

Development and Validation of an English Language Teacher Professional Identity Scale (ELTPIS)

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Abstract

The notion of teacher professional identity has become a regular fixture in numerous theoretical and empirical studies in both mainstream and L2 teacher education. Consequently, several scales have been designed and developed to quantify this construct. To be sure, the extant instruments are general concerning both context and subject matter, and this line of inquiry has not addressed the quantification of the concept in the ELT profession. The present study was, therefore, an attempt to provide a (re)conceptualization of L2 teachers' professional identity through exploring its underlying components. To this end, an initial 61-item, self-assessment questionnaire was developed using a comprehensive review of the related literature and experts' opinions. The trial scale was then administered to a sample of 676 ELT teachers. Results of exploratory factor analysis reduced the instrument to 42 items, leading to a six-factor model which indicated that L2 teacher identity includes: researching and developing one's own practice; language awareness; institutional and collective practice; engaging learners as whole persons; appraising one's teacher self; and sociocultural and critical practice. Confirmatory factor analysis substantiated the resultant six-factor model as a robust and valid tool for measuring ELT teachers' professional identity.

Keywords: Teacher identity, ELT teacher professional identity, ELT teacher professional identity instrument, ELT teacher professional identity model

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INTRODUCTION

The last two decades have witnessed an increasing emphasis laid on the concept of teacher identity, as a variety of the generic notion of identity (Izadinia, 2013), since socio-cognitive conceptualizations of teaching (Borg, 2003) were substituted for behavioristic perspectives in teacher education (Johnson, 2009). As a ramification of this fundamental shift in orientation, second-language (L2) education has also witnessed teacher identity research becoming an inevitable area of its inquiry when it comes to teacher preparation and development (Gu & Benson, 2014; Pennington & Richards, 2016). Consequently, researchers and theoreticians have been investigating and theorizing teachers' professional and mental lives from a myriad of perspectives including professional, cognitive, social, cultural, political, as well as contextual ones (Varghese, Morgan, Johnson, & Johnson, 2005). In this regard, an area of research that has also become almost autonomous in both mainstream and language teacher education is the notion of (language) teachers' professional identity or (L)TPI (Akkerman & Meijer, 2011; Beauchamp & Thomas, 2009; Beijaard, Meijer, & Verloop, 2004).

Broadly defined, TPI is how teachers think of their roles (Beck & Kosnik, 2014; Norton, 2017) and describe themselves to other individuals (Lasky, 2005). Recognizing the significance of teachers' professional identity in their pedagogical approach, theorists, and researchers alike, have therefore centered on several facets of the concept. TPI has proved to be highly effective in systematizing teachers' professional roles (Korthagen, 2004), their approaches to how they teach and develop professionally (Moore & Hofman, 1998; Stenberg, 2010; Yazan, 2018a), and their ability to solve the pedagogical problems (Han, 2021). The construct has been also known to contribute to teachers' pedagogical decision making about different aspects of their career, including classroom practices and their intentions to leave or remain in the profession (Hong, 2010; Karaolis & Philippou, 2019), the quality of their teaching (Labaf, Moinzadeh, & Dabaghi, 2019), their creativity, autonomy, and agency (Benson, 2017;

Derakhshan, Coombe, Arabmofrad, & Taghizadeh, 2020), their efficiency in coping with constraints, tensions, contradictions (Eslamdoost, King, & Tajeddin, 2020; Schaap, Want, Oolbekkind-Marchand, Meijer, 2021; Wang, 2021), undesirable working environments (Olsen, 2008), and their approaches to respond to educational and curriculum reforms (Day, 2002; Widodo & Allamnakhrah, 2020). Moreover, it is acknowledged that TPI has a great impact on “how language teachers practice theory and theorize their practice, how they educate their students, and how they interact and collaborate with their colleagues in their social setting” (Yazan, 2018a, p. 21).

Despite an extensive amount of research devoted to the notion of teacher identity, researchers still have a long way to reach a comprehensive insight into the components of the construct (Hong, 2010), and it still demands conceptual development, analytic illumination, and empirical investigation. This is highly due to the intricate and elusive nature of the construct (Beauchamp & Thomas, 2009) which has the propensity to be shaped and reshaped by a variety of personal and contextual factors (Kelchtermans, 2009). The literature has provided a long list of such factors: sociocultural, institutional, educational, and political elements (Duff & Uchida, 1997; Norton, 2017; Zembylas & Chubbuck, 2018), the subject matter taught (Beijaard, 2017; Beijaard, Verloop, & Vermunt, 2000), teachers’ biographies (Beijaard, 2019), including their gender and personality (Duff, 2017), as well as other miscellaneous factors such as classroom knowledge and experiences (Karimi & Mofidi, 2019; Lamote & Engels, 2010; Rojas, Ñiñoles, & Madrid, 2021), teachers’ aspirations, hopes, dreams, learning history, and beliefs about education (Beijaard, 2019).

