Applied Research on English Language

Developing and Validating Identity Processing Styles Scale for Iranian High School EFL Teachers: A Mixed Methods Approach

Salah Addin Rahimi [1*], Seyyed Ayatollah Razmjoo [2]

[1] PhD Candidate, Department of Foreign Languages and Linguistics, Shiraz University, Shiraz, Iran

[2] Professor, Department of Foreign Languages and Linguistics, Shiraz University, Shiraz, Iran

Abstract: Berzonsky (1990) conceptualized three social-cognitive components of the identity process: an informational or scientific style, normative or dogmatic style, and a diffuse or ad hoc style. Despite the importance of this concept, no previous studies have been conducted to develop and validate the IPS scale to measure this construct as it relates to the EFL settings. Accordingly, the present study aimed at developing and validating a measure that could assess IPS in the EFL context of Iran. To this end, a sequential mixed methods design was conducted in two phases. In the qualitative phase, the researchers reviewed the related literature and conducted semi-structured and focus group interviews with EFL teachers in order to seek out the EFL teachers' perspectives regarding what shapes their identity processing styles. Next, the researchers used the principles of data analysis of the grounded theory to analyze the data. Seven sub-components were initially identified that constitute the Iranian version of identity processing styles model, namely, informational style (analytical/rational thinking), normative style (personal norm thinking, social norm thinking, and religious thinking), and diffuse-avoidant style (pessimistic thinking and optimistic thinking). Finally, to measure the EFL teachers' identity processing styles, 42 five-point Likert-scale items were developed. Then, the newly-developed instrument was completed by 203 EFL teachers in the higher education context. In the quantitative phase, the IPS scale was tested through different statistical procedures including confirmatory factor analysis and Cronbach alpha for reliability. Statistical results are discussed and implications and applications of the study are explained.

Keywords: Identity Processing Styles, Mixed-methods Design, Grounded Theory Approach, Psychometric.

Introduction

Teacher identity is overwhelmed with a myriad of perspectives, including Ericson's theory of identity and Bourdieu's theory of social capital (Hasinoff & Mandzuk, 2005). Teachers' professional identity may be expressed in the form of beliefs, attitudes, values, motives, and experiences through which teachers express themselves in their teaching practices (Tsakissiris, 2015). Professional identity has been identified as the very core of effective teaching and how teachers view themselves as experts in their work (Beijaard, Meijer, & Verloop, 2004). Ultimately, a comprehensive set of meanings define the role of teachers in a particular context.

Teacher identity is undergirded by psychological constructs, for example, values, emotions, beliefs, and attitudes. People around the world deal with social networks, media, and the context in which they work and live. They customize their identities to a new setting and people with whom they interact and take a leading role in new situations or communities of practice.

Teacher identity is comprised of three major categories based upon student learning and language teachers' pedagogical knowledge. Teachers are considered valuable resources and guidance in learning with respect to students, and there is a close linkage between teachers' professional identity and students' achievement. In this regard, Mercer and Gregersen (2020) argued there is "a strong connection between teacher and learner psychologies, that is, "teacher psychology can influence the psychology of the learner in the class- both as individuals and as a collective group" (p. 505). This implies that teachers can influence student learning, and there is a close association between teacher identity development and student learning. In fact, teachers are thought to be active agents in the classroom because the teacher-student relationship will heavily influence how students are involved in learning (Varghese, Morgan, Johnston, & Johnson, 2005). Concerning post-modernist and post-structuralist views, teacher identity is conceptualized as a self or ego identity which is "a polysemic product of experience, or product of practices that constitute this self in response to multiple meanings that need not coverage upon a stable, unified identity" (Zembylas, 2003, p. 107).

Identity formation is the major developmental task of adolescence (Erikson, 1968). Thus, identity is not a static entity. It is dynamic, contextual, and changes gradually as a result of communication and interaction. Berzonsky (1992) developed a social-cognitive model that highlights reliable stylistic differences in the way individuals maintain, shape, or reshape their sense of identity. Berzonsky (1989) represented three components of identity development that are inextricably intertwined, namely, process, structure, and content. The identity formation process

reflects different phases of identity-relevant information that is encoded, integrated, and expanded. Berzonsky (1992) proposed three types of identity styles, informational, normative, and diffuse-avoidant.

Individuals primarily utilizing the informational identity style consciously seek out, evaluate, and utilize identity-relevant information in order to gain realistic self-insight (Berzonsky et al., 2013). They show respect for the diverse opinions, values, and beliefs of others (Berzonsky, et al., 2013). They are proactive in coping with naturally occurring challenges, and they may gather social support to cope with their problems (Seaton & Beaumont, 2008). Those utilizing an informational orientation are more autonomous in academic settings (Berzonsky & Kuk, 2005), self-aware, skeptical, and willing to accommodate opposite views (Berzonsky et al., 2013). The informational-orientated identity style has been associated with mental flexibility, wisdom, mindfulness, and openness to experience (Berzonsky et al., 2013).

Those people using a normative style tend to act according to prevailing norms or conform based on the specific expectations of a particular social category (for instance, mother, father, Christian, etc.) (Berzonsky & Sullivan, 1992). They are reluctant to consider ideas, norms, beliefs, and values different from their own (Berzonsky, 2011). They preserve and enhance their existing concepts of self and identity structure (Berman, Schwartz, Kurtines, Berman, 2001). Those with normative styles are positively associated with values such as tradition, religion, and security (Berzonsky, 1993; Berzonsky & Sullivan, 1992). They have a foreclosed identity status and a limited tolerance for ambiguity (Berzonsky et al., 2013). That is, they are strongly inclined to a definite answer instead of uncertainty or doubt (Berzonsky, 1992).

Finally, individuals utilizing the diffuse-avoidant style are more egocentric in their values and primarily rely on immediate rewards, and their behaviors are strongly tied to the situations (Berzonsky, 1992). Hence, there is considerable variability in their actions. They mainly depend on who they are with and where they are (Berzonsky et al., 2013; Berzonsky & Sullivan, 1992). Those with diffuse identity status reflect attention-seeking behavior in which people often seeking popularity and impressions of others (Berzonsky, 2008; Berzonsky et al., 2013; Berzonsky & Sullivan, 1992). People using a diffuse identity style tend to procrastinate in order to avoid doing something despite knowing that there is an apparent negative consequence. Hence, they typically lack commitments (Berzonsky & Ferrari, 2009).

Schwartz (2016) notes that Western and non-Western contexts differ in terms of identity formation and views of the person. Western culture is usually described as individualistic. That is, people tend to be self-reliable and independent. In contrast, non-Western contexts have been

typically associated with collectivistic perspectives. People from a collectivistic cultural background tend to group goals. In the educational domain, due to the importance of investigating teachers' identity, Varghese et al. (2005) stated that understanding identity is crucial to understanding language education and learning and helps to clarify teachers' thoughts or assigned identities. It should be noted that identity is an effective factor in teachers' motivation, self-efficacy, commitment, and effectiveness. Then, how EFL teachers perceive themselves as teachers and what factors contribute to their perceptions are valuable for academic investigation. Many scholars believed that the identity style construct might serve differently in the Middle East contexts compared to Western settings (Hassan, Vignoles, & Schwartz, 2018; Tariq, 2012). As Fogle and Moser (2017) recognized, understanding teacher identities is the key to gaining more profound visions of the factors that impact a teacher's decision-making process, attitudes, and beliefs.

Objectives of the Study and Research Questions

The main purpose of the present study is to pinpoint and define the main components of identity processing styles based on the previous work by Berzonsky et al. (2013) and literature as well as high school EFL teachers' perceptions. We, in fact, make the first attempt to propose a model of identity processing styles in the EFL context of Iran. Mindful of this, the researchers embarked on developing and validating a more contextualized scale to measure social cognitive strategies and identity orientations that underlie high school EFL teachers' identity formation. To achieve this objective, the following research question is set to find an answer.

What does an Iranian identity processing styles model consist of, and whether the developed inventory demonstrates an appropriate level of reliability and validity?

Literature Review

Measuring Identity Processing Styles

In developmental psychology, social cognitive strategies and identity-related information have been characterized as the phenomenon related to a normative, age-related identity crisis. Stable individual differences in cognitive abilities are associated with variation in the way people process and respond to the sense of identity and make identity-related decisions, information processing, and decision-making strategies (Berzonsky, 1989, 2011).

Every person is able to set their cognitive capacity fit to different styles of cognitive processing; however, this has been noted by Berzonsky (2008), who said that individuals generally have a dominant orientation. It implies that people are typically tied to the most

dominant style within one of three social-cognitive strategies to maintain and process identity-related decisions. He also argued that different styles of social-cognitive strategies (e.g., stylistic orientations) are unique and relatively consistent over time and across situations and use the same goal-directed strategies to overcome identity crises. Schwartz (2016) has argued that "any of the three decision-making styles can be used to adopt (or resist) receiving culture ideas and practices and to retain (or resist) heritage culture practices." (p. 14).

The ISI is the most commonly used scale to measure social-cognitive styles in various cultural contexts (Bosch & Card, 2012). In order to address the issues related to improving its psychometric properties, five different versions of identity processing styles inventory were developed including ISI-1 (Berzonsky, 1989) which was an extension of Marcia's identity status (1966) model; ISI-2 (Berzonsky, 1992) which was not exclusively based on the statements in relation to the content domains in Murcia's (1996) identity status interview. However, a certain revision was made to the normative and informative scale in the third version of the ISI.

