



Construction and Validation of the Teacher Resilience Questionnaire in the Iranian EFL Context

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Abstract: Teacher resilience, as a context-specific variable, has become a prominent research priority in teacher education, especially in challenging educational settings. This study aimed to construct and validate a questionnaire to measure teacher resilience among Iranian EFL teachers. In an exploratory sequential design, two groups of English language teachers were selected as the samples of the study: The first sample, comprising 27 English teachers, participated in semi-structured interviews, and the second sample, consisting of 308 English teachers, completed a questionnaire. Based on the thematic analysis of the interview data, an initial draft of the questionnaire, containing 41 items, was administered to the second sample. An Exploratory Factor Analysis, using Principal Components Analysis with Varimax Rotation, supported a four-factor model—comprising Contextual, Personal, Professional, and Sociocultural factors—which explained 72.26% of the total variance. All 41 items loaded cleanly ($>.54$) on their intended factors. The results of Confirmatory Factor Analysis, using SmartPLS, confirmed the four-factor measurement model, demonstrating strong composite reliability ($CR > 0.70$), convergent validity ($AVE > 0.50$), and discriminant validity (HTMT ratios < 0.58), thus establishing robust psychometric properties for the instrument. The validated questionnaire provides Iranian EFL administrators with a reliable, context-specific tool to measure resilience levels and design targeted support programs.

Keywords: Factor Analysis, Iranian EFL Context, Questionnaire Construction, Teacher Resilience.

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Introduction

The teaching profession, as an intellectual and emotional endeavor, not only requires content knowledge and pedagogical knowledge but also needs socio-emotional coping strategies to overcome various challenges inherent in the profession (Sikma, 2021). The latter requirement has given rise to a new concept in the domain of teacher education, known as *teacher resilience*. The term *resilience* means the individuals' capacity to adapt and thrive despite experiencing adversity, and accordingly, teacher resilience refers to "what sustains teachers and enables them to thrive rather than just survive in the profession" (Beltman et al., 2011, p. 185). This concept has emerged as a critical area of international research for those researchers who are concerned about teacher burnout or attrition in the profession.

The rationale behind teacher resilience is that teachers face a variety of challenges and adversities in their profession. To navigate through these challenges and adversities, teachers are required to draw on some resources and adaptive strategies (Mansfield et al., 2012). The resources teachers can utilize may be personal resources, such as teachers' self-efficacy, career motivation, and professional attitudes, or contextual resources, such as collegial relationships, supportive workplace, and job characteristics (Mishra & McDonald, 2017). In addition to these personal and contextual resources, teachers should be equipped with several coping strategies, such as problem-solving, reflective teaching, and professional development, to deal with the adversities inherent in the profession (Ghaslani et al., 2023). If teachers are not resourceful or lack adequate coping strategies, some negative outcomes, such as emotional exhaustion, job dissatisfaction, and turnover intentions, are inevitable (Bakker & Demerouti, 2017).

There is a consensus among scholars that teacher resilience is a dynamic process characterized by the interplay between teachers' personal characteristics and the immediate contextual resources (Beltman, 2021; Ghaslani et al., 2023; Mansfield et al., 2012). This implies that teacher resilience is a context-specific variable that varies significantly across different educational settings due to the unique challenges present in each sociocultural context. This variability underscores the importance of measuring this variable for each setting and implementing tailored interventions. Therefore, constructing and validating a questionnaire on teacher resilience that is sensitive to the unique characteristics of each educational setting appears to be among the top priorities for researchers in this domain.

In the context of the current study, Iran's education system faces several persistent issues, such as teachers' burnout (Sadeghi & Khezrlou, 2014), job dissatisfaction (Soodmand Afshar & Doosti, 2016), and career demotivation (Baleghizadeh & Gordani, 2012). In the

given context, English teachers are expected to manage large heterogeneous classes, navigate a centralized curriculum that restricts creativity, get along with demotivated learners, and cope with economic pressures due to inadequate payment. Moreover, contributing factors such as limited access to professional development, exclusion from the educational policy-making procedure, and lack of attractive job prospects exacerbate feelings of professional stagnation. All these challenges are teacher-related factors that can be effectively addressed through the lens of teacher resilience. Therefore, investigating Iranian teachers' resilience is a prominent area of research, particularly considering the challenges they face in their working environments. To achieve this goal, developing a validated instrument for assessing teacher resilience is of paramount significance. In this line of inquiry, this study aims to construct and validate a teacher resilience questionnaire for the sociocultural context of Iran. Developing such an instrument, specifically tailored to the sociocultural context of Iran, can provide interested researchers with an accurate assessment of teacher resilience in a context where resilience is under-researched.

Review of the Literature

In recent years, there has been a growing research interest in understanding the reasons behind teacher attrition (Gundlach, 2025; Maleki, & Mirfendereski, 2025; Tran & Moskovsky, 2024). Among the contributing factors, teacher resilience has been granted significant attention since it not only affects teachers' attrition rate but is also influenced by a multitude of factors. In this regard, Zhang and Luo (2023) proposed a conceptual map in which variations in teacher resilience can be explored concerning career, workplace, and demographic factors, and its causal or correlational relationships with personal, psychological, and contextual variables can be examined. This model highlights the significant role of teacher resilience in mitigating teacher attrition, enhancing teacher motivation, and promoting academic achievement.

The term *resilience*, which refers to the ability to recover after confronting adversities, traumatic events, formidable challenges, or threatening conditions, has been used in various contexts, such as psychology, social sciences, and education (Daniilidou & Platsidou, 2018). In education, teacher resilience is defined as “a quality that enables teachers to overcome personal and environmental vulnerabilities and maintain their commitment at teaching in the face of work-related challenges, pressures, and demands” (Platsidou & Daniilidou, 2021, p. 99). In addition to this definition, which views teacher resilience as a trait, teacher resilience is also defined as “a multifaceted, dynamic process comprised of the interaction of

personal and contextual resources that permits teachers to bounce back and forth from negative stressors and traumatic events of the field” (Wang, 2021, p. 2). This definition implies that teacher resilience is a sustainable, developmental, and continuous process that occurs over teachers’ professional lives.