An element that plays a prominent role in the formation of a nexus of relations among such factors is the issue of the teaching field and/or subject matter (Beijaard, 2017; Bromme, 1991; Kiely, 2014). Pennington (2015) has adopted the stance on the underlying assumption that subject matter is a key player in shaping the professional identity of teachers. She postulates that “a specific construct or model of teacher identity is

associated with each teaching field as what teachers who work in that field need to know and be able to do” (p. 34). Similarly, Beijaard (2017) believes that “one’s subject or content area strongly determines who one is and how one wishes to be seen as a teacher” (p. 140). From this perspective, Pennington and Richards (2016) have accented this point as they believe that “the subject and content of instruction, the methods and approaches to teaching, and the students and specific context in which one teaches are important factors influencing teacher identity” (p. 5).

Lamenting a paucity of research on the issue of subject matter in teacher identity literature, which adds to the conceptual lacuna surrounding the notion of professional identity, Beijaard et al. (2000) developed a model of teacher professional identity which considers teachers as pedagogical experts, didactical experts, and subject matter experts. According to them, while a pedagogical expert focuses on the social and emotional sides of her students, a didactical expert develops her repertoire of skills to better implement and assess learning and teaching undertakings. They also believe that “a subject matter expert is a teacher who bases his/her profession on subject matter knowledge and skills” (p. 754). A number of researchers, consequently, followed suit, and subject matter became the focus of attention in mainstream teacher education, hence the development of some instruments. A cursory glance at the literature on teacher professional identity shows that the inventories developed so far address the construct both generically and specifically. For example, Carrinus, Helms-Lorenz, Beijaard, Buitink, and Hofman (2012), Cheung (2008), Hasegawa and Kudomi (2006), Kao and Lin (2015), and Karaolis and Philippou (2019) designed and validated generic, rather than subject matter specific, questionnaires to investigate school teachers’ professional identities. Starr et al. (2006) developed a scale, in the field of medical education, to explore physicians’ identity as teachers. To measure the professional identity of faculty members from various fields of study, Abu-Alruz and Khasawneh (2013) embarked on developing pertinent inventory. To be sure, this line of inquiry has not addressed TPI in the English Language Teaching (ELT)

profession which has the English language as both content and medium of instruction. Moreover, these studies did not take into consideration the requirements of the recent development in teaching (Kumaravadivelu, 2012). This academic negligence comes against a backdrop of calls by ELT theoreticians and researchers for developing models of teacher professional identity peculiar to the field of applied linguistics (Pennington, 2015) align with recent perspectives on L2 teaching (Kumaravadivelu, 2012) and language teacher identity (e.g., Barkhuizen, 2017), or in a word, to acknowledge the individual, pedagogical, sociocultural, institutional, and critical aspects of L2 teacher identity. Encouraged by such lines of reasoning, the present study is a step in conceptualizing the construct of L2 teacher professional identity in that it explores its underlying components taking into account the particularity of teaching in an L2 setting.

LITERATURE REVIEW

Teacher (Professional) Identity

The concept of teacher identity has been defined and conceptualized from different perspectives. Broadly speaking, both theoreticians and researchers have dealt with the construct from three main, broad, and, at times, overlapping viewpoints of psychological, sociological, and postmodern prisms (Karaolis & Philippou, 2019).

From a psychological perspective, TPI is an individual, cognitive notion since teachers continually endeavor to grasp and justify who they are as teachers (Beauchamp & Thomas, 2009) and who they like or dislike to be (Norton, 2017) “through the processes of interpretation, self-reflection, and agency” (Karaolis & Philippou, 2019, p. 399). On a sociological plane, TPI is shaped by social (Norton, 2017; Rojas et al., 2021) and contextual factors (Beijaard, 2017; Yazan, 2018a). A prominent approach reflecting this dimension of identity is the social identity theory. This socially-oriented theory of identity posits that identity formation highly hinges upon the social stratifications established within communities (Tajfel, 1978). This

theory propounds that social factors such as ethnicity and class provide the fabric of a person's identity (Varghese et al., 2005). Another case in point, also rooted in situated learning theory (Kumaravadivelu, 2012), is the notion of communities of practice (CoP) proposed by Lave and Wenger (1991), which "refers to a group of people who are bound together by a commonly-shared concern or a passion for something, and regularly interact with each other in order to deepen their knowledge, sharpen their skills, and enrich their experience" (Kumaravadivelu, 2012, p. 91). In contrast, postmodern perspectives have as their central tenet the idea of multiplicity on teacher identity (Akkerman & Meijer, 2011; Karaolis & Philippou, 2019; Rojas et al., 2021; Tao & Gao, 2018), rendering it dynamic (Edwards & Burns, 2016; Zembylas & Chubbuck, 2018), flexible, relational, and discontinuous (Akkerman & Meijer, 2011; Avraamidou, 2016; Beijaard, 2017; Rojas et al., 2021; Zembylas & Chubbuck, 2018). The dynamicity of identity is reflected in teachers negotiating and changing their roles, self-knowledge, values, and behaviors through engaging in different discourses and practices (Korthagen, 2004).

