratives about the strategies teachers use when facing classroom challenges. The interview items were then reviewed and revised with the help of three field experts to ensure contextual relevance and content validity. Interviews were conducted in Persian, recorded with participant consent, and transcribed verbatim for analysis.

In the subsequent phases, a researcher-constructed questionnaire was employed. This questionnaire was developed directly from the themes identified in the qualitative analysis. The final version included 24 items grouped into six thematic categories: Setting Clear Expectations, Establishing a Positive Learning Environment, Active Listening, Positive Reinforcement, Managing Behavior, and Collaborating with Parents. Each category contained four items measured on a 5-point Likert scale ranging from Strongly Agree to Strongly Disagree.

The reliability of the questionnaire was assessed during the pilot phase. The Cronbach's alpha coefficients for each category ranged from .59 to .78, with an overall scale reliability of .88, indicating high internal consistency. These values reflected the scale's suitability for assessing problem-solving constructs in the context of Iranian EFL education.

2.3. Data Analysis

Data from the qualitative phase were analyzed using the grounded theory method. The transcribed interviews were

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imported into MAXQDA software for qualitative coding. The process began with open coding, where researchers read and re-read the transcripts to identify recurring concepts and labels. This was followed by axial coding, which grouped related codes into overarching themes that described how teachers understand and apply problem-solving strategies. Finally, selective coding was used to refine the relationships among the themes and form a coherent theoretical framework that would inform questionnaire development.

For the pilot and main quantitative phases, data analysis was conducted using SPSS (Version 20.0) and LISREL statistical software. Initially, descriptive statistics such as means, standard deviations, and frequency distributions were calculated for all questionnaire items and categories. Normality of the data was verified using the Kolmogorov–Smirnov test. Following the preliminary analysis, exploratory factor analysis (EFA) was performed in the pilot phase to examine the factorial structure of the questionnaire.

In the main phase, structural equation modeling (SEM) was applied to test the proposed model of EFL teachers' problem-solving skills. SEM was used to examine the relationships among the six identified factors and assess the overall model fit using LISREL. Model fit indices such as the Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), and Goodness of Fit Index (GFI) were calculated to ensure that the data adequately supported the hypothesized model. Path coefficients were estimated to determine the significance and strength of relationships between latent constructs.

3. Findings and Results

3.1. Qualitative Phase Results

The qualitative phase of the study resulted in the development of a problem-solving skills questionnaire based on six core dimensions identified through teacher interviews. These dimensions represent key strategies used by Iranian EFL teachers to address classroom challenges.

Setting Clear Expectations emerged as a foundational skill, where teachers communicate academic and behavioral standards clearly to students. This clarity reduces confusion, enhances focus, and enables students to understand what is expected of them. It also allows teachers to address classroom issues consistently and effectively by referring back to these expectations.

Establishing a Positive Learning Environment was identified as another essential strategy, focusing on building strong teacher-student relationships, valuing diversity, and fostering equity. Creating a welcoming and inclusive atmosphere where students feel safe and respected supports emotional well-being and engagement in learning. The physical environment and integration of social-emotional learning also play important roles.

Active Listening stood out as a particularly important and widely used skill. It involves being present, attentive, and empathetic to student voices. Teachers use this skill to understand students' individual challenges and perspectives, tailor instruction, and manage conflicts. It promotes trust, respect, and open communication, enabling collaborative problem-solving.

Positive Reinforcement is employed by teachers to encourage desirable behaviors and academic effort. Recognizing student achievement through praise or rewards increases motivation, creates a constructive classroom climate, and helps redirect negative behavior toward more positive engagement. This technique requires intentional planning and consistent implementation.

Managing Behavior involves proactive and responsive strategies to ensure a focused and orderly learning environment. Teachers implement diverse techniques to address behavior rooted in individual, social, or environmental factors. Building rapport and cultural responsiveness are key components, along with fostering mutual respect and understanding to reduce disruptions.

Collaborating with Parents is the sixth dimension, emphasizing the importance of parent-teacher partnerships in addressing students' academic and emotional needs. Teachers gain a fuller understanding of their students by maintaining open communication with families, involving them in decision-making, and creating inclusive channels for collaboration. This partnership enhances student outcomes and strengthens the home-school connection.