According to Berzonsky et al. (2013), the original version or translated version of ISI 3 has been utilized in various countries, including China, Canada, Finland, Spain, Poland, Turkey, Slovakia, Germany, Pakistan, Iran, Switzerland, Australia, Belgium, the Czech Republic, and Greece. The third version of ISI-3 demonstrates high validity and reliability (Berzonsky, 1992, 2008, 2011). Despite these strengths, the ISI-3 was subject to several potential weaknesses. Ultimately, Smits, Soenens, Vansteenkiste, Luyckx, and Goossens (2010) developed and revised a brief version of ISI-4, which has been utilized in a number of studies (e.g., Smits et al., 2010; Missotten, Luycky, Branje, Vanhalst, & Goossens, 2011). Although the ISI-4 has been utilized in various studies, the internal reliability of the score on the ISI-4 normative scale was low, and there was not any significant relationship between IPS subscales with the commitment scale (Smits et.al, 2010). Given these problems, the revised identity style inventory (ISI-5) was constructed after the revision process, including creating additional items for the three styles and rewording and adapting some of the statements contained in the ISI-3 (Berzonsky et al., 2013).

Association of Identity Styles with Related Constructs

In this part, the related experimental studies in identity styles and associated constructs will be expounded. Many studies have been conducted to understand the relationship between different social-cognitive strategies and variables associated with academic achievements.

To investigate the relationship between different identity styles and academic achievement, Berzonsky and Kuk (2005) indicated a relatively little but consistent relationship between different identity styles and educational achievements. The findings showed no significant difference among the three identity styles and the academic achievement of students. Berzonsky and Kuk (2005) believed that their sample characteristics and the optimal use of cognitive processing are the major causes of non-significant differences. Another study adds further nuance to the identity styles model by exploring the correlation among the three identity styles and learners' language proficiency in the Iranian educational setting.

Razmjoo and Neissi (2010) focused on components such as grammar, vocabulary, and reading skills. The result indicated that the individuals who score high on normative and informational styles possess a high command of general English proficiency. Besides, learners with diffuse-avoidant styles tend to score lower on language ability and subscales, namely, grammar, reading skills, and vocabulary. In addition, there were meaningful gender differences in diffuse-avoidant style and vocabulary.

Furthermore, Razmjoo and Izadpanah (2012) conducted a study to investigate the relationship between L2 literacy of Iranian EFL learners at an advanced level and their identity processing styles. The findings showed that identity processing styles contributed to the Iranian EFL learners' L2 literacy. With respect to L2 literacy and writing skills, those with informational styles are positively associated with these components. On the other hand, normative style is negatively and weakly related to L2 proficiency. Finally, those with diffuse-avoidant style are not correlated with L2 proficiency.

Farsinejad (2004) investigated the relationship between identity styles and self-efficacy. The result showed a positive correlation between self-efficacy and informational and normative identity styles, and diffuse avoidant style was negatively associated with self-efficacy.

Besides, Zarrinabadi and Heidari (2014) investigated the relationship between informational and normative styles and willingness to communicate. The result indicated that the large extent of the variation in willingness to communicate could explain the difference in identity styles. The finding showed the positive relationship between informational and normative styles and the willingness to communicate among Iranian EFL learners.

In line with this study, Shahsavar (2014) explored the specific link between willingness to communicate and identity styles, suggesting a close relationship between these variables. Norozi and Mohamadi (2015) conducted a study investigating the relationship between Iranian EFL learners' autonomy, identity styles, and writing ability. The findings showed that identity

styles could predict writing ability. Moreover, there is no significant positive relationship between writing ability and EFL learner autonomy in the EFL context of Iran. Apart from examining the association between identity styles and variables related to academic performance, identity styles can also be approached from the parent-child relationship. For example, Ratner (2014) investigated the relationship between parent-child and identity styles. The findings revealed that a kind and loving maternal figure provokes children to feel secure, and parents with a normative style provide children with a combination of love and discipline.

In addition, Mohamadi and Mokhtari (2016) investigated the relationship between writing ability and identity styles. The result indicated that EFL learners with informative styles had better reading and writing abilities.

Malmir and Derakhshan (2020) investigated the relationship between identity processing styles and students' speech act knowledge and production. This study was conducted through multiple stages. In the first phase of the study, 122 participants were asked to fill out Berzonsky's (2011) identity processing styles inventory. Next, students were required to answer multiple choices discourse completion test (MDCT). Finally, in the third phase of the study, the students were asked to role-play using scenarios in different situations. The results of the study using multiple regression indicated individuals using informational style possess better production of common English speech act. Moreover, those with normative style had a weak contribution to L2 pragmatic knowledge and production regarding speech act. Finally, individuals using diffuse avoidant style were very poor predictors of the speech act regarding L2 pragmatic knowledge and production.

Having reviewed previous research on identity processing styles, the researchers found a few gaps on two major issues. First, there is a considerable cultural gap between Iran as an Islamic country and Western contexts, where many theories on identity formation are originally developed. After the Islamic Revolution (1979), the Islamic Republic of Iran was established based on its own cultural, geographical, and historical features and firmly relied on the ethical principles and values of Islam (Mirhosseini & Khodakarami, 2015). Under this nationalistic religious ideology, the authorities consider English language teaching to reinforce the Islamic-Iranian identity.

The previous research on identity processing styles focused solely on the psychometric properties of identity processing styles (e.g., Berzonsky & Papini, 2014; Crocetti & Shokri, 2010; Hassan et al., 2018; Szabo, Ward & Fletcher, 2016), and no research has extended the scope of investigation on developing IPS scale within EFL contexts of Iran. It should be noted

that original or translated versions of ISI have been used in different countries (Berzonsky et al., 2013). However, most of these countries are commonly called the Western world and, no one to the best of our knowledge has developed and validated ISI beyond their cultures of origin (e.g., United States, Belgium) (Hassan et al., 2018).

Clearly enough, the majority of the studies on identity processing styles have been carried out in Western cultural contexts, such that the available model of identity styles (Berzonsky et al., 2013, 1992) largely developed based on a Western understanding of the concept (Hassan et al., 2018). Moreover, another significant issue in accordance with the previous studies is that these studies have not investigated the contextual and local needs (Szabo et al., 2016). In order to fill this gap, the researchers of the present study decided to develop and validate an efficient instrument that incorporates more contextualized factors related to the Iranian context for measuring social-cognitive strategies and identity orientations that underlie high school EFL teachers' identity formation.

Method

Design

Due to the nature of the research questions, an exploratory sequential design was used. The sequential mixed methods design was conducted in two phases. First, in the qualitative phase of the study, the researcher pinpointed and defined the main components of the model in order to develop the instruments, including item generation and revision. Second, in the quantitative phase of the study, the researchers followed different stages to validate the newly-developed instrument. In the qualitative phase, the study specifically used the grounded theory approach for the gathering of data to gain an in-depth understanding of EFL teachers' identity processing styles. The grounded theory approach is an appropriate research design for the qualitative phase of this study as Ary, Jacobs, Razavieh, and Sorensen (2006) maintain: "The grounded theory type of study aims at developing a theory of social phenomena drawn from a field data collected in a study" (p. 33).

The researchers aimed to construct a theory grounded in the data by using flexible procedures to collect and analyze qualitative data (Charmaz, 2006). Ultimately, the broad inquiry logic for mixed-methods deals with utilizing induction (discovery of pattern), deduction (testing the theoretical hypothesis), and abduction (exploring and focusing on the best of the set of explanations for understanding one's result). The abductive approach has some

links to grounded theory, and the first mention of the abductive approach as it is understood today was proposed by Peirce (1976) who developed thinking on pragmatism.

This study aimed to uncover EFL teachers' perspectives abductively by making use of the existing conceptual framework. This approach also implies that a dialogic relationship between theory and analysis is cyclical rather than a fixed logic. Ultimately, the research began with provisional categories of analysis (derived from existing theory and prior research). Thus, the researchers could differentiate new understandings from the data from these, which confirmed the existing theory. Although drawing on Berzonsky's (2013) classification of identity processing style might not be in line with the positivistic assumptions of grounded theory at first glance, it is in line with the post-positivist view of grounded theory. Corbin and Strauss (1998) argued that researchers could use existing theoretical concepts as a point of departure (Charmaz, 2006). However, the ideas are considered provisional until they find their way into the emerging theory by repeatedly being present in the data.

Participants

Two groups of EFL teachers participated in this phase of the study as follows:

Group 1: The primary group of participants consisted of 18 EFL teachers (8 females and 10 males) teaching English in high school. The EFL teachers were selected from different high schools in Iran from different education levels, ages, genders, and educational backgrounds. They hold different degrees, including BA, MA, and Ph.D., and their teaching experience varies from 2 to 28 years. The type of sampling was used in the present study is convenient sampling. The high school EFL teachers were chosen based on purposive maximum variation sampling (Ary, Jacobs, Razavieh, & Sorensen, 2010), which is common in qualitative research. The researchers tried to recruit participants who create as many differences as possible concerning gender, teaching experience, and variations in qualifications, individual skills, and workplaces (i.e., urban, rural, and inner-city schools) in order to construct a robust view of the issue from the EFL teachers' perspectives. Ary et al. (2006) and Best and Kahn (2006) state that in qualitative studies, data are collected from the samples until there are no further emergent themes that refer to data saturation.