To strike a balance among psychological, sociological, and postmodern viewpoints of teacher identity, Akkerman and Meijer (2011), using a dialogical-self approach, conceived of TPI "as both unitary and multiple, both continuous and discontinuous, and both individual and social" (p. 308). It seems that this balancing point of view is highly needed in the literature on TPI since, as it was previously discussed, there are indeed individual, social, and contextual factors contributing to the formation and reformation of the construct galore (Kelchtermans, 2009).

Language Teacher Professional Identity

When it comes to language teacher identity, the field of language teacher education has developed in parallel with both the foregoing conceptualizations and what might be exclusive, though not necessarily, to its discourse community. Early perspectives on language teacher identity,

which considered its formation as a mere combination of transmission of knowledge and control of behaviors of the learners (Pennington & Richards, 2016), had limitations on teachers' agency, creativity, criticality, and social responsibility (Barkhuizen, 2017). More recent descriptions, in line with the aforementioned psychological, sociological, and postmodern perspectives in mainstream education, have presented "a more relational, performative and holistic view of teacher identity" (Kiely, 2014, p. 214) in that identity underpins teachers' personal practical knowledge (Beijaard et al., 2004), their agency (Beijjard, 2019; Cobb, Harlow, & Clark, 2018; Pennington & Richards, 2016; Ruohotie-Lyhty, 2018; Yazan, 2018b; Zembylas & Chubbuck, 2018), as well as their thinking, knowing, believing, and doing (Miller, 2009). It is now assumed that language teacher identity is ideological (Barkhuizen, 2017), reflective, and transformative (Menard-Warwick et al., 2019; Morgan, 2017; Zembylas & Chubbuck, 2018). This conceptual expansion also suggests an acknowledgment of teacher research as identity formation (Borg, 2017; Edwards & Burns, 2016; Trent, 2011) and critical language teacher identity (Menard-Warwick et al., 2019; Morgan, 2017; Zembylas & Chubbuck, 2018) that can be characterized by a strong commitment to social justice and greater self-reflexivity of language teachers on their teaching behaviors and beliefs (Kubota, 2017). These reconceptualizations of language teacher identities have necessitated a content and context-specific model of teacher education peculiar to (second) language education. The next section deals with such a model which also comprises the theoretical base of the present study.

Theoretical Framework: Components of Language TPI

The gradual demise of the concept of method, at least in academic circles, in applied linguistics discussions has been considered a conceptual shift of orientation in the ELT profession (Allwright, 1991). The post-method pedagogy was put forth by Kumaravadivelu (1994) in lieu of a method to end its long monopoly over the profession. After the provision of his

proposal onwards, Kumaravadivelu endeavored to respond to the call for a comprehensive model of language teacher education inspired and driven by the post-method condition which led to his KARDS model in 2012. The acronym KARDS stands for: Knowing, Analyzing, Recognizing, Doing, and Seeing. These components, specifying L2 teachers' main roles based on local demands and global forces (Kumaravadivelu, 2012), imbue the model with a holistic and cohesive understanding of different aspects of L2 teaching which would inform the development of a context-sensitive language teacher education program. What follows is a brief description of the KARDS modules, followed by a discussion of the rationale behind using this model as an overall guide for developing the English Language Teacher Professional Identity Scale (ELTPIS).

Knowing focuses on professional knowledge (teachers' content-based knowledge), procedural knowledge (instructional knowledge and ability to manage language learning effectively), and personal knowledge (critical reflection on one's teacher identities, beliefs, and values). The module called analyzing underscores teachers' responsibility to diagnose and analyze learners' subjective and objective needs, to understand their motivation for L2 learning in terms of their self-determination and agency, and to generate proper conditions for their autonomy so that they become both academic learners and critical thinkers. The third module of the model, namely recognizing, pivots on the importance of L2 teachers' identification of their teaching self, i.e. their identities, moral values, and beliefs about various aspects of teaching and learning. Teaching, theorizing, and dialogizing compose the tripod related to the goals of the 'doing' module. In doing teaching, L2 teachers should assist learners to achieve their learning goals; they should also develop critical awareness, in both themselves and their students, about the socio-political issues surrounding education. L2 teachers should also have both the competence and confidence to theorize what they practice and practice what they theorize through tools such as action research. Moreover, through dialogizing, L2 teachers should have critical conversations with other teachers and with their teaching self to

develop their identities. According to the fifth component of the model, seeing, L2 teachers need to develop the capacity to view and scrutinize educational issues from multiple perspectives including those of different stakeholders in education such as colleagues, students, educators, and supervisors.

The foregoing shows that KARDS - combining personal, professional, political, and pedagogical aspects of L2 teacher education - echoes recent conceptualizations of teacher professional identity. The KARDS framework also serves as a multi-dimensional response to the key teacher identity questions, namely “what kind of teacher do I want to be? how do I see my role as a teacher?” (Korthagen, 2004, p. 81), and “who am I at this moment?” (Beijaard et al., 2004, p. 108). Thus, Kumaravadivelu’s modular model, as an overarching framework, along with other scholarship on professional teacher identity from both mainstream and language teacher education literature, laid the foundation for the selection and formation of the items for the trial instrument in the present study.

