



# Development and Psychometric Validation of a Questionnaire Measuring Internal and External Accountability of EFL University Instructors in Iran

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## Original Research

## Abstract

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The current study aimed to develop and validate a questionnaire to explore Iranian university instructors' perceptions of internal and external accountability. A total of 390 EFL instructors from various universities in Iran participated in the study, selected through convenience sampling. Initially, 41 Likert-scale items were developed based on existing literature. In assessing content validity, both the Content Validity Ratio and the Content Validity Index were calculated. Based on the results, out of the initial 41 items, only 38 items met the required thresholds and were retained, while the remaining items were excluded from the final instrument. To establish construct validity, Exploratory Factor Analysis and Confirmatory Factor Analysis were conducted, confirming a two-factor structure comprising internal and external accountability. The CFA yielded acceptable model fit indices (e.g., CFI = 0.95, RMSEA = 0.06), supporting the factorial validity of the instrument. Additionally, the reliability of the questionnaire was confirmed, with Cronbach's alpha coefficients of 0.90 for internal consistency and 0.94 for external consistency, indicating high reliability. The validated 38-item questionnaire offers a reliable tool for assessing instructors' perceptions of accountability. The study highlights the potential of fostering internal and external accountability through professional development initiatives.

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**Keywords:** EFL; External Accountability; Internal Accountability; University Instructors

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## 1. Introduction

Today's societies have become critical of the educational systems and pay special attention to the accountability of these systems. Accountability has changed into an

interesting topic in the research area between 1965 to 2000 (Dubnick, 2014). The massification of education is highly important (Smith & Benavot, 2019), as more and more students attend schools and universities these days, and the question of who is accountable for ensuring the

quality of education is a pressing concern today. Accountability refers to the idea that schools, universities, educators, and students are responsible for the results, which has become a recent watchword in education, according to the [Editorial Projects in Education Research Center \(2004\)](#). Accountability can be considered a cornerstone of education policy ([Smith & Benavot, 2019](#)). The idea of accountability has been penetrating all social services, including education ([UNESCO, 2017a](#); [Yi Hawa, 2021](#)). The utilization of accountability in the education management process can help control service delivery and discipline within the institution, ultimately enhancing the system's effectiveness. Administrators and people in charge should be aware of accountability as an essential ingredient that is integrated with the organizational framework in various educational contexts, such as universities ([Nakpodia & Okeimute, 2011](#)). Universities are regarded as crucial educational institutions in every society, playing a vital role in teaching and preparing future citizens. As accountability in education has been viewed as very significant, society expects a lot from university systems ([Leveille, 2006](#)). All operators in the university system must see their responsibilities and make the education system competitive and responsive. Accordingly, teachers and instructors are seen as important elements of every educational context whose role in students' lives cannot be denied ([Ingram, 2004](#)). Teachers should all continue to be highly qualified and should be held accountable. Holding accountability is important to ensure that mistakes are not repeated. Accountability means holding to standards, which is very necessary for all teachers. Thus, teachers' accountability can help their profession as accountability is considered the main drive to help teachers move towards actions and helps them remain on track while they try to manage their progress ([Leveille, 2006](#)). Therefore, the present study aims to focus on the EFL teachers' accountability in Iran with a special focus on university systems. Regarding accountability and types of it, including internal and external accountability, not many studies and research have been done around the world; specifically in Iran, there is little information about accountability.

The teachers' internal and external accountability in education, especially university systems, has never been investigated and studied in Iran. It should be noted that the study aims to focus on the teachers' workplace and the accountability in their job setting. Thus, this study aims to construct and validate a questionnaire to measure EFL university instructors' internal and external accountability in Iran. The research question leading this inquiry was: RQ1: Does the developed questionnaire for measuring EFL university instructors' internal and

external accountability in Iran enjoy validity and reliability?

## 2. Review of Literature

Placing a high demand for accountability, societies have employed strategies to enhance accountability as a measure of schools' and universities' effectiveness. The greater the level of accountability, the more effective schools and universities will be ([Hurley & Hurley, 2015](#)). Accountability is defined as a form of obligation to account for the success and failure of utilizing the organization's mission to achieve its set objectives and goals ([Risakotta & Akbar, 2018](#)). Accountability entails a kind of relationship in which somebody is asked to explain and take responsibility for their actions. Accountability inclines to indicate that performances are related to organizational objectives. Therefore, it is a kind of goal-oriented activity.

Accountability in education is the accountability for one's performance and actions in education (Noun, 2008). It should be known as being accountable to the stakeholders in education and accountable for the resources used in education. This suggests that accountability can be a kind of measure to see whether all available sources in a productive system are employed for greater efficiency and productivity. Thus, accountability in education deals with what records should be kept, and how records are needed in terms of procedures, methodology, forms to be used, and activities. Accountability in education is concerned with keeping records of activities done in schools to evaluate and assess the performance and achievement of predetermined objectives ([Okoroma, 2007](#)).

In the school system, accountability is closely tied to the management and utilization of resources to ensure the achievement of the stated objectives and goals of education ([Dangara, 2016](#)). The integration of accountability can help improve service delivery and control the organization, and as a result, enhance efficiency. [Nakpodia and Okeimute \(2011\)](#) believed that accountability should be intertwined within the organizational framework. Two types of accountabilities are known in the system of constitutional government: 1) internal accountability and 2) external accountability.

### 2.1. Internal Accountability

Internal accountability refers to being accountable to oneself. It's a kind of individual commitment to take responsibility for one's promises. It comes from the inside out. According to [Risakotta and Akbar \(2018\)](#), internal accountability is a form of direct accountability used within a particular organization, where

subordinates report directly to their superiors. Hill et al. (2002, as cited in Sheila, 2014) defined internal accountability as establishing a belief that a school's performance depends on all adults working in concert, leading to shared expectations about how the school will operate, what it will provide children, and who is responsible for what.

They mentioned that internal and external accountability mechanisms are applied in schools to make individuals accountable for their activities. For instance, the teacher would be asked in front of higher authorities about how she/ he uses the authority they have been given to perform the duties they have been assigned to (Adamovic, 2023; Algazo & Ibrahim, 2024).

