



## Classroom Interaction, Learner Autonomy, Pedagogical Scaffolding, and Learner Identity: A Structural Equation Modelling Approach

Fatemeh Zolfaghari \*

Naser Rashidi \*\*

### Abstract

The newly demanded language learning methodologies can exhibit their maximum efficiency if they are monitored meticulously and regularly in their particular contexts of application. The prerequisite would be putting educational programs in the spotlight and identifying the decisive elements of each learning context. Accordingly, based on the solicited responses from 638 students, in this study, a scale was developed and validated to inquire into the participants' perceptions about the extent to which classroom interaction, learner needs, learner autonomy, pedagogical scaffolding, and learner identity could regulate learning activities in Iranian academic contexts. Importing the survey results to AMOS 22, we tested and validated a hypothetical model of the addressed variables. The validated model supported the interwoven relationships of the study variables and the pivotal role of interaction in regulating, predicting, shaping, and explaining the behaviors of other variables. The results can raise awareness of the sociocultural manifestations of classroom interaction, learner needs, learner autonomy, pedagogical scaffolding, and learner identity in Iranian TEFL programs and encourage highly positive developments and generally accepted practices to improve the status quo. Decision-makers and stakeholders can also gain a detailed insight into how sociocultural variables interrelate and accordingly coordinate their social and educational policies and measures.

**Keywords:** Classroom Interaction, Learner Autonomy, Learner Identity, Learner Needs, Pedagogical Scaffolding

Received: 24/09/2022 Accepted: 11/11/2023

\* Assistant Professor, the Center of English Language at Isfahan University of Technology, fzolfaghari@iut.ac.ir, Corresponding Author

\*\* Professor, Shiraz University, nrashidi@rose.shirazu.ac.ir

#### How to cite this article:

Zolfaghari, F., & Rashidi, N. (2023). Classroom Interaction, Learner Autonomy, Pedagogical Scaffolding, and Learner Identity: A Structural Equation Modelling Approach. *Teaching English as a Second Language Quarterly (Formerly Journal of Teaching Language Skills)*, 42(1), 147-183. doi: 10.22099/tesl.2022.44896.3144



COPYRIGHTS ©2021 The author(s). This is an open access article distributed under the terms of the Creative Commons Attribution (CC BY 4.0), which permits unrestricted use, distribution, and reproduction in any medium, as long as the original authors and source are cited. No permission is required from the authors or the publisher.

Social and cultural variables have been the subject of many research studies ever since the sociocultural theory (SCT) was proposed (John-Steiner & Mahn, 1996) in the early 20th century. Since then, the ever-increasing number of sociocultural studies and the ever-emerging educational technologies have dramatically boosted teaching and learning efficiency. Targeting higher forms of human mental functioning and knowledge, numerous studies (e.g., Aljaafre & Lantolf, 1994; Danli, 2011; Davin & Kushki, 2021; Donato, 1994; Gillani, 2003; Ivone & Jacobs, 2022; King, 1997; Mao & Lee, 2022; Méndez Picazo et al., 2021; Molenaar et al., 2011; Rambe, 2012; Yaghoubi & Farrokh, 2022) have observed and stipulated the core tenets of SCT. However, the demands of the burgeoning population of foreign language learners bring potential research opportunities to meet the needs in the general interest of educational programs. Attending to sociocultural principles to pore over the ruling conditions and shifting attention from theory-based learning conceptualizations to individual and collective relations in day-to-day classroom practices are thereby of significant importance (Sawyer, 2012).

The point of departure between sociocultural and earlier cognitive and psycholinguistic investigations is the former's attempts to position linguistic and mental development in the broader social and cultural contexts (Gao, 2021). When dealing with realizations of sociocultural theory in language learning and teaching contexts, several practical issues arise. As has been phrased by sociocultural philosophers, learning and development emerge according to the demands of each specific context (Hall, 1997). The context-bound nature of learning and development, by implication or otherwise, points to the inadequacy of prescribing an a priori set of activities for different contexts (Rymes, 2016). In particular, due to the interconnections of context, language, and communication, context-specific investigations can gain even more importance in TEFL programs that address the needs of the target audience with a variety of social and cultural backgrounds (Rymes, 2016; Wang & Munday, 2021). It is also likely that in different TEFL contexts, language learners exhibit various levels of progress partly due to their distinct cultural and social heritage and potential changes in the contributory factors in achieving the desired learning outcomes (Rymes, 2016).

The available literature has advanced the micro and macro analysis of the sociocultural contexts by attending to the contributions of individual and institutional factors to language users' high levels of achievement (Amin & Rahimi, 2022; Davin & Kushki, 2021; Ivone & Jacobs, 2022; Mao & Lee, 2022; Mehranfar & Tahririan, 2022; Shirazifard et al., 2022; Yaghoubi & Farrokh, 2022). For example, in their analysis of sociocultural variables,

Yaghoubi and Farrokh (2022) investigated the role of sociocultural conceptualizations of private speech on EFL learners' performance on reading comprehension tasks. They analyzed the effects of six types of private speech across test takers with different genders and proficiency levels and reported the positive roles of such tasks in promoting the internalization of the test takers' knowledge and activating their problem-solving potential. Davin and Kushki (2021) also highlighted the effects of interaction in regulating and balancing the workings of other variables in students' learning and cognitive development. Their study supported the increased metalinguistic awareness and its potential effects on increased grammar proficiency of language learners who had participated in interactions. Mao and Lee (2022) further reported the contribution of the feedback provided through the sociocultural practice of engagement to disclosing and enhancing the learning potentials of second language learners.

What is certain is the universally valid assumption that social and cultural experiences instantiate growth in learning and cognitive functioning. However, discussions on the processes underlying this growth, and their universal or context-bound nature are still in progress (Gauvain, 2005) as some issues have been left untouched. First, studies on ideological identities have largely pored over academic texts coupled with scant attention to knowledge producers as essential elements of the ideologically-driven contexts of meaning-making (Ivanic, 1998). Second, few studies have investigated the significance of identity in foreign language contexts (Taylor et al., 2013). Third, as most studies have taken the roles of internalization and mediation in learner identity development for granted, there is a need to address the interconnections of learner agencies and ideological identities (Deters, 2011). Fourth, concerning interaction, few studies at the national level have focused on students' and instructors' voices and their awareness of patterns of classroom interactions. Accordingly, as a relatively new line of research, this study probes into the current status of the TEFL context to bridge the above gaps. In this study, identity refers to the ways learners perceive and see themselves and their awareness of their strong and weak sides (Bignold, 2006). Scaffolding is any form of expert assistance so that junior learners can successfully perform their language learning tasks (Lantolf & Thorne, 2006). Learner autonomy points to the students' ability to decide on the most appropriate resources and artifacts for learning achievement and the type of support they need (Brammerts, 2003). The learner needs constitute the gap between the present and desired degrees of language users' affective, psychological, academic, and occupational achievement (Brindley, 1989; Richards, 2001) and as the last variable of this study, interaction is a two-way and reciprocal process (Dagarin,

2004; Robinson, 2005) in the sense of not just acting and reacting but a verbal or non-verbal way of discovering unknown information (Robinson, 2005).

As the core elements of the learning contexts, teachers and learners are social beings whose attainment of social goals can secure their survival in social settings. It is thus possible to trace shades of sociocultural tenets in every educational context (Zarate & Neuner, 1998). What follows summarizes the basic sociocultural principles governing language learning contexts.

### **Learning is Mediated**

The philosophy behind resorting to the notions of mediation and scaffolding is the world's inaccessibility to human beings and their need to employ culturally-constructed, physical, or psychological signs and tools for establishing indirect connections with the world and regulating mental activities (Harvey, 2011; Poehner, 2008). As Vygotsky (1978) put it, pedagogical scaffolding happens through interactions among learning partners. Shifting away from the commonly held banking view of learning and knowledge reception, the sociocultural view favors the mutual interactive influence of at least two entities or events on each other (Wagner, 1994). Through reciprocal classroom interactions, students and instructors can join open dialogues to discover new information (Robinson, 2005).

### **Language Mediates Learning: Language is the Tool of Tools**

The notion of language is one of the artifacts that connects individuals to social contexts (Valsiner & Rosa, 2007). Socioculturally speaking, language is not a priori system of lexicogrammatical elements and verbal representations of meaning but a series of communicative and cognitive activities mediated by semiotic resources and an emergent artifact to mediate other artifacts' (i.e., social connections) proper functioning (Lantolf, 2006; Ushakova, 1994). Given that meaning-making and learning as the ultimate goals of mediation reside in the social uses of language (Johnson, 2009), the choice of native or target language for mediation, however, is dependent on the task conditions and the communities that perform the tasks (Lantolf, 2006). The mediational role of language in human learning and development can even represent the traditional accounts of learning earlier than the sociocultural perspective (e.g., Swain's (2001) output hypothesis).

## Learning is Context-bound

The point of departure between sociocultural and earlier cognitive and psycholinguistic investigations is the former's attempts to position linguistic and mental development in the broader social and cultural contexts (Gao, 2021). When dealing with realizations of sociocultural theory in language learning and teaching contexts, several practical issues arise. As has been phrased by sociocultural philosophers, learning and development emerge according to the demands of each specific context (Hall, 1997). The context-bound nature of learning and development, by implication or otherwise, points to the inadequacy of prescribing a priori set of activities for different contexts (Rymes, 2016). In particular, due to the interconnections of context, language, and communication, context-specific investigations can gain even more importance in TEFL programs that address the needs of the target audience with a variety of social and cultural backgrounds (Rymes, 2016; Wang & Munday, 2021). It is also likely that in different TEFL contexts, language learners exhibit various levels of progress partly due to their distinct cultural and social heritage and potential changes in the contributory factors in achieving the desired learning outcomes (Rymes, 2016).

