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Development and validation of Foreign Language Teacher Support Scale (FLTSS)

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Abstract

Teacher support, as an essential type of social support and an important antecedent of many key outcomes in L2 learning, can significantly contribute to foreign language achievement. Although teacher support has received considerable attention in education and educational psychology, it has drawn scanty attention in foreign language and applied linguistics research. Therefore, the present study aimed to fill in this research gap by developing and validating a domain-specific scale to measure the types of teacher support perceived by English as a Foreign Language (EFL) learners. An initial item pool was constructed based on some generic measures of teacher support and semi-structured interviews with EFL learners. Then, the items were submitted to a panel of experts and their content validity was checked using the content validity index. After a series of exploratory and confirmatory factor analyses, the final version of the Foreign Language Teacher Support Scale (FLTSS) measuring four types of perceived teacher support, namely, emotional, instrumental, appraisal, and informational, was prepared. The results of examining different types of validity and reliability indicated that the scale is suitable for measuring different types of perceived teacher support. Some suggestions for further research are presented.

Keywords: Teacher support, Social Support, English as a Foreign Language (EFL), Scale development, Scale validation

Introduction

Learning English as a Foreign Language (EFL), as an obligatory subject at school or university, is a demanding process which can create significant challenges and stress for learners (Zhang, 2019), lead to learners' decreased control over the learning situation, and trigger feelings of helplessness (Furnham & Marks, 2013). To overcome these difficulties, learners can benefit from a range of resources including, inter alia, social support, or the support provided by significant others such as their peers, family members, and teachers (Piechurska-Kuciel, 2013). Perceived social support refers to "an individual's subjective appraisal that people in their social network care for them and are willing to provide assistance when needed" (Ciarrochi et al., 2017, p. 1155) and can significantly contribute to learners' success in learning a foreign language (Wong, 2007; Piechurska-Kuciel, 2008).

To date, the research literature of EFL and applied linguistics has focused on several influential factors relating to learners, teachers, and their interactions to provide suggestions for better learning (e.g., Dewaele, 2007; Ellis, 2008). Teacher support, as an essential type of social support and an important aspect of classroom environment, has been considered as a key factor which can significantly contribute to foreign language learners' success to the extent that "successful learning may be very difficult, if not impossible" without sufficient teacher support (Piechurska-Kuciel, 2011, p. 84). EFL teachers can create a positive, supportive, and secure atmosphere by regulating emotional and social processes (Furrer et al., 2014) so that learners can "unload emotionally while experimenting with their English" (Sharp-Ross, 2011, p. 110).

Given the importance of teacher support in general and for learning English in particular (Piechurska-Kuciel, 2011) as well as the gap relating to the lack of due attention to this important construct in the research literature of applied linguistics (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021, 2022) and the unavailability of a domain-specific scale in L2 research, the present study is an attempt to develop and validate a teacher support scale which can measure the types of support perceived by learners during their foreign language learning process. First, a review of previous studies highlighting the benefits of teacher support is presented. Then, the social support model proposed by Tardy (1985) is introduced as the theoretical basis of the study. Next, details relating to the method (e.g., questionnaire development, procedure, and data analysis) are provided. Subsequently, the validity and reliability of the proposed instrument is examined. Finally, a brief discussion of the findings as well as the limitations, implications, and suggestions for further research are presented.

Literature review

Teachers, along with students and materials, are generally known as a principal element in language teaching and learning situations (Hutchinson & Waters, 1987; Richards, 1998). In fact, they play a highly important role in supporting students' learning progress via numerous interactions with them. Teacher-student relationship is considered as a highly important mechanism which can promote students' engagement and motivation (Reeve, 2012) as well as resilience (Hu, 2022) by providing a supportive and positive learning environment (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021, 2022). Teachers can build a secure and encouraging environment by establishing a constructive relationship with students and providing them with sufficient support (Furrer & Skinner, 2003).