Table 1. *Profile of Participant Teachers*

Teacher	Academic Degree	Gender	Professional Qualifications	Teaching Experience

T1	Ph.D. in TEFL	M	High school EFL teacher Attended a few training sessions on syllabus design and teaching methodology	28
T2	BA in English Literature	F	High school EFL teacher attended a few training sessions on syllabus and course design and teaching methodology	5
T3	BA in English Literature and MA in TEFL	F	High school EFL teacher attended a few ELT workshop	7
T4	BA in English Literature	M	High school EFL teacher Attended a few training sessions on syllabus design and teaching methodology	8
T5	Ph.D. in TEFL	M	High school EFL teacher attended a few training sessions on syllabus design and teaching methodology and ELT workshop	14
T6	BA and MA in TEFL	M	High school EFL teacher attended a few ELT workshop	21
T7	BA in English Translation and MA in TEFL	F	High school EFL teacher Attended a few ELT workshop	5
T8	BA and MA in TEFL	M	High school EFL teacher Attended a few ELT workshops and training sessions on syllabus and course design	6
T9	BA and MA in TEFL	M	High school EFL teacher attended a few training sessions on syllabus design and teaching methodology	17
T10	BA in English Translation and MA in TEFL	F	High school EFL teacher Attended a few ELT workshops and training sessions on syllabus and course design	12

AREL

T11	Ph.D. in TEFL	M	High school EFL teacher attended a few training sessions on syllabus design and teaching methodology and ELT workshop	19
T12	BA in English Translation and MA in TEFL	M	High school EFL teacher attended a few training sessions on syllabus design and teaching methodology	5
T13	BA and MA in TEFL	F	High school EFL teacher attended a few ELT workshop	8
T14	BA and MA in TEFL	M	High school EFL teacher attended a few training sessions on syllabus design and teaching methodology	18
T15	BA in English Translation and MA in TEFL	F	High school EFL teacher attended a few ELT workshop	26
T16	BA in TEFL	F	High school EFL teacher Participated in a few training sessions on syllabus design and teaching methodology	2
T17	BA in TEFL	M	High school EFL teacher attended a few ELT workshop	4
T18	BA in TEFL	F	High school EFL teacher attended a few ELT workshop	10

Group 2: Apart from the individual interview, the researchers used series of focus group interviews. Mindful of the notions of focus group interviews (Patton, 2002), ten EFL teachers took part in this phase of the study. The demographic information of high school EFL teachers in the focus group interview is parented in Table 2.

Table 2. *Profile of Participant Teachers*

Teacher	Academic degree	Gender	Professional qualifications	Teaching experience

T1	BA in English Literature and MA in TEFL	F	High school EFL teacher attended a few ELT workshop	5
T2	Ph.D. in TEFL	M	High school EFL teacher Participated in a few training sessions on syllabus design and teaching methodology	8
T3	BA in English Translation and MA in TEFL	F	High school EFL teacher Attended a few ELT workshop	18
T4	BA in TEFL	M	High school EFL teacher attended a few ELT workshop	11
T5	BA and MA in TEFL	M	High school EFL teacher attended a few ELT workshop	26
T6	BA and MA in TEFL	M	High school EFL teacher Attended a few ELT workshop	5
T7	BA in English Literature and MA in TEFL	M	High school EFL teacher attended a few ELT workshop	7
T8	BA and MA in TEFL	F	High school EFL teacher Attended a few ELT workshop	12
T9	BA and MA in TEFL	M	High school EFL teacher Participated in a few training sessions on syllabus design and teaching methodology	10
T10	BA and MA in TEFL	M	High school EFL teacher attended a few ELT workshop	6

Group 3: At the second phase of the study, non-probability convenience sampling (Ary et al., 2010) was employed to select 50 respondents for the initial piloting and a total of 203 experienced and novice high school EFL teachers took part as the participants of this study. They were in different degrees including BA, MA, and Ph.D. for reliability and factor analysis stages.

Instruments

Identity Processing Styles Scale

Due to the fact that there are differences in the extent to which individuals in the same context

rely on rational-analytical reasoning, which underpins the notion of different styles or preferences in the reasoning strategies people utilize, the researchers decided to develop and validate more nuanced ISI that better captures its utilization within EFL contexts of Iran. To measure the high school EFL teachers' identity styles in the EFL context of Iran, a new scale titled the Identity Processing Styles scale was developed and validated through a number of meticulous and scrupulous stages.

First, the researchers reviewed the related literature and conducted interviews with EFL teachers in order to seek out the EFL teachers' perspectives regarding what shapes their identity processing styles. Second, based on these operational definitions and teachers' perspectives regarding what shapes their identity processing styles, 45 items were created. Third, two experts in TEFL with two experts in psychology with several years of teaching experience and educational background were asked to review the items and make comments on whether the items are accurate and plausible and whether they have any difficulty in understanding the terminology in the items. Fourth, to ensure the psychometric quality of the test, the scale was piloted among 50 high school EFL teachers. After being completed, it was analyzed in terms of the internal consistency of the items, employing the Cronbach Alpha formula. In the next important stage, the construct validity of the newly developed scale was checked through exploratory factor analysis in SPSS software (version 23). The newly-developed instrument consisted of 42 five-point Likert scale items, ranging from 1 (Very much like me) to 5 (Not like me at all) with the following components and sub-components: informational style (analytical/rational thinking), normative style (personal norm thinking, social norm thinking and religious thinking), and diffuse-avoidant style (pessimistic thinking and optimistic thinking).

Semi-Structured Interviews

In developing the interview protocol, some steps were taken. Although there are prior designed questions, they had an open-ended format. Accordingly, "the semi-structured interview, valued for its compromise to a range of research goals, typically reflects variation in its use of questions, prompts, and accompanying tools and resources to draw the participant more fully into the topic under study" (Galletta & Cross, 2013, p. 2).

First, the interview questions were designed a priori, but the order and format of the items were flexible to change during the interview. Some experts in TEFL reviewed the interview questions, and it was piloted with some Iranian EFL teachers. The interview questions were

designed in English, but all the interviews were conducted in Persian since most high school EFL teachers feel more comfortable and facilitate expressing ideas and attitudes. The participant teachers were asked some core questions about different aspects of the nature of identity, philosophy of life, personality, like "How do you describe yourself?", "How does your family describe you and your personality?", "What kind of person are you to your family?", "What makes you unique? "or "Can you tell me what is your greatest weakness, and what is your greatest strength?"

The interview questions were based on the generic identity categories (e.g., values, goals, beliefs, life decisions, personal problems, and the like). Then, the researchers used the principles of data analysis of the grounded theory methodology to analyze the data. It should be noted that in the present study, the researchers followed Ary et al. (2010) in adopting interviews by the researcher as the primary data collection instrument. An interview protocol was designed based on Ary et al. (2010). After reviewing and piloting interview questions, the initial questions went through several modifications which attempted to incorporate experts' opinions. In addition, interview questions were piloted in advance with five high school EFL teachers. Consequently, three questions were modified, and two general questions were added to the protocol.

Focus Group Interviews

In the second stage of the interview, ten EFL teachers consenting to focus group interviews were divided into groups of three to six. Moreover, an online focus group (OFG) was conducted as an original method of data collection in qualitative research. The participant teachers were asked some core questions about professional experiences as a teacher like "which traits of your personality are most important for your teaching career?" or "Do you recall any other work experiences besides language teaching that influenced your teaching styles or teaching philosophy? In what way?"

Generally, technological innovations are claimed to be an indispensable tenet of educational principles. Emerging technologies provide new opportunities for qualitative researchers to improve their instructional material quality and accessibility (Turney & Pocknee, 2005). Many qualitative researchers have started to identify the technical innovations that represent new opportunities for sharing resources, improving face-to-face contact, and recruit research participants.

Data Collection Procedure

The Covid-19 has created an unusual situation for researchers to conduct the interviews and distribute the scales in person. In addition, lockdown and strict measures for social and physical distancing guidelines for residents are announced. Due to the fact that we need to support the nation's public health efforts, remote interviewing was currently the only safe method in which participants and the interviewer meet each other virtually through social networks including Skype and WhatsApp applications.

In the primary phase of the study, the researchers conducted a semi-structured interview in order to collect data for the grounded work. Each interview lasted for thirty minutes, and after collecting data, all interviews were transcribed and read while listening to the audio recording. Next, the researchers listened to audio files to identify components, such as a sarcastic tone, which is not possible from the written transcript. Dörnyei (2007) claimed that this type of interview is an accommodation between the two extremes, that is, structured and unstructured interviews. Ultimately, the online focus group interview has provided an effective opportunity for an unexpected level of speed and adjustability with scheduling. The focus group interview was running well over 30 minutes, and the participants were willing to attend an online interview on   Skype. Considering the results of several stages mentioned above, the researchers designed and validated the IPS scale based on the following procedures. The scales were distributed virtually through the Google Document tool, which allows its distribution as a link to the website where it is hosted. The participants can easily access in any place where there is an internet connection. The participants completed the scale not only from a laptop but also from mobile or tablet with internet access. It took around 20 minutes for the teachers to complete the identity processing styles scale without any time limitation.

Data Analysis

In line with our aim in conducting the present study, the researchers adopted sequential mixed methods research. In the qualitative phase of the study, we utilized a qualitative grounded theory approach whereby the researchers collected the high school EFL teachers' perceptions in order to gain an in-depth understanding of EFL teachers' identity processing style. The purpose of the qualitative phase of the study was to pinpoint and define the main components of identity processing styles in the Iranian EFL context in order to develop an Iranian identity processing style model.