3.2. Quantitative Phase

The present study was designed in order to achieve and examine the Confirmatory Factor Analysis (CFA) of the problem-solving skills by teachers. The data collected in this phase of the study were analyzed through Multivariate ANOVA (MANOVA), CFA, and Cronbach's Reliability Indices. The report beings with testing assumptions, following which the research questions will be discussed.

Before exploring the research questions, the data were checked for any univariate and multivariate outliers, following which univariate and multivariate normality were tested. Table 2 shows the minimum and maximum values for

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the standardized scores (z scores). Since none of the values were higher than ±3.29 (Tabachnick & Fidell; 2014), it was concluded that the present data did not suffer from any univariate outliers.

Table 1 also shows the minimum and maximum values for the Mahalanobis Distance (MD). The maximum MD value of 17.75 was lower than the critical value of Chi-Square at .001 levels for six components of TIC; i.e. 22.45. Thus; it was concluded that the data collected in this study did not suffer from any significant multivariate outliers.

Table 1

Standardized Scores and Mahalanobis Distances for Checking Univariate and Multivariate Outliers

	N	Minimum	Maximum
Zscore(Setting)	200	-2.39	2.20
Zscore(Establishing)	200	-2.44	2.63
Zscore(Active)	200	-2.53	2.32
Zscore(Reinforce)	200	-2.23	2.05
Zscore(Behavior)	200	-2.55	2.37
Zscore(Collaborate)	200	-2.75	2.05
Mahalanobis Distance	200	.48	17.75
Critical Value for MD	22.45		

Table 2 shows the skewness and kurtosis indices of univariate normality for 24 items of the problem solving skills questionnaire. Since the values of skewness and kurtosis were lower than ±2, it was concluded that the assumption of univariate normality was retained. It is worth mentioning that the criteria of ±2 were proposed by some experts. It should also be noted that Zhu et al. (2019); suggested the criteria of ±3. However, Watkins (2021) suggested different criteria for skewness and kurtosis. He believed that skewness values should be less than ±2; while kurtosis indices should be evaluated against the criteria of ±7.

Table 2 also showed the Mardia's index of multivariate normality. Mardia's index should be equal to or less than 3. Thus; it was concluded that the assumption of multivariate normality was also retained. The normality of the six components of PSSQ will be tested when reporting the results for the second and third research questions through MANOVA.

Table 2

Univariate and Multivariate Normality Indices

Item	Skewness	Kurtosis	Item	Skewness	Kurtosis
1	-0.054	-0.578	14	0.055	-0.693
2	0.258	-0.719	15	0.202	-0.447
3	0.405	1.434	16	0.124	-0.470
4	-0.421	0.130	17	0.027	-0.630
5	0.027	0.865	18	-0.043	-0.138
6	-0.707	-0.016	19	0.048	-0.493
7	0.029	-0.178	20	-0.097	-0.549
8	0.213	-0.596	21	-0.559	-0.075
9	-0.011	-0.739	22	-0.834	0.209
10	-0.023	-0.426	23	-0.660	0.174
11	-0.325	-0.650	24	-0.413	-0.314
12	-0.185	-0.461	Mardia		.141
13	0.024	-0.323			

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Table 3 shows the Cronbach's alpha reliability indices for total PSSQ and its six components. The overall questionnaire enjoyed a reliability index of .920. The reliability indices for the six components of PSSQ were; setting clear expectations (α = .859), establishing a positive learning environment (α = .872), active listening (α = .886), positive reinforcement (α = .899), managing behavior (α = .902), and collaborating with parents (α = .878).

All of the above mentioned reliability indices can be considered as appropriate; as noted by some studies who believed that a Cronbach's alpha value of .70 is the adequate reliability index for an instrument. However; George and Mallery (2020: 244) believe that, "there is no set interpretation as to what is an acceptable alpha value. A rule of thumb that applies to most situations is; >.9 excellent, >.8 good, > .7 acceptable, >.6 questionable, >.5 poor and < .5 unacceptable". Based on these criteria, it can be concluded the instruments employed in this study enjoyed either "good"; i.e. >=.80, or excellent; i.e. >= .90 reliability indices.