## Learner Subjectivities Matter

The sociocultural view favors a curriculum that facilitates the development of several subjectivities or agencies (Williams et al., 2007). The agency is a "socioculturally mediated capacity to act" (Ahearn, 2001, p. 112) and an overarching concept that encompasses different psychological processes or learner subjectivities such as autonomy, identity, needs awareness, and learning (van Lier, 1996, 2007). Each of these subjectivities could have its shape modified based on learners' newly developed insights, experiences, and self-concepts, imitation of available choices and models, and interactions with others within their membership communities (Devers, 2009; Feryok, 2013; Vygotsky, 1978).

The above assumptions signify the importance of examining sociocultural variables in foreign language learning contexts. The implication of such an analysis would be raising awareness of the current educational systems and where foreign language instructors and learners stand regarding the major contextual elements. An additional consequence would be the opportunities to develop systematic, albeit open-ended models which are per se prone to give orientations to the pursuit of knowledge and growth in educational contexts. However, in so far as the educational contexts are concerned, an important consideration is that plenty of sociocultural variables are at work to meet the expectations of learners, instructors, and

stakeholders. The inevitable conclusion is that an analysis of all variables lies beyond the scope of a single research study. Accordingly, following expert comments and their first top-rated variables, considering the results of the initial pilot studies, trying to perform a manageable in-depth analysis, and aiming to give an answer to the calls for more attention to contextual factors (e.g., King, 2012; Whaley & Noel, 2011) this study looks into the following research questions to see whether or not learner needs, ideological identities, learner autonomy, classroom interactions, and pedagogical scaffolding feed on each other in TEFL academic programs:

1. How can the relationships between learner identity, learner autonomy, pedagogical scaffolding, classroom interaction, and learner needs in TEFL contexts be described and modeled?
2. What is the current status of learner autonomy, learner needs, learner identity, pedagogical scaffolding, and classroom interaction in TEFL contexts?

### Method

The present researchers performed a structural equation modeling of the data collected from a questionnaire survey.

### Participants

Participants of this study consisted of male and female university students aged between 18 to 39 years old who met the considered criteria for conducting the study and voluntarily completed the questionnaires. Bachelor's students needed to have completed Language Teaching, Linguistics, and Language Testing courses to develop their attitudes regarding TEFL programs. There was no such criterion for M.A. and Ph.D. students as they were assumed to have enough experience to express their voices. Participants of the first pilot analysis of the questionnaire were 250 university students. Then, in the second pilot analysis, whose results were used for the main analysis as well, 638 students (486 BA, 112 M.A., and 40 Ph.D. students) at the University of Tehran, University of Isfahan, Shahid Bahonar University of Kerman, Allameh Tabatabaei University of Tehran, Iran University of Science and Technology, Sharif University of Technology, Shiraz University, Jahrom State University, University of Yazd, Lorestan University, Shahid Chamran University of Ahvaz, and Kahlij Fars University of Booshehr returned the questionnaires.

## Instrument

To collect the required data, we developed and validated a 5-point Likert scale questionnaire with 1 for *Strongly Disagree* and 5 for *Strongly Agree*. The questionnaire was in English. It started with a brief description of the study, a demographic data section asking questions about the respondent's age, gender, and affiliation, and ended with the main items. The validated version of the scale rested on learner autonomy (4 items), learner needs (5 items), ideological identity (5 items), classroom interaction (6 items), and pedagogical scaffolding (6 items).

Questionnaire development began with reviewing the currently available literature to detect the main sociocultural variables and then preparing the items in English. The researchers first developed a single 100-item questionnaire addressing 16 sociocultural variables that had been spotted in the available literature and could reflect the actual practice of numerous social and cultural elements in TEFL programs. Then, a sample of 250 students responded to the first version of the questionnaire and provided us with their suggestions for accommodating the items. Almost all the respondents complained about the considerable item quantity that could distract and exhaust them. The participants also expressed their differing attitudes towards language testing, linguistics, and language teaching courses, thus suggesting separate scales to deal with the specialized TEFL courses.

After considering the pilot feedback and refining the instrument, we then solicited expert opinions on the content validity of the questionnaire and narrowed down the scope of the study to the first five top-rated variables. The refined version of the scale consisted of 27 items about interaction, ideological identity, learner needs, learner autonomy, and pedagogical scaffolding. Eight experts approved content relevance and content coverage of the second version. They provided us with technical and specialized information regarding the content and wording of the items and suggested omission, revision, exclusion, and addition of some questions. In the next step, items were revised according to the expert opinions and piloted to 35 representative participants to obtain the overall consistency index. The overall Cronbach's alpha was .87. It showed a high level of consistency as it was above .60 as the moderate value of reliability (Dornyei, 2010). Also, the expert and pilot sample opinions helped us check how much the scale appeared effective for its assumed purposes.

For the construct validity of the scale, we conducted confirmatory factor analyses to calculate the related factor loadings and decide whether to keep, revise, or omit the items. For construct validity, factor analysis requires large samples (Pallant, 2007) to give the inter-correlations of the questionnaire items. In this study, the responses of 638 participants

provided input for the factor analysis. As the data met the assumptions for exploratory factor analysis, the 27-item scale on students' awareness of sociocultural elements in TEFL academic programs was subject to principal component analysis using SPSS version 22. The correlation matrix showed the presence of correlations of .3 and above. The KMO value was .77 which was above the suggested value of .6. Bartlett's Test of Sphericity was also significant ( $p = .00 < .05$ ), suggesting an appropriate dataset for extracting the underlying constructs. However, the scree plot (Fig. 1) did not show a clear break from the elbow:

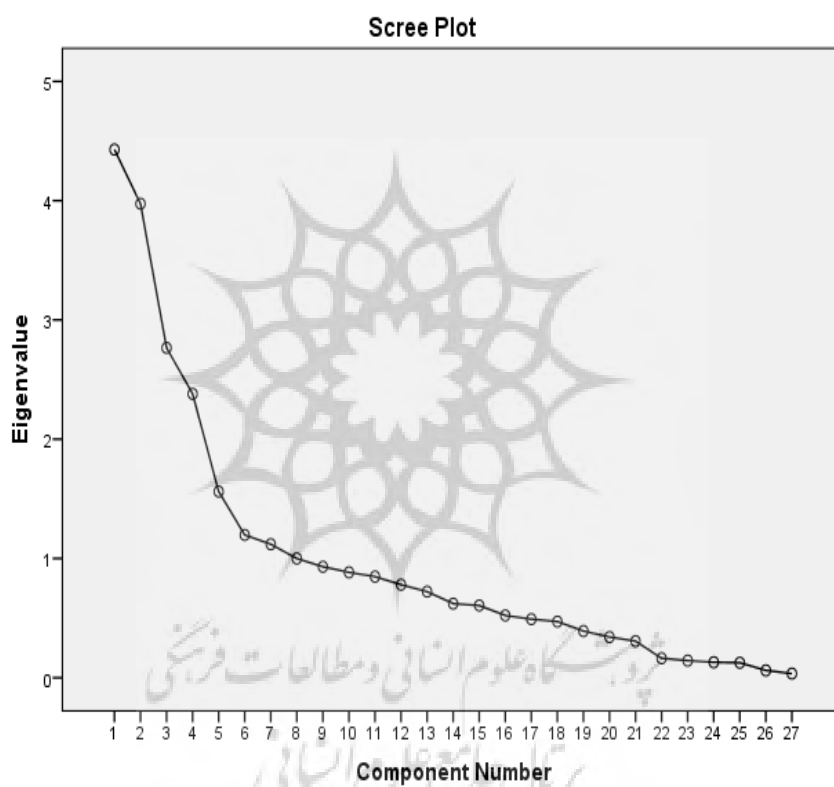


Fig. 1. The scree plot of the questionnaire items' eigenvalues

Hence, we checked Total Variances Explained and found 7 components with eigenvalues above 1 (Table 1):



Table 1

*Selected Output of Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings a
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	<b>4.43</b>	16.40	16.40	4.43	16.40	16.40	4.23
2	<b>3.97</b>	14.72	31.12	3.97	14.72	31.12	4.09
3	<b>2.77</b>	10.24	41.37	2.77	10.24	41.37	2.82
4	<b>2.38</b>	8.82	50.18	2.38	8.82	50.18	2.48
5	<b>1.56</b>	5.78	55.96	1.56	5.78	55.96	1.51
6	<b>1.20</b>	4.43	60.40	1.20	4.43	60.40	1.33
7	<b>1.12</b>	4.15	64.54	1.12	4.15	64.54	1.30
8	1.00	3.70	68.24				
9	.93	3.45	71.69				

پژوهشگاه علوم انسانی و مطالعات فرهنگی  
رتال جامع علوم انسانی

For a more exact estimation of the number of the factors underlying the scale, the actual eigenvalues from the principal component analysis and criterion ones from O'Conner's (2000) Parallel Analysis program were compared. Ultimately, five components with greater eigenvalues than their corresponding criterion values supported the assumption for factor extraction through confirmatory factor analysis (Table 2).