In addition to conceptualizing teacher resilience as a trait and process, namely person-focused perspectives, and process-focused perspectives, respectively, Beltman (2021) proposes two other conceptualizations of teacher resilience: context-focused perspectives and system-focused perspectives. Context-focused perspectives argue that exploring teacher resilience should go beyond here-and-now specifics of teachers’ lives and view their experiences within broader social, cultural, and political contexts (Johnson et al., 2014). This conceptualization of teacher resilience highlights the crucial role of contextual factors in shaping teacher resilience. System-focused perspectives view teacher resilience as a process in which several systems, such as family, school, education system, community, organization, and economy, dynamically interact with each other (Masten, 2014). This conceptualization of teacher resilience can be justified within Bronfenbrenner’s (2005) ecological model, which emphasizes the complex interplay between teacher resilience and the factors found within different layers of interacting systems.

The literature indicates that a plethora of personal and contextual factors contribute to teacher resilience. These factors are classified into two main categories: risk factors and protective factors, each of which has two subcategories: individual and contextual factors (Beltman et al., 2011). Risk factors are those challenges, barriers, or adversities that hinder teachers’ ability to cope effectively with the profession-related stresses and maintain their commitment to the profession. These risk factors can be individual factors, such as the lack of experience, low level of confidence, distorted vision of the realities of the job, and a sense of isolation or alienation, or contextual level, such as heavy workload, classroom management concerns, inadequate support, and insufficient resources or equipment (Fan et al., 2021). Protective factors in teacher resilience, on the other hand, are the positive elements and resources that help teachers cope with challenges and maintain effectiveness in their profession. These factors can also be individual factors, such as self-efficacy (Beltman et al., 2011), reflection on practice (Leroux & Théorêt, 2014), and coping strategies (Beltman et al., 2011), or contextual factors, such as positive work climate (Thieman et al., 2012), and positive relationships and interactions with colleagues (Muller et al., 2011).

Various conceptual frameworks have been developed to classify the contributing factors to teacher resilience within pertinent dimensions. Mansfield et al. (2012) have

proposed a four-dimensional framework to describe the characteristics of resilient teachers. The framework includes four dimensions: profession-related, emotional, motivational, and social dimensions. The profession-related dimension encompasses factors directly related to the practice of teaching, including organization, preparation, and professional reflection. The emotional dimension involves the ability to regulate emotions and apply strategies to cope with stress. The motivational dimension deals with the teacher's inner forces, such as self-efficacy, self-belief, and persistence, which drive the teacher to be effective in the profession. Finally, the social dimension deals with factors associated with social interactions within the workplace, including asking for help, building positive relationships, and developing a support network. This dimension has also been referred to as *relational resilience*, or *relationship-resourced resilience* (Ebersöhn, 2012) in the literature. Although the framework proposes a holistic, process-oriented model of teacher resilience, it is criticized for overburdening the teacher, lacking clear boundaries among the dimensions, and underemphasizing contextual factors.

Another comprehensive theoretical framework for teacher resilience has been proposed by Mansfield et al. (2016). Within this framework, resilience is made up of personal resources, contextual resources, strategies, and outcomes, all of which dynamically interact with each other to help the teacher navigate everyday challenges and adversities. Personal resources in this framework encompass two major themes of motivation-related factors, such as efficacy, self-belief, and sense of purpose, and emotion-related factors, such as optimism, hope, and empathy. Contextual resources, as the second component, highlight the importance of social relationships and supportive working environments in boosting teacher resilience. The third component deals with various strategies, such as problem-solving, goal-setting, and professional learning, which should be adopted to strengthen teachers' ability to cope with challenges and setbacks. The last component delineates the outcomes of teacher resilience, such as teachers' well-being, commitment, satisfaction, enthusiasm, and sense of belonging. This framework proposes a systemic, interactive model that explicitly links personal and contextual resources to strategic actions and positive outcomes, framing resilience as a dynamic process, but it can be criticized for its potential ambiguity in categorization, which makes it hard to operationalize for quick self-assessment or straightforward intervention design.

Given that personal and contextual resources, along with some coping strategies, contribute to resilience outcomes, Mansfield et al. (2016) have proposed a framework containing four overarching themes, including relationships, well-being, motivation, and

emotions. Each of these themes plays a critical role in enhancing teachers' capacity to cope with the challenges of the teaching profession. The first theme — relationships — emphasizes the significance of social interactions and support networks in building teacher resilience. The second theme — well-being — deals with the physical, emotional, and mental health of teachers. Motivation, as the third theme, refers to the intrinsic and extrinsic factors that drive teachers to engage in their profession with enthusiasm and commitment. The last theme — emotions — relates to the teachers' ability to manage and regulate their emotions effectively in response to the challenges of their profession.

Based on these theoretical frameworks, several teacher resilience questionnaires or scales have been developed in different countries. In an effort to reconceptualize teacher resilience, [Chen \(2024\)](#) constructed and validated the Teacher Resilience Inventory (TRI) for Chinese teachers. This 20-item inventory encompasses five dimensions of teacher resilience, namely, physical, emotional, psychological, social, and spiritual resilience, with each dimension comprising four items. Although the inventory contains various dimensions, it seems the physical dimension is an outcome of resilient behaviors rather than a dimension of the construct. The items measuring psychological and emotional resilience demonstrate significant conceptual overlap. In another attempt, [Trang and Thang \(2023\)](#) developed and validated the Vietnam Teachers' Resilience Scale (VITRS) to capture the multifaceted nature of teacher resilience in the Vietnamese context. The VITRS includes 20 items across four dimensions: social, professional, emotional, and motivational resilience. As stated by the authors, it has been developed by "drawing on" pre-existing Western scales, leading to the omission of uniquely Vietnamese aspects of resilience. The examination of the items within each subscale further suggests their insufficient coverage of the multifaceted factors constituting teacher resilience. In the same vein, [Nurshadrina et al. \(2023\)](#) attempted to examine the psychometric properties of teacher resilience in the Indonesian context. The instrument, entitled "Multidimensional Teachers Resilience Scale Indonesia Version (MTRS-I)", consisted of 13 items with four dimensions, namely emotional, motivational, professional, and social resilience. Considering teacher resilience as a complex, multi-dimensional construct, including only 13 items, compromising its content validity, fails to capture the full breadth of the construct.