Table 3

Cronbach's Alpha Reliability Statistics

	Cronbach's Alpha	N of Items
Setting Clear Expectations	.859	4
Establishing a Positive Learning Environment	.872	4
Active Listening	.886	4
Positive Reinforcement	.899	4
Managing Behavior	.902	4
Collaborating with Parents	.872	4
Total	.920	24

The main research question of this study was: "Utilizing a grounded theory method, what is the model of Iranian EFL teachers' problem-solving skills?"

The research question investigated the validity of the PSSQ. A Confirmatory Factor Analysis (CFA) was run to probe the validity of the PSSQ. Figure 1 shows the conceptual diagram of the PSSQ. The model includes 24 indicators (observed variables, or items) which loaded under six latent variables, shown in ovals. These six latent variables, in turn, loaded under a higher order latent variable named PSSQ. The small circles connected to indicators and some of the latent variables are error residuals. The main objectives of CFA are to prove the fit of the model; and also to prove that indictors have large contributions; i.e. > .50, to their latent variables.

Figure 2 shows the same model in standardized regression weights. It should also be noted that standardized regression weights (beta values in Table 4) are analogous to Pearson correlations that can be evaluated against three criteria; i.e. .10 = weak, .30 = moderate and .50 = large. Based on these results it can be concluded that all 24 items had large; i.e. >= .50 contributions to their latent variables. It is worth mentioning that the indicators whose unstandardized regression weights are one, are required by the model to have initial values to start the computations. However; they do not affect the results of the model.