Table 2

*Comparison of Eigenvalues from PCA of Questionnaire and the Desired Values from Parallel Analysis*

Component	Actual Eigenvalue from PCA	The Desired Eigenvalues from PA	Decision
1	4.43	1.46	Accept
2	3.97	1.39	Accept
3	2.77	1.34	Accept
4	2.38	1.29	Accept
5	1.56	1.25	Accept
6	1.20	1.23	Reject
7	1.12	1.19	Reject

The 5-component solution explained 55.96% of the variance and the extracted components respectively accounted for 16.4%, 14.72%, 10.24%, 8.82 %, and 5.78% of the variance. Assuming some indirect relationships among the study variables, for a clear interpretation of the results, we decided on Oblimin rotation. The results showed some strong loadings for each of the components. Items 20, 22, 21, 19, 17, and 18 loaded strongly on component one (i.e., classroom interaction), and items 11, 12, 15, 13, 16, and 14 loaded strongly on component two (i.e., pedagogical scaffolding), items 6, 8, 9, 7, and 10 loaded strongly on component three (i.e., learner needs), items 3, 4, 1, and 2 loaded strongly on component four (i.e., learner autonomy) and items 23, 24, 25, 26, and 27 loaded strongly on component five (i.e., learner identity) (Table 3).

Table 3

*Pattern Matrix for Oblimin Rotation in the First Factor Analysis of the Questionnaire*

	Component				
	Interaction	Scaffolding	Needs	Autonomy	Identity
Q20	.980				
Q22	.940				
Q21	.937				
Q19	-.917				
Q17	-.618				

	Component				
	Interaction	Scaffolding	Needs	Autonomy	Identity
Q18	.428				
Q11		.922			
Q12		.919			
Q15		.863			
Q13		-.855			
Q16		-.642			
Q14		.640			
Q6			.841		
Q8			-.812		
Q9			-.770		
Q7			.675		
Q10			.558		
Q3				.884	
Q4				.877	
Q1				-.762	
Q2				.551	
Q5					
Q24					.658
Q23					.627
Q25					.396
Q26					.349
Q27					-.327

As Table 3 shows, item 5 did not load on any of the extracted components. Therefore, excluding item 5 from the analysis, another factor analysis was performed with 26 items. The results showed some strong loadings for each of the components. Items 19, 21, 20, 18, 16, and 17 loaded strongly on classroom interaction, items 10, 11, 14, 12, 15, and 13 satisfactorily explained pedagogical scaffolding, items 5, 7, 8, 6, and 9 loaded strongly on learner needs, items 3, 4, 1, and 2 loaded strongly on learner autonomy and items 22, 23, 24, 25, and 26 loaded strongly on learner identity (Table 4).

Table 4

*Pattern Matrix for Oblimin Rotation in the Second Factor Analysis of the questionnaire*

	Component				
	Interaction	Scaffolding	Needs	Autonomy	Identity
Q19	.98				
Q21	.94				
Q20	.94				
Q18	-.92				
Q16	-.62				

	Component				
	Interaction	Scaffolding	Needs	Autonomy	Identity
Q17	.43				
Q10		.93			
Q11		.92			
Q14		.87			
Q12		-.85			
Q15		-.65			
Q13		.63			
Q5			.84		
Q7			-.82		
Q8			-.77		
Q6			.67		
Q9			.57		
Q3				.88	
Q4				.87	
Q1				-.76	
Q2				.56	
Q22					.65
Q23					.64
Q24					.43
Q25					.35
Q26					-.34

The component correlation matrix also showed that the five extracted components did not correlate strongly, indicating their independence and appropriateness of defining them as separate components.

Table 5

*The Component Correlation Matrix in the Second Factor Analysis of the Questionnaire*

Component	Interaction	Scaffolding	Needs	Autonomy	Identity
Interaction	1.000	.031	.089	.012	-.010
Scaffolding	.031	1.000	-.031	-.069	.000
Needs	.089	-.031	1.000	.035	.080
Autonomy	.012	-.069	.035	1.000	.034
Identity	-.010	.000	.080	.034	1.000

### Data Collection Procedures

This study followed convenient sampling to collect the required data. Using social networking applications and email services, the electronic versions of the questionnaires were distributed among 824 students. From this group, six hundred thirty-eight students

voluntarily completed and returned the questionnaires, thus providing the input data for the structural equation modeling analysis.

### Data Analysis

First, one-sample t-tests were used to check the participants' levels of certainty about the practice of the addressed variables. Then, an SPSS 22 data file from the administration of the validated scale constituted the input for structural equation modeling (SEM) analysis. The collected data set did not contain any missing values, hence meeting the requirements for SEM analysis. Also, the confirmatory factor analysis, part of the questionnaire validation process, confirmed the construct validity of the data file, and this complied with the requirements for the measurement model in SEM analysis.

Within the next stage, we used AMOS version 22 and drew a schematic diagram and regressions paths among the study variables (i.e., the measurement model) to visualize the hypothetical model (i.e., the structural model) and checked model fitness for depicting the direct, indirect, and total effects of the variables on each other. Doing several trials and errors and applying modification indices, the best goodness of fit indices were obtained when scaffolding, identity, autonomy, and needs were the endogenous variables, and interaction was the only exogenous variable in the model (Fig. 2).

پژوهشگاه علوم انسانی و مطالعات فرهنگی  
پرتال جامع علوم انسانی

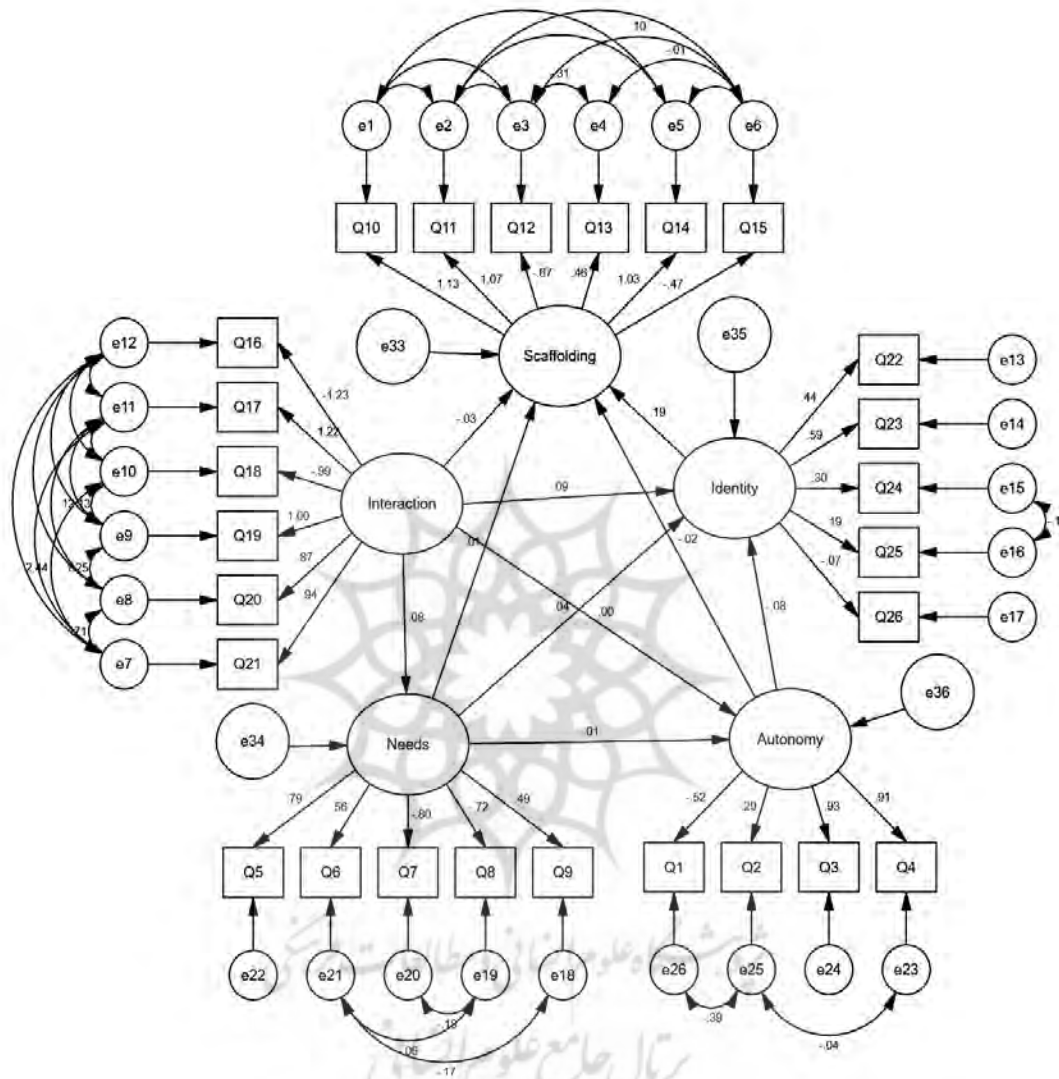


Fig. 2. SEM representation of the relationships among the study variables

Several indices served the requirements for validating the structural model. As Table 1 shows, the Chi-Square Value or the minimum discrepancy divided by its degree of freedom ratio (CMIN/DF) was less than three and was satisfactory. However, the P-value of the CMIN index was significant, indicating that the model could not be quite adequate for explaining the sample data. This value is highly dependent on sample size, and with large samples (i.e., with more than 200 participants), it may not appropriately estimate model fitness. Hence, most scholars ignore it and check other fit indices (Byrne, 2010).