In the context of the current study, Iran, [Ghaslani et al. \(2023\)](#) investigated Iranian EFL teachers' resilience in a mixed-methods study. The analyses of the qualitative phase of their study indicated that job satisfaction, appropriate working conditions, personal characteristics, supportive network, and financial support were the main protective factors contributing to

Iranian EFL teachers' resilience. In addition to these protective factors, some risk factors, such as organizational injustice, professional challenges, sociocultural problems, personal challenges, and economic problems, were indicated as risk factors that threaten Iranian teachers' resilience. To the best of the researcher's knowledge, no other prior studies have been conducted to develop an instrument to measure the resilience of Iranian teachers. Therefore, in the absence of a validated scale or questionnaire, exploring resilience-related problems such as teachers' burnout, attrition, anxiety, and emotional exhaustion, in the context of the Iranian EFL context, cannot be done effectively. To address this gap, the current study aimed to construct and validate a teacher resilience questionnaire tailored to the sociocultural context of Iran.

Methodology

Research Design: This mixed-methods study employed an exploratory sequential design (Ary et al., 2019), whereby qualitative data were first gathered through semi-structured interviews to explore the protective and risk factors contributing to teacher resilience. Subsequently, quantitative data were collected and analyzed for construct validation, guided by the patterns that emerged from the qualitative data analysis.

Participants: Two groups of participants provided the required data in the study. The first group was made up of 27 English teachers (15 females, 12 males) who were selected purposefully to take part in semi-structured interviews. The second group consisted of 308 high school English teachers from different regions in the country. They were selected through convenience sampling based on their availability and willingness to participate in the study. Of the sample, 53.2% of the participants ($n = 164$) were male, and 46.8% ($n = 144$) were female. They are between 23 and 52 years old ($M = 29.34$, $SD = 8.31$). In terms of teaching experience, 59.7% of the participants ($n = 184$) were classified as early-career teachers, possessing less than five years of teaching experience, while 40.3% ($n = 124$) were categorized as late-career teachers, having more than five years of teaching experience.

Procedures: The steps suggested by Dörnyei and Taguchi (2010) were followed for constructing and validating the questionnaire. First, the participants of the first sample (27 English teachers) participated in a semi-structured interview to state which protective and risk factors would positively and negatively contribute to their resilience in the teaching profession (See Appendix A). To create a relaxed atmosphere, the interview sessions were conducted in the language the participants felt more comfortable with. The interviews were audio-recorded, and the Persian responses were subsequently translated into English, with

their contents transcribed verbatim. The obtained data were then analyzed thematically using MAXQDA (version 2020) for factors and the related categories. Based on the results of this qualitative analysis, reviewing the existing questionnaires and related theoretical frameworks in the literature, an initial pool of items was generated. Then, an initial pilot was conducted with a panel of subject matter experts, including 3 experienced teachers with 25 years of teaching experience and 2 teacher educators, to comment on the item clarity and the relevance of the items to the construct and the proposed categories. Based on their comments, some items were revised or eliminated, and the initial version of the questionnaire, containing 41 items under 4 categories, was developed. As the next step, a total of 23 English teachers were selected for the final pilot testing. They were required to complete the questionnaire and provide comments on any difficulties encountered. Based on the comments, some minor structural and item-level modifications were made, and the final version of the questionnaire was uploaded to Google Forms. Then, the generated link was sent to 380 English teachers. A total of 308 participants filled out the questionnaire, and their responses were submitted to SPSS for exploratory factor analyses and PLS for confirmatory factor analyses.

Results

Qualitative Data Analysis

The interview data were thematically analyzed using [Braun and Clarke's \(2006\)](#) framework. After examining the transcribed data, 159 initial codes were identified. These codes were re-examined to generate potential overarching categories. The categories were then reviewed for coherence and alignment with the coded statements, leading to a four-component generated map. The categories ranked in descending order of frequency were: personal factors, contextual factors, professional factors, and sociocultural factors.

Contextual factors, comprising 51 coded statements, emerged as the most frequently reported category of contributing factors to teacher resilience. This category included students' behaviors ($n = 15$), learning motivation ($n = 13$), school facilities ($n = 10$), system support ($n = 9$), and working environment ($n = 4$). The second frequent category, reported in 49 coded statements, was contextual factors including job motivation ($n = 11$), professional attitudes ($n = 7$), sense of empathy ($n = 7$), job commitment ($n = 6$), teaching competency ($n = 5$), communication skills ($n = 5$), classroom management skills ($n = 4$), and sense of empathy ($n = 4$). Professional factors comprised the third category of factors reported in 37 coded statements. This category included job benefits ($n = 11$), career outlook ($n = 8$), in-service teacher education ($n = 7$), pre-service teacher education ($n = 5$), reward system

($n = 4$), and job responsibilities ($n = 2$). The last category, indicated in 22 statements, encompassed sociocultural factors including the social prestige of the teaching profession ($n = 9$), the quality of the educational system ($n = 7$), and educational reforms ($n = 6$).

Quantitative Data Analysis

Exploratory Factor Analyses

In this study, a total of 308 participants completed the questionnaire to indicate the extent to which the given factors contribute to their teacher resilience. Descriptive statistics for the categories of contributing factors are presented in Table 1.

Table 1. Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Contextual	1.00	4.82	2.916	.826	-.111	-.668
Personal	1.44	5.00	3.756	.661	-.591	.508
Professional	1.00	4.70	2.091	.840	.692	-.143
Sociocultural	1.00	4.75	1.933	.724	.950	.916

As demonstrated in Table 1, the most influential categories of contributing factors were personal and contextual factors, followed by professional and sociocultural factors. This finding is further supported by the data obtained from the interviews. Moreover, the skewness and Kurtosis values, which were between -1 and +1, indicate that the pattern of responses is considered a normal distribution (Hair et al., 2022).