A growing body of research in education and educational psychology has focused on teacher support and confirmed its substantial benefits for students. For example, research indicates that teacher support can significantly enhance students' academic achievement (Niehaus et al., 2012; Wong et al., 2018), motivation (Ahmed et al., 2010), learning strategy use (Yıldırım, 2012), creative thinking (Zhang et al., 2020), self-regulated learning (Perry et al., 2002), task persistence (Pakarinen et al., 2014), engagement (Klem & Connell, 2004; Mckeown & Taylor, 2022; Tas, 2016; Zhao et al., 2019), academic self-efficacy (Aldridge et al., 2012), concentration on learning activities (Boulton et al., 2012), and career development (Wong et al., 2022). In addition, several studies have shown that higher levels of teacher support could encourage learners to devote

considerable effort to their learning process, increase their self-confidence (Pianta et al., 2012; Ucar & Sungur, 2017), and cultivate positive attitudes to the subject-matter (Rice et al., 2013). Furthermore, teacher support can foster students' positive achievement emotions (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021; Lei et al., 2018), lower their negative achievement emotions (Lawman & Wilson, 2013), promote their task value and academic self-concept (Tas et al., 2019), assist them to fulfill teachers' expectations and reduce their undesirable and distractive behaviors (Wang & Eccles, 2013), decrease and resolve their uncertainties (Rosenfeld et al., 2000), promote their grit (Hejazi & Sadoughi, 2022), and enhance their belonging to the learning environment (Roeser et al., 1996; Saroughi & Cheema, 2022). Hence, it is highly important for teachers to foster and maintain a friendly and positive relationship with students and offer them substantial support to promote their achievement.

Despite the fact that "the language learner [is considered] as an active self-reflective agent of an interaction with the social context" (Taylor, 2013, p. 34), the literature on the role of the support provided by important others, particularly EFL teachers, is still relatively scanty and fragmented. Some studies have shown that teacher support can substantially enhance students' willingness to communicate (MacIntyre et al., 2001; Piechurska-Kuciel, 2015; Wei & Xu, 2022), which is considered as an essential aspect of foreign language success. In addition, teacher support can improve EFL learners' motivation (Bi, 2015; Piechurska-Kuciel, 2013; Vatankhah & Tanbakooei, 2014), enhance their learning experience and engagement (Sadoughi & Hejazi, 2021, 2022), promote their positive emotions (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021) and affective learning (Sun & Shi, 2022), and reduce their negative emotions such as anxiety by offering them a sense of security in the class (Abu Rabia, 2004; Huang et al., 2010; Jin et al., 2017; Lawman & Wilson, 2013; Piechurska-Kuciel, 2011). Additionally, the results of a study conducted by Ghaith (2002) indicated that perceived teacher support had a positive correlation with academic achievement and cooperative learning among EFL learners. Furthermore, sufficient support from EFL teachers can improve students' resilience, protect them from stressors, and help them overcome challenges and stressful tasks in learning a foreign language (Rahimi & Bigdeli, 2014). Last but not the least, considering the demanding and challenging nature of the lengthy process of learning a foreign language, teachers play a crucial role in maintaining learners' interest and sustaining their effort (Hejazi & Sadoughi, 2022), which can strongly predict learners' foreign language achievement (Piechurska-Kuciel, 2013).

Theoretical background

Teacher support is deeply rooted in the social support model. According to Tardy (1985), social support could be conceptualized as a multi-faceted construct with five main dimensions including direction (support given or received), description/evaluation (social support described or assessed), disposition (available or utilized), content (instrumental, informational, emotional, or appraisal support), and network of support. Social support could be provided by family members, peers, and teachers for learners (Steese et al., 2006).

This study focuses on EFL learners' perceived types of social support provided by their EFL teachers, which could have several important advantages for them (see [Introduction](#)

and [Literature review](#)). Generally speaking, teachers can provide different types of support including informational, emotional, instrumental, and appraisal support (Malecki & Demary, 2002). Informational support refers to teachers' provision of information, guidance, or advice on a particular content area. Emotional support is related to empathy, love, belonging, and trust. Instrumental support includes resources such as time, money, or skills. Finally, appraisal support refers to teachers' evaluative feedback and/or instructions for improving students' performance.