Based on the available literature on SEM, the reported Goodness of Fit (GFI) and the Adjusted Goodness of Fit (AGFI) indices were above .90 and satisfactory. The Comparative Fit Index (CFI) was also satisfactory as it was above .95. Other frequently reported goodness of fit indices also approached the suggested thresholds (e.g., Root Mean Square Error of Approximation (RMSEA) < .05; PCLOSE > .09; [Normal Fit Index (NFI); Incremental Fit Index (IFI); Relative Fit Index (RFI); and Tucker-Lewis Index (TLI)] > .90).

Table 6  
*Goodness of Fit Measures for the Final Model*

Index	Current Level	Accepted Level	Evaluation
CMIN	P < .001	P > .05	Very good (sample size > 200)
CMIN/DF	2.345	< 3	Very good
GFI	.934	> .90	Very good
AGFI	.910	> .90	Very good
NFI	.939	> .90	Very good
IFI	.964	> .90	Very good
RFI	.924	> .90	Very good
TLI	.955	> .90	Very good
CFI	.964	> .90	Very good
RMSEA	.045	< .05	Very good
PCLOSE	.919	> .09	Very good

**Results**

Several one-sample t-tests were conducted to determine if the students' ratings for each of the questionnaire subscales were high, low, or neutral. Then, the average values of the responses to each of the questionnaire subscales were compared with a hypothetical mean value (M= 3).

**Analysis of Learner Autonomy**

The first 4 items of the questionnaire sought learners' perceptions about different ways autonomy was practiced in their TEFL courses. The learners were first expected to specify if they could help their instructors to make decisions about the appropriate learning activities (item1). In item 2, the learners' awareness of the pedagogical goals of the learning materials was sought. Item 3 asked about learners' ability to recall the previously learned contents without their instructors' assistance. Finally, item 4 was related to learners' ability to successfully transfer what they had learned in one task to

new tasks. In all TEFL courses and levels, the mean values of the autonomy subscale were significantly greater than 3 (Sig < .05) with large effect sizes ( $d \geq .8$ ) for most of the addressed courses. This indicated the acceptable power of the study to show that TEFL students had perceived significantly high levels of autonomy in TEFL academic programs.

Table 7  
*One Sample T-Test Results for Analyses of Learner Autonomy*

Respondents	Level	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
Students	BA	Testing	99	3.73	.37	19.7	.00	1.97	.66	.81
		Teaching	100	3.73	.37	20	.00	1.97	.66	.81
		Linguistics	100	3.79	.36	21.73	.00	2.19	.72	.86
	MA	Testing	82	3.71	.30	21.21	.00	2.37	.65	.78
		Teaching	79	3.81	.4	18.01	.00	2.02	.72	.9
		Linguistics	20	3.79	.33	10.76	.00	2.39	.63	.94
Students	Ph.D.	Testing	19	3.83	.44	8.19	.00	1.89	.62	1.04
		Teaching	22	3.63	.33	8.78	.00	1.91	.48	.77
		Linguistics	9	3.64	.22	8.69	.00	2.91	.47	.81

Note. Sig\*: Sig (2-tailed)

### Analysis of Learner Needs

Items 5 to 9 of the students' questionnaire revolved around learner needs and learner perceptions of how their needs were satisfied. The first item was about the availability of instructional resources such as instructors, video projectors, printers, and whiteboard markers. The second item asked for learners' perceptions of their instructors' knowledge of the learning contents. Item 7 had to do with the extent to which a mixture of theory and practice was considered in TEFL courses. Item 8 was about the extent to which learners' interest in learning was prompted in TEFL courses. Finally, item 9 was related to the clarity of what was expected of the students in their TEFL courses. Based on the results, the students had significantly negative attitudes regarding the satisfaction of their needs in almost all of their TEFL courses. The only exception was Ph.D. language teaching courses about which the students were not sure ( $p > .05$ ). Statistical power of the analyses



was also supported by Cohen's *d* values which were all above the moderate level ( $d > .5$ ) for the significant *t* values.

Table 8  
*One Sample T-Test Results for Analyses of Learner Needs*

	Levels	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
Respondents	BA	Testing	99	2.73	.33	-8.41	.00	-.81	-.34	-.21
		Teaching	100	2.74	.23	-11.08	.00	-1.13	-.30	-.21
		Linguistics	100	2.80	.25	-7.86	.00	-.8	-.25	-.15
	MA	Testing	82	2.75	.23	-9.85	.00	-1.09	-.30	-.20
		Teaching	79	2.8	.21	-8.62	.00	-.95	-.25	-.16
		Linguistics	20	2.83	.28	-2.74	.013	-.61	-.30	-.04
Students	Ph.D.	Testing	19	2.85	.24	-2.69	.015	-.62	-.26	.03
		Teaching	22	2.93	.49	-.70	.49	-.14	-.29	.14
	Linguistics	9	2.84	.09	-5.29	.001	-1.7	-.22	-.08	

Note. Sig\*: Sig (2-tailed)

### Analysis of Pedagogical Scaffolding

The focus of items 10 to 15 of the questionnaire was pedagogical scaffolding in TEFL courses. Item 10 asked about the variety of the learning tasks. Items 11 and 14 were about the quality of instructors' practices of teaching. Items 12 and 15 asked about the extent to which the instructors tried to increase learners' awareness of the importance of learning tasks as well as their strengths and weaknesses in learning. Finally, item 13 was about instructors' assistance regarding how learners should perform their learning activities and tasks.

The results obtained from one sample *t*-test showed TEFL students' significantly high satisfaction with their instructors' scaffolding practices. The statistical power of the significant findings is also supported by appropriate effect sizes ( $d > .5$ ).

Table 9  
*One Sample T-Test Results for Analyses of Pedagogical Scaffolding*

Respo	Levels	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
Students	BA	Testing	99	3.48	.37	12.72	.00	1.30	.40	.55
		Teaching	100	3.47	.33	14.47	.00	1.42	.41	.54
		Linguistics	100	3.39	.39	10.08	.00	1	.32	.47
	MA	Testing	82	3.46	.35	11.77	.00	1.31	.38	.53
		Teaching	79	3.54	.25	19.31	.00	2.16	.49	.60
		Linguistics	20	3.59	.20	13.33	.00	2.95	.50	.68
	Ph.D.	Testing	19	3.29	.47	2.68	.015	.62	.06	.52
		Teaching	22	3.34	.46	3.47	.002	.74	.14	.55
		Linguistics	9	3.44	.40	3.34	.010	1.1	.14	.75

Note. Sig\*: Sig (2-tailed)

### Analysis of Interaction

Items 16 to 21 checked the students' perceptions about the practice of interaction in TEFL courses. Item 16 was about solving the learning problems collaboratively. Item 17 asked about the instructors' talk time. Item 18 was about the extent to which the arrangement of the class could facilitate interactions among the students. Item 19 was about whether the learners accepted the responsibility of participating in interactions. Item 20 was about the available time and resources for classroom interactions. Finally, the last item on interaction was about the role of group work in learning. Based on one sample t-tests with huge effect sizes ( $d \geq 0.8$ ), all BA, MA, and Ph.D. students believed that their TEFL courses were highly interactive.

Table 10  
*One Sample T-Test Results for Analyses of Interaction*

Respondent	Level	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
Students	BA	Testing	99	3.85	.22	38.42	.00	3.86	.81	.89
		Teaching	100	3.86	.24	35.49	.00	3.58	.81	.91
		Linguistics	100	3.86	.20	42.32	.00	4.3	.82	.90
	MA	Testing	82	3.87	.23	34.70	.00	3.78	.82	.92
		Teaching	79	3.86	.26	29.98	.00	3.31	.80	.92
		Linguistics	20	3.74	.21	16.12	.00	3.52	.65	.84
	Ph.D.	Testing	19	3.84	.17	21.47	.00	4.94	.76	.92

Respondent	Level	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
		Teaching	22	3.64	.56	5.38	.00	1.14	.39	.89
		Linguistics	9	3.85	.34	7.56	.00	2.5	.59	1.11

Note. Sig\*: Sig (2-tailed)

### Analysis of Ideological Identity

Items 22 to 26 of the questionnaire were about the extent to which learners' ideological identities were considered in TEFL courses. The first item asked about learners' perceptions of the role of silence in safeguarding their academic prestige. Item 23 was about the instructors' consultation with the students while making educational decisions. Item 24 was about the extent to which learners' opinions were welcomed in the academic courses. Item 25 was about learners' feelings of loneliness in their academic courses. Finally, item 26 asked about learners' lack of fear for showing their unique individual characteristics. Through their responses to the questionnaire items, the students expressed their significantly positive perceptions about how ideological identities were considered in TEFL courses ( $p < .05$ ,  $d > .8$ ).