Before conducting Exploratory Factor Analysis, correlation analysis was performed to examine whether the data were suitable for factor analysis. The results indicated that Cronbach's alpha internal consistency coefficient for the entire questionnaire was 0.95, exceeding the acceptable level of 0.70 (Pallant, 2020). Moreover, the item-total correlation coefficients were satisfactory, with all values surpassing the benchmark of 0.30 for item-to-total correlations (Tabachnick & Fidell, 2019). These results suggest that factor analyses could be conducted using all items. The relevant results are presented in Table 2.

Table 2. Mean, SD, Total Correlation, and Cronbach's Alpha Values

Item	Mean	Std. Deviation	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1	2.70	1.052	.682	.945
2	2.21	.961	.567	.946
3	2.89	1.030	.700	.945
4	3.09	1.097	.712	.945
5	2.06	.963	.625	.946
6	3.49	.974	.490	.947
7	2.63	1.053	.439	.947
8	3.16	1.028	.521	.946
9	2.69	1.135	.715	.945
10	3.52	.819	.636	.946
11	3.70	1.000	.536	.946
12	3.31	1.044	.672	.945
13	3.54	.862	.539	.946
14	4.02	.643	.642	.946
15	3.76	.830	.412	.947
16	4.09	.690	.672	.946
17	2.87	1.116	.693	.945
18	4.02	.745	.430	.947
19	3.88	.839	.515	.946
20	3.89	.923	.661	.945
21	3.76	.785	.640	.946
22	4.02	.659	.427	.947
23	4.32	.674	.677	.946
24	3.99	.851	.394	.947
25	3.83	.773	.422	.947
26	3.75	.783	.404	.947
27	2.87	1.043	.647	.945
28	1.94	.862	.549	.946
29	2.61	1.001	.566	.946
30	1.65	.714	.533	.946
31	2.02	.960	.544	.946
32	1.86	.870	.538	.946
33	2.72	1.018	.484	.947
34	2.57	1.077	.520	.946
35	1.95	.842	.531	.946
36	1.39	.614	.462	.947
37	2.19	.991	.488	.947
38	2.32	1.046	.493	.947
39	1.72	.756	.434	.947
40	1.65	.930	.305	.948
41	2.08	.814	.240	.948

Before extracting the constructs, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of sphericity were performed to examine the adequacy of the sample and the suitability of the data for exploratory factor analysis. The results indicated that since the KMO value was above 0.6 (Tabachnick & Fidell, 2019), and Bartlett's test was significant at $p < .05$ (Pallant, 2020), factor analysis could be performed ($KMO = .922$; $\chi^2 = 15933.272$, $df = 820$, $p < .0001$). Table 3 displays the results.

Table 3. KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.922
Bartlett's Test of Sphericity	Approx. Chi-Square	15933.272
	Df	820
	Sig.	.000

After confirming the appropriateness of the dataset, an exploratory factor analysis was conducted using the Principal Component Analysis (PCA) with Varimax rotation to explore the underlying structure of the questionnaire. This analysis identified five components with eigenvalues exceeding one. A visual examination of the scree plot showed a sharp decline in eigenvalues after the fifth component (see Figure 1), suggesting that further analyses could be conducted by retaining these components.

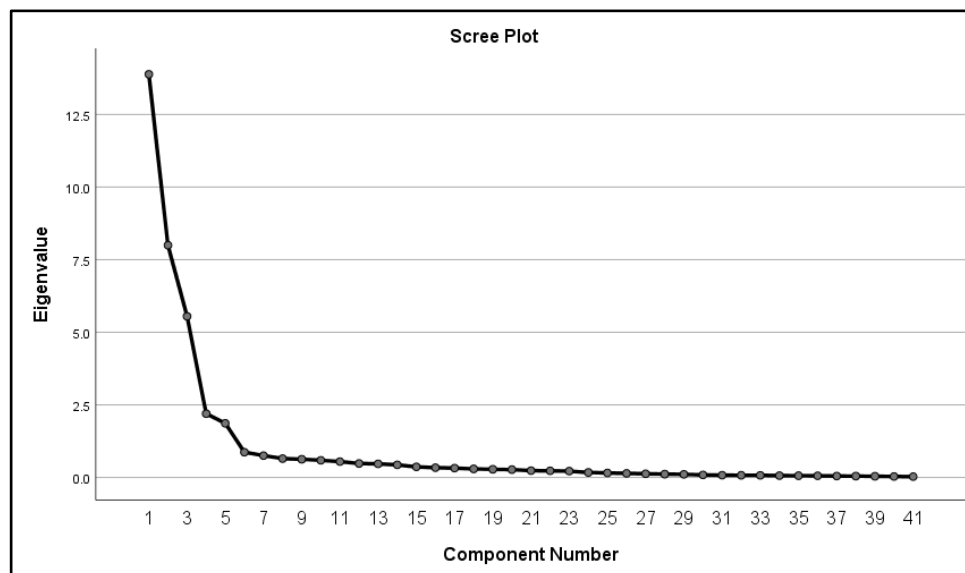


Figure 1. Scree Plot of Exploratory Factor Analysis

The analysis of variance revealed that these six components accounted for 76.813% of the total variance, which is considered acceptable in social science research (Hair et al., 2006). The relevant results are presented in Table 4.

Table 4. Percentages of Variance Explained by the Components

Component	Eigenvalues	% of Variance	% Cumulative
1	13.884	33.862	33.862
2	7.997	19.505	53.368
3	5.549	13.535	66.902
4	2.198	5.360	72.263
5	1.866	4.550	76.813

To simplify complex data structures, a Varimax rotation was applied to the factor analysis, resulting in five distinct factors. Table 5 presents the factor loadings from the analysis of the 41 items.