PURPOSE OF THE STUDY

This study was conducted to develop a valid and reliable English Language Teacher Professional Identity Scale (ELTPIS) and design a pertinent model in applied linguistics to operationalize the construct and make its quantitative investigation possible. The study addressed the following questions:

- 1) What are the main components underlying L2 teachers’ professional identity in the Iranian context?
- 2) Is the English Language Teacher Professional Identity Scale (ELTPIS) developed in this study a reliable and valid data collection instrument?

The following sections provide a detailed account of the

development and validation of ELTPIS.

METHOD

Participants

The participants of this study were Iranian ELT pre-service and serving teachers. As for the pilot phase of the study, 40 respondents (22 males, 18 females) answered the questionnaire. More specifically, 14 of whom were inexperienced pre-service teachers, 16 were experienced serving teachers, and 10 were novice teachers with less than five years of teaching experience from different schools in Sanandaj and Tehran. Their ages ranged from 19 to 41. For the exploratory factor analysis phase, 676 (333 males, 343 females) ELT pre-service and serving teachers filled out the questionnaire. With regard to the participants' educational degrees, 214 (31.7%) were pre-service teachers at different levels from five Farhangian University Branches. The rest of the respondents were M.A. ($n = 211$, 31.2%), B.A. ($n = 207$, 30.6%), and Ph.D. ($n = 44$, 6.5%) serving teachers from different schools in Iran. The participants' ages ranged from 19 to 48. Their teaching experience varied from having no experience to more than 20 years of teaching experience. The participants for the confirmatory factor analysis phase were also 438 (195 males, 243 females) ELT pre-service and serving teachers. Regarding the educational degrees, 146 participants were pre-service (33.3%), the rest were M.A. ($n = 158$, 36.1%), B.A. ($n = 121$, 27.6%), and Ph.D. ($n = 13$, 2.9 %) serving teachers. The participants ranged in age from 20 to 51. Like the exploratory factor analysis phase, their teaching experience varied from having no experience to more than 20 years of teaching experience.

Instrumentation

The stages of questionnaire development which guided this study were those proposed by Boateng, Neilands, Frongillo, Melgar-Quiñonez, and Young

(2018), Brown (2001), and Dörnyei (2010) as follows.

Item Development

In the initial phases of the item development stage, domain identification and content sampling, multi-item scale, and self-initiative item generation were employed. At this point, the general objective was to develop items that embody the theoretical domain of the construct under examination, namely English language teacher professional identity, to demonstrate content validity. To start with, and in line with the process of domain identification (Boateng et al., 2018), the authors of the present study reviewed the literature on teacher professional identity, as discussed in the previous sections, to check for any existing instruments and to establish a conceptual framework for the questionnaire. In a parallel fashion, this thorough review of the literature was also accompanied by content sampling to cover comprehensive and representative content to develop the items of the instrument. As a highly neglected phase in the process of item development in L2 teaching inquiry, multi-task scales were also used in this study to develop more than one item to “address each identified content area, all aimed at the same target but drawing upon slightly different aspects of it” (Dörnyei, 2010, p. 25). The rationale behind using multi-task scales was the possibility that single items might be eliminated in different phases of questionnaire development including item analysis, pilot testing, and exploratory factor analysis. Since the content selection of this study differed from those of previous teacher professional identity questionnaires, the only recourse for drawing up an item pool was self-initiative item generation. Accordingly, while the founded theoretical framework of the construct was continuously solicited, the researchers set in motion their imagination to create an efficient item pool. Subsequently, an initial item pool consisting of 362 statements was generated.

After the initial item production, some of the items having a general meaning of identity, overlapping items, and items that were repetitions of

one another were removed; furthermore, some other items were merged. This initial revision resulted in the reduction of the items to 120. Following this phase, meetings were organized with five domain experts to aid the researchers in assessing the content validity and readability of the items. The purpose of this phase was to find out how well-developed the experts considered the questionnaire items to be and whether any additional items were needed to be generated. The experts made comments on the appropriateness, relevance, accuracy, specificity, and wording of the items. They also put forward suggestions for adding, rewording, combining, and/or excluding items. Incorporating their comments led to a further reduction of the items to 61.

Following the standard procedure for questionnaire development, the remaining 61 items were put into a standard questionnaire format. In addition, a six-point Likert scale (Strongly Agree, Agree, Slightly Agree, Slightly Disagree, Disagree, and Strongly Disagree) was added to the questionnaire. The reason why an even number was employed in the Likert format scale was that practice shows some of the respondents go for the most harmless and undemanding item. The draft version of the instrument was then given to a panel of experts for proofreading and face validity assessment, bringing about further minor changes in the wording of a few items and also the instructions.

The final trial scale was then piloted on a group of 40 ELT pre-service and serving teachers. The teachers were also asked to write down their comments on any items they found ambiguous and difficult to understand. The questionnaire was further polished based on the participants' analyses of the instrument, resulting in the modification and improvement of some of the items. Table 1 shows the items of the trial scale after this final alteration. Analysis of the pilot data using the Cronbach's alpha index yielded a high estimate of reliability, i.e., .90.