According to Ary et al. (2006) and Patton (2002), the data analysis for qualitative studies

is a cyclical process. The researchers form categories from participants' responses, among which similarities and differences are generated. This refers to an inductive analysis and creative synthesis, where essential patterns, themes, and interrelationships are discovered from rich data. The researchers reviewed the related literature and conducted semi-structured and focus group interviews with EFL teachers in order to seek out the EFL teachers' perspectives regarding what shapes their identity processing styles. Finally, a number of content categories were drawn. Emerging themes were obtained from the interview along with the related literature on identity processing styles.

The data analysis was conducted using three types of coding: open, axial, and selective (Corbin & Strauss, 2015). First, the recorded files of the interview were transcribed, and then the researchers began to look for similarities and differences from the data. All the interviews were conducted in Farsi since the teachers feel more comfortable and less time-consuming.

Through the open coding stage, the researchers read through the transcription of a few interviews to identify differences or similarities among the data. A variety of procedures were carried out to examine parts of the transcriptions. During the axial coding stage, the researchers used one category found in open coding to form connections between a category and its subcategories. Then, the researchers saw more categories around it or found the relationships among the new categories. Then, a number of the statements or phrases cut out earlier to represent categories were organized together in a meaningful way on the big piece of paper to examine the relationship between categories and subcategories. The process continually repeated in order to find more subcategories through the process of asking questions and making comparisons.

Finally, during selective coding, the researchers identified and chose the core category and then systematically linked it to other categories. The relationships of those categories were validated by further data collection. To increase the credibility of the findings, peer review and member checks were used. Peer review was achieved by consensus among the researchers concerning the themes extracted from the raw data. Finally, the participant teachers themselves were asked to express their ideas about the extracted themes and categories (i.e., member checks).

At the next stage, the researchers utilized the model assembled from axial coding to describe the interrelationships of the categories. As a result, a theory was generated toward the end of this research and presented in several forms, such as narrative statements and visual pictures. Consequently, the probable model of EFL teachers' identity processing styles was

designed, and a scale was developed to test the model.

In the second stage of the present study, the researchers adopted a quantitative approach to assess the validity of identity processing styles. To this end, the researchers considered three fundamental types of validity: face validity, construct, and content validity. To estimate the construct validity, the researchers of this study defined the theoretical framework of identity processing styles through an in-depth literature review and elicited EFL teachers' perceptions through an interview.

To evaluate the content validity, this scale was reviewed by three experts in TEFL. They were required to mark any items whose wording is not appropriate beside the newly-developed ISI was piloted with 50 Iranian EFL teachers. Therefore, the reliability of the instrument and appropriateness of the content were checked. Following this, the scale was administered to a group of EFL teachers (n = 50) to check the internal consistency of the instrument. Cronbach's alpha was calculated. In the next stage, the newly developed scale was validated through factor analysis (Mulaik & Millsap, 2000), which is the current framework for model validation and assessment.

Results

Results of the Qualitative Phase of the Study

The research question aimed at exploring the components of identity processing styles. The study began with the provisional categories of analysis (derived from existing theory and prior research). The researchers reviewed the related literature and conducted interviews with EFL teachers in order to seek out the EFL teachers' perspectives regarding what shapes their identity processing styles. Finally, a number of content categories were drawn and emerging themes were obtained from the semi-structured interview along with the related literature on identity processing styles. For the sake of enhancing consistency and systematicity, these sub-categories were classified under the main types of identity processing styles, that is, informational style, normative style, and diffuse-avoidant style.

Informational Style

With regard to social-cognitive information processing, the informational style was revised and further divided into two forms, including rational/analytical thinking strategies and intuitive thinking strategies in order to explore EFL teachers' beliefs, assumptions, perceptions, character traits, personal challenges, and interpretations of their identity.

Intuitive Thinking. Individuals with intuitive thinking demonstrate the intellectual capacity to uncover opportunities by observing cues or signals through unfamiliar and unarranged data that are processed holistically. It should be noted that intuitive thinking can be considered holistic, associative, effortless, rapid, effective, and non-conscious (Olson, 1985). Therefore, those with intuitive thinking consciously recognize a different aspect of the problem through the perception of relevant cues and patterns, and they often non-consciously stimulate all the cognitive schema that are essential to deal with the problem. Individuals with intuitive thinking are more associated with creative thinking, and they are better at solving complex problems (Rusou, Zakay, & Usher, 2013). Therefore, like analytical information processing, intuitive thinking includes identifying and formulating the problem, analyzing, and generating a set of alternatives, but these stages take place faster and are most unconscious and deeply intertwined. The result of the interview showed that intuitive thinking enables people to understand reality at the moment without analysis and spending time. In this regard, the following comments are taken from a focus group interview:

The fact of the matter is that Life is full of ups and downs. I meet every challenge with confidence. I try to make decisions mostly unconsciously based on my prior experiences. For instance, when I confront challenges due to uncooperative students and those with abnormal behavior, I try to be flexible and behave wisely with them, and it's important to know how to utilize past experiences in order to make the most appropriate decisions.

As can be seen in this interview excerpt, intuitive thinking strategies not only help an individual to deal with uncertainty but also provides an opportunity for decision-makers to generate and explore various ideas solutions (Miller & Ireland, 2005). Therefore, those with intuitive thinking consciously recognize a different aspect of the problem through the perception of relevant cues and patterns, and they often non-consciously stimulate all the cognitive schema that are essential to deal with the problem.

Rational/Analytical Thinking. Individuals with analytical thinking are likely to be effortful, sequential, precise, and rule-based (Epstein, 1994, 2008). Epstein (1998) argued that those with analytical thinking strategies are more logical, analytical, highly depend on justification via logic, and evidence, and they show a slower rate of information processing. In particular, it refers to an individual's preferred and habitual approach to synthesize and

compare different aspects of options to each other to find the best solutions. In this regard, during a focus group interview, one of the interviewees argued:

I try to find a logic behind the problem or I may abandon some that are more superstitions than my beliefs. I try to find a way to overcome challenges and the problem I face. I guess it makes me stronger and more experienced. I only care and listen to unbiased and logical bits of advice. Then I try to analyze them and make the right decisions.

According to cognitive-experimental self-theory (CEST), intuitive thinking strategies and analytical thinking strategies not only are generally independent, but also work interactively throughout the life span. It should be noted that behavior is formed based on the two thinking styles, empirical process support for the existence of rational thinking and experimental processing systems (Epstein, 1998). However, although the analytical and intuitive thinking process is assumed to coexist through most of the life span, different factors such as job positions, educational level, family, and contextual factors may affect the extent to which an individual typically relies on one system over the other. As such, some researchers have shown that the ability to adapt to different environmental conditions has made it possible for individuals to employ particular problem-solving approaches (Hammond, Hamm, Grassia, & Pearson, 1987).

This point is well described by one of the teachers as follows:

I think adaptation is very important; I try to understand different situations and adapt myself according to another condition. For example, I suppose my punctuality, patience and diligence are essential for my teaching career. I used to be a sales person in a shop for a while. I got to learn to be punctual and treat people with respect; I guess these qualities somehow affected my teaching style.

Normative Style

In this section, the normative style was examined in connection with the three core elements of normative orientations in the Iranian context, including (a) religious beliefs, (b) automatic internalization of social inputs like values/norms from significant others, and (c) individuals who perceive a discrepancy between their own norms and values with the society or significant others.

Religious Thinking. Everyone is entitled to their beliefs that reflect the social experiences in a particular context at a specific time. Ideologies influence how an individual defines a problem and makes a decision. Ideologies are a relatively compact system of ideas, beliefs, and norms which provide the standardized interpretation of social life and thereby reduces uncertainty and information processing requirements (Terzani & Turzo, 2020). Along with different social norms, religion influences individuals' behavior and determines their actions (McGuire, Omer, & Sharp, 2012). It implies from the literature that many individuals' religious beliefs are positively associated with honesty (Perrin, 2000) and higher risk aversion (Noussair, Trautmann, Van De Kuilen, & Vellekoop, 2013). According to one of the teachers:

Actually, I feel connected with my community, and my religion gives feel right to me. I'm secure in what I believe, and I don't see anything wrong with that. After all, I started to make my own decision based on the philosophy of Islam.

Likewise, another interviewee stated:

I usually find it challenging to decide when I have too many options, and my religion restricts many opportunities and leave me with significantly less options, set of values and principles.

Social Norms Thinking. Those with social norms thinking actively evaluate, process others' opinions, and analyze the alternatives which are inconsistent with their beliefs. They operate in a relatively consistent with the contextual structure in which they live, and the personal values are quite influential in forming their decisions and practices. Markus and Kunda (1986) pointed out, contextual variations are essential to shape individual identity. Generally speaking, teachers are affected not only by the epistemological assumptions of disciplines but also by institutional policies, regulations, and socio-political environment (Deem & Lucas, 2006). These structures influence the organizational and physical context and can constrain individuals to make informed choices within the organization (Mathieson, 2011). They are mainly strongly eager in an activity and value it more to fit the group with whom they interact and the culture they live. As mentioned by one of the teachers:

I belong to Iran and I guess the best way to respect my country is following the norms and values. I always try my best to follow social norms or behaviors that are considered

acceptable in a group or society. I work as an Iranian teacher in the ministry of education system and I never act against the rule.

Thus, those who adopt institutional policy and structural context prefer to operate according to the values and norms of their context. The institutions determine sets of values and norms in order to operate within a structural context.