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Figure 1

Conceptual Diagram of Problem Solving Skills

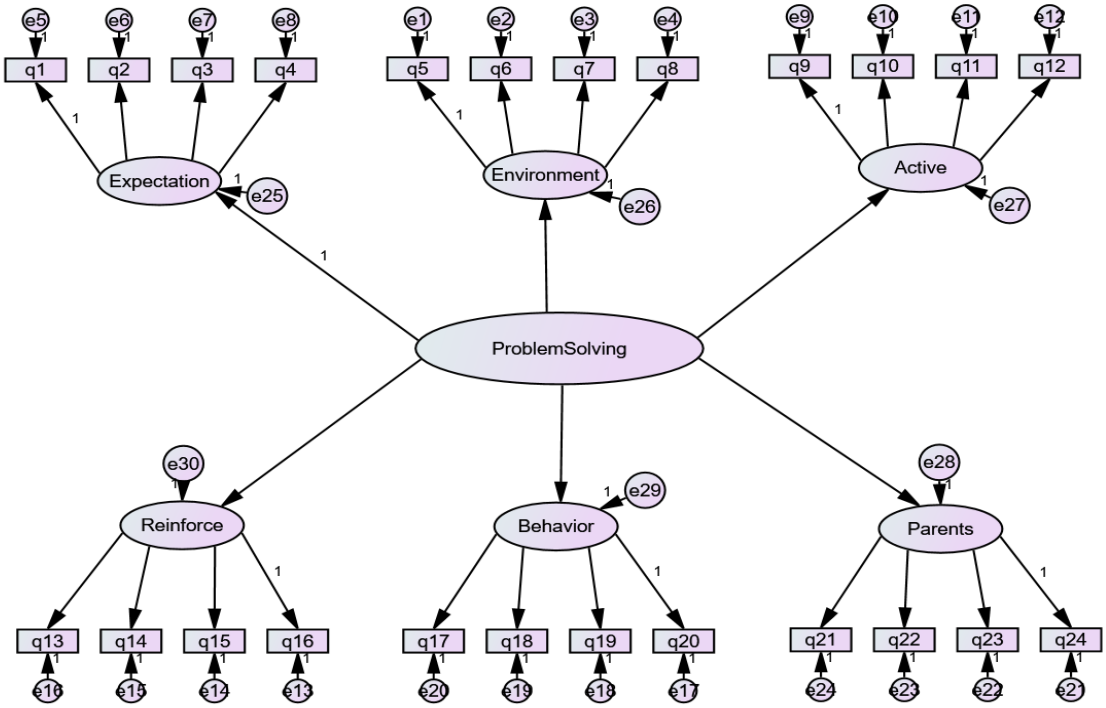

Figure 2

Confirmatory Model of Problem Solving Skills

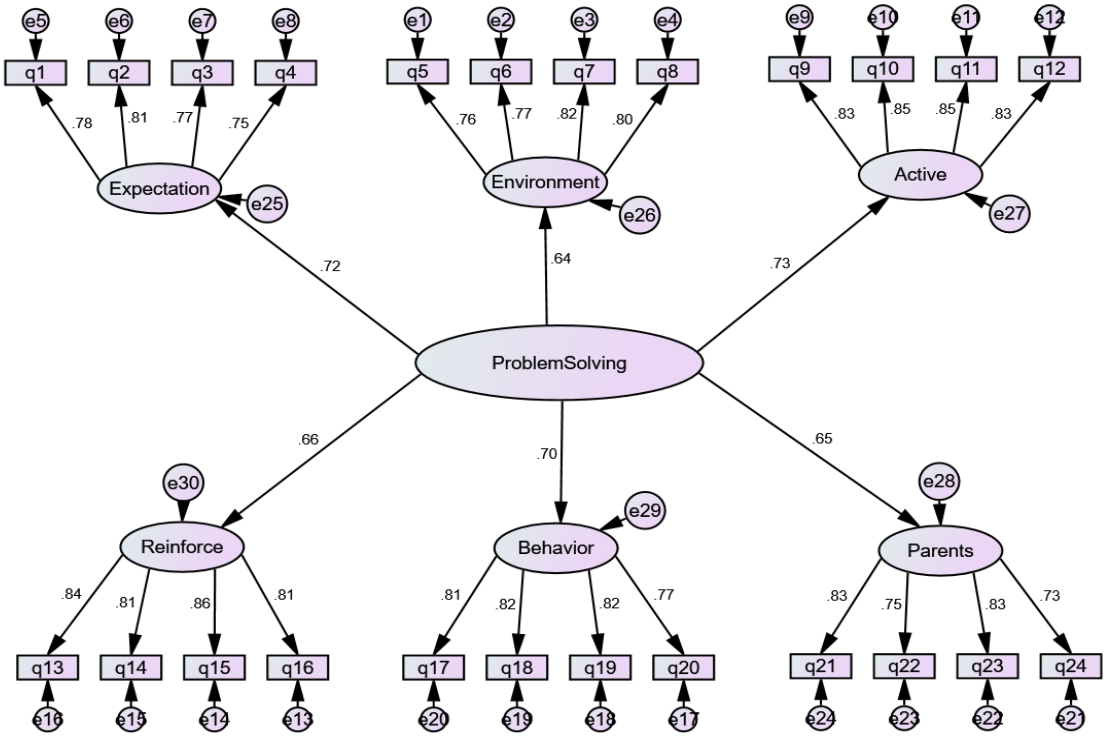

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Table 4

Unstandardized and Standardized Regression Weights for Contributions of Indicators (Items) to Latent Variables

			Unstandardized	S.E.	C.R.	P	Standardized
q5	<---	Environment	1.000				.763
q6	<---	Environment	1.161	.108	10.781	.001	.773
q7	<---	Environment	1.416	.124	11.399	.001	.817
q8	<---	Environment	1.466	.131	11.229	.001	.804
q1	<---	Expectation	1.000				.779
q2	<---	Expectation	1.237	.109	11.378	.001	.805
q3	<---	Expectation	.648	.060	10.872	.001	.770
q4	<---	Expectation	.725	.069	10.524	.001	.747
q9	<---	Active	1.000				.825
q10	<---	Active	.981	.070	14.039	.001	.849
q11	<---	Active	1.004	.071	14.059	.001	.850
q12	<---	Active	.981	.072	13.599	.001	.830
q16	<---	Reinforce	1.000				.810
q15	<---	Reinforce	1.039	.076	13.674	.001	.858
q14	<---	Reinforce	1.017	.080	12.713	.001	.810
q13	<---	Reinforce	1.023	.077	13.296	.001	.839
q20	<---	Behavior	1.000				.774
q19	<---	Behavior	1.007	.085	11.882	.001	.819
q18	<---	Behavior	1.011	.085	11.855	.001	.817
q17	<---	Behavior	1.059	.090	11.807	.001	.814
q24	<---	Parents	1.000				.735
q23	<---	Parents	1.125	.101	11.165	.001	.834
q22	<---	Parents	1.002	.099	10.108	.001	.751
q21	<---	Parents	1.072	.096	11.146	.001	.833

Table 5 shows the unstandardized and standardized regression weights for the contributions of latent variables to the higher order latent variable of PSSQ. The results indicated that setting clear expectations, establishing a positive learning environment, active listening, positive reinforcement, managing behavior, and collaborating with parents had large; i.e. >=.50 contributions to the higher order latent variable of PSSQ.

