

## Teacher Education | Full Research Article

# Development and Validation of English Language Teacher Emo–sensory Practice Scale and Examining its Relation with Teacher Effectiveness

Maryam Sadat Zargar, Ferdowsi University of Mashhad

### Abstract

Given a considerable number of studies attempted to determine the factors influencing teacher effectiveness, the current study set out to investigate the effect of the newly-proposed concept of Emo-sensory practice on teacher success. For this purpose, the researcher took advantage of using both qualitative and quantitative methods of research. In the first phase, a focus-group discussion was conducted with nine EFL teachers to explore their views toward using emo-sensory practices in their education. Based on the data from the qualitative phase, the English language teacher emo-sensory practice scale (ELT-ESPS) was designed. Afterwards, a total of 200 English language learners filled out ELT-ESPS along with the teacher success scale. The construct validity of ELT-ESPS was substantiated through confirmatory factor analysis. To examine whether distal and proximal senses could predict teacher success, structural equation modeling was utilized. The results indicated that distal senses (i.e., auditory and visual) are better predictors of success than proximal senses (i.e., olfactory, gustatory, and kinesthetic); the auditory sense is the strongest predictor of teacher success whereas the olfactory sense is the weakest predictor of it. Findings indicated that there is a significant positive correlation between Iranian English language teacher emo-sensory practices and teacher success. In the end, the results were discussed and implications of findings were presented.

**Keywords:** Emo–sensory practices, Distal senses, Proximal senses, Teacher Success

## Introduction

To be the “focus of educational policy in the 21st century” (Mangiante, 2011, p. 42) is persuasive evidence for the considerable attention teachers have been attracting in recent years.

With a definite roadmap and clear orientation on what to do and how to do it, the concept of teacher effectiveness is frequently prescribed for the advancement of quality in learning

and teaching. Teacher success is the construct that determines the extent to which teachers are efficient and effective in the classroom context.

Factors found to be influencing teacher success, such as teachers' communication skills, employing Neurolinguistic Programming techniques, or teachers' personal qualities have been explored in several studies (e.g., Darling-Hammond, 2000; Wayne & Youngs, 2003; Pishghadam, Shayesteh, & Shapoori, 2011; Bhardwaj, 2009). Despite the importance of quality teaching, there remains a lack of unanimity in the qualifications of successful teachers (Palardy & Rumberger, 2008).

Considering multisensory strategies are a prerequisite for students' engagement in a multimodal learning environment, effective teaching has been investigated concerning multisensory education (e.g., Katai, 2011). Above all, as a multi-sensory movement, Pishghadam (2018b) stated that teachers' ability to engage all senses in the learning process will determine their success in thick-slice sensory education. It is now well-established from a variety of studies, that interrelationship of emotions and senses play a crucial role in how learning and teaching take place (e.g., Pishghadam & Shayesteh, 2017). In light of this significant interplay, Pishghadam (2018a) proposed the concept of emo-sensory language education (ESLE), assuming that teachers should be aware of sense-induced emotions in class.

The theoretical framework of the present study is based on a new type of intelligence which is emo-sensory intelligence or so-called emo-sensory awareness, proposed as one major aspect of the ESLE concept. Teachers' Emo-sensory awareness seems to be of high relevance to their effectiveness. Given the significance of emo-sensory education, there has been no detailed investigation of the relationship between one such dominant feature and teacher effectiveness. Due to the scarcity of research in this area, I aimed to shed light on the concept of emo-sensory awareness and reconstruct the definition of teacher effectiveness from the emo-sensory education perspective. Thus, the major purpose of the current study is to measure teacher success from the learners' perspective using the newly developed scale.

## Literature Review

### Teacher Success

Teacher success has been defined differently in different eras. Behaviorists took a product-oriented point of view and assessed teacher success based on predefined manners and accomplishments. Unlike behaviorists, cognitivists took a more process-oriented perspective and assessed teacher success based on teaching and learning processes. During the reform movement, the conception of teacher effectiveness varied substantially across affective, cognitive, and social characteristics (Ellett & Teddlie, 2003). Therefore, teacher effectiveness is a multidimensional concept incorporating many dimensions.

Several studies took a psychological perspective, assessing teachers based on their personality type (Buela & Joseph, 2015), whereas others highlighted the role of educational objectives teachers achieve (Okigbo & Okeke, 2011). Indeed, recent studies of teacher

effectiveness have given prominence to teacher personality traits, including emotional intelligence, self-efficacy, critical thinking, and self-regulatory abilities (e.g., Ghanizadeh & Moafian, 2010; Birjandi & Bagherkazemi, 2010).

From an instructional perspective, effective teachers provide sufficient instruction, organize and manage the classroom, use instructional time efficiently, provide learners with abundant exercises and application occasions, provide a respectable classroom environment, and have adequate knowledge (Kyriakides, Campbell & Christofidou, 2002). Hiebert, Morris, Berk, and Johnson (2007) maintained that effective teachers are skilled at identifying learning goals for learners and estimating if the goals are being achieved. Furthermore, the characteristics of a successful EFL teacher based on their learners' perceptions were discovered, the result of which was The Characteristics of Successful Iranian EFL Language Teacher Questionnaire (Pishghadam & Moafian, 2009), which has been used in this study.

The importance of teachers' role in the process of learning in general and language learning, in particular, has been confirmed by many studies. Therefore, it is not unusual that by browsing the same kind of literature, we can come across many effective and successful teachers.

All in all, the researches to date have tended to focus on teachers' instructional strategies than emo-sensory practices teachers employ to facilitate learning. Because emo-sensory practices of Iranian English language teachers' concept and characteristics of successful teachers are of high significance in all levels of education, the necessity for advanced research is felt to observe how these features are associated. To sum up, the current study attempted to examine the relationship between teachers' level of emo-sensory practices and their educational success.