Table 11

One Sample T-Test Results for Analyses of Learner Identity

Respondents	Level	Courses	N	Mean	SD	t	Sig*	Effect size	95% Confidence Intervals	
									Lower	Upper
Students	BA	Testing	99	4.41	.34	41.32	.00	4.15	1.34	1.47
		Teaching	100	4.58	.26	62.04	.00	6.08	1.53	1.63
		Linguistics	100	4.28	.32	40.60	.00	4	1.22	1.34
	MA	Testing	82	4.56	.30	47.72	.00	5.2	1.50	1.63
		Teaching	79	4.52	.28	48.19	.00	5.57	1.46	1.58
		Linguistics	20	4.47	.31	21.47	.00	4.74	1.33	1.61
	Ph.D.	Testing	19	4.21	.44	11.87	.00	2.75	1	1.42
		Teaching	22	4.17	.89	6.16	.00	1.31	.78	1.57
		Linguistics	9	4.58	.12	39.38	.00	13.17	1.49	1.67

Note. Sig\*: Sig (2-tailed)

### Discussion

In our validated model, the direct and indirect regression paths indicated the close interconnections among the study variables. The regression paths pointed to the pivotal role of interaction in predicting, regulating, and explaining learner identity, learner needs, pedagogical scaffolding, and learner autonomy. Besides, learner identity changed with classroom interaction, learner autonomy, and learner needs. Similarly, learner autonomy was under the direct influence of interaction and learner needs. The results also showed how instructors' scaffolding practices were dependent on the patterns of interaction, the prevailing learner identities and ideologies, learner needs, and learner autonomy in TEFL contexts. As for indirect relations, the regression paths suggested how the sketched variables could moderate each other's relationships and behaviors. For example, learner needs and autonomy were two moderator variables explaining an indirect relationship between interaction and learner identity and an indirect relationship between interaction and pedagogical scaffolding.

The findings of this study corroborate earlier research on the connections of each pair of the addressed variables. The relationship between identity and interaction parallels the results of Bucholtz and Hall's (2005) sociocultural study indicating the importance of interaction in shaping people's identities. As Bucholtz and Hall (2005) argued, identity is the product of interactions between self and others and can, in a sense, reflect people's social and cultural roles. In this regard, predicting one's identity based on one's roles in interactions and the amounts and forms of one's interactions with others is quite sensible. Closely consistent with the present findings, marking identity as a multifaceted notion and focusing on its social shades can also provide further evidence for the interconnections of identity and interaction (Cheng, 2015). Likewise, the influence of social activities and one's membership in different social communities as a prerequisite for self-concept development (Hyland & Tse, 2012) seems inevitable. Hence, it can be argued that people's choices of linguistic devices and meaning-making activities are affected by their interlocutors in social exchanges and the roles they occupy in social communities (Holland et al., 1998; Hyland, 2010; Ivanic, 1998; Ivanic, 2006; Ochs, 2008; Rowsell & Pahl, 2007; Saville-Troike, 1982; Schiffrin, 1987). To put it differently, people can use language to construct and show who they are through social interactions.

Literature also supports the interconnections of learner autonomy and classroom interaction that our SEM analysis suggests (Benson, 2001; Dam, 1995; Dang, 2010; Ivone & Jacobs, 2022; Little, 1991; Oxford, 2003; Murray, 2014). In fact, quite similar to

learner identity and according to the sociocultural perspective, learner autonomy is affected by interaction and is thereby socially constructed (Ivone & Jacobs, 2022; Murray, 2014). The information exchanges among language users are also likely to reflect the impact of personal and situational factors (Dang, 2010). Hence, as a possible reflection of the term ‘interdependence’ (e.g., Benson, 2001; Dam, 1995; Little, 1991; Oxford, 2003; Murray, 2014), learner autonomy merely echoes the pivotal role of interaction in granting more learner autonomy and conveying the double shades (i.e., social and individual) of autonomous behaviors.

Closely in line with the present findings, scholars have also made several arguments on the connections between interaction, learner autonomy, and identity. For one thing, specifying the relationship between identity and autonomy is in line with Cienkanski’s (2007) ideological arguments. One can interpret learner autonomy as their right to make choices and decide their preferred learning options. Further, identity is a function of autonomy because nearly all autonomous learners can refer to their real selves, decide on what they like and dislike, and then make decisions (Cienkanski, 2007). Lee’s (2017) conceptualization of learner autonomy as a precondition for developing self-awareness and identity development also shows a link between autonomy and identity. Altogether, when attention is drawn to communicative methods’ strong emphasis on skills such as motivation, self-confidence, and self-management for promoting autonomy, it can be concluded that learners’ attitudes and ideologies facilitate their movement from the stage of other-regulation to autonomy and self-regulation (Murray, 2014). Quite similarly and in support of the present findings, De Florio-Hansen (2009) used the term ‘interdependence’ for autonomy and referred to autonomy as people’s interactions with others to reach the state of self-management and self-organization.

The direct and indirect paths in the model also show the beneficial role of pedagogical scaffolding in fostering learner autonomy. This finding is consistent with Oxford’s (2003) accounts suggesting that instructors’ pedagogical activities can increase learner autonomy only if they can guarantee learners’ high sense of security. The so-called collective form of learner autonomy is likewise the result of fruitful ‘collaboration rather than competition’ in a pleasant and stimulating environment (Candy, 1991, p. 337). The findings also direct attention to Hogan and Pressley’s (1997) arguments concerning the positive effects of scaffolding on increasing learners’ awareness of their levels of autonomy.

As representatives of another category of the portrayed relationships, the regression paths indicated a close association between learner autonomy and learner needs. Consistent findings in the available literature (Guo, 2018; Hu & Zhang, 2017) show that highly autonomous students can find appropriate artifacts to mediate the satisfaction of their needs, and in consequence, their high levels of autonomy (Guo, 2018; Hu & Zhang, 2017). Convincingly, Carre (as cited in Cienkanski, 2007) noted that due to technological advancements, the students' needs are constantly changing; therefore, the educational contexts may not provide enough instructions and preparations to meet all learner needs. One solution can be training autonomous learners who can resolve the situation and satisfy their needs.

Our structural equation model further suggests that learner identity, learner autonomy, learner needs, and interaction can explain and determine the instructors' applied forms of pedagogical scaffolding (e.g., the ones addressed in items 10 to 15 of the scale) in the analyzed context. In close association with these findings are arguments that have called attention to the fundamental influence of scaffolding on the other addressed variables. This finding signifies that understanding the world calls for establishing connections between the mind and social and cultural phenomena (Vygotsky, 1978). People's use of scaffolds such as language and instruction to understand the world highlights the relationship between one's sense of self and others' attempts to regulate it. Besides, in educational contexts, more knowledgeable people consider learners' ZPDs and use different scaffolds to mediate their cognitive growth and self and identity development. To put it in simple words, learners can reach the stage of agency where they can express and shape their identities. The prerequisite can be their attempts to internalize the existing affordances through their social interactions with others (Vygotsky, 1978).

Focusing on the positive role of teacher scaffolding in facilitating classroom interactions, literature (e.g., Inan, 2012) also supports the function of teacher scaffolding in regulating interaction. Reminiscent of this claim are different forms of peer and teacher scaffolding practiced through learner-learner and teacher-learner interactions. Indeed, scaffolding activities can successfully perform their positive regulatory function through knowledge exchanges and mutual interactions among different people (Inan, 2012; Kumpulainen & Wray, 2002). Researchers (e.g., Brown & Renshaw, 2000; Lantolf, 2000; Rogoff, 1990; Voerman et al., 2012) have further stressed that through establishing interactive support, instructors can explore learner needs, adjust their scaffolding to those needs, and provide feedback and comments on their satisfactory progress. Similarly,

Lantolf (2000) maintained that learner motives are rooted in their needs, and the instructors can understand and meet learner motives through scaffolding and meditational activities. In addition, focusing on learner needs through teacher scaffolding can offer prospects of language users' autonomous behaviors (van Lier, 2000).

The results arising from our structural model were also suggestive of the associations between learner identity and needs. This finding mirrored the self-determination theory that introduced autonomy, relatedness (i.e., connection with significant others), and competence (i.e., the ability to do complex tasks) as the human needs that can influence the types of identities they develop (Ryan & Deci, 2002). Literature (e.g., Luyckx et al., 2009) also reports consistent results concerning a significantly meaningful relationship between needs fulfillment and identity formation and the power of learners needs to define their identities. Likewise, the implication is that those with a stronger sense of identity are highly aware of their needs and the practical approaches to satisfy them (Claudia et al., 2021; Luyckx et al., 2009).

### Conclusion

The findings of this study shed light on the claims concerning the presence of shades of sociocultural elements in every learning environment. Since in almost all academic contexts, the ever-changing social and cultural factors can affect the applicability of educational activities, the responsibility of the researchers is to identify and reinforce those factors that contribute to the success of the learning programs. Accordingly, the present study tried to raise awareness of learner autonomy, pedagogical scaffolding, learner identity, classroom interaction, and learner needs in TEFL programs.

The structural equation model of this study proved the part that classroom interaction plays in defining and shaping learner autonomy, pedagogical scaffolding, learner identity, and learner needs. The direct and indirect relationships among the study variables could also indicate the importance of considering interaction as the most prominent factor in decision-making processes. All the identified mechanisms, interrelations, and paths for the better mental development of TEFL learners solidify the current research and contribute to the previous literature. Further, the discussed issues can give a roadmap to the responsible agents to fine-tune their efforts to develop learner-oriented and context-sensitive programs that intend to suit students with different backgrounds and address their various needs.