This study

Although perceived EFL teacher support has appeared as an important variable in previous studies (e.g., Bi, 2015; Huang et al., 2010; Piechurska-Kuciel, 2011, 2013), these studies have mainly used generic measures of teacher support (e.g., Aldridge et al., 1999; Chen, 2005; Griffith, 1995; Johnson & Johnson, 1983; Trickett & Moos, 2002), thus failing to capture the particular types of support which EFL teachers can provide for their learners in learning a foreign language. Considering the nature of teacher support as a malleable (Gehlbach et al., 2012) and multidimensional construct (Anderman et al., 2011), the present study is a response to Piechurska-Kuciel's (2017) call for further systematic research on teacher support in EFL learning. More specifically, this study is an attempt to develop and validate a comprehensive, domain-specific scale, known as Foreign Language Teacher Support Scale (FLTSS), for measuring perceived teacher support among EFL learners. The following research questions (RQs) motivated the present study:

RQ1: What is the factor structure of the FLTSS?

RQ2: Is the four-factor structure hypothesized for the FLTSS confirmed?

RQ3: How valid and reliable is the FLTSS?

Method

Questionnaire development

Following Dörnyei's (2010) steps for questionnaire development, an initial item pool was prepared by *borrowing questions* and *using qualitative, exploratory data*. More specifically, we first constructed an item pool by borrowing and adapting items from the existing teacher support scales (e.g., Patrick et al., 2007; Wong et al., 2018). All items were translated to Persian and back-translated to English by translation experts for guaranteeing the translation quality. In the next stage, semi-structured interviews were conducted with EFL learners to ascertain their views about different types of support they received from their teachers. Data saturation was accomplished when 18 students were interviewed. The interview data were analyzed following Dörnyei's (2007) approach. In doing so, the data were first transcribed and meticulously read several times in the pre-coding stage. Then, they were coded and recoded many times to extract "higher-order pattern codes" from "descriptive and low-inference" codes. It should be noted that since the theoretical framework of the study was based on social support model, only themes relating to social model of teacher support were retained while others were excluded. Furthermore, following Lynch (2003), we asked

two applied linguistics and two educational psychology experts familiar with analysis of interview data to crosscheck the coding and extraction of the themes. In this stage, 4 items were added to the item pool. All items were based on five-point Likert type scale, where a higher score indicated a higher level of perceived teacher support.

Next, clarity, content-relatedness, and format of the questionnaire items were checked and some minor modifications were made. Finally, the constructed questionnaire was submitted to a panel of 8 experts to assess the content validity of the items and total scale. Content validity index (CVI), as the most widely used method for checking content validity (Polit et al., 2007), was calculated for all items. In this stage, 8 items with CVI values lower than .7 were removed. The remaining items ($n=25$) had CVI values in the range of .75 to 1, which indicates the good content validity of the FLTSS.

Participants and procedure

The participants were Iranian EFL learners in Tehran (Iran) who were selected through convenience sampling from 12 language institutes. A total of 1150 questionnaires were administered among the EFL learners, and 1074 questionnaires were returned, which led to a response rate of 93.3%. It is noteworthy that 22 questionnaires with missing values on more than five items were excluded. Therefore, 1052 questionnaires completed by 530 male students (50.38%; mean age=15.55) and 522 female students (49.61%; mean age=15.78) were retained. In the first section of the questionnaire, the EFL learners first provided their demographic information (age and gender) and responded to the FLTSS items. The participants were given sufficient time to answer the questionnaire items.

To recruit the sample, several language institutes were first contacted and the aims of the study were explained for their managers. The managers granting their permission were further contacted to organize the data collection procedure. The questionnaire was administered in Persian, the EFL learners' native language, to ensure their maximum understanding. The anonymity and confidentiality of the collected data were guaranteed for the participants. In addition, learners' informed consent was obtained and they knew that their participation was completely voluntary. The exclusion criteria were incomplete questionnaires, unwillingness to continue the study, and refusal to give informed consent.

Data analysis

The data analysis was performed in three phases: constructing the item pool and descriptive analyses, exploratory factor analyses and item analysis, and confirmatory factor analyses. The data were examined for missing data, and the results indicated that the percentage of missing data per each variable was .1 to 1.2%. The results of Little's test indicated that the data were missing completely at random (MCAR) ($\chi^2_{(755)} = 723.054, P = .793$). Thus, multiple imputation using the EM algorithm was performed to replace the isolated missing values in the data set. Then, the univariate normality and multivariate normality were investigated by standardized scores and Mahalanobis Distance, respectively, which led to removal of no cases. Then, EFA was run to extract the underlying

factors and exclude the items with factor loadings less than .4. Finally, CFA was performed to verify the internal, external, convergent, and discriminant validity of the scale.