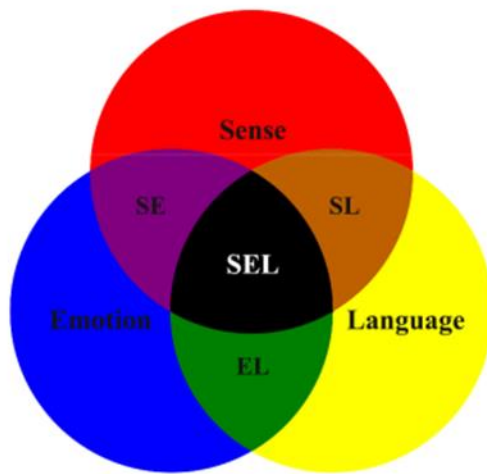
### **Emo-sensory Intelligence**

Inspired by the concept of emotioncy, Pishghadam, Jajarmi, and Shayesteh (2016) introduced the concept of sensory relativism and examined how sense inputs can relativize cognition. This concept reveals the strong relationship between sense and emotion and the fact that sensational experiences and evoked emotions mingle into a single idea. In fact, through sensory input processing, we make emotional reactions to an object or a concept (Thomson, Crocker, & Marketo, 2010). Considering life experiences, it can be claimed that events that are related to emotions can be remembered better (Conway, 1990; Ochsner, 2000).

Accentuating the saliency of a strong interrelationship between sense and emotion, Pishghadam (2018a) proposed the concept of emo-sensory language education (ESLE). Emo-sensory is a blend of two terms, referring to the emotional and sensory aspects of education. ESLE underscores the role of sense-induced emotions in the class and emphasizes the fact that teachers need to be aware of sensory emotions to facilitate the learning process. Emo-sensory intelligence or so-called emo-sensory quotient (ESQ), as one of the core dimensions of ELSE, introduces a new type of intelligence that may spring from the integration of emotional quotient (EQ) and sensory quotient (SQ). To define, emo-

sensory intelligence is the ability to recognize, label, monitor, and manage sense-induced emotions to guide one's behavior (Pishghadam, 2018a).

According to Pishghadam et al. (2020), people with high ESQs are more successful in manipulating their senses to live a successful and happy life. As it was mentioned, successful management of sense-induced emotions considered as the practical aspect of ESQ. To shed more light on the concept, Pishghadam and Shayesteh (2017) investigated the extent to which individuals can recognize, label, and manage color emotions; asking them to express their emotions for several selected colors. Findings indicated that by having better emotional expressions, they are more successful in sense-induced emotions management. To elaborate more, Pishghadam and Shayesteh (2017) constructed a Venn diagram originated from emotional responses to colors (Figure 1).



*Figure 1.* The Three-Set Model of Emo-Sensory Expression.  
Adapted from Pishghadam & Sadafian (2017)

As depicted in Figure 1, several terms such as SE, SL, and EL presented as a result of the intersection between three sets of sense, emotion, and language; representing different degrees of emotion as a result of different abilities of individuals in verbalizing their emotions (Pishghadam & Shayesteh, 2017). The complete descriptions of the terms used in the diagram have been clarified in Table1.

Table1  
Venn Diagram Terms and Examples

Region	Description	Example
<b>Sense (Red)</b>	It represents the sensory information obtained through our sensory organs.	<i>I listen to music.</i>
<b>Emotion (Blue)</b>	It refers to psychological states, moods, or feelings.	<i>I am sad.</i>
<b>Language (Yellow)</b>	It accounts for the individuals' knowledge of emotion-related words to label their emotions.	<i>Pink is delicious.</i>
<b>SE(Purple)</b>	The intersection of sense and emotion captures sense-induced emotions (sensory emotions) explaining emotional reactions to sensory knowledge. Senses may indeed evoke specific types of emotions (only valence is recognized) prior to the actual behavior. For instance, the smoke smell trigger a feeling of danger before calling for help.	<i>I have a bad feeling but I do not know what it is exactly.</i>
<b>SL(orange)</b>	The intersection of sense and language (sensory language) refers to those emotional moods associated with cliché events or images (you have a cliché emotion word for color, yet there is no idiosyncratic emotional experience behind it).	<i>I remember nature when I see green.</i>
<b>EL(Green)</b>	The intersection of emotion and language renders those clear emotions, individuals have for items/concepts, which they can label (emotional clarity) as a result of better access to emotion vocabularies regardless of having adequate sensory experiences.	<i>I guess red cheers me up at first glance. But if I use it a lot, it tires me, triggering negative feelings of anger and anxiety.</i>
<b>SEL(Black)</b>	The intersection of sense, emotion and language characterizes the states individuals sense an entity and recognize the type of emotion evoked by that, label it and try to manage it to guide behavior.	<i>I love brown. It satisfies my desire for luxury and comfort, since it is the color of wood and leather. I use it as for my furniture. It looks amazing.</i>

Note: Adapted from Pishghadam & Sadafian (2017)

A noteworthy point is that individuals categorized by SEL state, possess emo-sensory quotient (ESQ). Based on the SEL description presented above, the intersection of sense, emotion, and language highlights the importance of sense-induced emotions. Sense-induced emotion is a type of emotion that emerges out of five traditionally recognized senses, i.e., sight, hearing, taste, smell, and touch. To evoke this type of emotion in the educational context, teachers could implement emo-sensory practices to engage learners through their senses.

The specific objective of this study was to shine new light on the concept of teacher success through introducing the concept of emo-sensory practices. The author hypothesizes that the teachers who attend to engage learners using sense-induced emotions are more likely to be successful. Therefore, the current study attempts to address the following research questions:

1. How do Iranian teachers of the English language use senses in their education?
2. Does the English language teacher emo-sensory practice scale (ELT-ESPS) enjoy psychometric properties?
3. Can distal and proximal senses predict teacher success?
4. Is there any significant relationship between ELT-ESPS and teacher success among Iranian EFL learners?

## Research Method

### Participants

Nine teachers and 200 EFL learners participated in the current study. The participants were chosen based on convenience sampling. The EFL teachers included two males and seven female teachers aged between 20 to 35. The teachers had between 1 to 15 years of teaching experience. Participants held BAs (N=2), MAs (N=6), and PhDs (N=1). The EFL teachers participated in a focus group discussion so the questionnaire could be developed. Language learners who took part in the second phase of data collection were all Iranian EFL learners in the intermediate level from different language institutes in Mashhad. Participants included 64 male and 136 female language learners, aged between 18 to 30. They were at different levels of education (High school diploma: 12, BA: 22, MA: 86, Ph.D.: 80).