Similarly, another teacher stated:

I definitely introduce myself as a patriotic Iranian. Although I know there are many problems in my country, but I am always proud of my originality because that's my root and basis and I know I can never change it.

Personal Norms Thinking. Those with personal norms thinking are strongly inclined to moral obligations to perform certain behaviors in the environment. As Schwartz (1994) has posited that "desirable transitional goals varying in importance and serve as a guiding principle in people's lives" (p. 21). This point is well described by one of the teachers as follow:

I always try to make my own choice based on what is best for me. Actually, the benefits of facing difficulties are that they make you a stronger person and they can be useful experiences in your life, and I hardly ever let other people's feelings influence me. Generally, when I encounter an attitude that questions my beliefs, I reject them in order to protect my existing ideas. I also interpret the problem in a way that upholds my existing ideas.

Diffuse-Avoidant Style

The diffuse avoidant style was revised and further divided into two parts, including optimistic thinking and pessimistic thinking. Lay (1986) argued that some procrastinators rationalize their behavior and put off their actions deliberately. They often come up with various possible benefits of putting their intentions and tend to perform an action at a particular time that it was planned. Ultimately, they postpone it or refuse to do it. Procrastination can be divided into two relatively independent ways. Two types of procrastination have been replicated several times (McCown & Johnson, 1991; Milgram & Naaman, 1996). The two aspects of procrastination in the Iranian context are optimistic thinking and pessimistic thinking.

Optimistic Thinking. Individuals with optimistic thinking tend to put off their intentions but they are not worried about it. More specifically, one of the participants stated:

I don't have any particular philosophy of living but as long as I live I always remind myself and others that we live once, then we should enjoy it. I try to be hopeful rather than worried about the future. I live in the present moment and never think about the future.

It is worth mentioning, one of the interviews argued:

I guess my future will be filled with uncertainty. As you know there is not any control or any reason for worrying about the future.

As we can see from the excerpt, they often overestimate their progress in relation to achieving goals and underestimate the time needed to achieve their goals. Thus, they are confident that God help them in difficult circumstances.

Pessimistic Thinking. Individuals who feel incompetent do not involve in a particular task because they do not know how to deal with the task. Ultimately, they try to avoid unpleasant experiences.

As mentioned by one of the teachers:

I guess rejecting some social norms and regulations are not terrible things if it is bringing about positive change.in fact, I feel my expectations are so unrealistic and I am not willing to put in the required effort to accomplish my desired goals.

Presented Model of Identity Processing Styles for Iranian EFL Teachers

As mentioned above, the purpose of the first phase of the study is to pinpoint and define the main components of identity processing styles in the Iranian EFL context in order to develop an Iranian identity processing style model. The researchers reviewed related literature and conducted semi-structured and focus group interviews with EFL teachers in order to seek out the EFL teachers' perspectives regarding what shapes their identity processing styles. The data analysis was conducted using three types of coding: open, axial, and selective (Corbin & Strauss, 2015, p. 220). Finally, a number of content categories were drawn, and emerging

themes were obtained from the interview along with the related literature on identity processing styles and the final model was presented.
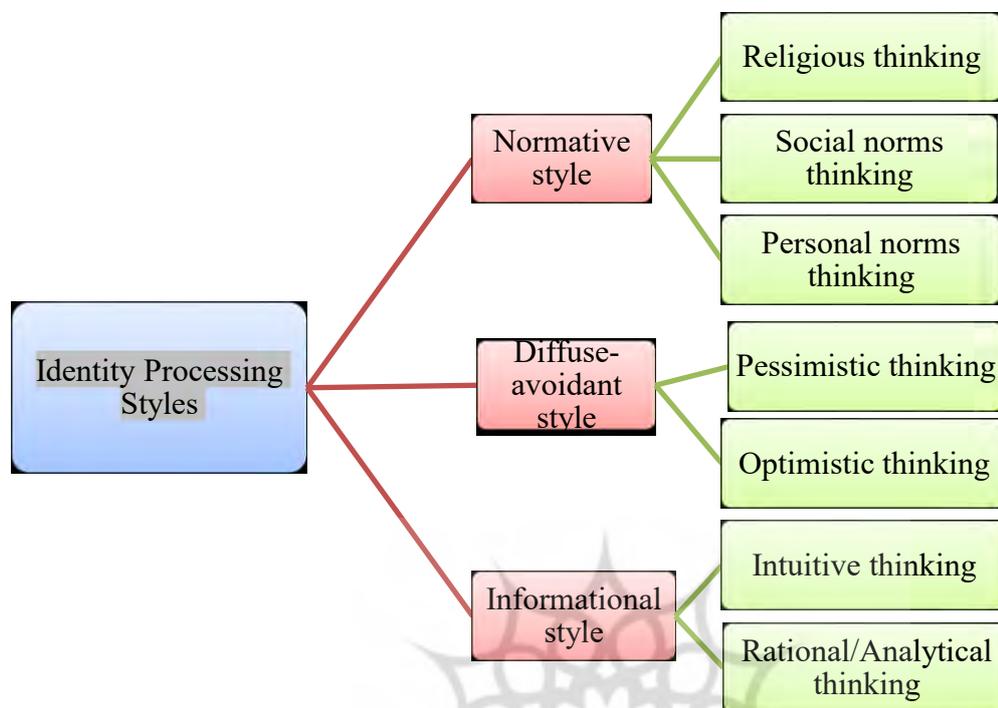
Figure 1. *The Proposed Identity Processing Styles (IPS) Model for Iranian EFL Teachers*

As can be seen from Figure 1, the seven sub-categories specified for identity processing styles in the EFL context of Iran are as follows: analytical/rational thinking, intuitive thinking, religious thinking, personal norms thinking, social norms thinking, optimistic thinking, and finally, pessimistic thinking. In Table1, the definition for each of the identified components are elaborated as follows:

Table 3. *Sub-components of Identity Processing Styles in the EFL Context of Iran along with Their Definitions*

Identity Processing Styles	Component	Definition

Informational Style	**Rational/analytical thinking**	It reflects how EFL teachers with analytical thinking can be effortful, logical, and analytical. Rational thinking allows individuals to uncover protentional solutions that are analyzed and estimated carefully. This component reflects analytical thinking may be effective in improving creative ideas. This refers to the fact that some EFL teachers try to find a logic behind the issues or asking experienced people to share their thoughts and ideas.
	Intuitive Thinking	This component reflects the fact that intuition thinking enables EFL teachers to explore reality at the moment without interpreting and analyzing. It reflects how EFL teachers make decisions mostly unconsciously based on their prior experiences and they try to be flexible and behave wisely with students. It reflects that intuitive thinking allows EFL teachers to deal with uncertainty and provide them an opportunity to generate and examine different perspectives. It refers to the fact that Individuals with intuitive thinking may avoid reconciling the information to protect their beliefs and interpret them in a way that upholds their existing values and beliefs.
Normative Style	**Religious Thinking**	It reflects that individuals with religious thinking tend to internalize and fully follow values only in a way that only supports their existing beliefs and attitudes. It reflects that religion influence life style and shapes attitude, cultural norms, and the way they treat people. Religion influences our behavior and determine our actions on what is right or wrong.
	Personal Norms Thinking	It refers to the discrepancy between EFL teachers' values and beliefs with society and significant others. It should be fit between an individual's norms with the educational settings. It reflects those personal values that influence teaching practices in educational contexts, and they try to act in line with the social structure and regulation policies. An

		individual sometimes deviates from a social norm or disobeys it if he is perceived as less important than others, and the norms of other people are not harmonious with them. This component reflects the fact that there is a conflict between personal beliefs and values with social norms. An individual might deviate from a social norm or disobey it if he/she perceived it as less important than others. An individual's sense of self-values influences this conformity It reflects the fact that EFL teachers are willing to teach and value it more in a way that fits the culture in which they live.
	Social Norms Thinking	This component reflects the fact that context structure and regulation policies constrain EFL teachers to make decisions and teaching practices within educational settings. They are mainly sticking institutional policies in a way that is considered acceptable for authorities. Thus, those who internalize social values and policies prefer to operate in line with the institutional regulations. It refers to national identity connected to history, art, Persian language, literature, cultural traditions, moral values, and national sovereignty. They argued that nationality belongs to a particular group and is not a fixed entity. It refers to contextual factors that are quite influential in shaping and forming EFL teachers' teaching strategies and decisions. It reflects the fact that EFL teachers help students express themselves and accept themselves for who they are and encourage them to develop their potential and learning styles. It reflects the fact that EFL teachers tend to focus on a particular kind of environmental fit between their beliefs and educational setting.
Diffuse-avoidant Style	**Optimistic Thinking**	This component reflects the fact that individuals with contextualized self-views living in the moment without worrying about the future or past. They are sensitive in emotional domains as well. They have no self-concept clarity.

	It reflects that individuals' behavior is not consistent with social values. They utilize different attributes to describe themselves in different situations
	Optimistic procrastinators tend to put off their intentions without worrying about it. They are confident that God helps them in difficult circumstances.
Pessimistic Thinking	It reflects the fact that individuals postpone or refuse to act at a particular time that it was planned.
	They try to avoid being involved in a particular task because they don't know how to deal with the task, and they try to avoid unpleasant experiences.
	They often exhibit attention-seeking behavior. Therefore, they start copying their favorite idol.
	Pessimists often worry about the consequences. Thus, they avoid engaging in a particular task.