According to Ansell (2015), internal accountability is about the alignment of three overlapping elements, namely 1) individual responsibility, 2) collective expectations, and 3) measures of accountability. A clear example of internal accountability is, for instance, a good teacher feels that she doesn't want to let her students down or disappoint them. It's not how much teachers care about grades, but what the teacher thinks about his or her work. "Internal factors refer to factors within the educational context that can influence a student's achievement, in contrast with external factors such as material or cultural deprivation" (Poole, 2011, p.265). For this reason, internal accountability is considered as one construct of the questionnaire in the current study.

## 2.2. External Accountability

External accountability is known as being accountable to others and feeling responsible towards others. It comes from outside in. According to Risakotta and Akbar (2018), external accountability is an indirect kind of accountability that deals with reporting to parties outside the organization. An example of external accountability can be the standards and yardsticks determined by schools or universities. For instance, education systems should be held strictly accountable for the scores and graduation of students. Risakotta and Akbar (2018) mentioned that the role of external accountability is to support the determination of internal accountability. It generates an atmosphere that helps students apply their best intentions. External accountability cannot manufacture commitment, but it can fan its flame when the fire begins to wane. Intentions must be present in the first place or there's no flame to fan; but when intentions are given positive reinforcement, the results are amazing" (Gong, et.al, 2002, as cited in Anderson, 2005). Due to the significance of external accountability, it is considered another construct of the questionnaire in the current study.

## 2.3. Accountability in Education

Accountability can be considered a cornerstone of education policy (Smith & Benavot, 2019). The idea of accountability has been penetrating all social services, including education. The global learning crisis has garnered considerable attention, suggesting that high-quality education, as measured by increased student learning, has been a key focus of national and international policymakers (Ansell, 2015). Therefore, more resources need to be allocated to measuring and monitoring learning. In the educational system, accountability should be seen as a cornerstone that helps improve the efficiency of the system. It is connected to the management of the educational resources to ensure the implication of available resources for the achievement of the stated purposes and goals of education. The utilization of accountability in the education management process can help control service delivery and discipline within the institution, ultimately enhancing the effectiveness of the system (Aniagboso, 2019). Universities are regarded as a crucial educational context in every society, playing a vital role in teaching and preparing future citizens (Nakpodia & Okeimute, 2011). As accountability in education has been viewed as very significant, society expects a lot from university systems. All operators in the university system must see their responsibilities and make the education system competitive and responsive. Educational administrators in universities are accountable to the stakeholders in education and for achieving the goals of education using all resources. Teachers and instructors are recognized as crucial elements in every educational context, whose role in students' lives cannot be overstated. Teachers should all continue to be highly qualified and should be held accountable (Nakpodia & Okeimute, 2011).

Simply, educational accountability looks for deciding which individual is accountable and for what (Hoy & Miskel, 2008). Holding accountability is important to ensure that mistakes are not repeated. Accountability means holding to standards, which is very necessary for all teachers. So, teachers' accountability can help their profession as accountability is considered the main drive to help teachers move towards actions and helps them remain on track while they try to manage their progress.

## 2.4. Related Studies

Rosenblatt (2017) tried to validate a questionnaire with two-dimensional scales to measure teachers' and school administrators' accountability dispositions, and the results confirmed the two-dimensional structures, namely internal and external accountability. Dangara

(2016) explored accountability in education, examining the concept of accountability, its dimensions, and the factors that affect it, and proposed strategies to improve it. Hurley et al. (2015) investigated the values and attitudes of teachers toward teacher accountability in China and Canada and revealed that the attitudes and perceptions of the teachers were not the same in the two countries. Risakotta and Akbar (2019) analyzed the influence of internal and external accountability, job motivation, and education on the performance of local government officials, with organizational commitment as the intervening variable and indicating a positive influence. Smith and Benavot (2019) wrote an article about improving accountability in education, discussing the importance of a structured democratic voice. They believed that the voices of stakeholders who work, learn, and teach in educational institutions are usually absent from the discussions of accountability. In a recent study by Kucukbere and Balkar (2021), they investigated the relationship between teacher accountability and occupational professionalism by investigating a supposed conceptual model of accountability and occupational professionalism dimensions. The first level for the accountability mechanisms to be effective was enhancing occupational awareness. In addition, Yi Hwa (2021) investigated the extent to which the national sociocultural context affected the relationship between one phase of policy, that is, teacher accountability, and student results, and revealed that it was necessary to strengthen the situation for considering teacher accountability as a socio-cultural process. However, there is a dearth of research measuring accountability, especially in universities in Iran.

### 3. Methodology

#### 3.1. Design

The mixed-methods research design was used. Mixed methods enable the researchers to conceptually and analytically integrate qualitative research and quantitative data to facilitate the interpretation of the results. Mixed methods can help you gain a more complete picture than a standalone quantitative or qualitative study, as they integrate the benefits of both methods (George, 2023). It should be mentioned that an exploratory sequential type of mixed methods was employed using qualitative data to develop an instrument for quantitative testing.

#### 3.2. Participants and setting

At first, a group of 10 EFL experts was requested to take part in the process of expert validation of the external and internal accountability questionnaire. These 10

participants were both male and female (M=6 & F=4) who had the experience of teaching at the BA level in different universities in Mashhad, Torbat Heydarieh, Sabzevar, and Neyshabour, and were all PhD holders. These experts were given the first version of the designed questionnaire and were asked to comment on the items of the questionnaire based on three options, namely keep (if the item was good and essential), modify (if the item was essential with some revisions), and delete (if the item was not good and essential or it was irrelevant). Then, based on the ideas of the experts, the CVR and CVI were computed. A detailed explanation of the results of CVR and CVI is given in section four of the present study.

Furthermore, a group of 20 EFL instructors who had the same characteristics as the main participants of the research took part in the pilot phase of the designed questionnaire. They were asked to read the items and comment on the clarity, understandability, and relevancy of the items.

A group of 390 EFL instructors took part in the research as the main participants of the study (190 for the EFA and 200 for the CFA). They were both male and female instructors including 105 females and 85 males for the EFA part and 112 females and 88 males for the CFA part from different universities (Islamic Azad University, Payame Noor University, State University, and some institutes of higher education) in different cities (Mashhad, Shiraz, Esfahan, Yazd, Birjand, Torbat Heydarieh, Sabzevar, Neyshabour, Gonabad, Tehran, Sari, and Bojnourd) in Iran, with various teaching experiences (0 to 20 years), academic degrees (MA & Ph.D.), and various age ranges (35 to 65 years). It needs to be mentioned that a sample size of 200 would be adequate when the range of measured variables and the number of items are between 36 to 144 (38 in the present study), and it provides stable factor structures and reliable parameter estimates (Dimitrov, 2012; Tabachnick & Fidell, 2013).