Table 5. Principal Components Analysis with Varimax Rotation

Item	Name	Component 1	Component 2	Component 3	Component 4	Component 5
1	Con1			0.893		
2	Con2			0.598		
3	Con3			0.879		
4	Con4			0.888		
5	Con5			0.835		
6	Con6			0.731		
7	Con7			0.742		
8	Con8			0.754		
9	Con9			0.869		
10	Con10			0.833		
11	Con11			0.545		
12	Pre1	0.876				
13	Pre2	0.640				
14	Pre3	0.817				
15	Pre4	0.782				
16	Pre5	0.832				
17	Pre6	0.870				

Item	Name	Component 1	Component 2	Component 3	Component 4	Component 5
18	Pre7				0.821	
19	Pre8	0.714				
20	Pre9	0.864				
21	Pre10	0.852				
22	Pre11				0.843	
23	Pre12	0.834				
24	Pre13				0.833	
25	Pre14				0.898	
26	Pre15	0.734				
27	Pre16	0.871				
28	Pro1		0.911			
29	Pro2		0.881			
30	Pro3		0.890			
31	Pro4		0.954			
32	Pro5		0.942			
33	Pro6		0.910			
34	Pro7		0.941			
35	Pro8		0.934			
36	Pro9		0.873			
37	Pro10		0.916			
38	Soc1					0.684
39	Soc2					0.898
40	Soc3					0.785
41	Soc4					0.733

As Table 5 illustrates, the 41 items of the questionnaire were aligned with 4 components, corresponding to the subscales of the questionnaire. To this end, a factor analysis was conducted again with a fixed number of 4 components (See Table 6).

Table 6. Principal Components Analysis: Factor Loadings of Items of the Scale

Items	Contextual Factors	Personal Factors	Professional Factors	Sociocultural Factors
1. The rate of disruptive behaviors among my learners is low.	0.890			
2. My learners' level of motivation to learn is high.	0.602			
3. I am satisfied with my learners' academic performance.	0.883			
4. The culture of my classes is positive.	0.897			
5. The classes I am teaching are not overcrowded.	0.830			
6. I receive strong administrative support at schools.	0.714			
7. The schools where I am teaching do not have a tedious working environment.	0.757			
8. The staff at the schools where I am teaching manage the schools effectively.	0.744			
9. I have access to adequate facilities and resources for teaching at schools.	0.875			
10. A good collegial rapport has been established at schools.	0.840			
11. Every learner in my classes treats me with great respect.	0.570			
12. I have a positive attitude towards the teaching profession.		0.881		
13. I have cultivated a strong professional identity as a teacher.		0.544		
14. I employ reflective teaching as a practice to improve my teaching.		0.862		
15. I demonstrate a high level of self-efficacy as a teacher.		0.670		
16. I have the ability to understand and feel the emotional states of my learners.		0.875		
17. I have a strong career motivation in my teaching profession.		0.873		

Items	Contextual Factors	Personal Factors	Professional Factors	Sociocultural Factors
18. I can manage my emotional states in appropriate and adaptive ways.		0.674		
19. I have effective communication skills for dealing with my learners.		0.686		
20. I can manage my classes effectively.		0.905		
21. I am satisfied with the results of my efforts and performance as a teacher.		0.880		
22. I am flexible and adaptable in my teaching profession.		0.725		
23. I demonstrate commitment and accountability in my teaching profession.		0.853		
24. I incorporate a sense of humor into my teaching practices.		0.732		
25. I can strike a balance between my work commitments and home responsibilities.		0.717		
26. I have an appropriate level of teacher competencies.		0.650		
27. I am not a perfectionist in my teaching profession.		0.757		
28. The materials that I teach (e.g., textbook) are appropriate.			0.905	
29. My pre-service teacher education programs prepared me for the profession.			0.884	
30. The in-service teacher education programs address my professional development needs.			0.890	
31. The prospects for the teaching profession for me are bright.			0.947	
32. I receive extensive professional support when I need it.			0.938	
33. My workload as a teacher is manageable and appropriate.			0.911	

Items	Contextual Factors	Personal Factors	Professional Factors	Sociocultural Factors
34. The expectations that I face as a teacher are realistic and manageable.			0.946	
35. The existing reward system for me in the teaching profession works well.			0.932	
36. The salary and benefits offered to me are reasonable and fair.			0.868	
37. I experience a low level of work anxiety.			0.908	
38. I think the teaching profession is prestigious.				0.692
39. I think the current education system is effective.				0.858
40. I think education is among the top priorities for policy-makers.				0.731
41. I think the current educational reform has been successful in its implementation.				0.704

This time, the factor loadings for the 41 items of the questionnaire were organized into four distinct subscales, which together accounted for 72.26% of the total variance. As Table 6 displays, all 41 items were clustered around four components: contextual, personal professional, and sociocultural factors.

To verify the internal consistency of the questionnaire and to examine how well the four components function as a single construct, reliability analyses were performed on both the overall questionnaire and its individual components. The Cronbach's alpha values obtained for the entire questionnaire and its components exceeded the accepted threshold of 0.70, as recommended by [Pallant \(2020\)](#), demonstrating the internal consistency reliability of the instrument (see Table 7).

Table 7. Post-exploratory Factor Analysis: Reliability Analysis

Subscales	No. of Items	Cronbach's Alpha
Contextual Factors	11	0.949
Personal Factors	16	0.957
Professional Factors	10	0.980
Sociocultural Factors	4	0.826
Total	41	0.948

Confirmatory Factor Analyses

The extracted factors were also analyzed using Confirmatory Factor Analysis with Smart PLS software. The purpose was to validate the hypothesized model regarding teacher resilience based on four subscales, namely, contextual, personal, professional, and sociocultural. The model was evaluated based on the most used goodness-of-fit indices for structural equation modelling, as illustrated in Figure 2.