### Instruments

#### Characteristics of Successful EFL Teachers Questionnaire

Moafian and Pishghadam (2009) designed and validated the Characteristics of Successful Iranian EFL Language Teacher Questionnaire in the context of foreign language learning in Iran to measure teachers' success in schools and language institutes. The scale measures 12 subscales, and it consists of 47 items that measure Teaching Accountability (7 items), Interpersonal Relationship (7 items), Attention to All (5 items), Examination (3 items), Commitment (3 items), Learning Boosters (6 items), Creating a Sense of Competence (4

items), Teaching Boosters (4 items), Physical and Emotional Acceptance (4 items), Empathy (4 items), Class Attendance (2 items), and Dynamism (2 items). The participants are required to rate the extent to which the proposed item describes their teacher on a 5-point Likert

scale. The responses varying from 1 (strongly agree) to 5 (strongly disagree). Cronbach's alpha revealed that the questionnaire enjoyed high reliability in this study ( $\alpha=.94$ ).

#### **English language teacher emo-sensory practice scale (ELT-ESPS)**

To investigate whether English language teachers use sense-induced emotions in their education, a scale was designed and developed in Persian. Initially, five traditionally recognized senses of sight, hearing, taste, smell, and touch were taken into consideration. Due to the existence of these senses, a five-factor model of emo-sensory practice was revealed which accounted for visual, auditory, gustatory, olfactory, and tactile senses. Subsequently, the researcher interviewed nine teachers. The interviews were then transcribed and themes were extracted from them. Based on the collected data from focus group interviews, the researcher explored the most frequent samples of each sense so that they could be included as the items of the questionnaire. To ensure the appropriateness of the scale and its comprehensibility, it was piloted with eight EFL learners based on which some modifications were made. Afterwards, statistical analyses were run to ensure its validity and reliability English language teacher emo-sensory practice scale (ELT-ESPS) is a 23-item questionnaire presented as a 5-point Likert scale whose answers range from never to always (with 1= never, 2=rarely, 3=sometimes, 4=often, 5=always). Statistical analysis showed that the questionnaire enjoyed acceptable indices of Cronbach's alpha ( $\alpha=.85$ ). Sample items are listed in the appendix.

#### **Data Collection and Analysis**

To develop the English language teacher emo-sensory practice scale, EFL teachers' perceptions and use of sense-induced emotions in EFL classes were examined. Nine Iranian EFL teachers participated in a face-to-face semi-structured interview. Initially, they were asked to explain what they knew about sense-induced emotions, their significant role in English language teaching; and thereafter, explain the extent to which they use senses in their education. The data collection continued until no new information was provided by the participants, i.e. the saturation criterion was met. The whole interview took around 1 hour and was recorded and transcribed to deduce the major themes. Furthermore, the Lincoln and Guba (1985)'s model of validity and reliability for qualitative works was used to meet all four criteria of dependability, credibility, transferability, and confirmability.

Based on the data from the qualitative phase, the English language teacher emo-sensory practice scale ELT-ESPS was designed. A total number of 200 intermediate EFL learners from different English language institutes participated in the validation phase of the study. Having got permission from supervisors and teachers, the researcher distributed both ELT-ESPS and Characteristics of Successful Iranian EFL Language Teacher Questionnaire simultaneously at the end of the classes. In the first place, the purpose of the study was explained to the learners. Furthermore, they were informed that their responses would be kept anonymous and their participation was not mandatory. On average it took around 20 minutes to fill out the surveys. Subsequently, the questionnaires were collected, and both their total score and their scores on each subscale were computed and recorded. To ensure that all the questions were comprehensible to the respondents, the questionnaires were given in the participants' mother tongue, Persian. Participants' demographic information including (age, gender, education status) was obtained as well. Statistical Package for Social Sciences (SPSS 22) was used for data coding and computing descriptive statistics. The internal consistency of the

items of the ELT-ESPS scale was measured utilizing Cronbach's alpha ( $\alpha$ ). To substantiate the construct validity of the ELT-ESPS scale and to analyze the relationship among variables, Confirmatory Factor Analysis was used utilizing Analysis of Moment Structure (AMOS 24). Moreover, the relationships among variables were analyzed using Structural Equation Modeling through Amos (version 24) statistical package.

## Results

### **Iranian English language Teachers' Perceptions of Sense-induced Emotions**

The researcher clarified the concept of sense-induced emotions, then participants were asked to respond to the first question regarding how important it is for teachers to provide sensory experiences. All of the teachers believed that it is "very important" to implement senses in education. All teachers reported that they have more or less experienced benefiting from sense-induced emotions while teaching English. Yet, experiences provided by the majority of teachers tended to be limited to the areas of auditory and visual stimulation. The senses least utilized were taste and smell. One of the participants expressed her view of the concept this way: "I think teaching foreign languages has the closest association with senses. In my classes, students love exposure to auditory, visual, and tactile input. Examples of it included things like teacher's lecture and stories, seeing things like the whiteboard and the words on that, touching things like chairs, pens, pencils, markers, etc." Participants' comments on the first research question revealed that they were ignorant of the significant role of gustatory and olfactory senses, concentrating on auditory and visual senses.

When asked about the individual importance of the five senses, all of the participants believed that visual stimulation is "very important". As far as the visuals concern, all teachers stated that they presented pictures in the classroom. However, this number went down to four in the case of videos and picture slides. Although most teachers confessed that their use of supplementary materials such as videos and picture slides was rather inadequate due to the lack of technological tools, all of them confirmed that these new technological tools could have a significant beneficial effect on language learning, in particular in terms of arousing students' attention and increasing their motivation. For instance, a participant contended that: "Videos can offer real models for role-plays; raise awareness of other cultures; provide exposure to both audio and visual perceptions simultaneously."

To mention other implementations of visual sense, five participants reported, they write in multi-colored markers. Moreover, two of the participants wore colorful uniforms. Six of the respondents indicated that the use of visual aids in the classroom increases learners' interest in the subject matter. Eight teachers stated that visual aids enabled them to attract learners' attention during the lesson. On the whole, all teachers concurred with the fact that using visuals made their classes more pleasant. Therefore, it was found that all respondents possessed a high level of awareness towards the visual sense.