The findings of this study will redound the macro and micro-level benefits of foreign language learning in EFL contexts. At the macro level, they can influence the choice of textbooks, syllabi, and classroom activities. At the micro-level, the results can foster awareness of the moment-to-moment learning and teaching attempts to provide the necessary conditions for learning progress and make teaching a rewarding task. Future studies can investigate other sociocultural variables such as metalinguistic awareness, motivation, and learning strategies in other EFL contexts. This study mainly revolved around the ideological aspect of identity. Future studies can address biological and physiological facets of identity as well.

### **Implications**

This study could be viewed as the initial step of an attempt to explore and resolve the existing barriers to establishing pedagogies where the learner needs, learner autonomy, ideological growth, interactive learning, and pedagogical assistance could be improved with an emphasis on the social and cultural contexts of learning. In this sense, the obtained results can give enough awareness of the investigated variables to facilitate decision-making in the future. Based on the findings of the present study, the following implications are made for TEFL academic programs to improve their learning and teaching activities and outcomes: First, the Iranian TEFL students need to develop enough awareness as the first step to foster learner autonomy which is a prerequisite for higher learning achievement. Second, attempts should be made to remove the obstacles such as crowded classes and time limitations to fulfill BA students' urgent need for interaction-oriented learning sessions. Third, though there is an acceptable amount of attention to ideological issues in the Iranian TEFL courses, instructors should be highly cautious in selecting and teaching suitable textbooks and other learning materials. The textbooks should cover appropriate contents which do not contradict the cultural and moral values of their addressees. The instructors can also put their best efforts to explain the positive and negative dimensions of the textbook ideologies and, if possible, localize the textbook contents with examples from the students' cultural context of learning.

### **Implications for materials developers**

The results of the current study will assist materials developers to decide on the textbook activities, contents, and structures that foster higher levels of learner autonomy and interaction and meet the learning needs of TEFL students, especially at the BA level.



In addition, those who are responsible for planning TEFL charts and syllabi can focus on more practical issues than mere attention to theoretical concepts.

### **Implications for language learners**

Since every attempt to facilitate learner development starts from the learners themselves, the results of this study could be valuable in terms of the amount of awareness that the students gain. According to sociocultural assumptions, without awareness of the current status of the learners and factors such as the system and instructors, no change and development is possible. The present findings can provide the students with an overall picture of where they stand with regard to each of the addressed variables. In this sense, the findings are significant because they act as the starting point for every individual or institutional decision aiming at improving the status quo.

### **Implications with focus on each study variable separately**

One of the major implications of this study is that the proposed SEM model helps the researchers gain insights into how the sociocultural variables interrelate. The model can serve as a framework based on which scholars can predict the behaviors of each of the study variables in the presence or absence of the other focused variables. Although the criteria for the viability of the SEM model have been met, the researchers need to consider these preliminary results in their future attempts to come up with more representative models. The future models will include more sociocultural variables and will focus on instructors' data, as well.

Analyses of each of the study variables carried several potential implications. The findings of this study can help the instructors, students, and other people who are engaged in the TEFL learning processes to dedicate more concentration to learner autonomy. Attentive focus on learner autonomy development brings real benefits to TEFL academic programs. Fostering learner autonomy offers solutions to the problems of low learner motivation. Highly autonomous students can find appropriate strategies to deal with their low willingness to learn. Besides, highly autonomous learners can have better control over their learning. This, in turn, leads to another implication as the students get prepared for critical analysis of the learning issues and can effectively negotiate learning issues and improve the quality of their learning. Being aware of their level of autonomy, the students can accept the responsibility of improving it, as well. Further, the learners' informed attention and intention to foster their levels of autonomy imply an attempt to improve the

higher-order thinking skills such as evaluation, analysis, and reflection. As a result, the students can reflectively involve in the learning activities and planning and decision-making processes.

The current analysis of the status of scaffolding in Iranian TEFL academic programs gives the instructors ideas about how to teach effectively. Using these results, the teaching activities can be adjusted to the needs of the learners; hence, proper solutions to the existing problems will be found. It is the instructors' informed and effective scaffolding activities that equip learners with appropriate strategies to perform their tasks properly and achieve their goals. Further, when learners are emotionally and cognitively supported through instructors' various forms of assistance, they can make their best use of the available scaffolds toward their deepest learning experiences. It should also be noted that it is through appropriate teacher scaffolding activities that learners practice collaborative learning and come up with their best learning models. The learners' negative affect can also be resolved as they get more motivated and self-directed through instructors' supportive activities.

Identity is a broad concept that encompasses physiological, biological, and ideological factors that specify who someone is. In this study, only the ideological aspect of identity that has to do with learners' ideas and belief systems was the focus of attention. Considering this sense of identity, people understand who they are through participation in different social activities and internalization of values and ideas from different systems and individuals. The implications of a focus on ideological identities include an understanding of students' meaning-making processes and an ability to shape the ways people, objects, textbooks, institutions, and learning activities are seen and understood. Further, as identities are socially constructed and form a big part of students' backgrounds, knowledge of learner identities helps decision-makers, students, and instructors find the best scaffolds for mediating their meaning-making attempts, identifying the proper forms of education, and growing awareness of the potential obstacles to TEFL learning.

The specific focus of the present study on learner needs indeed could fulfill one of the main needs of the educational systems. Attention to the specific wants and lacks of the students is a great asset to the planning stage of the target TEFL learning programs. This, in turn, stimulates students' active learning. Each student is unique, but there exist a series of common needs among all students. Needs analysis studies like the current research can facilitate any movement towards more personalized learning contexts where

the focus revolves around presenting a curriculum that is useful for all learners. In addition, when learning issues are in line with the students' needs, they become more motivated for active engagement in the learning activities.

Besides demonstrating the positive impacts of learner autonomy, scaffolding, learner needs, and learner identity, this study explored the importance of interaction in TEFL academic courses. As the structural equation model showed, interaction is the variable that acts as the predictor of other addressed variables. Hence, analyses of interaction facilitate better interpretation of the results obtained from the other variables. As mentioned before, ideological identity is a socially-constructed concept that is shaped through interaction with other people. Humans as social beings define themselves in relation to others. If they do not participate in any social interaction, they may not be able to define who they are. When learners are not aware of who they are, and what strengths and weaknesses they have, they cannot move toward the stage of development. The same is true about the instructors. If they do not know their students and the reasons for learners' problems in learning, they may not find the best solutions to the students' problems in learning. Scaffolding activities are also regulated by learner needs and their levels of autonomy. Simply put, all the identified relationships among the study variables give an overall realistic picture of the system and facilitate further attempts to improve it.

Additionally, highly interactive courses expose learners to different inside and outside perspectives and help them not focus on one-size-fits-all ideologies. In other words, interactive courses train highly reflective learners that can look at the issues from different perspectives and develop their own ideas. The results of this study can help the responsible agents including the students and instructors find interactive ways to address the challenges in the learning processes. Through interactions, learners can think and internalize the meanings and learning concepts. It is indeed through interaction that people articulate what is in their minds, unite opposite perspectives, and achieve their own voice. Otherwise, they may not be even aware of their inner thoughts and beliefs and cannot reach the stage of interdependence.

### ***Acknowledgments***

We would like to thank the editorial team of TESL Quarterly for granting us the opportunity to submit and publish the current paper. We would also like to express our appreciation to the anonymous reviewers for their careful, detailed reading of our manuscript and their many insightful comments and suggestions.

### ***Declaration of conflicting interests***

The authors declare no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### ***Funding***

The authors received no financial support for this article's research, authorship, and/or publication.

### **References**

- Ahearn, L.M. (2001). Language and agency. *Annual Review of Anthropology*, 30, 109-137. <https://doi.org/10.1146/annurev.anthro.30.1.109>
- Aljaafreh, A., & Lantolf, J. P. (1994). Negative feedback as regulations and second language learning in the zone of proximal development. *The Modern Language Journal*, 78, 465-483. <https://doi.org/10.2307/328585>
- Amin, F., & Rahimi, M. (2022). Assessing the alignment among learners' language needs, course objectives, and classroom practice in an EFL communicative course. *Teaching English as a Second Language Quarterly (TESLQ)*, 41(4). <https://doi.org/10.22099/tesl.2022.43485.3107>
- Benson, P. (2001). *Teaching and researching autonomy in language learning*. Longman.
- Bignold, W. (2006). The child, family and society: Early years in context. In J. Sharp, L. Hankin, & S. Ward (Eds.), *Education studies: An issues-based approach* (pp. 46-56). Learning Matters.
- Brammerts, H. (2003). Autonomous language learning in tandem: The development of a concept. In T. Lewis, & L. Walker (Eds.), *Autonomous language learning in tandem*. Academy Electronic Publications.
- Brindley, G. (1989). The role of needs analysis in adult ESL program design. In R. K. Johnson (Ed.), *The second language curriculum* (pp. 63-78). Cambridge University Press.
- Brown, R. A. J., & Renshaw, P. D. (2000). Collective argumentation: A sociocultural approach to reframing classroom teaching and learning. In H. Cowie, & G. van der Aalsvoort (Eds.), *Social interaction in learning and instruction: The meaning of discourse for the construction of knowledge* (pp. 52-66). Pergamon Press.
- Bucholtz, M., & Hall, K. (2005). Identity and interaction: A sociocultural linguistic approach. *Discourse Studies*, 7(4-5), 585-614. <https://doi.org/10.1177/1461445605054407>
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming*. Routledge.
- Candy, P. C. (1991). *Self-direction for lifelong learning*. Jossey-Bass.
- Cheng, S. Y. (2015). Beyond the cultural turn: Indigenous identity and mainstream identity. In W. J., Jacob, S. Y., Cheng, & M. K. Porter (Eds.), *Indigenous education: Language, culture and identity* (pp. 381-394). Springer.
- Cienkanski, M. (2007). Fostering learner autonomy: Power and reciprocity in the relationship between language learner and language learning adviser. *Cambridge Journal of Education*, 37(1), 111-127. <https://doi.org/10.1080/03057640601179442>