Results of the Quantitative Phase of Study

The reliability of the newly-developed instrument was estimated by Cronbach's Alpha coefficient which showed the scale's internal consistency. "This refers to the degree to which the items that make up the scale "hang together" ideally, the Cronbach's Alpha coefficient of scale should be above 0.7" (Pallant, 2007, p. 95). The value of Cronbach's Alpha for the whole scale was 0.78 that is considered acceptable reliability of the scale indicating the scale could be used as a valuable tool for the main study. Table 4 indicates the reliability statistics for the three styles and components related to each style illustrated in the following section.

Table 4. *Number of Each Component Related to Each Style*

Dimensions	Components	Items Related to Each Component in the revised IPS Scale after scrambling	Number of Items Related to Each Component	Cronbach's Alpha IPS scale
	Pessimistic thinking	2,8,27,32,35,40	12	.84

Diffuse-avoidant style	Optimistic thinking	3,7,14,18,19,21		
Normative style	Religious thinking	5,10,11,16,24,31	18	. 93
	Social norm thinking	15,17,23,34,25,33		
	Personal norm thinking	13,20,22,28, 29,38		
Informational style	Rational/analytical thinking	1,4,6,12,36	10	.97
	Intuitive thinking	9,26,30,37,39		

To estimate the validity of identity processing styles, the researchers implemented different types of validity, including face validity, content validity, and construct validity.

For face validity, the IPS scale was scrutinized by a panel of experts considering a good layout, proper font, suitable margin, etc.

To evaluate the content validity, two TEFL professors with nine EFL teachers with several years of teaching experience and educational background were asked to review the items and make comments on whether the items are accurate and plausible and whether they have any difficulty understanding the terminology in the items. Then, some modifications were conducted on the IPS scale as follows:

1. The wording of some items 4, 8, 9, and 30 were changed.

2. The researchers removed items 7, 25, and 25 since they were ambiguous.

Finally, to avoid the response-order effect and prevent the effect of response bias, the order of items within the scale was randomized.

To estimate the construct validity, the researcher conducted two procedures. In the first stage, the researcher of this study checked the IPS scale for its congruency with the defined theoretical framework in the literature concerning identity processing styles and this was accomplished by iteratively checking the items with the existing literature and experts' opinions. Moreover, following this, the scale was administered to a group of EFL teachers (N=203) to check confirmatory factor analysis which is the current framework for model validation and assessment. Finally, since the seven sub-categories specified for the identity processing styles in the EFL context of Iran, some items were created for each component, and the reliability of each style was estimated.

In the second stage, before running principal component analysis, the suitability of the sample for factor analysis was examined. KMO statistics and Bartlett's tests of sphericity were utilized to examine the suitability of factor analysis. Pallant (2007) suggested KMO values close to 1 as acceptable. It should be noted that Kaiser (1974) pointed out KMO values of .05 or more demonstrates relatively good patterns of correlation. Moreover, Field (2013) stated that values between 0.7 and 0.8 or more are acceptable. On the other hand, Bentler and Bonnett (1980) pointed out Bartlett's test should be 0.5 or above. As Table 3 illustrates, the results of the Kaiser-Mayer-Olkin value were 0.68 that was adequately factorable, and Bartlett's test of sphericity, $p < .001$ reached statistical significance.

Table 5. *Rotated Component Matrix*

	Component 1	Component 2	Component 3
Item 2	.96		
Item 8.	.78		
Item 27	.87		
Item32	.76		
Item35	.96		
Item40	.53		
Item3	.60		
Item7	.92		
Item14	.84		
Item18	.76		
Item19	.91		
Item21			
Item5		.85	
Item10		.81	
Item11		.94	
Item16		.95	
Item24		.97	
Item31		.96	
Item15		.91	
Item17		.91	
Item23		.95	
Item34		.86	

|		
Item25	.97	
Item33	.92	
Item13	.88	
Item20	.56	
Item22	.82	
Item28	.97	
Item29	.94	
Item38	.53	
Item1		.77
Item4		.82
Item6		.82
Item12		.96
Item36		.93
Item9		.55
Item26		.66
Item30		.59
Item37		.92
Item39		.88

After the criterion for the data, factorability was met, factor analysis was run on 40 items, each containing 5 points Likert scale (very much like me=5, not much like me=1) using SPSS version 23. As can be seen in Table 4, the three factors were extracted with eigenvalues greater than 1 which explained 89 percent of the total variance. The finding indicated that the first three styles recorded eigenvalues above 1 including style 1 (17.85), style 2 (29.96), style 3 (15.59)

Table 6. *Total Variance Explained*

Component	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %

1	17.850	44.624	44.624	17.713	44.283	44.283
2	11.985	29.962	74.587	11.943	29.857	74.140
3	6.239	15.597	90.184	6.418	16.044	90.184

The scree plot derived from the result in Figure 2 along with other criteria such as parallel analysis confirmed the presence of three components.
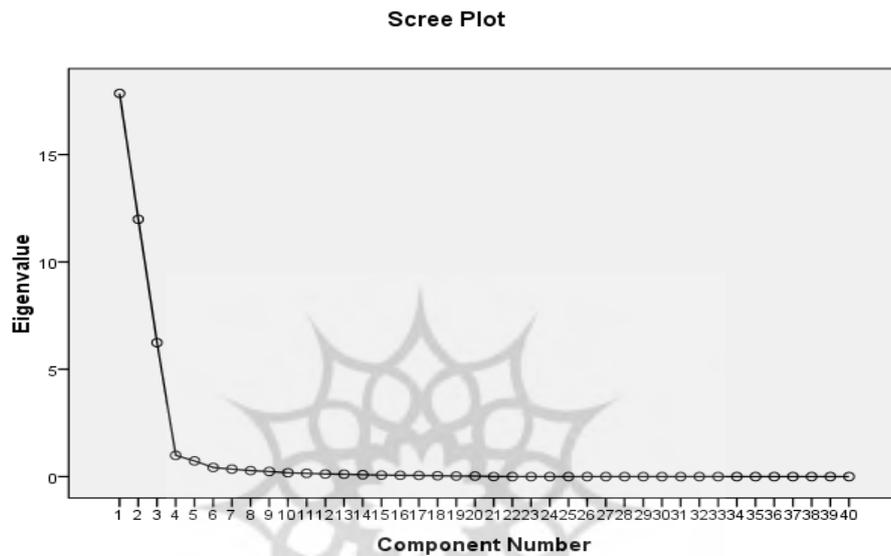
Figure 8. *Scree Plot of the Eigenvalues and the Items of 'IPS' Scale*

Discussion

As mentioned before, the IPS scale was developed to assess how EFL teachers engage or avoid the task of constructing a sense of identity. In addition to the three identity processing styles that are related to Berzonsky's (1989, 2011) theory of social-cognitive identity styles, the main aim of the study was to pinpoint and define the main comments of IPS in the EFL context of Iran. Ultimately, seven sub-components were initially identified that constitute the Iranian version of identity processing styles, namely, informational style (analytical/rational thinking), normative style (personal norm thinking, social norm thinking, and religious thinking), and diffuse-avoidant style (pessimistic thinking and optimistic thinking). Moreover, the results of this phase of study support the findings of Szabo et al. (2016). They focused on developing a new version of ISI to measure the identity processing styles of the immigrant population. The main objectives of the study were to assess immigrants' social-cognitive information processing styles and explore how individuals with different identity styles operate in an

acculturation identity crisis. More specifically, Szabo's study presented five distinct styles, namely, exploratory informational, analytical informational, normative to the country of origin, normative to the host of society, and diffuse-avoidant.

However, it should be noted identity commitment subscale was discarded since the identity commitment construct did not emerge in the data analysis. It is worth noting that, we didn't try to "force preconceived ideas and theories directly upon our data" (Charmaz, 2006 p. 17). It implies that researchers who conduct the grounded theory approach try to elicit the participants' perspectives and insights into a particular context (Patton, 2002; Ary et al., 2006). In fact, that human behavior is tied to context and the understanding of such behavior is the result of involving in the context in which society, history, politics, and cultures remain (Corbin & Strauss, 1998). This model was based on self or ego-identity. It implies that EFL teachers' identity processing styles reflect alternative ways of processing and evaluating self-relevant information to form, maintain, or revise one's sense of ego or self-identity.

Our results revealed that religious thinking, social norm thinking, and personal norm thinking emerged as distinct factors of social-cognitive processing styles. The findings of the study demonstrated religion and ideology are of great importance as they form the Iranian identity processing styles. Thus, individuals with religious thinking tend to interpret information to support their beliefs and attitudes. On the other hand, those with social norm thinking are intensely eager in activity and value it more to fit the group with whom they interact and the culture they live. The social norm thinking in the EFL context of Iran is postulated to reflect the significant role of social and personal factors such as the influence of different cultures, institutional regulations, and learning styles in different educational settings. Ultimately, those people with personal norm thinking tend to challenge their own beliefs to reconstruct their knowledge by reflecting on the beliefs underpinning teaching practices. They tend to appraise their competence and beliefs.

Concerning focus-form thinking, it is essential to recognize that values are crucial in decision making, which is fundamental in any decision situation. It should be noted that those with personal norm thinking are positively associated with self-worth thinking and self-image. In fact, the theme related to personal norms thinking reflects the fact that there is an inconsistency between the ideal and perceived self. Self-worth refers to the extent to which individuals feel good about themselves; that is, a sustainable sense of value oneself arises from a positive self-view. Self-worth thinking is determined by many factors, including how

different people desire to see themselves favorably and act to increase and maintain their self-worth (Gecas, 1971).