Item Analysis

In order to analyze the data gathered in the pilot study, item analysis was conducted using Extreme Group Method and Corrected Item-Total Correlation. In Extreme Group Method, an item was considered acceptable if it could discriminate well between the total test scores of the upper 33 percent and the lower 33 percent of the participants. The results of the independent samples T-test indicated that some items did not discriminate well between the upper and lower groups, at the .05 significance level (two-tailed, equal variances assumed). Despite the low discrimination ability of those items, it was decided to keep them since their foci, in terms of content, were not reflected in other items. Concerning Corrected Item-Total Correlation, some other items were considered suspect because the correlation between them and the total scale was below .3. Since the removal of items with weak item-total correlation did not result in very much better alpha as per the last column in the table, it was decided to keep the items. However, changes were made in the wording of these items.

Following this phase, the revised version of the questionnaire was administered to 765 Iranian ELT pre-service and serving teachers. The convenience sampling procedure was employed to collect data. The questionnaire was distributed through both face-to-face methods and emails. Close inspection of the completed questionnaires revealed that 89 of them were either incomplete or carelessly filled out, making them inappropriate for further analysis. This left the researchers with 676 questionnaires which were item analyzed to explore whether the changes incorporated based on the results of the pilot study had improved the discrimination level and the total correlation of the related items. The results of the analyses proved satisfactory and there were not any problematic items. The questionnaire was now ready to go through the process of construct validation.

Table 1: Items of the trial scale**Tentative L2 Teaching Professional Identity Items**

As an ELT teacher:

- 1) I should have adequate knowledge of how the English language is learned.
- 2) I should teach language skills in combination rather than separately.
- 3) I should improve my critical thinking skills.
- 4) I should know how to create a classroom environment that facilitates learning (e.g., academic, social-emotional learning).
- 5) I should evaluate my views of teaching, the way I teach, and the outcomes of my teaching.
- 6) I should examine the theoretical principles and instructional strategies proposed by scholars in order to see if they are appropriate for my teaching context.
- 7) I believe that L2 education is influenced by certain values, ideas, and perspectives which transfers them to the learners.
- 8) I should develop an awareness of my teaching behavior by understanding what I do and its consequences.
- 9) I should take responsibility for my own professional development (e.g., by attending conferences, workshops, reading books and articles).
- 10) I should act as a problem-solver (identify, examine, and solve the challenges) of my classroom practice.
- 11) I must fully follow the set syllabi, textbooks, and lesson plans in language centers/schools in which I teach.
- 12) If I make any changes to the classroom content and process, I believe I should investigate their effects and outcomes through some form of classroom research.
- 13) I should be aware of how my background (e.g., culture, learning, and teaching experience) affects my teaching views and practices.
- 14) I believe that the way I teach should be determined by contextual factors (e.g., local, socio-educational, cultural, political).
- 15) I should explore how power relationships in my classroom influence my interactions with students.
- 16) I should develop the research skills that help me to explore problems in and outside the classroom which may affect my teaching practice.
- 17) I should join language teacher communities and actively participate in their activities (e.g., joint events, seminars, panels).
- 18) I should develop my knowledge to use technology as a teaching-learning tool (e.g., possible uses of software, online discussion, blogs).
- 19) I should make sure students accurately understand the reasons behind the things we do in the classroom.

- 20) I should not only use theories produced by scholars but also develop my views of teaching and use them in my teaching practice.
- 21) I should think about the ideas that shape my teaching behavior.
- 22) I should encourage learners to initiate to talk, not just react and respond.
- 23) I should know about my students' backgrounds (e.g., linguistic, cultural background).
- 24) I should educate myself and my students about forms of inequality and injustice.
- 25) I should consider ways of empowering my students to take ownership of their learning.
- 26) I should have a knowledge of the relationship between the English language form, its meaning, and its use in real life.
- 27) I should try to enhance my students' moral growth.
- 28) I must confine myself to the specific values, norms of practice, and patterns of social participation of the school/language center in which I teach.
- 29) I should know about different factors (e.g., personal, educational, sociopolitical, cultural) which impact my students' language learning.
- 30) I should know about how different varieties of the English language are used in multilingual and multicultural contexts.
- 31) I should have a knowledge of how the English language is used to express social, cultural, political, and ideological meanings.
- 32) I should be proficient in English textual analysis (e.g., cohesion, lexical relation).
- 33) I should use different language teaching strategies to develop a sense of community among my learners (e.g., using group-based activities, changing seating arrangements).
- 34) I should examine the teaching materials to see how linguistic content is handled (e.g., authenticity).
- 35) I should be able to speak about English itself (e.g., how it works, how it is analyzed).
- 36) I should engage my students' sense of who they are and how they relate to the world they live in through activities (e.g., real activities of daily living, writing diaries).
- 37) I should equip my students with learning resources and appropriate strategies necessary to learn on their own.
- 38) I should use classroom techniques that encourage students to think deeply about their own thoughts, feelings, and behavior.
- 39) I must give high priority to the interests and benefits of the language center/school where I teach.
- 40) I believe that cultural issues (e.g., valued traditional habits, customs, ceremonies,

beliefs) should be free to discuss in the L2 classroom.