Table 5

Unstandardized and Standardized Regression Weights for Contributions of Latent Variables to Problem Solving

			Estimate	S.E.	C.R.	P	Label
Active	To	ProblemSolving	1.098	.161	6.802	.001	.729
Environment	To	ProblemSolving	.612	.102	6.028	.001	.635
Expectation	To	ProblemSolving	1.000				.718
Reinforce	To	ProblemSolving	.953	.150	6.366	.001	.660
Behavior	To	ProblemSolving	.978	.151	6.463	.001	.702
Parents	To	ProblemSolving	.667	.111	6.013	.001	.646

Table 6 shows the fit indices for the CFA model. Two sets of fit indices were discussed; absolute and incremental. The former indices, as defined by Khine (2013: 17) "measure how well the specified model reproduces the data. They provide an assessment of how well a researcher's theory fits the sample data". On the other hand; "Incremental (relative, comparative) fit indexes measure the relative improvement in fit of the researcher's model over that of a baseline model. The baseline model is usually the independence (null) model, which assumes covariances of zero between the endogenous variables" (Kline, 2016: 266). It should be noted that CFA has a third set of fit indices, parsimony fit indices, which compare several models to choose the simplest one. The present study included a single model. That was why parsimony fit indices were not reported. The five absolute fit indices are discussed below.

A: Chi-square badness of fit for the CFA model (χ^2 (246) = 177.688, p = 1.00) was non-significant; hence fit of the models. It is worth mentioning that the results of the chi-square tests should be non-significant to support the fit of the

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model (Bowen & Guo, 2011; Collier, 2020; Whittaker et al., 2022). The ratio of chi-square over the degree of freedom for the PSSQ model; i.e. .722, was smaller than 3; hence fit of the model (Collier, 2020).

B: The standardized root mean residual (SRMR) for the model; i.e. .028 was less than the criterion of .10. As previous studies mention (Byrne, 2010; Kline, 2016; and Whittaker et al., 2022) SRMR values less than .10 indicated fit of the model.

C: The root mean square of error approximation (RMSEA), and its confidence intervals should be within the ranges of .05 to .08; although values less than .10 are acceptable (Byrne, 2010; Bowen & Guo, 2011; Collier, 2020). The RMSEA index for the present model was .000; 90 % CI [.000, .000]. These results supported the fit of the model.

D: The probability of close fit of RMSEA (PCLOSE) for the model was 1.00. Since PCLOSE index was higher than .05; Byrne, 2010; it was concluded that the present model enjoyed a good fit.

E: The Goodness of fit index (GFI) of .936 was higher than the criterion of .90 hence fit of the model. The criterion of .90, that can be applied to the fit indices of NFI, RFI, TLI, IFI, and CFI, which will be discussed below, were proposed by some studies.

The Incremental fit indices of normed fit index (NFI = .941), relative fit index (RFI = .934), incremental fit index (IFI = 1.00), Tucker-Lewis fit index (TLI = 1.00) were all higher than .90. All these results supported the fit of the model. And finally; the Hoelter index of sampling adequacy of 318 was higher than 200; indicating that the present sample size was adequate for running the present CFA.

Table 6

Fit Indices for Problem Solving Skills Model

	Indices	Index	Criteria	Fit
Absolute	X^2	177.688	---	---
	df	246	---	---
	p	1.00	> .05	Good Fit
	X^2 Ratio	.722	< 3	Good Fit
	SRMR	.028	<.10	Good Fit
	RMSEA	.000	<.05	Good Fit
	CI	[.000,.000]	<=.10	Good Fit
	PCLOSE	1.00	>.05	Good Fit
	GFI	.936	>=.90	Good Fit
Incremental	RFI	.934	>=.90	Good Fit
	TLI	1	>=.90	Good Fit
	CFI	1	>=.90	Good Fit
	NFI	.941	>=.90	Good Fit
	IFI	1	>=.90	Good Fit
Hoelter (Sampling Adequacy)		318	>200	Adequate

4. Discussion and Conclusion

The present study aimed to investigate and model the problem-solving skills of Iranian EFL teachers by employing a mixed-methods approach comprising qualitative interviews, a pilot phase, and confirmatory factor analysis (CFA). The findings of this study revealed that six key dimensions characterize EFL teachers' problem-solving strategies: setting clear expectations, establishing a positive learning environment, active listening, positive reinforcement, managing behavior, and collaborating with parents. Among these, active listening was identified as the most commonly applied and valued strategy by Iranian EFL teachers, followed by positive reinforcement and managing behavior. Conversely, the least utilized strategies were collaborating with parents and establishing a positive learning environment.