Furthermore, the informational style was revised and further divided into two forms, including rational/analytical thinking and intuitive thinking. An individual with intuitive thinking tends to understand realities at the moment without analysis and spending time. It implies that intuitive thinking provides teachers with opportunities to be flexible and behave wisely based on their experiences.

Miller and Ireland (2005) stated that intuitive thinking helps an individual deal with uncertainty and provides an opportunity for decision-makers to generate and explore various ideas. On the other hand, those with analytic thinking can demonstrate a range of cognitive processes that combine multiple levels or inputs of intuition and analysis. Finally, our results revealed that pessimistic thinking and optimistic thinking emerged as distinct factors of diffuse-avoidant styles.

The findings demonstrated individuals with optimistic thinking tend to be hopeful rather than being worried about the future. Specifically, they live in the present moment without any plan because they argue that their lives are filled with uncertainty. On the other hand, those with pessimistic thinking feel incompetent and put off their action deliberately. Having determined the components, the researchers implemented different stages to ensure the credibility of the obtained data, including member-checking and peer-debriefing.

Member checking was carried out to validate and improve the accuracy of the interpretations. Moreover, the researchers conducted a thorough validation process, which included defining the theoretical framework of identity processing styles, literature review, and elicit EFL teachers' perception through an interview. Moreover, to ensure the psychometric quality of the test, the ISI was piloted among 203 high school EFL teachers using Cronbach's Alpha in order to measure the internal consistency of the items. Finally, in the next stage, the newly developed scale was validated through factor analysis (Mulaik & Millsap 2000), the current frameworks for model validation and assessment, resulting in a well-structured 42 items scale with acceptable reliability and validity based on the three identity processing styles. Based on all validation and statistical procedures, the newly-developed scale can be considered a valuable tool for measuring individuals' identity processing styles.

Conclusion and Implications

The present study is situated within the strong theoretical framework of identity processing

styles and draws on previous research by Berzonsky et al. (2013). Because ISI has been the most widely used scale to assess and measure social-cognitive styles in the various cultural context, it would contribute to the field of language teaching and learning in the EFL context of Iran and it provides a useful tool for other researchers in the field of language education to clarify teachers' thoughts or assigned identities.

However, the lack of an instrument to measure social cognitive strategies and identity orientations that underlie high school EFL teachers' identity formation has led the researchers to conduct the present study. In addition, there is a paucity of research on identity processing styles in non-Western cultures, (Crocetti & Shokri, 2010; Hejazi, Shahraray, Farsinejad, & Asgary, 2009), and even less research has sought to validate the measure for use in such contexts (Crocetti & Shokri, 2010; Tariq, 2012). In addition, although ample literature could be found about the psychometric properties of identity processing styles (e.g., Berzonsky, Macek, & Nurmi, 2003; Berzonsky & Papini, 2014; Crocetti & Shokri, 2010; Szabo et al., 2016), no field-specific scale is designed for EFL settings. One point which needs to be mentioned is that identity styles as a construct has not been defined in the EFL context of Iran. The present research was an attempt to uncover the status quo in Iran concerning identity styles and their components.

Therefore, the findings of the present study can have some pedagogical implications for educators and language teachers. IPS scale has been the most widely used scale to assess and measure social-cognitive styles in the various cultural context, it would contribute to the field of language teaching, and learning in the EFL context of Iran and it provides a useful tool for other researchers in the field of language education to clarify teachers' thoughts or assigned identities. It should be noted that identity is an effective factor in teachers' motivation, self-efficacy, commitment, and effectiveness. It implies that how EFL teachers perceive themselves as teachers and what factors contribute to their perceptions is valuable for academic investigation. Stakeholders, for instance, can use the newly-developed ISI to measure high school EFL teachers' identity processing styles. Particularly, the newly-developed ISI in the EFL context of Iran is postulated to reflect the significant role of contextual factors such as the influence of different culture and contextual structures, individual differences, and learning styles in different educational. Contextual variations are core to a person's identity; thus, situational variations create malleability in the self, and that people utilize various attributes to describe themselves in different situations.

In fact, according to Razmjoo (2010), the identity scales validated for the native speakers

of English may not be suitable for the EFL context. The accuracy of the result may be tainted due to the misunderstanding of some part of the scale by the participants. The new scale should also include local theories of identity and contextualized factors related to the Iranian context.

Limitations and Future Directions

The results of the current study, like other studies, should be interpreted in light of some limitations. The first limitation of the study beginning with the number of participants. Due to the restricted sampling during the emergence of the Covid-19 pandemic and immediate decisions concerning the comprehensive lockdown in different cities of Iran, the number of participants may limit the generalizability of the results. In fact, more detailed studies are needed to be conducted on the IPS model from different cities in Iran. Second, the participants of the current research did not constitute an accurately representative sample of the whole population of EFL teachers in Iran. It should be noted that the present study also limited its focus on high school EFL teachers in Iran, excluding other EFL teachers in other institutes.

Furthermore, more studies should be conducted to test if IPS model and scale is applicable in a different context and also if it can be used as newly developed model and scale within different countries and educational context. The IPS model can be modified or repeated in different cities or non-Iranian countries by researchers to compare the newly developed scale and model in different contexts based on the contextual variances.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. K. (2006). *Introduction to research in education*. Seventh Edition. Belmont, CA: Cengage Learning.

Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. K. (2010). *Introduction to research in education*. Eighth Edition. Belmont, CA: Wadsworth.

Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Journal of Teaching and Teacher Education*, *20*(2), 107–128.

Bentler, P., & Bonnett, D. (1980). Significance tests and goodness of fit in the analysis of covariance structures. *Journal of Psychological Bulletin*, *88*(3), 588-606.

Berman, A. M., Schwartz, S. J., Kurtines, W. M., & Berman, S. L. (2001). The process of exploration in identity formation: The role of style and competence. *Journal of Adolescence*, *24*(4), 513–528.

Berzonsky, M. D. (1989). Identity style. *Journal of Adolescent Research*, *4*(3), 268–282.

Berzonsky, M. D. (1990). Self-construction over the life-span: A process perspective on identity formation. *Advances in Personal Construct Psychology: A Research Annual, 1*(2), 155–186.

Berzonsky, M. D. (1992). Identity style and coping strategies. *Journal of Personality, 60*(4), 771–788.

Berzonsky, M. D. (1993). Identity style, gender, and social-cognitive reasoning. *Journal of Adolescent Research, 8*(3), 289–296.

Berzonsky, M. D. (2008). Identity formation: The role of identity processing style and cognitive processes. *Journal of Personality and Individual Differences, 44*(3), 645–655.

Berzonsky, M. D. (2011). A social-cognitive perspective on identity construction. In S. J. Schwartz, K. Luyckx, & V. L. Vignoles, (Eds.), *Handbook of identity theory and research* (pp. 55-76). New York: Springer.

Berzonsky, M. D., & Ferrari, J. R. (2009). A diffuse-avoidant identity processing style: Strategic avoidance or self-confusion?. *Identity: An International Journal of Theory and Research, 9*(2), 145–158.

Berzonsky, M. D., & Kuk, L. S. (2005). Identity style, psychosocial maturity, and academic performance. *Journal of Personality and Individual Differences*, *39*(1), 235–247.

Berzonsky, M. D., & Papini, D. R. (2014). Identity processing styles and value orientations: The mediational role of self-regulation and identity commitment. *Identity*, *14*(2), 96–112.

Berzonsky, M. D., & Sullivan, C. (1992). Social-cognitive aspects of identity style: Need for cognition, experiential openness, and introspection. *Journal of Adolescent Research, 7*(2), 140–155.

Berzonsky, M. D., Macek, P., & Nurmi, J. E. (2003). Interrelationships among identity process, content, and structure: A cross-cultural investigation. *Journal of Adolescent Research*, *18*(2), 112–130.

Berzonsky, M. D., Soenens, B., Luyckx, K., Smits, I., Papini, D. R., & Goossens, L. (2013). Development and validation of the revised identity style inventory (ISI-5): Factor structure, reliability, and validity. *Journal of Psychological Assessment*, *25*(3), 893–904.

Best, J. W., & Kahn, J. V. (2006). *Research in education*. Tenth Edition. Boston: Pearson.

Bosch, L. A., & Card, N. A. (2012). A meta-analytic review of Berzonsky's identity style inventory (ISI). *Journal of Adolescence, 35*(2), 333–343.

Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London: Sage Publication.

Corbin, J., & Strauss, A. (1998). Grounded theory research: Procedures, canons and evaluative criteria. *Zeitschrift Für Soziologie*, *19*(6), 418–427.

Corbin, J., & Strauss, A. (2015). *Basics of qualitative research: Techniques and procedures for developing grounded theory*. Thousand Oaks, CA: Sage Publication.

Crocetti, E., & Shokri, O. (2010). Iranian validation of the identity style inventory. *International Journal of Testing, 10*(2), 185–199.

Deem, R., & Lucas, L. (2006). Learning about research: Exploring the learning and teaching/research relationship amongst educational practitioners studying in higher education. *Journal of Teaching in Higher Education*, *11*(1), 1–18.

Dörnyei, Z. (2007). *Research methods in applied linguistics (Oxford applied linguistics)*. Oxford: Oxford University Press.

Epstein, S. (1994). Integration of the cognitive and the psychodynamic unconscious. *American Psychologist Journal*, *49*(8), 709–724.