Results

Exploratory factor analysis (EFA) and item analysis

EFA using principal axis factoring (PAF) with Promax rotation was performed to determine the separate, underlying factors in the prepared 28-item questionnaire. Common factor methods such as PAF are preferred over Principal Component Analysis (PCA) to evaluate the underlying factor structure of psychological and educational measures (Fabrigar et al., 1999; Floyd & Widaman, 1995). Given the fact that the decision to choose the appropriate rotation method is mostly dependent on the theory/model of the study (Meyers et al., 2005), Promax rotation method was applied in this study. Kaiser-Meyer-Olkin measure of sampling adequacy ($KMO=.938 > .8$) and Bartlett's test of sphericity (chi-square = 13682.055, $df = 378$, $p < .001$) indicated that the assumptions underlying PAF were fulfilled. PAF with Promax rotation after 6 iterations resulted in four factors with eigenvalues greater than 1, accounting for 50.55% of the total variance. Following Raubenheimer's (2004) recommendation, three items with factor loadings less than 0.4 were removed. Thus, another round of factor analysis was needed (see Qin, 2003). No item was removed in the next EFA round, and the results of $KMO = .938 > .8$ and Bartlett's test of sphericity (chi-square = 12,776.532, $df = 300$, $p < .001$) were significant. After six iterations, four factors with eigenvalues greater than 1 (7.63 for factor 1, 2.54 for factor 2, 1.81 for factor 3, and 1.53 for factor 4) were extracted, which explained 54.12% of the total variance. To sum up, the EFA results indicated that all the four extracted factors were clearly identifiable. The retained 25 items as well as their mean, standard deviation, skewness, and kurtosis are shown Table 1.

Confirmatory factor analysis (CFA)

CFA was performed in Amos to evaluate the factor structure of the FLTSS, which showed good model fit. The model fit indices indicated that the proposed model has adequate fit ($\chi^2/df = 1.923$, $GFI=.961$, $AGFI=.953$, $CFI=.980$, $TLI=.978$, $NFI=.960$, $IFI=.98$, $RMSEA=.03$). GFI , $AGFI$, CFI , TLI , NFI , and IFI values greater than .90 and .95 are considered as acceptable and very good, respectively (Hu & Bentler, 1999). As for $RMSEA$, values below .08 are considered as acceptable (Bentler, 2007).

Internal validity

CFA was performed to examine the internal validity of the FLTSS. The construct validity of two models, namely, one-factor and four-factor models, was evaluated competitively. Model A (one-factor model) supposed that the whole scale was based on only one factor while Model B (four-factor model) distinguished between the latent factors such as emotional, instrumental, appraisal, and informational teacher support.

Based on Table 2, model A did not have good fit to the data. However, the hypothesized model B had a good fit with the empirical data, and all factor loadings were larger than .66. Confirmatory factor analyses corroborated the four-factor structure by