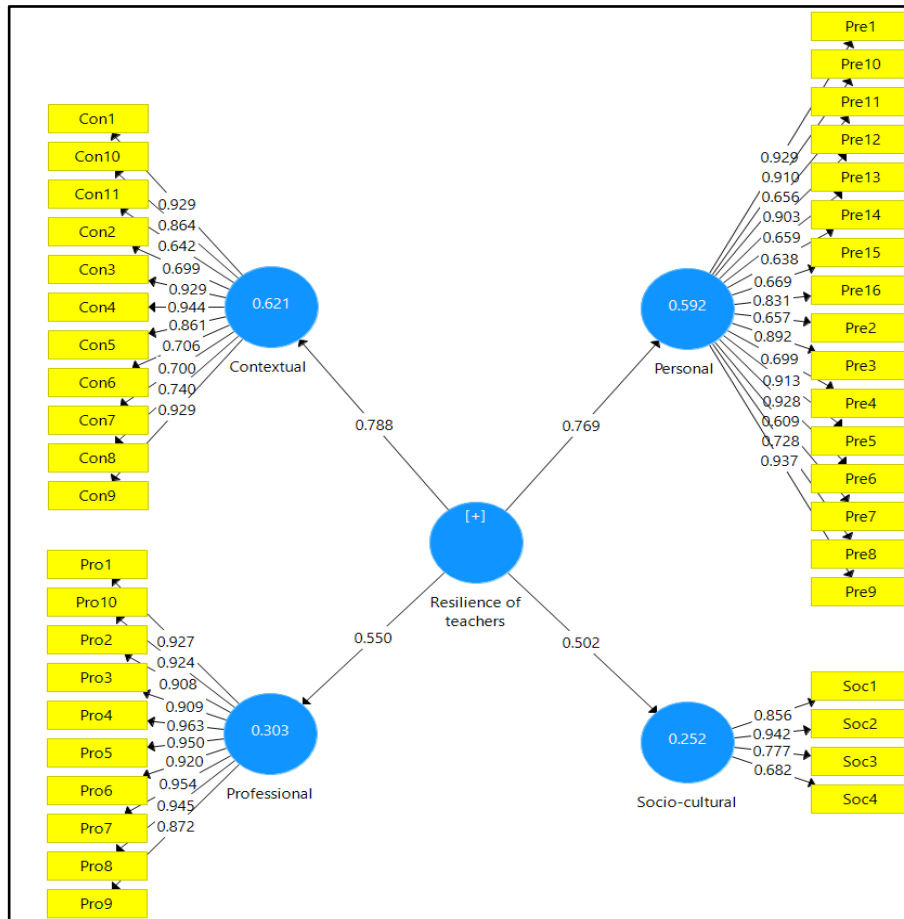


Figure 2. PLS-SEM Confirmatory Factor Analysis and Structural Model of the Questionnaire

The graphical presentation of the model indicated that all 41 items were loaded to the appropriate components. Since all the items had factor loading values greater than 0.50, proposed by [Hair et al. \(2006\)](#), they were retained for further analyses.

To check the significance of the factor loadings for each item in relation to the latent construct, t-test values were calculated. As Table 8 shows, the results indicated that all t-values were higher than 1.96 at the .05 level, the criterion suggested by [Hair et al. \(2011\)](#). These results confirmed the four-factor solution model indicated in the exploratory factor analyses.

Table 8. Factor Loading and T Values of the Items

Item	Factor Loading	T	p-value	Item	Factor Loading	T	p-value
Con1	0.929	141.434	0.0001	Pre11	0.656	14.597	0.0001
Con2	0.699	23.575	0.0001	Pre12	0.903	94.940	0.0001
Con3	0.929	139.077	0.0001	Pre13	0.659	15.618	0.0001
Con4	0.944	164.104	0.0001	Pre14	0.638	14.240	0.0001
Con5	0.861	62.321	0.0001	Pre15	0.669	17.304	0.0001
Con6	0.706	20.933	0.0001	Pre16	0.831	59.688	0.0001
Con7	0.700	19.266	0.0001	Pro1	0.927	102.586	0.0001
Con8	0.749	23.125	0.0001	Pro2	0.908	124.246	0.0001
Con9	0.929	119.332	0.0001	Pro3	0.909	94.464	0.0001
Con10	0.864	65.475	0.0001	Pro4	0.963	269.932	0.0001
Con11	0.642	18.136	0.0001	Pro5	0.950	163.370	0.0001
Pre1	0.929	163.404	0.0001	Pro6	0.920	159.915	0.0001
Pre2	0.657	19.898	0.0001	Pro7	0.954	23.681	0.0001
Pre3	0.892	77.449	0.0001	Pro8	0.945	154.612	0.0001
Pre4	0.699	22.156	0.0001	Pro9	0.872	72.944	0.0001
Pre5	0.913	108.836	0.0001	Pro10	0.924	122.707	0.0001
Pre6	0.928	124.074	0.0001	Soc1	0.856	5.961	0.0001
Pre7	0.609	113.529	0.0001	Soc2	0.942	146.280	0.0001
Pre8	0.728	23.657	0.0001	Soc3	0.777	25.363	0.0001
Pre9	0.937	146.292	0.0001	Soc4	0.682	16.593	0.0001
Pre10	0.910	114.053	0.0001				

To ensure the questionnaire's reliability, the Cronbach's alpha coefficient was computed. As illustrated in Table 9, the Cronbach's alpha coefficient for the entire questionnaire was found to be 0.95, and 0.95, 0.96, 0.98, and 0.84 for contextual, personal, professional, and sociocultural subscales, respectively, all exceeding the accepted threshold of 0.70 (Pallant, 2020) and confirming the reliability of the questionnaire. Moreover, the questionnaire demonstrated strong Composite Reliability (CR) across the scale and subscales since all CR values were higher than 0.70. The Average Variance Extracted (AVE) values for the whole questionnaire and its subscales were also above 0.50, indicating an appropriate level of convergent validity (Fornell & Larcker, 1981).

Table 9. Reliability, Composite Reliability, and Average Variance Extracted

(Sub)scale	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Contextual	0.949	0.957	0.673
Personal	0.959	0.964	0.632
Professional	0.982	0.984	0.860
Sociocultural	0.837	0.890	0.672
Teacher Resilience	0.948	0.952	0.500

In addition to ensuring convergent validity, the discriminant validity of the questionnaire was also examined. Using [Fornell and Larcker's \(1981\)](#) criterion, it was revealed that the square root of the Average Variance Extracted (AVE) for each subscale was greater than its correlations with other subscales, demonstrating adequate discriminant validity. The relevant results are displayed in Table 10.