The prominence of active listening among Iranian EFL teachers aligns with the socio-cultural values inherent in Iranian education, which emphasize respect, attentiveness, and strong interpersonal rapport between teachers and students. Active listening was not only conceptually validated through confirmatory factor analysis, but it also exhibited the highest mean score among the six dimensions. These findings are consistent with previous research highlighting the predictive role of teacher immediacy behaviors—including listening, verbal affirmation, and non-verbal attentiveness—in enhancing students' willingness to communicate and their academic engagement (Hu &

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Hemchua, 2023). Iranian EFL teachers appear to rely heavily on this communicative competence to understand students' needs, assess challenges accurately, and respond appropriately. This aligns with findings that suggest listening is a key aspect of emotional labor and identity construction in EFL teaching (Zhang et al., 2023). Furthermore, active listening contributes to a trust-based classroom climate, fostering learner autonomy and reducing classroom tension (Fathi et al., 2024; Tang & Zhu, 2023).

Following active listening, positive reinforcement emerged as a vital classroom problem-solving strategy. This approach involves providing verbal praise, feedback, or rewards to encourage desired student behaviors. Iranian EFL teachers' emphasis on reinforcement is supported by literature on teacher well-being and teaching enjoyment, which shows that reinforcing student effort enhances mutual respect and boosts classroom morale (Liu et al., 2023; Zhang, 2023). It also corresponds with the growing understanding that emotionally positive teacher-student interactions improve student motivation and self-regulation (Egitim, 2024). Importantly, this strategy complements active listening by responding to students' verbal and non-verbal cues and fostering a feedback-rich classroom. The connection between reinforcement and work engagement has been previously established in Iranian EFL contexts, suggesting that teachers who perceive reinforcement as effective are more likely to remain committed and professionally satisfied (Fathi et al., 2024).

Managing behavior ranked third among the problem-solving dimensions and represents an essential aspect of classroom control and student regulation. The relatively high score of this dimension among Iranian teachers reflects the growing emphasis on proactive classroom management in private institute settings. This is in line with earlier findings showing that problem-solving in EFL classrooms is largely behavioral, necessitating continuous teacher intervention (Abdulhay, 2023; Najafi et al., 2024). These behavioral management practices help minimize disruptive behavior, ensure instructional continuity, and maintain student focus. Moreover, managing student conduct through preventive strategies (e.g., seating arrangements, routines) rather than punitive methods is seen as more sustainable and congruent with teacher self-efficacy (Zhang, 2023; Y. Zhang & S. Luo, 2022).

However, the study's findings also revealed notable gaps in teachers' engagement with establishing a positive learning environment and collaborating with parents. These two dimensions recorded the lowest mean scores, indicating a potential disconnect between teachers' immediate problem-solving priorities and broader pedagogical or ecological frameworks. Despite strong evidence that positive classroom environments improve learning outcomes and emotional resilience in students (Egitim, 2024; Wang et al., 2024), teachers in the current study appeared to place less emphasis on this domain. This may reflect structural constraints such as overcrowded classrooms, institutional rigidity, or a lack of professional autonomy—conditions commonly cited in Iranian EFL settings (Ren & Zhou, 2023; Sadeghi, 2024).

The limited use of parental collaboration is also a critical finding. While parental engagement is often associated with student achievement, improved behavior, and emotional adjustment (Nurhidayat et al., 2023), it appears underutilized by Iranian EFL teachers. This outcome could be due to cultural and institutional factors that position the teacher as the primary authority in educational matters, limiting opportunities for parent-teacher interaction. Previous studies have shown that in EFL systems with centralized curricula and exam-oriented pedagogies, the role of parents is often marginalized (Arif, 2024; Salimi, 2023). In such systems, teachers might lack both the training and the institutional encouragement to meaningfully involve parents in the educational process.