The setting of this research was universities in Iran. The reasons for choosing the setting for this research were that, as EFL teachers were under investigation and accountability is a broad concept, all educational settings, including public schools and private institutes, could not be taken into account, and a more limited and specified setting was needed.

Therefore, only universities were selected. The other reason for choosing different universities instead of focusing only on one was that a large group of participants was needed (190 & 200), and focusing on only one university could limit the choice. It should be added that the selection of the setting and participants for this research was a convenience sampling method which should be considered as a limitation of the study.

### 3.3. Instrumentation

A questionnaire was designed, piloted, and validated by the researcher to assess the internal and external accountability of EFL university instructors in Iran. This questionnaire was designed based on the available literature and some ready-made questionnaires by Rahmatollahi et al. (2021), Edmonton (2005), Rosenblatt (2017), Kanika (2016), and Rodriguez (2015). The first version of the questionnaire consisted of 41 items, each presented on a 5-point Likert scale, ranging from 1 (not) to 5 (to a very great extent). The questionnaire contained two constructs, namely internal accountability with 22 items (items 1- 22) and external accountability with 19 items (items 23- 41). Then, the questionnaire was given to 10 experts in the EFL field for the expert validation part. The experts were asked to comment on the items of the questionnaire based on three options, namely keep, modify, or delete. After that, according to the opinions and comments of the experts, CVR and CVI were computed for the 41-item questionnaire. Based on the result of CVR and CVI, 3 items (8, 11, and 39) did not receive the required CVR value and needed to be removed from the questionnaire. Therefore, 38 items remained in the questionnaire. In the next step, the validity and reliability of the questionnaire were checked by running Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA), and Cronbach's Alpha. The questionnaire with 38 items was under investigation through computing EFA and CFA.

### 3.4. Procedure

To achieve the study's objective, which was to construct and validate a questionnaire for measuring Iranian EFL university instructors' internal and external accountability, the following steps were taken .

In the first step, the available literature was reviewed and studied to come up with the ideas of the scholars in the field about internal and external accountability to be able to design the items of the questionnaire. The main focus was on the already-made questionnaires by Rahmatollahi et al. (2021), Edmonton (2005), Rosenblatt (2017), Kanika (2016), and Rodriguez (2015).

In the second step, a questionnaire with 41 items based on a 5-point Likert scale was designed by the researchers in order to collect data concerning the perceptions and attitudes of EFL university instructors about internal and external accountability in Iran. Then, a group of 10 EFL experts was chosen to give their opinions and comments about the items of the questionnaire based on three options, namely keep, modify, or delete. Then, CVR and CVI were computed

for the expert validation of the questionnaire. Based on the results of CVR and CVI, three items were deleted, and 38 items remained in the final version of the questionnaire .In the third step, a group of 20 EFL instructors who had similar characteristics as the main participants of the study were chosen for piloting the questionnaire. The pilot aimed to check the clarity, relevancy, and understandability of the items. The results showed that all 38 items were clear and comprehensible to the readers. In the fourth step, to check the validity and reliability of the questionnaire, EFA, CFA, and Cronbach's Alpha were run. The results of the EFA and CFA are included in the results section.

## 4. Results

The main research question of the study was 'Does the internal and external accountability questionnaire designed and developed by the researcher enjoy reliability and validity? To summarize the data gathered from the teachers' internal and external accountability questionnaire, descriptive statistics were calculated. The results of descriptive statistics for the internal and external components of the questionnaire are indicated in Table 1. According to the results in Table 1, the minimum and maximum scores for the teachers in the internal accountability component of the questionnaire were 47.00 and 100.00, respectively. Similarly, the minimum and maximum scores for the teachers in the external accountability component of the questionnaire were 24.00 and 90.00, respectively. Furthermore, the mean and standard deviation of the teachers' scores in the internal accountability component of the questionnaire were 78.73 and 9.39, respectively. The mean and standard deviation of the teachers' scores in the external accountability component of the questionnaire were 72.66 and 12.92, respectively. The Kolmogorov-Smirnov test of normality is a robust and widely used method for determining whether a dataset follows a normal distribution. Its non-parametric nature, clear criterion for evaluation, and ability to handle various sample sizes make it an essential tool in statistical analysis.

By employing the K-S test, researchers can ensure the validity of their statistical inferences and choose appropriate methods for further analysis. In this article, the K-S test was used to assess the normality of the data, ensuring that the assumptions of subsequent statistical tests are met and enhancing the reliability of the study's findings.

The results of test of normality for the teachers' internal and external accountability questionnaire are revealed in Table 2. Based on the results of Table 2, 190 EFL teachers participated in the pilot phase of the study.

**Table 1.** Results of Descriptive Statistics for the Teachers' Internal and External Accountability Questionnaire

	N	Minimum	Maximum	Mean	Std. Deviation
Internal	190	47.00	100.00	78.73	9.39
External	190	24.00	90.00	72.66	12.92

**Table 2.** Results of the Test of Normality for the Teachers' Internal and External Accountability

	Kolmogorov-Smirnov <sup>a</sup>		
	Statistic	Df	Sig.
Internal	0.03	190	0.20
External	0.02	190	0.20

**Table 3.** Results of KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy	0.88
	8292.07
Bartlett's Test of Sphericity	703
	0.000

As the results showed, the levels of significance for the internal accountability and external accountability of the questionnaire were .20 and .20, respectively. Due to the fact that the p-values were more than 0.05, the results confirmed the normal distribution of the data gathered from the teachers' internal and external accountability questionnaire.

To show the construct validity of the questionnaire, explanatory factor analysis (EFA) was used. EFA is a data reduction technique that aims to identify a small number of unobserved variables, known as factors, which can explain the patterns of correlations among a larger set of observed variables.

EFA is exploratory and does not impose a preconceived structure on the data. This makes EFA particularly useful in the early stages of research when the goal is to discover potential underlying constructs without prior assumptions.

In this article, EFA was employed to analyze the data, uncovering the latent constructs that influence the observed patterns and contributing to a deeper understanding of the research domain. The results of KMO and Bartlett's test are revealed in [Table 3](#).

The [table 3](#) presents the results of the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy and Bartlett's Test of Sphericity, both of which are used to assess the suitability of data for factor analysis. Bartlett's Test of Sphericity tests the hypothesis that the correlation matrix is an identity matrix.