- 41) I should willingly interact with the other teachers and share my knowledge, experiences, and resources with them.
- 42) I should question the assumptions and values (e.g., personal teaching beliefs, teaching philosophy) I bring to teaching.
- 43) I should learn from my colleagues through, for example, observing their classes and asking for their feedback on my own teaching practice.
- 44) I should improve my students' intercultural understanding by familiarizing them with English-speaking and non-English speaking cultures.
- 45) I should consider learners' interests, learning needs (e.g., social-emotional, linguistic needs), and life experiences when selecting classroom content and topics.
- 46) I should develop my knowledge of other relevant disciplines in addition to EFL teaching (e.g., linguistics, psycholinguistics, sociolinguistics).
- 47) I should have a critical approach toward different aspects (e.g., socio-cultural, institutional, pedagogical, political) of my teaching.
- 48) I must have a good understanding of the institutional context (e.g., the ethos, policies, rules, rewards) in which I teach.
- 49) I should know that what the institutions determine as students' needs do not always reflect students' real needs.
- 50) I should make connections between knowledge about the English language and teaching methodology components.
- 51) I should involve my learners, where possible, in planning, monitoring, and evaluating their own learning in order to learn on their own (e.g., using cooperating learning, learners' self-report).
- 52) I should help my students to become critical thinkers (e.g., through problem-posing activities).
- 53) I should think of social events as learning resources when selecting classroom materials.
- 54) I should be able to revise my teaching practice continually based on my own evaluation.
- 55) I should have adequate knowledge of different aspects of the English language (e.g., phonology, morphology, semantics, syntax, pragmatics).
- 56) I should encourage learners to critically analyze and discuss the content (e.g., cultural, social elements) of the classroom language textbooks.
- 57) I should ask myself self-reflective questions about my teaching practice (e.g., If I were the student, rather than the teacher, what would I want the teacher to do).
- 58) I should develop an awareness of my own teaching strengths and weaknesses.

- 59) I should make my students aware of different varieties in the English language.
- 60) I should develop my ability to handle unique situations and unexpected students' reactions in the classroom.
- 61) I believe that the language center/school's goals and policies have a great impact on the way I teach.

RESULTS

Construct Validation of ELTPIS

To explore the construct validity of the developed instrument ELTPIS, the participants' responses were subjected to exploratory and confirmatory factor analysis. Although, as mentioned in the section related to the conceptual framework of the study, the KARDS model (Kumaravadivelu, 2012) and (language) teacher identity literature were used as the basis for item development, the categories established by the theoretical framework were not taken as a pre-determined factor structure for the developed instrument. Rather, in the interest of statistical rigor, it was decided to stay open to the factor structure that our participants' responses would yield. To that end, the validation study started with exploratory factor analysis (EFA) which does not take the factor structure of the construct under investigation for granted. This procedure, thus, best serves the goals of the researchers who are after "a factor structure or theory which can explain the correlations among the indicators" (Sharma, 1996, p. 128). Furthermore, initial exploratory factor analysis was followed by confirmatory factor analysis (CFA) "to empirically verify or confirm the factor structure" (p. 128). The next sections present a detailed account of the measures taken for data analysis.

Exploratory Factor Analysis

The exploratory factor analysis of ELTPIS was carried out using Principal Components Analysis (PCA) with Varimax Rotation and Kaiser Normalization. However, prior to this analysis and as a step against multicollinearity, the determinant was calculated to be higher than 0.00001.

Concerning factorability of the data (Pallant, 2007), the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was greater than .6 (.912), and Bartlett's test of sphericity was significant (.0), bearing witness to the fact that the data were factorable. PCA with varimax rotation was then carried out on the 61 items of the instrument. To find the right number of factors to be retained, multiple procedures including the Kaiser criterion, Scree test of eigenvalues, Parallel Analysis (PA), and Minimum Average Partial (MAP) tests were used. In the first attempt when Kaiser criterion was employed (eigenvalues greater than 1), 14 factors were extracted explaining 57.643% of the total variance, some of which were impossible to interpret since the Kaiser criterion overestimated the actual number of factors. To get an indication of the best number of factors, Scree test, PA, and MAP were also drawn upon, suggesting that six factors could be extracted. However, the final decision should be made in line with factor analysis' exploratory character to consider whether the solution can be readily interpreted. The cut-off point for meaningful factor loadings was set at .3. Items 3, 4, 7, 14, 27, 40, 49, 1, 2, 8, 15, 19, 22, 25, 37, 57, 59, 50, and 60 (see Table 1) which had loadings smaller than .3 were eliminated from the questionnaire.