Table 10. Discriminant Validity and Correlations among the Components

(Sub)scale	Contextual	Personal	Professional	Sociocultural	Teacher Resilience
Contextual	0.820				
Personal	0.376	0.795			
Professional	0.279	0.138	0.927		
Sociocultural	0.439	0.254	0.148	0.820	
Teacher Resilience	0.788	0.769	0.550	0.502	0.580

As another piece of validity evidence, the predictive validity of the instrument was assessed, using the Coefficient of Determination (R^2) and Q-square (Q^2). Considering criterion for interpreting R^2 values, where R^2 values of 0.67 or higher are considered substantial, 0.33 is moderate, and 0.19 is weak, the results indicated that the R^2 values for contextual and personal subscales were substantial, while those for the professional and sociocultural subscales were moderate (see Table 11). In addition, the analysis of the Q^2 values indicated acceptable indices since all values were above zero ([Tenenhaus et al., 2005](#)). These findings indicated that the model had predictive relevance.

Table 11. Results of R^2 and Q^2 values

Subscales	Coefficient of Determination (R^2)	Q-Square (Q^2)
Contextual	0.621	0.407
Personal	0.592	0.359
Professional	0.303	0.249
Sociocultural	0.252	0.156

Finally, to evaluate the global validation of the model, the Goodness-of-Fit (GoF) was calculated. As evident in Table 12, the model demonstrated an average R^2 of 0.671, and the average communality was found to be 0.440. The overall GoF index was calculated at 0.543, which falls into the category of large effect size, where GoF values greater than 0.36, between 0.36 and 0.25, and less than 0.25 are considered large, medium, and small, respectively. Therefore, it can be concluded that the model effectively captures the underlying factors influencing teacher resilience.

Table 12. Goodness-of-Fit Index Calculation

Average Communality	Average R^2	$GoF = \sqrt{(Communality) \times (R\ Square)^2}$
0.671	0.440	0.543

Discussion and Conclusion

This exploratory sequential design study aimed at constructing and validating a questionnaire for measuring Iranian EFL teacher resilience. The findings of the qualitative phase of the study revealed that four categories of factors, namely, personal, contextual, professional, and sociocultural factors contributed to teacher resilience in the given context. To examine this finding in more depth and delve into the factor structure and psychometric properties of the questionnaire, exploratory and confirmatory factor analyses were performed on the collected quantitative data. The results indicated that the construct of teacher resilience consisted of four dimensions. These dimensions, with a total of 41 items, were labeled as: contextual factors (11 items), personal factors (16 items), professional factors (10 items), and sociocultural factors (4).

Emerging a four-factor model, including contextual, personal, professional, and sociocultural dimensions, shows that teacher resilience is a complex multi-dimensional construct, in which various factors contribute to teachers' ability to adapt and thrive in the face of challenges within the educational settings (Beltman et al., 2011). In line with overarching models of teacher residence, which forms at the interface of person and context (Mansfield et al., 2014), this study indicates that personal resources interact with social challenges found in the microsystem of immediate schools/classes (contextual factors), mesosystem of interacting organizations/communities (professional factors), and macrosystem of national norms/policies (sociocultural factors). This person-context interface conceptualization of teacher resilience, along with the social-ecological perspective

(Bronfenbrenner, 2005), highlights the context-focused perspectives (Beltman, 2021), which contextualize teacher resilience within broader social, cultural, and political arenas (Johnson et al., 2014).

This four-factor solution model of Iranian EFL teacher resilience partially substantiates Mansfield et al.'s (2012) model, which defines profession-related, emotional, motivational, and social factors as four dimensions of teacher resilience. The comparison between the two models reveals that in the current study, the contextual factors at both the micro level of the institution system and the macro level of the educational system are more influential factors than affective factors found in the Australian context. When the model emerged in this study is compared with the one obtained from Chen's (2024) Teacher Resilience Inventory (TRI), which encompasses physical, emotional, psychological, social, and spiritual resilience as five dimensions of Chinese teachers' resilience, more considerable differences can be observed between the two models. Similar variations can also be indicated when the model is compared with other teacher resilience scales developed by Trang and Thang (2023) for the Vietnamese context and Nurshadrina et al. (2023) for the Indonesian context, which propose social, professional, emotional, and motivational resilience as the main components of teacher resilience.

In this study, personal factors gained the highest mean score ($M = 3.76$) based on the data collected from the questionnaire. This component also accounted for 59% of the total variance (R^2) in the emerged structural model of the questionnaire, which, in turn, indicates the importance of these factors in teacher resilience. In this category, job commitment, reflective teaching practice, and emotional regulation gained the highest mean scores among protective factors, while perfectionism, lack of teaching competencies, and ineffective classroom management emerged as the primary contextual protective factors contributing to teacher resilience. In line with these findings, prior studies have indicated the relationship between teacher resilience and job commitment (Muti'ah et al., 2023), reflection on action (Leroux & Théorêt, 2014), emotional intelligence (Ainsworth, & Oldfield, 2019), teaching competencies (Leroux & Théorêt, 2014), and classroom management skills (Cornelissen, 2016).

Contextual factors constituted the next category of factors contributing to teacher resilience ($M = 2.91$). This component explained approximately 62% of the total variance, suggesting that these factors significantly influence teacher resilience measured by the questionnaire. Within this category, large classes and learners' lack of motivation were reported as the most important contextual risk factors, and good collegial rapport and strong

administrative support turned out to be the most important contextual protective factors in developing teacher resilience. Similar studies have also indicated the significant role of learners' lack of motivation (Wang et al., 2024), and collegial and administrative support (Ghaslani et al., 2023) in developing Iranian teachers' resilience.

The third component, which encompassed professional factors, gained a low mean score ($M = 2.01$). Although this component accounts for just 30% of the total variance, the low mean score implies that these factors endanger teacher resilience more than personal and contextual factors in the context of the study. The teachers' responses revealed that in the absence of in-service effective teacher education programs and adequate professional support, their resilience is significantly undermined by low pay and a lack of promising job promotion. Although the impact of teacher professional development on enhancing teacher resilience has been established (Larasati & Kuswando, 2023), the in-service teacher education programs in the context of the study are less than satisfactory (Razi & Kargar, 2014). In addition to ineffective professional development and support, teachers' job dissatisfaction due to inadequate salary (Soodmand Afshar & Doosti, 2016) is an important risk factor that erodes the teachers' resilience.