Epstein, S. (1998). The rationality debate from the perspective of cognitive-experiential self-theory. *Behavioral and Brain Sciences*, *23*(5), 671-673.

Epstein, S. (2008). Intuition from the perspective of cognitive-experiential self-theory. In H. Plessner, C. Betsch, & T. Betsch (Eds.), *Intuition in judgment and decision making* (pp. 23–37). New York: Lawrence Erlbaum Associates Publishers.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York: Norton.

Farsinejad, M. (2004). *The relationship between identity styles, academic self-efficacy, and social well-being*. Master Dissertation, University of Tehran (in Persian).

Field, A. (2013). *Discovering statistics using SPSS, (introducing statistical methods)*. Third Edition. London: Sage Publication.

Fogle, L. W., & Moser, K. (2017). Language teacher identities in the Southern United States: transforming rural schools. *Journal of Language, Identity & Education*, *16*(2), 65–79.

Galletta, A., & Cross, W. E. (2013). *Mastering the semi-structured interview and beyond: From research design to analysis and publication (qualitative studies in psychology, 18)*. New York: New York University Press.

Gecas, V. (1971). Parental behavior and dimensions of adolescent self-evaluation. *Sociometry*, *34*(4), 466–482.

Hammond, K. R., Hamm, R. M., Grassia, J., & Pearson, T. (1987). Direct comparison of the efficacy of intuitive and analytical cognition in expert judgment. *IEEE Transactions on Systems, Man, and Cybernetics*, *17*(5), 753–770.

Hasinoff, S., & Mandzuk, D. (2005). Bonding, bridging, and becoming a teacher: Student cohorts and teacher identity. *Alberta Journal of Educational Research, 51*(3), 231–245.

Hassan, B., Vignoles, V. L., & Schwartz, S. J. (2018). Researching identity styles in Pakistan: Confirmatory factor analysis and associations with commitment and value priorities. *Identity*, *18*(3), 232–246.

Hejazi, E., Shahraray, M., Farsinejad, M., & Asgary, A. (2009). Identity styles and academic achievement: Mediating role of academic self-efficacy. *Social Psychology of Education: An International Journal, 12*(1), 123–135

Kaiser, H. F. (1974). An index of factorial simplicity. *Psychometrika, 39*(1), 31-36.

Lay, C. H. (1986). At last, my research article on procrastination. *Journal of Research in Personality*, *20*(4), 474–495.

Malmir, A., & Derakhshan, A. (2020). Identity processing styles as predictors of L2 pragmatic knowledge and performance: A case of common English speech acts. *Journal of Language Horizons*, *4*(2), 187–209.

Marcia, J. E. (1966). Development and validation of ego-identity status. *Journal of Personality and Social Psychology*, *3*(5), 551–558.

Markus, H., & Kunda, Z. (1986). Stability and malleability of the self-concept. *Journal of Personality and Social Psychology, 51*(4), 858–866.

Mathieson, S. (2011). Developing academic agency through critical reflection: A sociocultural approach to academic induction programmes. *International Journal for Academic Development*, *16*(3), 243–256.

McCown, W., & Johnson, J. (1991). Personality and chronic procrastination by university students during an academic examination period. *Journal of Personality and Individual Differences, 12*(5), 413–415.

McGuire, S. T., Omer, T. C., & Sharp, N. Y. (2012). The impact of religion on financial reporting irregularities. *The Accounting Review Journal, 76*(3), 313-332.

Mercer, S., & Gregersen, T. (2020). *Teacher wellbeing*. Oxford: Oxford University Press.

Milgram, N., & Naaman, N. (1996). Typology in procrastination. *Journal of Personality and Individual Differences, 20*(6), 679–683.

Miller, C. C., & Ireland, R. D. (2005). Intuition in strategic decision making: Friend or foe in the fast-paced 21st century?. *Journal of Academy of Management Perspectives*, *19*(1), 19–30.

Mirhosseini, A., & Khodakarami, S. (2015). A glimpse of contrasting de jure–de facto ELT policies in Iran. In C. Kennedy (ed). *English language teaching in the Islamic Republic of Iran: Innovations, trends and challenges* (pp. 23–34). British Council.

Missotten, L., Luyckx, K., Branje, S., Vanhalst, J., & Goossens, L. (2011). Identity styles and conflict resolution styles: Associations in mother–adolescent dyads. *Journal of Youth and Adolescence*, *40*(8), 972-982.

Mohamadi, Z., & Mokhtari, F. H. (2016). Identity styles: Predictors of reading and writing abilities. *International Journal of Applied Linguistics and English Literature*, *5*(5), 102-108.

Mulaik, S. A., & Millsap, R. E. (2000). Doing the four-step right. *Structural Equation Modeling: A Multidisciplinary Journal*, *7*(1), 36–73.

Norozi, A., & Mohamadi, Z. (2015). Mediating role of identity styles and learner autonomy in writing ability. *The Journal of Applied Linguistics and Discourse Analysis*, *3*(1), 97–115.

Noussair, C. N., Trautmann, S. T., Van De Kuilen, G., & Vellekoop, N. (2013). Risk aversion and religion. *Journal of Risk and Uncertainty*, *47*(2), 165–183.

Olson, P. D. (1985). Entrepreneurship: Process and abilities. *Journal of American Journal of Small Business*, *10*(1), 25–31.

Pallant, J. (2007). *SPSS survival manual: A step by step guide to data analysis using SPSS for windows (version 15)*. Third Edition. New York: Mc Graw Hill Open University Press.

Patton, M. Q. (2002). Two decades of developments in qualitative inquiry. *Journal of Qualitative Social Work*, *1*(3), 261–283.

Peirce, C. S. (1976). *The new elements of mathematics*. The Hague: Mouton.

Perrin, R. D. (2000). Religiosity and honesty: Continuing the search for the consequential dimension. *Journal of Review of Religious Research*, *41*(4), 534–544.

Ratner, K. (2014). The role of parenting and attachment in identity in identity style development. *The University of Central Florida Undergraduate Research Journal*, *7*(1), 15–26.

Razmjoo, S. A. (2010). Language and identity in the Iranian context: The impact of identity aspects on EFL learners' achievement. *Journal of Teaching Language Skills*, 3, 51-58.

Razmjoo, S. A., & Neissi, S. (2010). Identity processing styles and language proficiency among Persian learners of English as a foreign language. *Journal of Psychological Reports*, *107*(3), 822–832.

Razmjoo, S., & Izadpanah, M. A. (2012). On the relationship between L2 literacy (reading and writing) and identity processing styles of Iranian advanced EFL learners. *Journal of Research in Applied Linguistics*, *3*(2), 2–22.

Rusou, Z., Zakay, D., & Usher, M. (2013). Pitting intuitive and analytical thinking against each other: The case of transitivity. *Psychonomic Bulletin & Review*, *20*(3), 608–614.

Schwartz, S. H. (1994). Are there universal aspects in the structure and contents of human values?. *Journal of Social Issues*, *50*(4), 19–45.

Schwartz, S. H. (2016). Basic individual values: Sources and consequences. In T. Brosch & D. Sander (Eds.), *Handbook of value: Perspectives from economics, neuroscience, philosophy, psychology and sociology* (pp. 63–84). Oxford University Press.

Seaton, C. L., & Beaumont, S. L. (2008). Individual differences in identity styles predict proactive forms of positive adjustment. *Identity: An International Journal of Theory and Research, 8*(3), 249–268.

Shahsavar, Z. (2014). On the relationship between willingness to communicate and identity processing styles of the Iranian advanced EFL learners. *International Journal of Language Learning and Applied Linguistics World*, *5*(1), 57–67.

Smits, I., Soenens, B., Vansteenkiste, M., Luyckx, K., & Goossens, L. (2010). Why do adolescents gather information or stick to parental norms? Examining autonomous and controlled motives behind adolescents' identity style. *Journal of Youth and Adolescence*, *39*(11), 1343–1356.

Szabo, A., Ward, C., & Fletcher, G. J. O. (2016). Identity processing styles during cultural transition. *Journal of Cross-Cultural Psychology*, *47*(4), 483–507.

Tariq, S. (2012). *Identity styles, causality orientations and psychological wellbeing among adolescents: A cross cultural comparison*. Unpublished Doctoral Thesis, National Institute of Psychology, Quad-i-Azam University, Islamabad, Pakistan.

Terzani, S., & Turzo, T. (2020). Religious social norms and corporate sustainability: The effect of religiosity on environmental, social, and governance disclosure. *Corporate Social Responsibility and Environmental Management*, *28*(1), 485–496.

Tsakissiris, J. (2015). *The role of professional identity and self-interest in career choices in the emerging ICT workforce*. A Submitted Thesis in Fulfilment of the Requirements for the Degree of Master of Business (Research). Queensland University of Technology.

Turney, L., & Pocknee, C. (2005). Virtual focus groups: New frontiers in research. *International Journal of Qualitative Methods, 4*(2), 32–43.

Varghese, M., Morgan, B., Johnston, B., & Johnson, K. A. (2005). Theorizing language teacher identity: Three perspectives and beyond. *Journal of Language, Identity & Education*, *4*(1), 21–44.

Zarrinabadi, N., & Haidary, T. (2014). Willingness to communicate and identity styles of Iranian EFL learners. *Procedia- Social and Behavioral Sciences*, 98, 2010–2017.

Zembylas, M. (2003). Emotions and teacher identity: A poststructural perspective. *Journal of Teachers and Teaching*, *9*(3), 213–238.