For the auditory sense, all teachers alluded to the fact that it is very important to engage the auditory sense. They claimed that they use auditory materials to teach lessons including audiotapes. As far as listening is concerned, all participants indicated that they provide sensory experiences through music and songs with both British and American accents. An



example is from a participant who reported “I play pop music both in American and British accents.”

Moreover, several teachers mentioned that they encourage learners to answer questions orally and give oral reports. However, their reaction to the question, if they use storytelling to engage students, indicated that they rarely have been implemented effectively. In general, nearly all participants possessed a high level of awareness in terms of implementing the auditory sense.

Although interviewees used visual and auditory senses in their education, they did not attend to olfactory and gustatory senses. When they were asked about the importance of the olfactory sense, eight teachers claimed that they were ignored the sense of smell. The only teacher who used the olfactory sense claimed that: “I sometimes use perfume. I think students pay more attention when I wear perfume. It increases energy levels and it results in intense concentration.”

Participants’ reaction to the question if they encourage learners to take a deep breath manifested that none of them had practiced this activity. Thus, the smell is a sense that is easy to ignore, and a considerable proportion of the respondents were either ignorant of the olfactory sense or possessed poor levels of awareness.

Concerning the gustatory sense, their reaction to the question, “How do you use gustatory sense in your education?” indicated that only one of the participants had limited use of it. In some cases, she had some rules about students eating in the classroom. As she mentioned: “Learners are allowed to eat while they are watching instructional movies.” Teachers were unaware of the significant role of gustatory sense in facilitating learning. The majority of them had a “no-eating” policy, as they believed that students eating not only has been distracting to the “eater”, but it’s distracting to others who want the person eating to share his food with them, and there is more of a tendency to create chaos.

The following question asked from the teachers indicated the extent of their desire to get students moving. The question was, “To what extent movement is important during learning?”. In response to this question, all respondents maintained that it is “important” to incorporate physical activity into the learning process to help learners engage their whole bodies in learning. A teacher stated: “If I don’t let students move in the classroom, they will get out of control. Providing students an opportunity to move would help them stay focused.” To assess the degree to which teachers attend to engage the sense of moving, the interviewer asked how they used kinesthetic sense in their education.

In response to the aforementioned question, one of the participants stated: “I teach command verbs through pantomime. For example, after teaching my students words such as “walk” or “run,” I can ask them to show me the meaning of the words.”

Moreover, another participant told: “Most of the time, I use games in the classroom. I break my class into small groups and create a competitive atmosphere. I think through this type of classroom atmosphere, students pay attention and learn more.”

Therefore, all teachers were aware of the effects of moving sense and implemented them in their education.

### **Confirmatory Factor Analysis of EL Teacher Emo-sensory Practice Questionnaire**

To examine the validity of the English language teacher emo-sensory practice Questionnaire, Confirmatory Factor Analysis was employed. Based on the CFA, the association between

each sub-factor of the proposed model was analyzed. To check the model fit, goodness of fit indices was used. The model with all factor loadings can be in Figure 2.

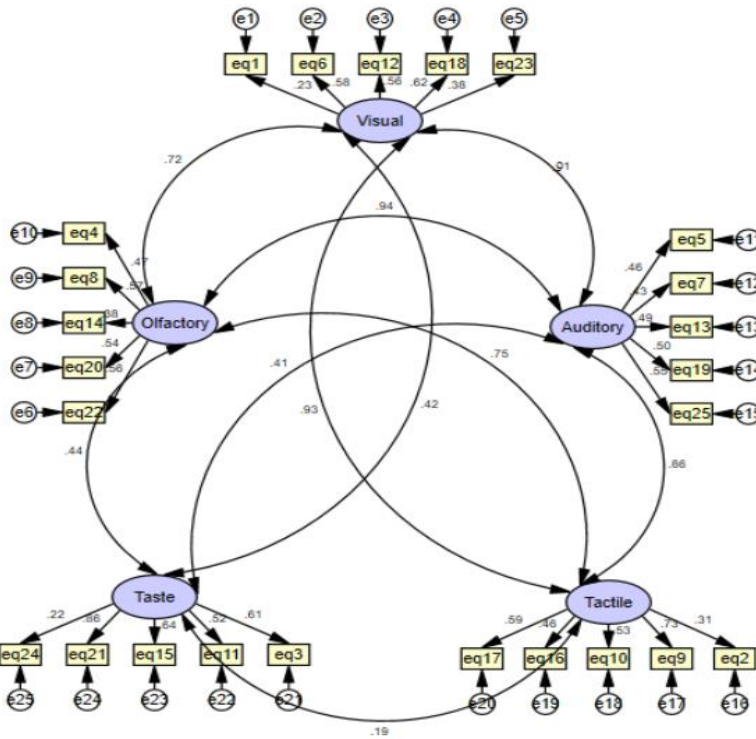


Figure 2. CFA Model of the EL Teacher Emo-sensory Practice Questionnaire before Modification

Because some measurement models did not show adequacy to the data, the researcher made some modifications to the model. These modifications included the removal of one visual item (eq1) and one taste item (eq24) due to low loadings (lower than .30). Goodness of fit indices before modification can be seen in Table 2. In this study,  $\chi^2/df$ , GFI, CFI, NFI,

and RMSEA were used. To have a fit model,  $\chi^2/df$  should be less than 3, GFI CFI, and NFI should be above .90, and RMSEA should be less than .08.

Table 2.  
Goodness of Fit Indices before Modification

	$\chi^2$	Df	$\chi^2/df$	GFI	CFI	RMSEA
Acceptable fit			<3	>.90	>.90	<.08
Model	594.168	265	2.24	.88	.90	.079

Figure 3. shows the CFA model of English language teacher emo-sensory practice Questionnaire after Modifications (removal of two items).