The last component that emerged in the model includes the sociocultural factors found in the macrosystem of education. This category of factors gained the lowest mean score ($M = 1.93$) and explained 25% of the total variance. The teachers believe that the education system and its latest implemented reform are highly ineffective, and education is not among the policy-makers' top priorities. This component has emerged in a few models of teacher resilience (e.g., Ghaslani et al., 2023), most probably due to the scarcity of research on the sociocultural factors of teacher resilience (Chen, 2024). Moreover, these factors exert an indirect influence on teacher resilience at more distant levels, thereby diminishing the perceived importance of these factors.

In conclusion, this study indicated that teacher resilience in Iranian EFL teachers is a complex interplay between internal characteristics and external influences, rooted in the educational settings, profession, and society. The findings underscore the significance of taking contextual and cultural factors into account when examining teacher resilience and building it through localized and culturally sensitive strategies. Teacher resilience can be viewed as a multifaceted construct that incorporates a variety of factors interacting in a nomological network. If education systems want to have resilient teachers, they should recruit resilient applicants, develop their resilience during pre-service and in-service teacher education programs, and eliminate contextual risk factors while promoting protective ones.

The findings of this study have some theoretical and practical implications. The emergence of the four-factor model of teacher resilience with 41 items implies that teacher resilience is a multidimensional construct in which personal attributes interact with a variety of immediate and distant contextual factors to help teachers both survive and thrive in the profession (Beltman et al., 2011). The addition of a relatively new component that includes sociocultural factors indicates that teacher resilience is influenced by the social and cultural policies and values within a society. In this study, sociocultural factors gained the lowest mean score, indicating that teachers are highly dissatisfied with the education system and the social status of the teaching profession. Therefore, policymakers are recommended to implement efficient innovations and reforms to promote resilience in teachers.

When it comes to professional factors, the findings indicate that, in the absence of protective factors, the risk factors are impairing teacher resilience. This implies that educational administrators should create better professional environments for teachers to help them navigate the challenges and adversities inherent in the profession. The detrimental effect of contextual factors, although not as significant as the previously mentioned factors, suggests that the conditions within educational environments are not conducive, and school officials should provide better conditions in their educational setting to foster teacher resilience. Finally, personal factors turned out to contribute positively to teacher resilience in the context of the study. This implies that teachers and teacher educators should invest in teacher competencies, knowledge, skills, and attitudes if they want to develop teacher resilience. Moreover, since resilience is an already-built personal attribute that teaching candidates partly possess, teacher education programs should measure this attribute as one of their admission criteria.

Some limitations should be considered when interpreting the findings of the study. First, this study concentrated on teacher resilience among EFL teachers. Future studies can be conducted to develop and validate a questionnaire designed to measure resilience in teachers from other disciplines. Second, the participants who were selected as the convenience sample were from a wide range of teaching experiences. Further studies can be carried out with data collected from more homogeneous samples of teachers at different career stages, such as prospective teachers, early-career teachers, and experienced teachers. Third, the present study employed a self-report technique, which is susceptible to response bias (Brutus et al., 2013), especially when exploring personal factors. Interested researchers can develop other questionnaires in which the items require participants to rate the factors with an emic view rather than an etic view. Finally, this instrument aimed to explore the contributing factors to teacher resilience. Since the strategies for dealing with these factors are also a main

component of teacher resilience models, developing other instruments for measuring these strategies can be illuminating.

Declaration of Conflicting Interests

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A

Interview Questions

- 1) What is your definition of resilience in the teaching profession, and how do you evaluate your resilience in the teaching profession?
- 2) Which individual and contextual factors increase your stress, burnout, and attrition, or decrease your motivation, well-being, and effectiveness in the profession?
- 3) Which resources, capabilities, or strategies promote your positive adaptation, enhance your ability to maintain well-being, and help you overcome the teaching challenges?

Appendix B

Questionnaire items

1. The rate of disruptive behaviors among my learners is low.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
2. My learners' level of motivation to learn is high.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
3. I am satisfied with my learners' academic performance.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
4. The culture of my classes is positive.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
5. The classes I am teaching are not overcrowded.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
6. I receive strong administrative support at schools.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
7. The schools where I am teaching do not have a tedious working environment.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
8. The staff at the schools where I am teaching manage the schools effectively.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
9. I have access to adequate facilities and resources for teaching at schools.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
10. A good collegial rapport has been established at schools.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
11. Every learner in my classes treats me with great respect.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*

12. I have positive attitudes towards the teaching profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
13. I have cultivated a strong professional identity as a teacher.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
14. I employ reflective teaching as a practice to improve my teaching.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
15. I demonstrate a high level of self-efficacy as a teacher.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
16. I have the ability to understand and feel the emotional states of my learners.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
17. I have a strong career motivation in my teaching profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
18. I can manage my emotional states in appropriate and adaptive ways.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
19. I have effective communication skills for dealing with my learners.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
20. I can manage my classes effectively.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
21. I am satisfied with the results of my efforts and performance as a teacher.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
22. I am flexible and adaptable in my teaching profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
23. I demonstrate commitment and accountability in my teaching profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
24. I incorporate a sense of humor into my teaching practices.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
25. I can strike a balance between my work commitments and home responsibilities.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
26. I have an appropriate level of teacher competencies.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
27. I am not a perfectionist in my teaching profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
28. The teaching materials that are currently used (e.g., textbook) are appropriate.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*

29. The pre-service teacher education programs prepare teachers for the profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
30. The in-service teacher education programs address teachers' professional development needs.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
31. The prospects for the teaching profession in our country are bright.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
32. Teachers receive extensive professional support when they need it.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
33. The teachers' workload is manageable and appropriate.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
34. The expectations that teachers face are realistic and manageable.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
35. The existing reward system in the teaching profession works well.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
36. The salary and benefits offered to teachers are reasonable and fair.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
37. Teachers experience a low level of work anxiety.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
38. The teaching profession is a prestigious profession.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
39. The current education system is effective.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
40. Education is among the top priorities for policy-makers.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*
41. The current educational reform has been successful in its implementation.
Completely agree *Agree* *No opinion* *Disagree* *Completely disagree*