In other words, it checks whether the variables are uncorrelated in the population. The KMO measure ranges from 0 to 1. A KMO value closer to 1 indicates that the data is suitable for factor analysis. A value above

0.8 is considered "meritorious" and suggests that the data is highly appropriate for factor analysis.

The KMO value of 0.88, in this case, indicates that the dataset has a high degree of common variance and is very suitable for factor analysis. The significance value is less than 0.05, indicating that the correlation matrix is significantly different from an identity matrix.

A low significance value (typically below 0.05) implies that the variables do share some common factors and that factor analysis may be useful. Bartlett's Test of Sphericity indicates that the correlations between variables are sufficiently large for factor analysis, with a highly significant result ( $p < 0.001$ ).

Together, these results strongly support the appropriateness of using factor analysis on this dataset. The results of communalities are revealed in [Table 4](#). The communality values in this analysis range from 0.50 to 0.90. Most items exhibit communalities above 0.50, which is generally considered acceptable according to [Hair et al. \(2019\)](#). This means that the majority of items have more than half of their variance explained by the factors, reflecting strong alignment with the underlying constructs. For instance, items such as q38 (0.87), q20 (0.86), q32 (0.90), q7 (0.84), and q6 (0.82) have very high communalities, indicating excellent representation by the factor structure.

In summary, the communalities provide strong evidence that the questionnaire items are largely well represented by the factor solution. This supports the construct validity of the questionnaire, indicating it reliably measures the intended internal and external accountability constructs. The results of the total variance are explained in [Table 5](#).

**Table 4.** Results of Communalities

	Initial	Extraction
q1	1.000	0.70
q2	1.000	0.74
q3	1.000	0.69
q4	1.000	0.64
q5	1.000	0.78
q6	1.000	0.82
q7	1.000	0.84
q8	1.000	0.67
q9	1.000	0.61
q10	1.000	0.78
q11	1.000	0.69
q12	1.000	0.83
q13	1.000	0.75
q14	1.000	0.69
q15	1.000	0.50
q16	1.000	0.51
q17	1.000	0.82
q18	1.000	0.75
q19	1.000	0.83
q20	1.000	0.86
q21	1.000	0.76
q22	1.000	0.63
q23	1.000	0.59
q24	1.000	0.70
q25	1.000	0.76
q26	1.000	0.87
q27	1.000	0.87
q28	1.000	0.77
q29	1.000	0.75
q30	1.000	0.77
q31	1.000	0.89
q32	1.000	0.90
q33	1.000	0.79
q34	1.000	0.55
q35	1.000	0.68
q36	1.000	0.76
q37	1.000	0.78
q38	1.000	0.87

As shown by [Table 5](#), two factors were explored with indices more than 1 in the total column. This was high enough to let them remain and be regarded as reliable factors in the next phases of data analysis. Furthermore, the cumulative variance of the extraction loadings indicated that these factors could explain 54.77 percent of the variance in the variables. The results of parallel analysis are revealed in [Table 6](#). To determine the optimal number of factors to retain in the Internal and External Accountability Questionnaire, a parallel analysis was conducted. This method compared the actual eigenvalues derived from principal component

analysis (PCA) to simulated eigenvalues generated from random datasets of equivalent size (190 respondents and 38 items). As shown in [Table 6](#), only the first two components had actual eigenvalues exceeding their corresponding random eigenvalues, with Component 1 (15.74) significantly higher than the simulated eigenvalue (1.97), and Component 2 (5.06) exceeding the threshold of 1.85. This provides empirical support for retaining both of these components. By contrast, Component three presented actual eigenvalues approximately equal to or lower than the respective simulated random eigenvalues, indicating that this factor

likely represents random variance rather than meaningful underlying constructs. Therefore, based on the results of the parallel analysis, a two-factor solution was statistically justified and retained for further validation. This approach strengthens the structural validity of the instrument by ensuring that only components explaining significant non-random variance were included in the final model. Figure 1 shows the parallel analysis scree plot. The scree plot visually compares the actual eigenvalues extracted from the PCA with the simulated random eigenvalues. As illustrated, only the first two components have actual eigenvalues substantially above the corresponding simulated values, confirming their statistical significance. Subsequent components fall below the simulated eigenvalue line, indicating that they represent random variance. Thus, the plot supports a two-factor solution for the questionnaire structure. The results of the component matrix are

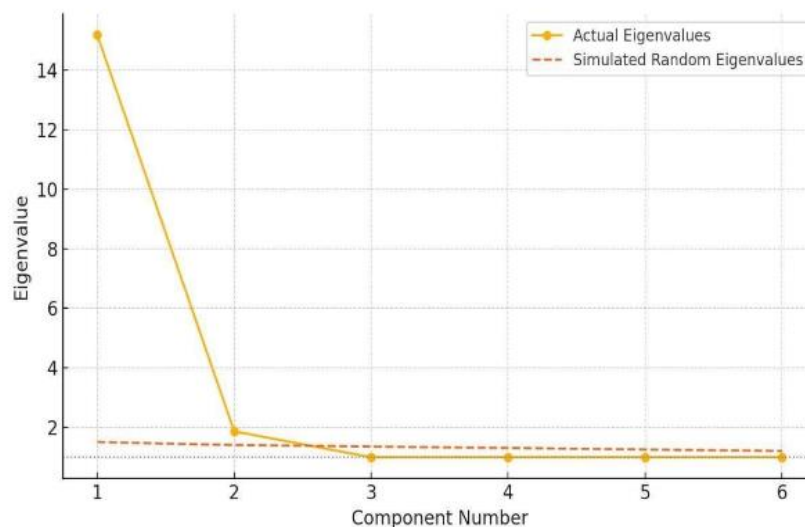
revealed in Table 7. Table 7 presents the component matrix from an Exploratory Factor Analysis (EFA), showing the loadings of 38 variables (q1 to q38) on two components labeled "Internal" and "External." The Internal Accountability Component of the questionnaire appears to represent a cohesive underlying factor that several variables (especially q4, q6, q19, and q34, etc.) strongly reflect. This factor might be related to internal processes, traits, or characteristics within the context of the study. Indeed, the results showed that items 1-20 are related to the internal component of the questionnaire. The External Component is another distinct factor, heavily represented by variables such as q21, q22, q23, q24, q25, q26, q27, q28, q29, q30, q31, q32, q33, q34, q35, q36, q37, and q38. This factor likely pertains to the external accountability factor of the questionnaire. The results of the rotated component matrix are revealed in Table 8.