As Table 2 shows, the factor loading of the 42 items surviving the EFA phase ranged from .390 to .860. The labels that were assigned to the factors based on the commonalities and general meaning of the items related to each factor were: L2 Teacher Identity as Researching and Developing One's Own Practice (Factor 1 with 8 items accounting for 12.771% of the variance), L2 Teacher Identity as Language Awareness (Factor 2 with 7 items explaining 9.536% of the variance), L2 Teacher Identity as an Institutional and Collective Practice (Factor 3 with 8 items accounting for 9.397% of the variance), L2 Teacher Identity as Engaging Learners as Whole Persons (Factor 4 with 6 items explaining 9.334% of the variance), L2 Teacher Identity as Appraising One's Teacher Self (Factor 5 with 6 items accounting for 8.331% of the variance), and L2 Teacher Identity as a Sociocultural and Critical Practice (Factor 6 with 7 items explaining 7.770% of the variance).

Table 2. Factor loading based on principle components analysis

Exploratory factor analysis						
Component Item	Factor 1 Researching and Developing One's Own Practice	Factor 2 Language Awareness	Factor 3 Institutional and Collective Practice	Factor 4 Engaging Learners as Whole Persons	Factor 5 Appraising One's Teacher Self	Factor 6 Sociocultural and Critical Practice
12	.826					
16	.796					
20	.691					
6	.775					
9	.786					
46	.792					
10	.738					
18	.859					
55		.730				
26		.590				
30		.677				
31		.782				
32		.783				
34		.766				
35		.693				
11			.675			
28			.733			
39			.628			
61			.559			
17			.726			
41			.551			
43			.762			
48			.511			
23				.796		
29				.815		
36				.390		
51				.808		
38				.855		
45				.860		
5					.748	
42					.740	
58					.790	
13					.742	
21					.544	
54					.782	
52						.677
24						.678
44						.742
56						.657
33						.721
53						.505
47						.450

The whole factor structure accounted for 57.139% of the total variance. The eigenvalues of the six factors were 10.067, 3.613, 2.918, 2.745, 2.449, and 2.207, respectively. The internal consistency reliabilities of the factors, using Cronbach alpha, turned out to be .85, .83, .87, .79, .81, and .82, respectively.

Confirmatory Factor Analysis

In the previous stage, the EFA yielded a six-factor model of ELTPIS. To validate this hypothetical model, confirmatory factor analysis was conducted on the dataset (438 questionnaires) in MPlus 7.4. The mean- and variance-adjusted weighted least squares (WLSMV) estimators that were specifically designed for categorical variables were used. Table 3 shows that the overall model enjoys a good fit. The chi-square ($df=804$, $\chi^2 = 1206.95$) indicates significant result at .001. The RMSEA index of .034 was lower than .05, which also shows a good fit. The other assessment indices, i.e., CFI and TLI are both higher than their critical values, i.e., .90.

Table 3: Fit indices of the CFA model

Fit Indices	6-factor model
Chi-Square	1206.95
df	804
P-value	.001
RMSEA(CI 90%)	.034(.030-.038)
CFI	.951
TLI	.948

The CFA results also showed that the factor loadings of all of the 42 items were higher than .3, all significant at .001, denoting noteworthy contributions of the items to their corresponding components. Therefore, the CFA corroborated the EFA results, showing that the final version of the instrument enjoys a high construct validity for what it is supposed and intended to measure. Figure 1 shows the schematic representation of the final model.