- Claudia, R., Barni, D., Zagrean, I., & Danioni, F. (2021). Value consistency across relational roles and basic psychological needs satisfaction: The mediating role of self-concept clarity. *Social Sciences*, 10, 291. <https://doi.org/10.3390/socsci10080291>
- Cylan, N. O. (2015). Fostering learner autonomy. *Procedia - Social and Behavioral Sciences*, 199, 85-93. <https://doi.org/10.1016/j.sbspro.2015.07.491>
- Dagarin, M. (2004). Classroom interaction and communication strategies in learning English as a foreign language. *English Language and Literature Teaching*, 1(1-2), 127-139. <https://doi.org/10.4312/elope.1.1-2.127-139>
- Dam, L. (1995). *Learner autonomy: From theory to classroom practice*. Authentik.
- Dang, T. (2010). Learner autonomy in EFL studies in Vietnam: A discussion from sociocultural perspective. *English Language Teaching*, 3(2), 3-9. <https://doi.org/10.5539/elt.v3n2p3>
- Danli, L. (2011). Scaffolding in the second language learning of target forms in peer interaction. *Chinese Journal of Applied Linguistics*, 34(4), 107-126. <https://doi.org/10.1515/cjal.2011.037>
- Davin, K. J., & Kushki, A. (2021). A sociocultural perspective: Seeking evidence of development in a PACE approach to grammar instruction. *Language Learning*, 72 (S1), 165-202. <https://doi.org/10.1111/lang.12473>
- De Florio-Hansen, I. (2009). How to become a successful language learner: Learner autonomy, styles and strategies revisited. *Sprachlehr institute und fremdspracheninstitut*, 81, 9-40. [https://doi.org/10.1501/Dilder\\_0000000057](https://doi.org/10.1501/Dilder_0000000057)
- Deters, P. (2011). *Identity, agency and the acquisition of professional language and culture*. Continuum International Publishing Group.
- Devers, C. J. (2009). *Students' perspectives and learning from a cross-cultural online course: The influence of a critical pedagogical approach*. Doctoral dissertation, University of Illinois at Urbana-Champaign, Urbana, Illinois.
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Ablex Publishing Corporation.
- Dornyei, Z. (2010). *Questionnaires in second language research: Construction, administration, and processing*. Routledge.
- Evans, D. (2015). *Language and identity: Discourse in the world*. Bloomsbury Academic.
- Feryok, A. (2013). Teaching for learner autonomy: The teacher's role and sociocultural theory. *Innovation in Language Learning and Teaching*, 7(3), 213-225. <https://doi.org/10.1080/17501229.2013.836203>
- Gao, F. (2021). From linguistic manipulation to discourse reconstruction: A case study of conference interpreting at the World Economic Forum in China. In B. Wang, & J. Munday (Eds.), *Advances in discourse analysis of translation and interpreting: Linking linguistic approaches with sociocultural interpretation* (pp. 24-40). Routledge.
- Gauvain M. (2005). Sociocultural Contexts of Learning. In *Learning in Cultural Context. International and Cultural Psychology Series*. Springer. [https://doi.org/10.1007/0-387-27550-9\\_2](https://doi.org/10.1007/0-387-27550-9_2)
- Gillani, B. B. (2003). *Learning theories and the design of E-learning environments*. University Press of America.
- Guo, Y. (2018). The influence of academic autonomous motivation on learning engagement and life satisfaction in adolescents: The mediating role of basic psychological needs satisfaction. *Journal of Education and Learning*, 7(4), 254-261. <https://doi.org/10.5539/ijel.v8n5p254>

- Hall, S. (1997). The work of representation. In S. Hall (Ed.), *Representation: Cultural representation and signifying practice* (pp. 13-74). Sage.
- Harvey, J. (2011). *A sociocultural-theory-based study of the impact of mediation during post-observation conferences on language teacher learning*. Unpublished doctoral dissertation, University of South Florida, Tampa.
- Hogan, K., & Pressley, M. (1997). *Scaffolding student learning: Instructional approaches and issues*. Brookline Books.
- Holland, D. C., Lachicotte Jr., W. S., Skinner, D., & Cain, C. (1998). *Identity and agency in cultural worlds*. Harvard University Press.
- Hu, P., & Zhang, J. (2017). A pathway to learner autonomy: A self-determination theory perspective. *Asia Pacific Education Review*, 18(1), 147-157. <https://doi.org/10.1007/s12564-016-9468-z>
- Hyland, K. (2010). Community and individuality: Performing identity in applied linguistics. *Written communication*, 27(2), 159-188. <https://doi.org/10.1177/0741088309357846>
- Hyland, K., & Tse, P. (2012). She has received many honors: Identity construction in article bio statements. *Journal of English for Academic Purposes*, 11, 155-165. <https://doi.org/10.1016/j.jeap.2012.01.001>
- Inan, B. (2012). A comparison of classroom interaction patterns of native and non-native EFL teachers. *Procedia - Social and Behavioral Sciences*, 46, 2419-2423. <https://doi.org/10.1016/j.sbspro.2012.05.496>
- Ivanic, R. (1998). *Writing and identity: The discursive construction of identity in academic writing*. John Benjamins Publishing Company.
- Ivanic, R. (2006). Language, learning and identification. In R. Keily, P. Rea-Dickens, H. Woodfield, & G. Clibbon (Eds.), *Language, culture and identity in applied linguistics* (pp. 7-29). Equinox.
- Ivone, F. M. & Jacobs, G. (2022). Learner autonomy and cooperative language learning. In T. I. Hardini, & Y. Wirza (Eds.), *Learning strategies and learner autonomy: Pedagogical struggles and opportunities in language and literature education* (pp. 5-14). UPI (Universitas Pendidikan Indonesia) Press.
- Johnson, K. (2009). *Second language teacher education: A sociocultural perspective*. Routledge.
- John-Steiner, V., & Mahn, H. (1996). Sociocultural approaches to learning and development: AVygotskian framework. *Educational Psychologist*, 31(3-4), 191-206. <https://doi.org/10.1080/00461520.1996.9653266>
- King, A. (1997). Ask to think-Tel why: A model of transactive peer tutoring for scaffolding higher level complex learning. *Educational Psychologist*, 32(4), 221-235. [https://doi.org/10.1207/s15326985ep3204\\_3](https://doi.org/10.1207/s15326985ep3204_3)
- Kumpulainen, K., & Wary, D. (2002). *Classroom interaction and social learning: From theory to practice*. Routledge Falmer.
- Lantolf, J. P. (2000). Second language learning as a mediated process. *Language Teaching*, 33, 79-96. <https://doi.org/10.1017/S0261444800015329>
- Lantolf, J. (2006). Sociocultural theory and L2. *Studies in Second Language Acquisition*, 28, 67-109. <https://doi.org/10.1017/S0272263106060037>
- Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and the genesis of second language development*. Oxford University Press.

- Lee, M. K. (2017). To be autonomous or not to be: Issues of subsuming self-determination theory into research on language learner autonomy. *TESOL Quarterly*, 51(1), 220–228. <https://doi.org/10.1002/tesq.343>
- Little, D. (1991). *Learner autonomy: Definitions, issues and problems*. Authentik.
- Luyckx, K., Vansteenkiste, M., Goossens, L., & Duriez, B. (2009). Basic need satisfaction and identity formation: Bridging self-determination theory and process-oriented identity research. *Journal of Counseling Psychology*, 56(2), 276-288. <https://doi.org/10.1037/a0015349>
- Mao, Z., & Lee, I. (2022). Researching L2 student engagement with written feedback: Insights from sociocultural theory. *TESOL Quarterly*, 56(2), 788-798. <https://doi.org/10.1002/tesq.3071>
- Marginson, S., & Dang, T. K. A. (2016). Vygotsky's sociocultural theory in the context of globalization. *Asia Pacific Journal of Education*, 37(1), 1-14. <https://doi.org/10.1080/02188791.2016.1216827>
- Mehranfar, Z., & Tahririan, M. H. (2022). Investigating investment for teaching English in Iranian upper secondary schools: A critical needs analysis approach. *Teaching English as a Second Language Quarterly (TESLQ)*, 41(2), 113-161 <https://doi.org/10.22099/tesl.2021.40644.2999>
- Méndez-Picazo, M., Galindo-Martín, M., & Castaño-Martínez, M. (2021). Effects of sociocultural and economic factors on social entrepreneurship and sustainable development. *Journal of Innovation & Knowledge*, 6(2), 69-77. <https://doi.org/10.1016/j.jik.2020.06.001>
- Molenaar, I., van Boxtel, C. A. M., & Slegers, P. J. C. (2011). Metacognitive scaffolding in an innovative learning arrangement. *Instr Sci*, 39, 785-803. <https://doi.org/10.1007/s11251-010-9154-1>
- Murray, G. (2014). *Social dimensions of autonomy in language learning*. Palgrave Macmillan.
- Nasri, N., Vahid Dastjerdy, H., Eslami Rasekh, A., & Amirian, Z. (2015). Iranian EFL teachers' practices and learner autonomy: Do gender, educational degree, and experience matter? *Innovations in Language Learning and Teaching*, 9(1), 1-13. <https://doi.org/10.1080/17501229.2015.1078337>
- O'Conner, B. P. (2000). SPSS and SAS programs for determining the number of components using parallel analysis and Velicer's MAP test. *Behavior Research Methods, Instruments, & Computers*, 32(3), 396-402. <https://doi.org/10.3758/BF03200807>
- Ochs, E. (2008). Constructing social identity: A language socialization perspective. In S. F. Kiesling, & C. B. Paulston (Eds.), *Intercultural discourse and communication* (pp. 78-91). Blackwell.
- Oxford, R. L. (2003). Toward a more systematic model of L2 learner autonomy. In D. Palfreyman, & R. C. Smith (Eds.), *Learner autonomy across cultures: Language education perspectives* (pp. 75-91). Palgrave Macmillan.
- Pallant, J. (2007). *SPSS survival manual: A step-by-step guide to data analysis using SPSS for windows*. Open University Press.
- Peng, J. E. (2012). Towards an ecological understanding of willingness to communicate in EFL classrooms in China. *System*, 40(2), 203-213. <https://doi.org/10.1016/j.system.2012.02.002>
- Poehner, M. E. (2008). *Dynamic assessment: A Vygotskian approach to understanding and promoting L2 development*. Springer.