Table 1 Results of EFA and descriptive statistics for the FLTSS items

| Item no. | Factor 1 | Factor 2 | Factor 3 | Factor 4 | h ² | M | SD | Skewness | Kurtosis |
|----------|----------|----------|----------|----------|----------------|------|------|----------|----------|
| 24 | .873 | | | | .749 | 3.73 | 1.20 | -.64 | -.55 |
| 22 | .825 | | | | .630 | 3.34 | 1.34 | -.28 | -.99 |
| 23 | .811 | | | | .683 | 3.67 | 1.24 | -.62 | -.64 |
| 21 | .766 | | | | .541 | 3.49 | 1.33 | -.44 | -.98 |
| 25 | .763 | | | | .567 | 3.53 | 1.34 | -.52 | -.93 |
| 19 | .751 | | | | .612 | 3.92 | 1.10 | -.80 | -.28 |
| 20 | .687 | | | | .584 | 4.08 | 1.04 | -.97 | .06 |
| 11 | | .791 | | | .585 | 4.13 | .90 | -.72 | -.40 |
| 7 | | .735 | | | .513 | 4.14 | .88 | -.74 | -.28 |
| 8 | | .722 | | | .569 | 4.17 | .94 | -.89 | -.16 |
| 10 | | .698 | | | .495 | 3.97 | .92 | -.55 | -.55 |
| 6 | | .693 | | | .488 | 3.92 | .93 | -.44 | -.69 |
| 9 | | .682 | | | .459 | 3.97 | .90 | -.46 | -.70 |
| 12 | | .654 | | | .476 | 3.87 | .95 | -.37 | -.87 |
| 13 | | | .766 | | .549 | 3.80 | 1.02 | -.48 | -.72 |
| 18 | | | .723 | | .492 | 3.67 | 1.00 | -.26 | -.77 |
| 14 | | | .712 | | .502 | 3.75 | 1.03 | -.50 | -.54 |
| 15 | | | .703 | | .530 | 3.62 | 1.06 | -.33 | -.68 |
| 17 | | | .679 | | .494 | 3.52 | 1.08 | -.20 | -.85 |
| 16 | | | .661 | | .447 | 3.71 | 1.01 | -.34 | -.68 |
| 2 | | | | .780 | .558 | 3.76 | .95 | -.39 | -.60 |
| 1 | | | | .768 | .572 | 3.75 | .93 | -.38 | -.41 |
| 5 | | | | .689 | .495 | 4.00 | .96 | -.71 | -.22 |
| 3 | | | | .680 | .468 | 3.69 | .92 | -.19 | -.76 |
| 4 | | | | .642 | .473 | 3.99 | .97 | -.62 | -.48 |

Extraction method: PAF analysis; Rotation method: Promax with Kaiser normalization, four factors extracted

Table 2 Summary of model fit statistics for the one-factor and four-factor models

| Model | χ^2 | df | AIC | GFI | CFI | RMSEA | 90% CI for RMSEA | |
|-----------------------------|----------|-----|-------|----------|-----|-------|------------------|--------------|
| One-factor model (model A) | 5923.311 | 275 | 21.53 | 6022.832 | .53 | .55 | .14 | (.137, .143) |
| Four-factor model (model B) | 517.212 | 269 | 1.92 | 629.212 | .96 | .98 | .030 | (.026, .033) |

distinguishing between different types of teacher support (i.e., emotional, instrumental, appraisal, and informational).

In addition, to further examine the internal validity, inter-correlations between the four types of teacher support were calculated. Students perceiving more support in any of the four sub-scales reported higher levels of support in other sub-scales. To conclude, the inter-correlations among the four sub-scales confirmed the internal validity of the FLTSS.

External validity

Gender differences were calculated as a measure of external validity. Multiple analysis of variance (MANOVA) was performed to investigate the mean level differences between female and male students in different sub-scales. Interestingly, the only significant

gender difference was related to emotional perceived teacher support as female EFL learners ($M=19.73$, $SD=3.54$) reported more emotional teacher support than male EFL learners ($M=18.64$, $SD=3.75$, $F_{(1, 1050)}=23.66$, $p<.001$). It should be noted that there were no significant differences between the two genders in terms of other types of teacher support.

Convergent validity

The convergent validity of the FLTSS was examined to verify the validity of each subscale. Based on Table 3, the model in each subscale has a good fit with the data, which shows that the data were suitable for convergent validity analysis.

Discriminant validity

Discriminant validity was examined by two common methods including Fornell and Larcker's criterion and heterotrait-monotrait (HTMT) ratio using SmartPLS software (version 3.2.9). In the first method, i.e., the Fornell and Larcker's criterion, when the square root of the average variance extracted (AVE) value of each component is higher than the correlation coefficient between the variables, the discriminant coefficient between the variables would be strong (Hair et al., 2010). As can be seen in Table 4, the