**Table 5.** Results of Total Variance Explained for the Five Factors of the Internal and External Accountability Questionnaire

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	15.74	41.44	41.44	15.74	41.44	41.44	15.69	41.30	41.30
2	1.06	13.32	54.77	5.06	13.32	54.77	5.11	13.46	54.77
3	0.97	7.23	62.01	-	-	-	-	-	-

**Table 6.** Parallel Analysis Results Comparing Actual and Simulated Random Eigenvalues

Component	Actual Eigenvalue	Simulated Random Eigenvalue	Decision
1	15.74	1.97	Retain
2	5.06	1.85	Retain
3	0.97	1.76	Discard



**Figure 1.** Parallel Analysis Scree Plot

**Table 7.** Results of Component Matrix

	Component	
	Internal	External
q1	0.71	-
q2	0.75	-
q3	0.64	-
q4	0.82	-
q5	0.81	-
q6	0.84	-
q7	0.75	-
q8	0.81	-
q9	0.65	-
q10	0.71	-
q11	0.73	-
q12	0.58	-
q13	0.78	-
q14	0.69	-
q15	0.66	-
q16	0.79	-
q17	0.73	-
q18	0.83	-
q19	0.80	-
q20	0.78	-
q21	-	0.81
q22	-	0.69
q23	-	0.79
q24	-	0.74
q25	-	0.73
q26	-	0.79
q27	-	0.76
q28	-	0.81
q29	-	0.75
q30	-	0.74
q31	-	0.79
q32	-	0.76
q33	-	0.81
q34	-	0.82
q35	-	0.68
q36	-	0.69
q37	-	0.71
q38	-	0.75

**Table 8.** Rotated Component Matrix (Varimax Rotation)

Item	Internal	External
	Accountability	Accountability
q1	0.59	0.32
q2	0.56	-0.25
q3	0.57	0.11
q4	0.66	0.22
q5	0.69	0.15
q6	0.71	-0.16
q7	0.74	0.14
q8	0.65	0.21
q9	0.77	0.08
q10	0.70	0.10
q11	0.63	0.13
q12	0.63	0.25
q13	0.70	0.09
q14	0.60	-0.13
q15	0.55	0.15
q16	0.54	0.28
q17	0.10	0.75
q18	0.12	0.71
q19	0.14	0.59
q20	0.13	0.68
q21	0.09	0.79
q22	0.10	0.75
q23	0.11	0.83
q24	0.30	0.78
q25	0.12	0.81
q26	0.07	0.87
q27	0.32	0.89
q28	0.11	0.69
q29	-0.13	0.71
q30	0.16	0.64
q31	0.31	0.68
q32	-0.12	0.71
q33	0.10	0.75
q34	0.36	0.80
q35	0.34	0.78
q36	-0.11	0.74
q37	-0.30	0.84
q38	0.24	0.78

Table 8 presents the results of the rotated component matrix using Varimax rotation, which was conducted as part of an exploratory factor analysis (EFA) to examine the underlying structure of the questionnaire developed to assess internal and external accountability among participants. Varimax rotation, an orthogonal rotation technique, was employed to maximize the variance of squared loadings for each factor, thus enhancing interpretability by yielding a clearer distinction between components. The matrix reveals two distinct components, labeled as Internal Accountability and External Accountability. Items q1 to q16 show substantial loadings on the internal accountability factor, with the highest loadings observed for q9 (0.77), q7

(0.74), q6 (0.71), q13 (0.70), and q10 (0.70). These high loadings suggest that these items strongly reflect internal mechanisms of accountability, such as self-regulation, intrinsic motivation, and personal responsibility. In contrast, their loadings on the external accountability factor are minimal or even negative, indicating discriminant validity between the two constructs. Conversely, items q17 to q38 load highly on the external accountability factor, with items such as q27 (0.89), q26 (0.87), q23 (0.83), q37 (0.84), and q34 (0.80) showing the strongest associations. These items appear to represent elements of accountability driven by external forces such as institutional mandates, evaluation systems, and administrative oversight. The generally

low cross-loadings on the internal factor further support the distinctiveness of the two dimensions.

Overall, the rotated component matrix confirms the presence of two well-defined factors corresponding to internal and external accountability. The clear pattern of factor loadings, along with minimal cross-loadings, provides evidence for the construct validity of the questionnaire.

Finally, Confirmatory Factor Analysis is a crucial technique in the toolkit of researchers involved in the psychological, social, and behavioral sciences. It offers a robust method for testing hypotheses about the relationships between observed variables and their underlying latent constructs. By confirming the factor structure of a dataset, CFA contributes significantly to the validity and reliability of measurement instruments, ultimately enhancing the quality of research findings. Figure 2 reveals the best model to describe the relationship between Iranian EFL teachers' internal and external accountability.

The presented measurement model consists of two latent constructs: Internal Attribute (IA) and External Attribute (EA), each measured through multiple observed indicators. The confirmatory factor analysis

(CFA) results suggest an overall acceptable model structure. The standardized factor loadings for IA range from 0.60 to 0.97, while the loadings for EA range from 0.60 to 0.96.

These values generally exceed the acceptable minimum threshold of 0.50, indicating that most items have a substantial contribution to their respective latent constructs. The correlation between IA and EA is notably high at 0.92, which raises concerns regarding the discriminant validity of the two constructs. While conceptually distinct, the empirical overlap indicates that participants may perceive IA and EA as closely related dimensions.

Each observed item is associated with an individual error term, reflecting the presence of measurement error and acknowledging that not all item variance is explained by the latent constructs. This is consistent with standard CFA procedures. Overall, the model supports the hypothesized two-dimensional conceptualization of accountability. Goodness-of-fit indices can be seen in Table 9. In this study,  $\chi^2/df$ , GFI, CFI, and RMSEA were used. To have a fit model,  $\chi^2/df$  should be less than 3, GFI and TLI should be above 0.90, and RMSEA should be less than 0.08.