- Rambe, P. (2012). Activity theory and technology mediated interaction: Cognitive scaffolding using question-based consultation on Facebook. *Australasian Journal of Educational Technology*, 28(8), 1333-1361. <https://doi.org/10.14742/ajet.775>
- Richards, J. C. (2001). *Curriculum development in language teaching*. Cambridge University Press.
- Robinson, H. A. (2005). *The ethnography of empowerment: The transformative power of classroom interaction*. The Falmer Press.
- Rogoff, B. (1990). *Apprenticeship in thinking: Cognitive development in sociocultural activity*. Oxford University Press.
- Rowse, J., & Pahl, K. (2007). Sedimented identities in texts: Instances of practice. *Reading Research Quarterly*, 42(3), 388-404. <https://doi.org/10.1598/RRQ.42.3.3>
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic Dialectical Perspective. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3-33). University of Rochester Press.
- Rymes, B. (2016). *Classroom discourse analysis: A tool for critical reflection*. Routledge.
- Saville-Troike, M. (1982). *The ethnography of communication: An introduction*. Basil Blackwell.
- Sawyer, K. (2012). Extending sociocultural theory to group creativity. *Vocations and Learning*, 5, 59-75. <https://doi.org/10.1007/s12186-011-9066-5>
- Shirazifard, H., Abbasian, G. R., Mohseni, A., & Rashtchi, M. (2022). Implementation of task-based collaborative dialogues in EFL speaking classes: Focus on achievements and perceptions. *Teaching English as a Second Language Quarterly (TESLQ)*, 41(3), 155-195. <https://doi.org/10.22099/tesl.2021.39105.2916>
- Schiffrin, D. (1987). *Discourse markers*. Cambridge University Press.
- Stokoe, E. (2013). The (in) authenticity of simulated talk: Comparing role-played and actual interaction and the implications for communication training. *Research on Language & Social Interaction*, 46(2), 165-185. <https://doi.org/10.1080/08351813.2013.780341>
- Swain, M. (2001). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and language learning* (pp. 97-114). Oxford University Press.
- Taylor, F., Busse, V., Gagova, L., Marsden, E., & Roosken, B. (2013). *Identity in foreign language learning and teaching: Why listening to our students' and teachers' voices really matters*. British Council.
- Ushakova, T. (1994). Inner speech and second language acquisition: An experimental-theoretical approach. In J. P. Lantolf & G. Appel (Eds), *Vygotskian approaches to second language research* (pp. 135-156). Ablex.
- Valsiner, J., & Rosa, A. (Ed.). (2007). *The Cambridge handbook of sociocultural psychology*. Cambridge University Press.
- Van Lier, L. (1996). *Interaction in the language curriculum: Awareness, autonomy and authenticity*. Longman.
- Van Lier, L. (2000). From input to affordance: Social-interactive learning from an ecological perspective. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 245-260). Oxford University Press.
- Van Lier, L. (2007). Action-based teaching, autonomy and identity. *Innovation in Language Learning and Teaching*, 1(1), 46-65. <https://doi.org/10.2167/illt42.0>



- Voerman, L., Meijer, P. C., Korthagen, F. A. J., & Simons, R. J. (2012). Types and frequencies of feedback interventions in classroom interaction in secondary education. *Teaching and Teacher Education, 30*, 1-9. <https://doi.org/10.1016/j.tate.2012.06.006>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Harvard University Press.
- Wagner, E. D. (1994). In support of a functional definition of interaction. *The American Journal of Distance Education, 8*(2) 6-26. <https://doi.org/10.1080/08923649409526852>
- Wang, B., & Munday, J. (Eds.). (2021). *Advances in discourse analysis of translation and interpreting: Linking linguistic approaches with sociocultural interpretation*. Routledge.
- Whaley, A. L., & Noel, L. T. (2011). Sociocultural theories, academic achievement, and African American adolescents in a multicultural context: A review of the cultural incompatibility perspective. *Soc Psychol Educ, 14*, 149-168. <https://doi.org/10.1007/s11218-010-9142-y>
- Williams, J., Davis, P., & Black, L. (2007). Sociocultural and cultural-historical activity theory perspectives on subjectivities and learning in schools and other educational contexts. *International Journal of Educational Research, 46*, 1-7. <https://doi.org/10.1016/j.ijer.2007.07.001>
- Yaghoubi, M., & Farrokhi, P. (2022). Investigating Iranian English learners' private speech across proficiency levels and gender based on Vygotsky's Sociocultural Theory. *Journal of Psycholinguist Research, 51*, 273-292. <https://doi.org/10.1007/s10936-022-09838-y>
- Zarate, M. B. G., & Neuner, G. (1998). *Sociocultural competence in language learning and teaching: Studies towards a common European framework of reference for language learning and teaching*. Council of Europe.

## Appendix A

### Questionnaire on Sociocultural Elements in TEFL Academic Programs

Dear students,

This questionnaire aims to evaluate how much sociocultural tenets are realized in TEFL academic programs. We are interested in your overall ideas on how much each of the following items is representative of your current **Linguistics**, **Language Testing**, and **Language Teaching Methodology** courses. We greatly appreciate the time you will spend in filling out this questionnaire. Your answers will be used only for research purposes and you will remain anonymous.

**Age:**

- 18-28  
 29-39  
 40-Upper

**Gender:**

- Male  
 Female

**Current Educational Level:**

- BA  
 MA  
 PhD

**Affiliation (your university):** .....

For the following items, please circle number

- 1 if you **completely disagree**,  
 2 if you **disagree**,  
 3 if you are **uncertain**,  
 4 if you **agree**, and  
 5 if you **completely agree**.

Items

1. We help our instructors to make decisions on the learning activities that

are appropriate for our higher learning achievement.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

2. I am aware of the pedagogical goals of our course materials.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

3. I can recall what I have learned in the previous sessions without my instructor's help.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

4. Once I learn to do a task, I can transfer my ability from the original task to do the new ones successfully.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

5. Instructional resources (e.g., instructors, video projectors, printers, and whiteboard markers) are available whenever we need them.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

6. Our TEFL instructors have excellent knowledge of the learning contents.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

7. Our TEFL courses have a good mix of theory and practice.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

8. My interest in learning is prompted in our TEFL courses.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

9. I have a clear idea of what is expected of me in our TEFL courses.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

10. Our instructor uses a variety of tasks to support our successful learning.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

11. During the class time, the instructor teaches the contents until we can

develop and express our own ideas on them.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

12. Our instructor makes us aware of the importance of the learning tasks.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

13. Our instructor gives us directions about how to do our learning activities and tasks such as doing research projects and lectures.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

14. Our instructor teaches us clearly so that we can easily understand the issues.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

15. Our instructor makes us aware of our strengths and weaknesses.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

16. During the class, we tackle our learning problems collaboratively.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

17. We are the major resource of class discussions. Our instructor's talk time is kept at the minimum.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

18. The arrangement of the classroom allows us sit eye-to-eye and knee to knee and interact more easily.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

19. In cooperative learning and group work activities, we cannot escape the responsibility for expressing our ideas and taking our own turns.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

20. We work on our tasks together in small groups.

**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)

21. Group work provides equal opportunity for us to learn.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)
22. Telling what I am not sure about in our classes does not jeopardize my academic prestige.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)
23. Our instructors use our ideas to make decisions about our learning.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)
24. We are encouraged to express our opinions regarding better solutions to the problems.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)
25. I feel I am truly accepted in most of our academic courses.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)
26. We represent our unique individual characteristics without fear from our instructors.  
**Linguistics** (1, 2, 3, 4, 5) **Lg. Testing** (1, 2, 3, 4, 5) **Lg. teaching Methodology** (1, 2, 3, 4, 5)