Table 3 Convergent validity, reliability, and model fit of the FLTSS

| | Items | Convergent validity | | | | | Model fit indicators | | | | |
|-------------------------------|-------|---------------------|------|-----|-----------------------|----------|----------------------|-------------|------|------|-------|
| | | λ | p | AVE | Composite reliability | α | r_{it} | χ^2/df | P | CFI | RMSEA |
| Emotional teacher support | 1 | .75 | .000 | .60 | .88 | .83 | .67 | 2.76 | .017 | .99 | .041 |
| | 2 | .73 | .000 | | | .66 | | | | | |
| | 3 | .68 | .000 | | | .61 | | | | | |
| | 4 | .68 | .000 | | | .61 | | | | | |
| | 5 | .70 | .000 | | | .63 | | | | | |
| Instrumental teacher support | 6 | .69 | .000 | .57 | .90 | .87 | .64 | 2.45 | .002 | .99 | .037 |
| | 7 | .70 | .000 | | | .65 | | | | | |
| | 8 | .75 | .000 | | | .69 | | | | | |
| | 9 | .67 | .000 | | | .62 | | | | | |
| | 10 | .70 | .000 | | | .65 | | | | | |
| | 11 | .75 | .000 | | | .70 | | | | | |
| Appraisal teacher support | 12 | .69 | .000 | | | .63 | 2.88 | .002 | .99 | .042 | |
| | 13 | .73 | .000 | .58 | .89 | .85 | | | | | .67 |
| | 14 | .70 | .000 | | | .64 | | | | | |
| | 15 | .73 | .000 | | | .66 | | | | | |
| | 16 | .66 | .000 | | | .60 | | | | | |
| | 17 | .70 | .000 | | | .64 | | | | | |
| Informational teacher support | 18 | .69 | .000 | | | .64 | 2.49 | .003 | .99 | .038 | |
| | 19 | .78 | .000 | .67 | .93 | .91 | | | | | .74 |
| | 20 | .75 | .000 | | | .71 | | | | | |
| | 21 | .72 | .000 | | | .69 | | | | | |
| | 22 | .78 | .000 | | | .75 | | | | | |
| | 23 | .83 | .000 | | | .78 | | | | | |
| | 24 | .86 | .000 | | | .81 | | | | | |
| | 25 | .74 | .000 | | | .71 | | | | | |

Table 4 Fornell-Larcker's criterion and HTMT ratios with 95% confidence interval

| Latent constructs | Emotional TS | Instrumental TS | Appraisal TS | Informational TS |
|-------------------|--------------|-----------------|------------------|------------------|
| Emotional TS | .779 | .395(.330,.462) | .396(.330, .462) | .240(.171, .307) |
| Instrumental TS | .341 | .760 | .457(.380, .523) | .458(.393, .519) |
| Appraisal TS | .338 | .398 | .764 | .460(.389, .530) |
| Informational TS | .215 | .415 | .413 | .820 |

The values (in bold) on the diagonal are the square root of AVE values. The values below the diagonal show the correlations between the constructs. The values above the diagonal indicate the HTMT ratios with 95% CI shown in parentheses

AVE square roots for each construct are higher than the correlation between the constructs (off-diagonal), which indicates the discriminant validity of each construct.

Furthermore, HTMT based on multitrait-multimethod (MTMM) matrix was employed to check the discriminant validity. HTMT values lower than .85 demonstrate discriminant validity (Kline, 2011). In addition, the bootstrap procedure was run with confidence interval to examine whether it includes one. Confidence intervals including the value one indicate the lack of discriminant validity while those not including the value one show distinctiveness of the constructs. Based on Table 4, since all HTMT ratios are lower than .85 and the confidence intervals (shown in parentheses) do not contain the value one, the FLTSS has discriminant validity.

Reliability

The Cronbach alpha coefficients of different sub-scales ranged from .83 to .91. Furthermore, part-whole corrected item-total correlations for all items were higher than .5 (see Table 3), which is considered very good (Bortz & Döring, 2006). Therefore, all sub-scales of the FLTSS have sufficient reliability.

Discussion

Teachers play an undeniably crucial role in language teaching programs by providing their learners with essential support, which can promote their grit (Hejazi & Sadoughi, 2022), L2 willingness to communicate (MacIntyre et al., 2001; Wei & Xu, 2022), motivation (Bi, 2015; Piechurska-Kuciel, 2013), engagement (Sadoughi & Hejazi, 2021, 2022), positive achievement emotions (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021), learning experience (Sadoughi & Hejazi, 2022), and foreign language achievement (Piechurska-Kuciel, 2013) and reduce their anxiety (Jin et al., 2017). However, no domain-specific scale is available to measure the types and amounts of support they can provide for learners. Therefore, in response to the necessity for further systematic research on teacher support in learning English as a foreign language, the present study aimed to address the research gap relating to the need for a domain-specific scale to measure different types of perceived teacher support. To this end, a psychometrically valid and reliable measure called FLTSS was developed based on some generic measures of teacher support, semi-structured interviews with EFL learners, and experts' judgements and went through rigorous exploratory and confirmatory factor analyses.