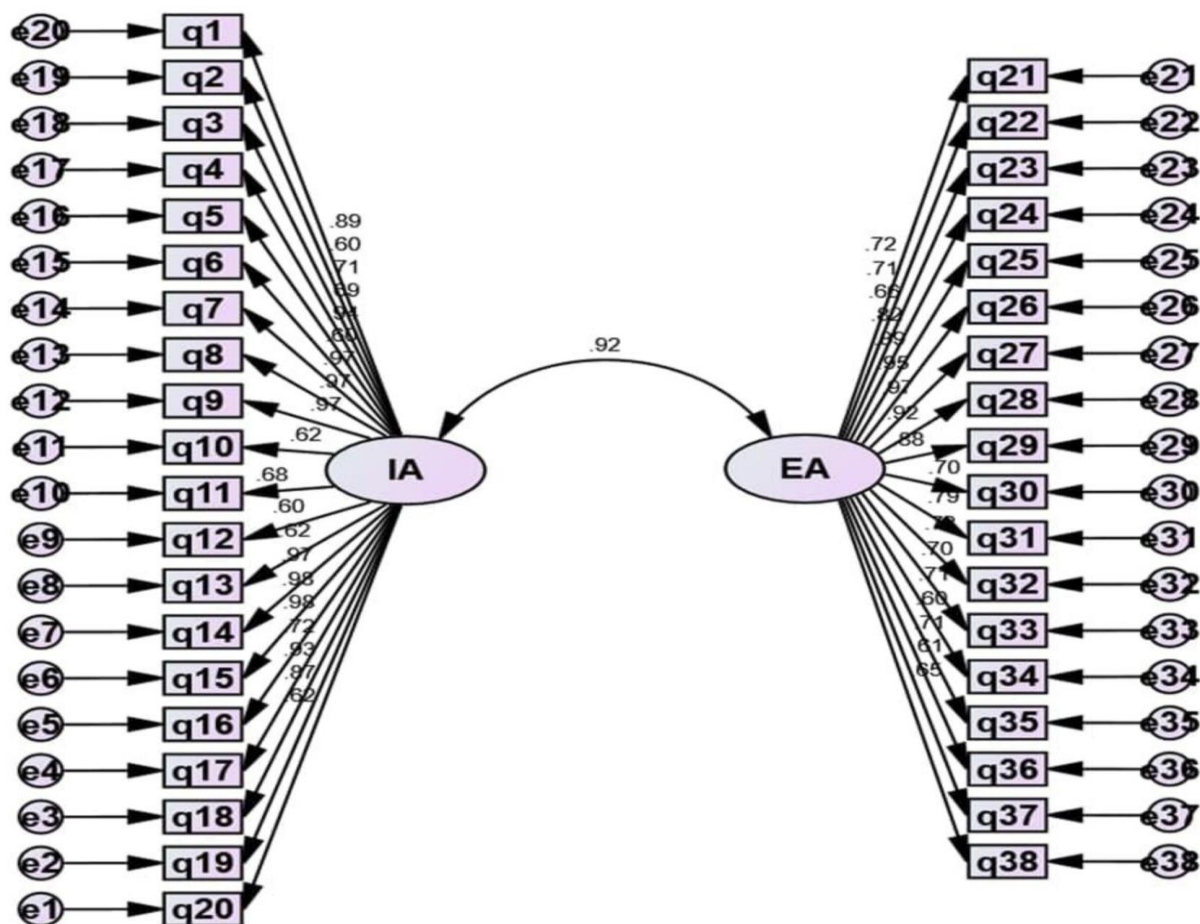


Figure 2. Results of Confirmatory Factor Analysis

**Table 9.** Goodness of Fit Indices for the Questionnaire

Fit Index	Acceptable Threshold	Model Value	Interpretation
$\chi^2/df$	< 3	2.85	Acceptable fit; within ideal range
GFI	> 0.90	0.93	Good fit
CFI	> 0.90	0.95	Very good fit
TLI	> 0.90	0.92	Good fit
RMSEA	< 0.08	0.06	Good fit
SRMR	< 0.08	0.05	Good fit

**Table 10.** Results of Reliability Statistics for the Teachers' Internal and External Accountability Questionnaire

Construct	Number of items	Cronbach alpha
Internal Accountability	20	0.89
External Accountability	18	0.91

The goodness of fit indices presented above indicate that the proposed Confirmatory Factor Analysis (CFA) model demonstrates an overall acceptable to good fit. The chi-square to degrees of freedom ratio ( $\chi^2/df = 2.85$ ) falls within the ideal range of less than 3, suggesting an acceptable level of model-data fit. Both the Goodness of Fit Index (GFI = 0.93) and the Comparative Fit Index (CFI = 0.95) exceed the commonly recommended threshold of 0.90, indicating good and very good model fit, respectively.

Similarly, the Tucker-Lewis Index (TLI = 0.92) reflects a strong comparative fit of the model. Furthermore, the Root Mean Square Error of Approximation (RMSEA = 0.06) and the Standardized Root Mean Square Residual (SRMR = 0.05) both fall below the cut-off value of 0.08, confirming that the model has a good approximation to the population covariance structure. Collectively, these indices support the adequacy of the model and provide evidence for its structural validity. As Table 5 shows, all the goodness-of-fit indices are within the acceptable range. Therefore, the questionnaire enjoyed acceptable validity with 38 items and two components.

To assess the convergent and discriminant validity of the model, key statistical indicators, including Average Variance Extracted (AVE) and Composite Reliability (CR), were calculated based on the standardized factor loadings obtained from the model. These measures are essential for ensuring that the constructs are both internally consistent and distinct from one another.

For the IA construct, the AVE was computed at 0.73, exceeding the minimum recommended threshold of 0.50, which indicates that IA accounts for a sufficient proportion of variance in its respective items. The Composite Reliability (CR) for IA was found to be 0.96, demonstrating high internal consistency and suggesting

that the indicators reliably measure the intended construct. Regarding the EA construct, the AVE value was calculated at 0.68, similarly surpassing the 0.50 criterion and reflecting satisfactory convergent validity. The CR for EA was 0.9, indicating a high level of internal consistency reliability.

Discriminant validity was examined using the Fornell-Larcker criterion, comparing the square roots of AVE values to the inter-construct correlation. The square roots of AVE for IA and EA were 0.85 and 0.83, respectively. Both values were slightly higher than the correlation coefficient between IA and EA (0.92), suggesting marginally acceptable discriminant validity. Although the constructs are statistically distinct, the high correlation signals conceptual overlap that may warrant attention.