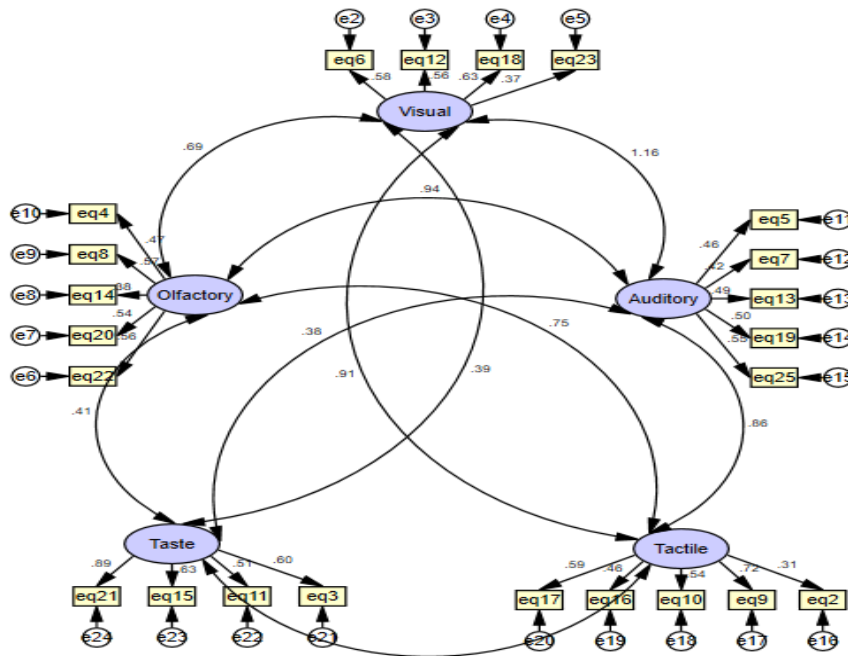


Figure3. CFA Model of EL Teacher Emo-sensory Practice Questionnaire after Modification

As Table 2 shows, all the goodness of fit indices are within the acceptable range. Therefore, the scale enjoys perfect validity. Goodness of fit indices after modification can be seen in Table 3.

Table 3.

Goodness of Fit Indices after Modification

	$\chi^2$	Df	$\chi^2/df$	GFI	CFI	RMSEA
Acceptable fit			<3	>.90	>.90	<.08
Model	594.168	265	2.24	.88	.90	.079

Moreover, the reliability of the questionnaire was calculated using Cronbach's alpha. Table 4 summarizes the information obtained from Cronbach's alpha analyses. As demonstrated in the table, the utilized questionnaire gained acceptable indices of Cronbach's alpha as a whole as well as in its subscales.

Table4.

Results of Cronbach Alpha Indices after Validation

Scale	Subscales	Number of items	Cronbach alpha
	Visual	4	.70
	Auditory	5	.71
	Olfactory	5	.73
	Taste	4	.77
	Tactile	5	.74
Emotioncy Scale	Total	23	.85
Teacher success	-----	47	.97

**The Relationship between Distal and Proximal Senses and Teacher Success**

To examine whether distal and proximal senses could predict teachers’ success, a model was proposed and measured through structural equation modeling. In statistics, path analysis is used to describe the directed dependencies among a set of variables. It can be viewed as a special case of structural equation modeling (SEM) in which only single indicators are employed for each of the variables in the causal model, i.e., path analysis is SEM with a structural model, but no measurement model. The hypothesized model is shown in Figure 4.

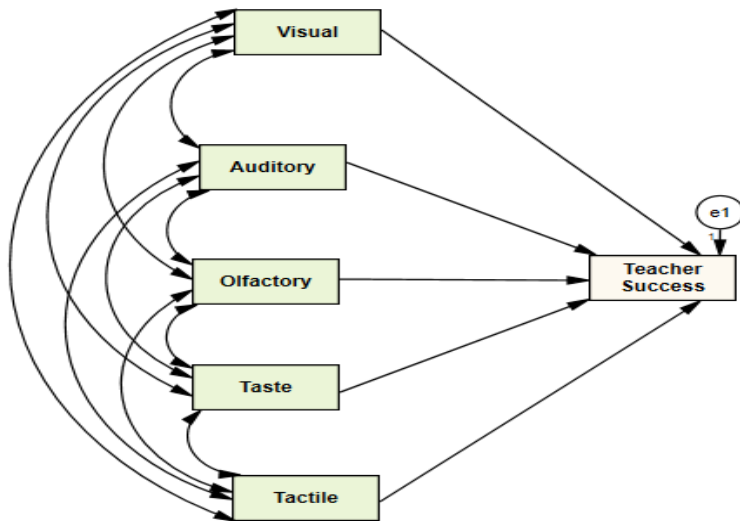


Figure 4. Proposed Model of the Path Analysis

To examine the structural relations, the proposed model (Figure 4) was tested using Amos 24 statistical package. Figure 5 shows the Path Analysis of Emo-Sensory Practices of English Language Teacher and Teacher Success. As the model demonstrates, among the five sub-constructs of Emo-sensory practices, there is only one non-significant path from olfactory to Teacher Success ( $\beta = .04, p > .05$ ). However, all the other four sub-constructs of Emo-Sensory Practices of English Language Teacher questionnaire are significant positive predictors of Teacher Success: Visual ( $\beta = .16, p < .01$ ), Auditory ( $\beta = .38, p < .01$ ), Taste ( $\beta = .15, p < .01$ ), and Tactile ( $\beta = .16, p < .01$ ).

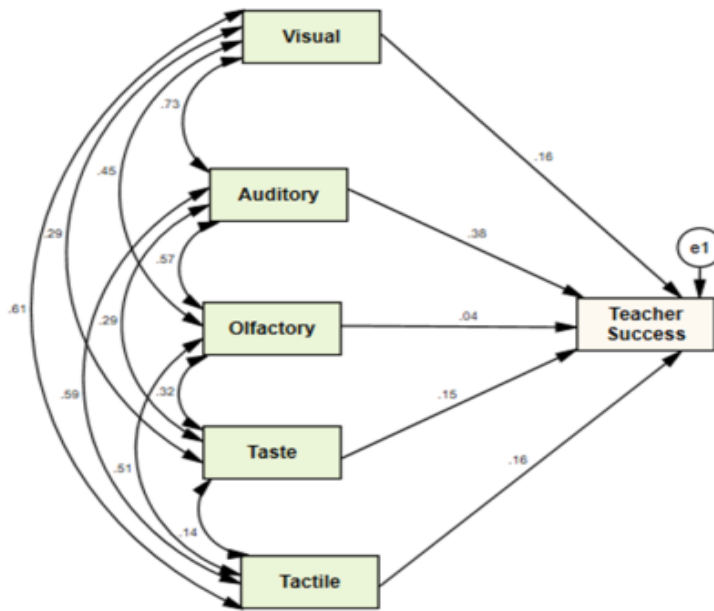


Figure 5. The Path Analysis of Emo-sensory Practices and Teacher Success

A number of fit indices were examined to evaluate the model fit. Goodness of fit indices for model of path analysis can be seen in Table 5. As Table 5 depicts, all the goodness of fit indices is within the acceptable range. Therefore, the model enjoyed perfect fit with data.