The FLTSS developed in this study can measure four types of perceived teacher support, namely, emotional, instrumental, appraisal, and informational. Emotional support refers to learners' perception of their teachers when they are warm, encouraging,

approachable, and caring (Malecki & Demary, 2002). This type of support, which concerns empathy, love, belonging, and trust, is assessed by 5 items in this scale. When learners encounter challenges such as difficulty in doing their class/homework and feel disappointed, EFL teachers can emotionally support them by understanding their feelings, being friendly with them, caring for their progress in learning English, and carefully listening to their concerns about learning English. Recent research indicates that emotional teacher support can play a crucial role in promoting adaptive learning outcomes such as L2 willingness to communicate (Wei & Xu, 2022), L2 grit (Hejazi & Sadoughi, 2022), engagement (Sadoughi & Hejazi, 2021, 2022), and motivated learning behaviour (Sadoughi & Hejazi, 2022).

The present study also showed that instrumental support, which is related to providing learners with resources such as time or skills, is another separate dimension of teacher support (7 items). This type of support is reflected by practical help (Suldo et al., 2009) and tangible support provided for learners when they are working on a difficult task or exercise (Semmer et al., 2008). Teachers can provide instrumental support for students by offering them sufficient help for learning English, fostering pair and group work in class, giving them opportunities to express their opinions, allocating adequate time for them, and making the classroom atmosphere and learning process fun. Past research have shown that instrumental support is positively related to intrinsic motivation (Federici & Skaalvik, 2014), positive emotions (Hejazi & Sadoughi, 2022; Sadoughi & Hejazi, 2021), and subjective well-being (Suldo et al., 2009) and negatively associated with anxiety (Federici & Skaalvik, 2014).

Another dimension of teacher support in FLTSS is appraisal support (6 items), which is related to teachers' evaluative feedbacks and/or instructions for improving students' performance (Malecki & Demary, 2002). This type of support helps learners monitor their learning process and regulate their efforts by interpreting teachers' feedbacks (Nicol & Macfarlane Dick, 2006). The evaluative nature of teachers' comments and suggestions about students' present and target levels of understanding and performance helps learners improve their learning process and outcomes. The key role of feedback for enhancing foreign language performance is highlighted in interaction hypothesis (Long, 1996). EFL teachers can provide their learners with appraisal support by giving them constructive feedback on their weaknesses, strengths, performance, and progress as well as talking with them about factors relating to their success or failure in learning English.

Finally, informational support, which refers to teachers' provision of information, guidance, or advice on a particular content area, is measured by 7 items of the FLTSS. EFL teachers can provide learners with this type of support through different ways such as introducing extra resources and materials (Zare-ee & Hejazi, 2018), offering good examples and clear explanations, and providing them with useful guidelines for improving their English. More specifically, this type of support is considered as a good scaffolding through which teachers can guide learners during the course of their studies to adopt better strategies for promoting their language learning process.

The results of previous studies on gender differences in terms of perceived teacher support are inconclusive. For example, while some studies (e.g., Bokhorst et al., 2010) showed that female learners could perceive higher levels of teacher support, others (e.g., Thompson & Austin, 2010) found that male learners could receive more

encouragement and eye contact from their teachers and thus perceive higher levels of teacher support. In the present study, the MANOVA results for gender differences as a measure of external validity showed that female learners perceived significantly higher levels of emotional teacher support. This could be justified by considering the fact that girls can make stronger emotional investments in their relationships with teachers due to traditional sex-role norms and perceive higher levels of teacher support (Piechurska-Kuciel, 2013). It should be noted that the measurement model suggested in this study had good model fit with the empirical data collected from both female and male EFL learners.