In conclusion, the analysis confirms that both IA and EA constructs meet established standards for convergent validity and internal consistency reliability. However, the slightly borderline discriminant validity indicates potential conceptual similarity between the two constructs. To show the reliability of the questionnaire, Cronbach's Alpha was used. Table 10 shows the results of reliability statistics for the questionnaire. As the results in Table 10 show, the number of items of the internal accountability component of the questionnaire was 20, and the number of the external accountability component of the questionnaire was 18. Furthermore, the reliability values for the internal and external accountability components of the questionnaire were 0.89 and 0.91, and the results confirmed the reliability of the teachers' internal and external accountability questionnaire. Therefore, the results of EFA and Cronbach's Alpha showed the acceptable validity and reliability of the internal and external accountability questionnaire.

## 5. Discussion

This study aimed to construct and validate a questionnaire to explore Iranian EFL university instructors' perceptions of their internal and external accountability. The questionnaire, comprising 38 items, was designed to assess two main components: internal accountability and external accountability. The validation process confirmed the reliability and validity of the instrument, making it a promising tool for examining how instructors navigate their professional responsibilities regarding personal values and external pressures. The development of the 38-item questionnaire was grounded in both theoretical frameworks and empirical findings related to accountability in education. The items were carefully crafted to capture two distinct yet interconnected dimensions of accountability: internal and external. Internal accountability focuses on personal responsibility, ethical teaching practices, and self-reflection, while external accountability focuses on institutional demands, societal expectations, and evaluation mechanisms.

The validation process, including factor analysis and expert evaluations, revealed that the questionnaire successfully measured these two dimensions and provided a clear structure for understanding instructors' accountability. However, it should be acknowledged that while the two-factor structure was confirmed, alternative models—such as hierarchical or bifactor structures—were not examined. The relatively high correlation between internal and external accountability suggests some conceptual overlap, which may partly reflect cultural or contextual factors inherent to the Iranian higher education system. This raises questions about potential cultural bias and the generalizability of the instrument across different educational or cultural contexts. Future research is needed to assess the applicability of the tool in varied settings and to explore whether cultural factors influence the relationship between personal and institutional accountability perceptions. The findings revealed that Iranian EFL instructors generally have a strong sense of internal accountability, as evidenced by their self-reported commitment to ethical teaching practices and professional growth. Many instructors indicated that their primary motivation for teaching stemmed from intrinsic values, such as the desire to contribute to student development and the field of education. Furthermore, the internal accountability component highlights the importance of reflective practice, which aligns with theoretical expectations regarding the role of self-evaluation and professional responsibility in improving teaching quality.

The external accountability component revealed that instructors felt considerable pressure from institutional policies, performance evaluations, and broader societal expectations. Although these mechanisms were acknowledged as necessary for maintaining standards, instructors expressed concerns about the fairness and comprehensiveness of current evaluation systems. These systems were often perceived as limited in their ability to capture the complexity of teaching performance, contributing to professional stress. This underscores the need for institutions to critically evaluate their accountability systems and consider revisions that balance oversight with support and developmental feedback. While existing studies such as Kucukbere and Balkar (2021) are used to contextualize these findings, it is important to more clearly position the current study within the broader measurement landscape. Unlike prior instruments that generally assess accountability in broader employee populations or primary/secondary education, this instrument specifically addresses the gap related to higher education EFL instructors in a non-Western context. This represents a meaningful contribution to accountability research by providing a culturally relevant tool that captures dimensions often overlooked in global accountability measurement.

## 6. Conclusion

The results of the study showed that the developed questionnaire with 38 Likert-scale items and two components had acceptable validity and reliability. This study contributes to the literature on accountability in higher education by developing and validating a questionnaire that explores both internal and external accountability among Iranian EFL university instructors. The findings underscore the importance of balancing personal responsibility with external pressures, particularly in contexts with strong institutional and societal expectations. By recognizing the complexity of accountability, educational institutions can better support their instructors, fostering a more balanced and effective teaching environment that benefits both educators and students. The findings of this study have several implications for the design of professional development programs and policy reforms aimed at enhancing accountability among EFL instructors. First, institutions should aim to strike a balance between internal and external accountability. While external pressures, such as evaluations and institutional expectations, are necessary for maintaining academic standards, they should not be so overwhelming that they undermine instructors' autonomy or intrinsic motivation. Institutions could consider adopting more flexible and

supportive evaluation systems that focus on formative feedback rather than punitive measures. Additionally, the study emphasizes the importance of fostering internal accountability through professional development programs. Such programs could focus on enhancing instructors' self-reflection, ethical decision-making, and commitment to continuous improvement. Encouraging instructors to align their values with institutional goals can foster a greater sense of ownership and satisfaction in their work. This developed questionnaire can be employed as an effective tool for measuring the amount of internal and external accountability among Iranian university instructors for the purpose of boosting their professional development and success in the workplace. While this study provides valuable insights, it has certain limitations. The focus on Iranian EFL instructors means that the findings may not be directly applicable to instructors in other cultural or educational contexts. Future studies could adapt the questionnaire to different countries or educational settings to explore the universality of the accountability dimensions identified in this study. Moreover, qualitative methods, such as interviews or focus groups, could be used in future research to gain a deeper understanding of the experiences and challenges that instructors face regarding internal and external accountability.

#### Authors Contributions

All the authors have participated sufficiently in the intellectual content, conception, and design of this work or the analysis and interpretation of the data (when applicable), as well as the writing of the manuscript.

#### Availability of data and materials

The data that support the findings of this study are available from the corresponding author, upon reasonable request.

#### Conflict of interest

The author states that there is no conflict of interest.