Table5.

Goodness of Fit Indices for Model of Path Analysis

	<b>X2/df</b>	<b>GFI</b>	<b>CFI</b>	<b>RMSEA</b>
<b>Acceptable fit</b>	<3	>.90	>.90	<.08
<b>Model</b>	2.79	.93	.91	.065

SEM analysis was also run to delve into the relationship between distal and proximal senses, and teacher success. Figure 6 shows the relationships among these variables.

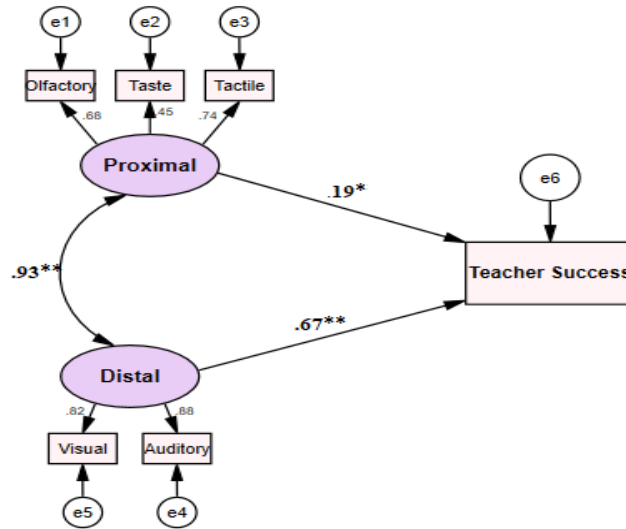


Figure 6. The Relationship among Distal and Proximal Senses, and Teacher Success

As the figure shows, proximal and distal senses are significant predictors of teacher success: proximal ( $\beta = .19, p < .01$ ) and distal ( $\beta = .67, p < .01$ ). A number of fit indices were examined to evaluate the model fit. Goodness of fit indices for the model of SEM can be seen in Table 6. As Table 6 shows, all the goodness of fit indices is within the acceptable range. Therefore, the model entailed a perfect fit with data.

Table 6  
Goodness of fit indices for the model of SEM

	<b>X2/df</b>	<b>GFI</b>	<b>CFI</b>	<b>RMSEA</b>
<b>Acceptable fit</b>	<3	>.90	>.90	<.08
<b>Model</b>	2.15	.90	.91	.08

### The Relationship between EL Emo-sensory Practice and Teacher Success

To investigate the relationship between English language teacher emo-sensory practice and Teacher Success, Pearson correlation was employed. Table 7 shows the results of Pearson correlation between five sub constructs of English language teacher emo-sensory practice and Teacher Success.

Table 7.

*Results of Correlation between EL Teacher Emo-sensory Practice and Teacher Success*

	1	2	3	4	5	6	7
1. Visual	1.00						
2. Auditory	.73**	1.00					
3. Olfactory	.45**	.56**	1.00				
4. Taste	.29**	.29**	.31**	1.00			
5. Tactile	.61**	.58**	.51**	.14*	1.00		
6. Total	.80**	.84**	.76**	.56**	.75**	1.00	
7. Teacher Success	.59**	.65**	.45**	.34**	.52**	.68**	1.00

\*\*Correlation is significant at the level of 0.01

As Table 7 presents, the correlations among English language teacher emo-sensory practice, Teacher Success, and their subscales are significant.

## Discussion

This study investigated teachers' level of awareness on emo-sensory practices. Afterwards, it aimed to develop a scale that delved into EFL teachers' emo-sensory practices and demonstrate its validity and reliability. Furthermore, it tried to investigate whether distal and proximal senses could predict teacher success. Finally, the study sought to answer whether there was a relationship between teacher success and ELT-ESPS.

In the first phase of the study, the results of the interviews were analyzed and major themes were recognized. Regarding the first objective of the study, most of the teachers believed that it is "very important" to engage learners, using sensory practices. However, they claimed that they concentrated on limited aspects of sensory education. In the same line, McMullen (1999) found a difference between teachers' perceptions and their classroom practices.

Despite their high level of awareness regarding the importance of using technological aids, what makes EFL teachers dissatisfied with the classroom environment is the lack of technological tools. In a similar line, Shaikh and Macaulay (2001) maintained that technology does not have a continuous presence in classrooms nowadays which differs from the presence of technology in society.

The participants considered music and songs as sources of joy that create a positive learning environment, making the process of learning more effective and interesting. Indeed, most teachers tend to use songs to engage learners. Tegge (2015) believed that many language teachers are of the view of using pop songs as a tool to facilitate language acquisition in the classroom which is compatible with the findings of this study.

Almost all participants who emphasized implementing supplementary material considered watching a video as the most practical Emo-sensory practice to help them engage both auditory and visual senses. Studies like (e.g., Hayati, & Mohmedi, 2009) examined the effects of using films as supplementary materials and suggested how they can foster learning as well. The findings of the current study suggested that nearly all teachers were ignorant of

engaging the olfactory sense in teaching and learning. Compatible with this finding, Brewster, McGoogan, and Miller, (2006) were of the view that the sense of smell in education has been much underutilized worldwide despite its importance for helping learners remember and relate difficult pieces of information.

Likewise, the gustatory sense was not valued by the participants of this study. They devised a no-eating policy in the classroom, as they believe eating in instructional time creates chaos.