These findings underscore a crucial tension in Iranian EFL instruction between individual problem-solving efforts and systemic or community-based interventions. Teachers demonstrate considerable strength in interpersonal strategies that directly affect classroom dynamics (e.g., listening, reinforcement, behavior management), but less competence in ecological strategies that require collaboration beyond the classroom. This distinction is echoed in literature on teacher professional identity, where individual strategies tend to dominate over collaborative or policy-driven approaches (Hu, 2023; Zhang et al., 2023). Moreover, despite advancements in digital learning and communication platforms, which theoretically should enable teacher-parent engagement, many educators still find it difficult to establish effective communication channels with families (Al Musawi, 2025; Drajatı et al., 2024).

The model proposed in this study—validated through structural equation modeling—provides a structured and empirically grounded framework for understanding and enhancing EFL teachers' problem-solving capacities. It integrates both affective and cognitive dimensions, acknowledging the complexity of classroom realities while providing actionable pathways for teacher development. Each of the six dimensions not only reflects a particular

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aspect of pedagogical competence but also represents a potential site of intervention for teacher training programs. For example, professional development workshops can target low-performing domains such as parental collaboration or learning environment enhancement, offering practical tools and role-play simulations to build teacher efficacy.

The importance of contextual factors in shaping teachers' problem-solving strategies was also evident in this study. Teachers from private institutes, unlike those in state schools, often enjoy greater autonomy and motivation due to voluntary student enrollment and performance-based accountability structures (Nushi & Momeni, 2022). These factors may enhance the salience of immediate classroom-based strategies over structural concerns. However, institutional pressures such as exam-oriented curricula, large class sizes, and limited technology access continue to constrain the full enactment of collaborative or inclusive teaching strategies (Dian Toar & Hamied, 2023; H. Zhang & S. Luo, 2022).

In conclusion, this study offers new insight into the multidimensional nature of problem-solving in Iranian EFL classrooms. It not only affirms the importance of established constructs such as active listening and behavior management but also reveals underdeveloped areas in teacher practice. By linking teacher-reported strategies with validated measurement tools and theoretical constructs, the study provides a coherent, actionable model that can inform both research and practice in EFL teacher development.

Despite the robust methodological framework and large sample size, this study has several limitations that must be acknowledged. First, the sample was restricted to private language institute instructors in Hormozgan province, which may limit the generalizability of the findings to other educational contexts, such as state schools or different Iranian provinces. Given the structural and cultural differences between private and public sectors in Iran, the problem-solving strategies and challenges faced by teachers may vary significantly. Second, the qualitative data were derived from self-reported interviews, which are subject to social desirability bias and retrospective distortion. Teachers may have overemphasized strategies that align with perceived professional norms or underreported those they find personally or institutionally challenging. Third, although the questionnaire demonstrated high internal reliability and construct validity, it did not account for contextual variables such as teaching experience, institutional support, or access to resources, which could influence problem-solving behaviors.

Future research should consider expanding the scope of inquiry to include teachers from public schools, rural areas, and under-resourced regions of Iran. Comparative studies between public and private sectors could illuminate structural variables affecting teachers' problem-solving capacities. Moreover, longitudinal research could examine how problem-solving skills evolve over time, particularly in response to institutional reforms or professional development interventions. Investigating the role of teacher autonomy, emotional intelligence, and digital literacy in shaping problem-solving behaviors would also enrich current models. Lastly, future studies could incorporate student perspectives or classroom observation data to triangulate teacher-reported strategies with actual classroom practices.

To translate these findings into effective pedagogical practice, teacher education programs should prioritize the development of both interpersonal and ecological problem-solving skills. Workshops and in-service training modules should include hands-on practice in areas such as parental collaboration, classroom climate building, and inclusive pedagogical strategies. Institutional leaders should facilitate structures for parental engagement, such as regular conferences and communication platforms, while encouraging teachers to reflect on their classroom management approaches. Educational policymakers should also consider integrating problem-solving modules into teacher certification programs, ensuring that educators are equipped to manage a range of instructional challenges in diverse and dynamic learning environments.

Authors' Contributions

All authors significantly contributed to this study.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

In this study, to observe ethical considerations, participants were informed about the goals and importance of the research before the start of the interview and participated in the research with informed consent.

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