## References

- Adamovic, M. (2023). From fair supervisor to satisfied employee: a comparative study of six organizational justice mechanisms. *Journal of Managerial Psychology*, 38(8), 576-596.
- Algazo, F. A. & Ibrahim, S. (2024). University governance and accountability. *Asian Journal of Research in Education and Social Sciences*, 6 (2), 526- 535.
- Anderson, J. A. (2005). *Accountability in Education*. NY: International Institute for Educational Planning.
- Aniagboso, I. A. (2019). Accountability in education management: A tool for efficiency and effectiveness in educational goal attainment. *International Journal of Institutional Leadership, Policy and Management*, 1(2), 313-325.
- Ansell, N. (2015). Shaping Global Education: International Agendas and Governmental Power. *International Development Planning Review*, 37 (1), 7- 16.
- Dangara, U. Y. (2016). Accountability in Education: An Imperative for Service Delivery in Nigerian School Systems. *Akwanga Journal of Education and Research*, 1 (1), 264- 272.
- Dimitrov, D. M. (2012). *Statistical methods for validation of assessment scale data in counseling and related fields*. American Counseling Association.
- Dubnick, M. (2014). *Accountability as a Cultural Keyword*. Oxford University Press.
- Editorial Projects in Education Research Center. (2004). *Accountability*. Education Week. Retrieved from <http://www.edweek.org/ew/issues/accountability/>
- Edmonton, E. (2005). *Accountability in Education*. Eighty-Eighth Annual Representative Assembly Handbook. 21- 23.
- George, T. (2023). *Mixed methods research: definition, guide & examples*. Scribbr. Retrieved August 5, 2024, from <https://www.scribbr.com/methodology/mixed-methods-research/>
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate Data Analysis* (8th ed.). Cengage Learning.
- Hoy, W. & Miskel, C. G. (2008). *Educational Administration: Theory, Research and Practice* (8<sup>th</sup> edition). New York, N. Y.: McGraw-Hill International Edition.
- Hurley, N., Lu, D., & Hurley, R. (2015). An Investigation of the Values and Attitudes of Teachers Toward Teacher Accountability in China and Canada. *Us- China Education Review*, 5 (10), 619- 630.
- Ingram, R. T. (2004). *Testimony to the national commission on accountability in higher education*. Washington, D.C.
- Kanika. (2016). Teachers' accountability: key to quality education. *International Journal of Advanced Research in Education and Technology*, 3 (1), 53- 54.
- Küçükbere, R., & Balkar, B. (2021). *Teacher accountability for teacher occupational professionalism: The effect of accountability on occupational awareness with the mediating roles of contribution to organization, emotional labor, and personal development*. Retrieved from <http://dx.doi.org/10.7160/eriesj.2021.140304>.
- Leveille, D. E. (2006). *Accountability in higher education: a public agenda for trust and cultural change*. Center for Studies in Higher Education. University of California, Berkeley.
- Nakpodia, E.D. & Okeimute, AR. (2011). Teachers' accountability in Nigeria's education system: Perception of teachers and administrators in Delta State. *International NGO Journal* 6 (7), 152-158.

- National Open University of Nigeria. (2008). *Responsibility and Accountability in Education Management*. Lagos: National Open University of Nigeria.
- Okoroma, N. S. (2007). *Perspectives of Educational Management, Planning and Policy Analysis* (2<sup>nd</sup> edition). Port Harcourt: Minson Publishers.
- Poole, M. (2011). *The relationship between external accountability policy and internal accountability: A cross-state analysis of charter and traditional public schools*. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/>.
- Rahmatollahi, M. & Mohamadi Zenouzagh, Z. (2021). *Language Testing in Asia*, 11 (11), 1- 21.
- Risakotta, K. A. & Akbar, R. (2018). The Effect of Internal and External Accountability, Job Motivation, and Education on Local Government Officials' Performance. *Journal of Indonesian Economy and Business*, 33 (3), 257- 272.
- Rodriguez, L. (2015). Educational accountability: high and low points of its implementation and challenges for Latin America. *ESTUDIOS SOBRE EDUCACIÓN*, 29, 191-213.
- Rosenblatt, Z. (2017). Personal accountability in education: measure development and Validation. *Journal of Educational Administration*, 55 (1), 18 – 32.
- Sheila, P. (2014). *The Hidden Power of Internal Accountability to Build Success That Endures: A Paradigm Shift*. Retrieved from <http://www.charterschooltools.org/tools>.
- Smith, W. C. & Benavot, A. (2019). Improving Accountability in Education: The Importance of Structured Democratic Voice. *Asia Pacific Education Review*, 20 (2), 193- 205.
- Tabachnick, B., & Fidell, L. (2013). *Using Multivariate Statistics*. Boston, MA: Pearson Education Inc.
- UNESCO. (2017a). *Education 2030: Incheon declaration and framework for action*. Paris: UNESCO.
- Yi Hawa, Y. (2021). *What works depends: teacher accountability policy and sociocultural context in international large-scale surveys*. Retrieved from <https://www.tandfonline.com>.

**Appendix A: EFL University Instructors' Internal and External Accountability Questionnaire**

**B: Instruction**

Please choose one of the choices given to state to what extent you agree with the following statements about your job as a teacher:

Not really / To a minor extent / a moderate extent / To a great extent / a very great extent

1                      2                      3                      4                      5

**Section I: Internal Accountability**

	<b>In my work as an English teacher, it is my duty to .....</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
1	achieve my teaching objectives and goals.					
2	reflect on my teaching to understand the extent to which I reached my goals.					
3	to be responsible for the consequences when students do not meet the expectations.					
4	act by my inner moral standards.					
5	act by professional ethical principles such as truth and values.					
6	teach in the best way possible to achieve optimal learning.					
7	learn from the work of outstanding colleagues.					
8	have a positive outlook towards the students' development.					
9	change my teaching methods based on the feedback I receive from students.					
10	ask colleagues and managers for feedback on my teaching.					
11	develop myself professionally (training sessions, workshops, seminars, conferences, etc.).					
12	encourage a sense of hard work among students.					
13	provide maximum learning opportunities.					
14	give motivation to students.					
15	assess students' performance in classes.					
16	introduce various resources (books, websites, applications) to improve students' performance.					
17	have a good rapport with all students.					
18	behave patiently and equally.					
19	provide students with the materials (books, slides, flashcards, charts,...) they need.					
20	help students improve their academic achievement.					

**Section II: External Accountability**

	<b>In my work as an English teacher, it is my duty to .....</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
21	consider how various parts of the course fit together.					
22	lower the pressure exerted by the manager or parents on me.					
23	increase the local authority.					
24	feel responsible towards my colleagues.					
25	be accountable to the manager.					
26	be accountable towards parents.					
27	be accountable towards the community.					
28	give the school management a report on the extent to which i achieve my goals at work.					
29	be open to parents' ideas and criticisms.					
30	be open to the managers' ideas and criticisms.					
31	have respectful behavior towards colleagues.					
32	help fulfill the goals of the place in which I am teaching.					
33	keep in touch with students' parents.					
34	inform parents about students' academic performance.					
35	make a relationship with parents based on trust.					
36	cooperate well with the administrative system.					
37	adhere to the principles and rules of the place in which I am teaching.					
38	teach students based on the moral standards and cultural issues of society.					