In the same line, Tromble (2015) stated that eating in the classroom could pose a lot of distractions. Moreover, it creates a mess and it requires teachers to clean the classroom. Contrary to this finding, it was found that Iranian people are more aware of their gustatory senses (Pishghadam et al., 2020). Finally, all participants confirmed the beneficial role of physical movement during the lesson. They maintained that if they ignore physical movement activities during the lesson, students will become distracted effortlessly. In particular, the findings were in line with those of Dunn and Dunn (1978), revealing that learners who possess a kinesthetic style of learning often struggle to stay focus on the target and often fail to concentrate.

Regarding the second phase of the study, a scale was designed and validated based on the themes that emerged from the focus group discussion to measure teachers' attention to sense-induced emotions. Based on the results of the interviews, 25 items were designed which took auditory, visual, olfactory, gustatory, and kinesthetic senses into account. The visual variable included items such as presenting colorful PowerPoints and presence in a nice appearance. The auditory variable comprised items like using songs in different accents and telling short stories. The olfactory variable included items like wearing perfume and opening windows. The gustatory variable was contained items like encouraging to eat and drink; and finally, items such as performing pantomime were part of the kinesthetic variable.

Subsequently, the scale was validated using CFA. Because some measurement models did not show adequacy to the data, the researcher made some modifications to the model. These modifications included the removal of two items. Besides, the reliability of the scale was examined through Cronbach's alpha showing that the scale enjoyed high reliability.

For examining the effect of distal and proximal senses on teachers' success, a model was proposed and measured through SEM. The analysis of the SEM indicated that distal and proximal senses are not consistent predictors of Iranian English language teachers' success. To be more precise, distal senses (i.e., auditory and visual) predict teacher success better than proximal senses (i.e., olfactory, kinesthetic and tactile). This implies that auditory and visual senses were used more than olfactory, kinesthetic, and tactile senses by successful teachers. This finding can be justified in light of the cultural background of Iranian teachers and students. Eating in the classroom environment is considered disrespectful in Iran's educational system. Teachers believe that engaging learners through gustatory, olfactory, and kinesthetic senses are ineffective in the learning process. Thus, they attend more to visual stimuli to facilitate the learning process.

By and large, the findings revealed that the auditory sense is the strongest predictor of teacher success, while the olfactory sense is the weakest predictor of it. It seems that, although the olfactory sense is often ignored by successful teachers, the auditory sense is



regularly employed in their classrooms. A possible justification may be related to the nature of language. Language is a verbal phenomenon used for communication; therefore, successful teachers regularly concentrate on the hearing sense to keep students engaged. According to Pishghadam (2018b), in thin-slice sensory education, teachers implement several verbal techniques, stimulating the auditory sense in learners. Moreover, the study conducted by Pishghadam et al. (2020), revealed that people with higher auditory, visual, and kinesthetic ESQ scores have a higher chance of getting a high GPA.

To study the possible relationships between teachers' Emo-sensory practices and their success, Pearson correlation was used. The results indicated that the total score on Emo-sensory practices correlated positively and highly with teacher success. This suggests that an increase in teachers' attendance to Emo-sensory practices in light of the five subscales of English language teacher emo-sensory practice scale (auditory, visual, olfactory, gustatory, and tactile) can lead to a greater amount of teacher success. A possible line justification may be related to the structure of the brain. The brain is made of three major parts: sensory brain, emotional brain, and logical brain.

Stimulating the sensory and emotional parts of the brain, one can activate the logical brain. When the emotional environment is appropriate, the cognitive abilities will be used, enhanced, and optimized (Pishghadam & Shayesteh, 2017).

A significant contribution of this study maybe is the fact that the definition of effective teachers was redefined in terms of emo-sensory practices they use in their education. Indeed, successful teachers are those teachers who are aware of the significant role of sense-induced emotions in teaching and attempt to utilize them in their education.

## Conclusion

The current study investigated the validity and reliability of the English language teacher emo-sensory practice scale. Moreover, it explored the relationship between teachers' emo-sensory practices in language classrooms and teacher success. Finally, it took into account the degree to which distal and proximal senses may predict teacher success. The results of the present study provide teachers, teacher trainers, text-book designers, and researchers with theoretical and pedagogical implications to foster the teaching output in the realm of English education.

Providing teachers with information on emo-sensory intelligence and highlighting the role of emo-sensory practices in education can help teachers improve their teaching practice. Although they might use some of the five senses in their education, they are not fully aware of their effects on facilitating the process of learning. Therefore, it can be concluded that for better education to take place, teachers should implement various practices which evoke sense-induced emotions in learners. Moreover, teachers need to gain enough awareness about the novel concept of sense-induced emotions which would lead them to become effective teachers.

Since this is the first time that sense-induced emotions and their applications have been explored in the EFL classroom, this research has several practical applications for stakeholders and teacher training programs. Implementing sense-induced emotions in training programs can help the teacher observe how useful these practices can be.

Moreover, training would-be teachers to use these practices in language classrooms will prepare them well for their job. The benefits of the present findings for educational planners were suggested by Darling-Hammond (2010). According to Darling-Hammond (2010), policymakers have found promotion in teacher quality as one of the most effective strategies for improving academic outcomes.

In addition to teachers, teacher trainers, and policy-makers, material developers can use the results of the current study to develop books in which sense-induced emotions are implemented. Books that are carefully designed can help teachers become more aware of the use of emotions and can improve teachers' practices.

Despite the research findings, I must acknowledge at least one limitation. Data gathered in the qualitative phase of this study were in the form of the interview rather than real classroom observations. As the topic of this study is sensitive, the participants might have self-censored their opinions to meet the researcher's outlooks. Although the participants were aware of the privacy of their identity, they might have not presented views that show negative sides of their practices.

## Funding

The author received no direct funding for this research.

## About the Author

**Maryam Zargar** holds a master's degree in Teaching English as a Foreign Language from Ferdowsi University of Mashhad. Her research interest is in studying psychology of language education.