Conclusion

The FLTSS developed and validated in this study could be administered as a valid and reliable instrument to assess EFL learners' perceived emotional, instrumental, appraisal, and informational teacher support, which can help better accommodate their need for different types of support by providing useful guidelines for EFL teachers to develop effective classroom interventions. In this way, teachers can help EFL learners reduce their frustration in learning English and enhance their learning experience, willingness to communicate, positive emotions, grit, and motivation, engagement, and performance. Additionally, given the fact that EFL teachers play an undeniably important role in learning and teaching situations and that teacher support is an important antecedent of many key outcomes in education and educational psychology (see [Introduction](#) and [Literature review](#)), researchers may use this scale as a research tool to measure EFL learners' perceived teacher support and explore its effects on other variables as well as its possible relationship with them.

Limitations and suggestions for further research

The present study had some limitations. The participants were selected through convenience sampling. The FLTSS was built based on adaptation of items from some generic teacher support measures and results of semi-structured interviews. Future studies can use stimulated recall and think-aloud protocol to further consider the four types of perceived teacher support investigated in this study.

The scale developed in the current study was based on *social support model* (Tardy, 1985). Therefore, it is suggested that future studies focus on teacher support from other perspectives such as self-determination theory (SDT) based on which teachers can provide students with different types of support such as autonomy and emotional support. In addition, given the undeniable role of gender in educational research (Pahlke & Goble, 2015), future studies can take into account not only students' gender but also teachers' gender to check the invariance of the FLTSS developed in this study. Since the FLTSS was developed and validated among language learners in institutes in Iran as an EFL context with its own educational, cultural, socioeconomic, and political features, future studies can explore the psychometric properties of the scale in high schools and university settings in other EFL or English as a Second Language (ESL) contexts. Future studies can measure perceived teacher support across different

English language proficiency levels (e.g., pre-intermediate and advanced) as well as productive skills (speaking and writing) and receptive skills (listening and reading) in EFL learning. Last but not the least, future research can design effective interventions to improve teachers' skills for providing different types of teacher support and examine their effects on key educational outcomes.

Appendix

Foreign Language Teacher Support Scale (FLTSS)

1. My English teacher really understands my feelings.
2. My English teacher does not take my feelings seriously. (R)
3. My English teacher carefully listens to my concerns about learning English.
4. My English teacher cares for my progress in learning English.
5. I feel that my English teacher is friendly.
6. My English teacher gives extra help when I need it.
7. My English teacher gives me opportunities to express opinions.
8. My teacher devotes enough time to talk about issues related to learning English.
9. My English teacher makes English learning very fun.
10. My English teacher facilitates group and pair work.
11. My English teacher devotes sufficient time to check my answers.
12. My English teacher is available when I need his/her assistance.
13. My English teacher tells me about how well I am doing in class.
14. My English teacher gives me feedback on my strengths and weaknesses.
15. My English teacher talks about my progress with me.
16. My English teacher provides me with valuable feedback on my performance.
17. My English teacher talks with me about factors relating to my success or failure in learning English.
18. My English teacher helps me identify my weaknesses and strengths.
19. My English teacher provides me with more examples/explanations when I do not understand a point.
20. My English teacher tells me what I need to do to learn English better.
21. My English teacher tells me how to use extra resources to improve my English.
22. My English teacher provides me with sufficient information about the application of English in academic and professional settings.
23. My English teacher gives me a clear picture of the English language learning process.
24. My English teacher gives me information on how to successfully learn English.
25. My English teacher provides me with valuable information on how to use different teaching materials (e.g., electronic dictionaries, websites, audio and video clips).

Abbreviations

| | |
|-------|--|
| EFL | English as a Foreign Language |
| FLTSS | Foreign Language Teacher Support Scale |
| CVI | Content validity index |
| MCAR | Missing completely at random |

| | |
|--------|---|
| EFA | Exploratory factor analysis |
| CFA | Confirmatory factor analysis |
| PAF | Principal axis factoring |
| PCA | Principal Component Analysis |
| KMO | Kaiser-Meyer-Olkin |
| GFI | Goodness of Fit Index |
| AGFI | Adjusted Goodness of Fit Index |
| CFI | Comparative Fit Index |
| TLI | Tucker Lewis Index |
| NFI | Normed Fit Index |
| IFI | Incremental Fit Index |
| RMSEA | Root mean square error of approximation |
| MANOVA | Multiple analysis of variance |
| HTMT | Heterotrait-Monotrait |

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Availability of data and materials

Data and materials could be made available upon reasonable request.

Declarations

Competing interests

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