## References

- Bhardwaj, A. (2009). Role of personality factors for teaching effectiveness. *Pacific Business Review: A Quarterly Journal of Management*, 2(5), 75-80.
- Birjandi, P., & Bagherkazemi, M. (2010). The relationship between Iranian EFL teachers' critical thinking ability and their professional success. *English Language Teaching*, 3(2), 135-145.
- Brewster, S., McGookin, D., Miller, C. (2006, April). Olfoto: Designing a smell-based interaction. In Rebecca, G., Thomas, R. (Eds.), *Proceedings of the SIGCHI conference on Human Factors in computing systems* (pp. 653-662). Montreal, Canada: ACM.
- Buela, S., & Joseph, M. C. (2015). Relationship between personality and teacher effectiveness of high school teachers. *The International Journal of Indian Psychology*, 3(1), 57-70.
- Conway, M. A. (1990). *Autobiographical memory: An introduction*. Open University Press.
- Darling-Hammond, L. (2000). How teacher education matters. *Journal of Teacher Education*, 51(3), 166-173.

- Dunn, R., & Dunn, K. J. (1978). *Teaching students through their individual learning styles: A practical approach*. Reston Publishing Company.
- Ellett, C. D., & Teddlie, C. (2003). Teacher evaluation, teacher effectiveness and school effectiveness: Perspectives from the USA. *Journal of Personnel Evaluation in Education*, 17(1), 101–128.
- Ghanizadeh, A., & Moafian, F. (2010). On the relationship between critical thinking and self-efficacy: A case of EFL teachers in language institutes. *Journal of Faculty of Letters and Humanities*, 5(16), 77-96.
- Hayati, A., & Mohmedi, F. (2009). The effect of films with and without subtitles on listening comprehension of EFL learners. *British Journal of Educational Technology*, 42(1), 181-192.
- Hiebert, J., Morris, A. K., Berk, D., & Jansen, A. (2007). Preparing teachers to learn from teaching. *Journal of Teacher Education*, 58(1), 47-61.
- Katai, Z. (2011). Multi-sensory method for teaching-learning recursion. *Computer Applications in Engineering Education*, 19(2), 234-243.
- Kyriakides, L., Campbell, E., & Christofidou, E. (2002). Generating criteria for measuring teacher effectiveness through a self-evaluation approach: A complementary way of measuring teacher effectiveness. *School Effectiveness and School Improvement*, 13(3), 291-325.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage.
- Mangiante, E. M. S. (2011). Teachers matter: Measures of teacher effectiveness in low-income minority schools. *Educational Assessment Evaluation Accreditation*, 23(1), 41–63.
- McMullen, M. B. (1999). Characteristics of teachers who talk the DAP talk and walk the DAP walk. *Journal of Research in Childhood Education*, 13(2), 216-230.
- Moafian, F., & Pishghadam, R. (2009). Construct validation of a questionnaire on characteristics of Successful Iranian EFL teachers. *Pazhuhesh-e Zabanha-ye Khareji*, 9(54), 127-142.
- Ochsner, K. N. (2000). Are affective events richly recollected or simply familiar? The experience and process of recognizing feelings past. *Journal of Experimental Psychology: General*, 129 (2), 242-261.
- Okigbo, E. C., & Okeke, S. O. (2011). Perceived difficulty in integrating educational objectives within the mathematics classroom: A comparison of beginner and experienced teachers. *Educational Research and Reviews*, 6 (3), 292-298.
- Palardy, G. J., & Rumberger, R. W. (2008). Teacher effectiveness in first grade: The importance of background qualifications, attitudes, instructional practices for student learning. *Educational Evaluation and Policy Analysis*, 30 (2), 111-140.
- Pishghadam, R. (2017, October). *Depicting ELT in light of emo-sensory education*. Paper presented at the 3<sup>rd</sup> Conference of Interdisciplinary Approaches to Language Teaching, Literature and Translation Studies. Iran, Mashhad.
- Pishghadam, R. (2018a, February). *Can emo-sensory intelligence inform L2 instruction?* Paper presented at the First National Conference on New Trends in English Language Teaching and Applied Linguistics. Iran, Gorgan.

- Pishghadam, R. (2018b, June). *An introduction to thin-slice sensory education: Less is more*. Paper presented at the International Academic Conference on Economics, Business and Social Sciences. Georgia, Tbilisi.
- Pishghadam, R., Jajarmi, H., & Shayesteh, S. (2016). Conceptualizing sensory relativism in light of emotioncy: A movement beyond linguistic relativism. *International Journal of Society, Culture & Language*, 4(2), 11-21.
- Pishghadam, R., Makiabadi, H., Zabetipour, M., Abbasnejad, H., Firoozian Pooresfahani & Shayesteh (2020). Development, validation and application of an inventory on emo-sensory intelligence. *Teaching English Language*, 14(2), 173-216.
- Pishghadam, R., & Shayesteh Sadafian, S. (2017). Emo-sensory expression at the crossroads of emotion, sense, and language: A case of color-emotion associations. *International Journal of Society, Culture & Language*, 5(3), 54-64.
- Pishghadam, R., Shayesteh, S., & Shapoori, M. (2011). Validation of an NLP Scale and its Relationship with Teacher Success in High Schools. *Journal of Language Teaching & Research*, 2(4).
- Shaikh, A. N., & Macaulay, L. (2001). Integrating groupware technology into the learning environment. *ALT-J*, 9(2), 47-63.
- Tegge, F. A. G. (2015). *Investigating song-based language teaching and its effect on lexical learning* [Unpublished doctoral dissertation]. Victoria University of Wellington.
- Thomson, D. M. H., Crocker, C., & Marketo, C. G. (2010). Linking sensory characteristics to emotions: An example using dark chocolate. *Food Quality and Preference*, 21(8), 1117–1125.
- Tromble, W. (2015). Eating attitudes in English secondary school students: Influences of ethnicity, gender, mood, and social class. *International Journal of Eating Disorders*, 31(1), 92-96.
- Wayne, A. J., & Youngs, P. (2003). Teacher characteristics and student achievement gains: A review. *Review of Educational research*, 73(1), 89-122.

## Appendix

Sample items from English language teacher emo-sensory practice scale

- My teacher uses classroom objects and realia while teaching.
- My teacher tells short stories and plays music and song in both American and British accents.
- My teacher wears perfume and I can smell it across the classroom.
- My teacher allows students to eat in the class during instructional times.
- My teacher uses movements (miming, plays, gestures, etc.) while teaching.