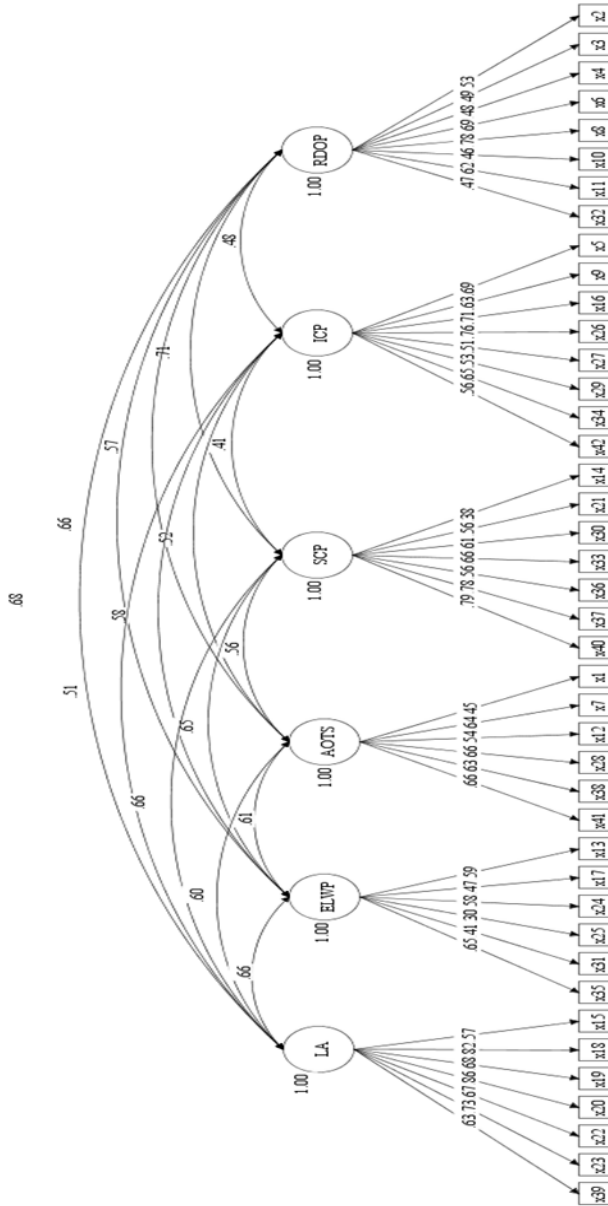


Figure 1: Final model of ELTPIS

Table 4 also shows the positive correlations among six factors, all were significant at .001. The minimum correlation was between F3 and F6 ($r = 0.41$) and the maximum correlation was between F1 and F6 ($r = .71$) factors.

Table 4: Correlation matrix for latent factors

	F1	F3	F6	F2	F5
F1	1				
F3	.48**	1			
F6	.71**	.41**	1		
F2	.68**	.51**	.66**	1	
F5	.57**	.52**	.56**	.60**	1
F4	.66**	.58**	.64**	.66**	.61**

DISCUSSION

EFA and CFA analyses confirmed six components of English language teachers' professional identity. These factors are discussed in the following sections.

Factor 1: L2 Teacher Identity as Researching and Developing One's Own Practice

This component of ELTPIS includes items that deal with teachers' efforts aimed at researching different aspects of their teaching and developing their practice professionally. This component epitomizes the theorizing element under the module of 'Doing' in the KARDS model. Theorizing realized through small-scale research tools such as action research enables teachers to find solutions for the problems they encounter in the teaching practice (Richards & Lockhart, 1994). Such research engagement functions as a way to challenge teachers' identities (Burn, 2007) and makes them autonomous, professional practitioners (Xu, 2017), strategic thinkers as well as exploratory researchers as teachers' roles, consistent with a multiple and dynamic view of teacher identity, shift away from mere users of others'

(academicians’) theories to producers of their own practical and theoretical knowledge (theorizing) of the field. Moreover, to enhance their professional knowledge, an important element in the ‘Knowing’ module of KARDS, language teachers try to attend related seminars and workshops and scrutinize the literature related to their field of study (Richards & Farrell, 2005).

Factor 2: L2 Teacher Identity as Language Awareness

The items comprising this component deal with an ELT teacher’s knowledge of the subject matter they teach (Beijaard, 2017; Beijaard et al., 2000; Kiely, 2014; Pennington, 2015; Pennington & Richards, 2016). This component has been categorized under the ‘professional knowledge’ element in the KARDS model. The items constituting this component capture the three types of knowledge about language provided by KARDS: language as system, discourse, and ideology. While language as a system looks into the micro-systems of language such as phonological processes and syntactic structures, language as discourse focuses on “the coherent relationship between form, meaning, and the communicative intent within a particular communicative situation” (Kumaravadivelu, 2012, p. 25). These types of teacher knowledge about language have been long promoted in second language teacher education programs (Bartels, 2009) as they help teachers teach more successfully (Thornbury, 1997). However, KARDS assumes a third role for English language teachers as processors of language as ideology. Taking on this role, ELT practitioners go beyond the linguistic formalities of language and analyze it on higher planes such as social and ideological ones (Kumaravadivelu, 2012).

Factor 3: L2 Teacher Identity as an Institutional and Collective Practice

This component consists of items that relate to institutional factors teachers

engage within educational settings, including the school culture, the curriculum, and socialization patterns that teachers experience in the workplace. These items highlight the significance of dialogizing embedded in the module ‘Doing’. Kumaravadivelu (2012) strongly believes that “teaching inquiry is dialogic inquiry” (p. 90) meaning that teachers should develop even their theories of practice in a collective fashion. A major aspect of L2 teacher professional identity is, therefore, how teachers define themselves as members of the institutional settings where they work (Beijaard et al., 2004; Miller, 2009).

This view of teacher identity might be looked at as a source of conflict. As various teaching methods and curricula in different settings of a certain discourse community might assign teachers predetermined roles in line with their philosophical underpinnings, teachers might undergo identity ‘crisis’ or identity ‘stress’ in adopting the new roles assumed by the new communities of practice (Lave & Wenger, 1991) they encounter. However, such limitations, seemingly in conflict with the teacher’s self-image, will “offer opportunities to problem-solve and evolve new modes of teaching that respond to those constraints while also incorporating the teacher’s values and teaching ideals” (Pennington & Richards, 2016, p. 5).

Factor 4: L2 Teacher Identity as Engaging Learners as

Whole Persons

This component of ELTPIS is comprised of items that consider learners as whole persons in the process of teaching and go beyond a mere focus on developing learners’ linguistic skills, encompassing consideration of other aspects of their identities, such as social and emotional ones (Maftoon, Najafi Sarem, & Hamidi, 2012). These items exemplify the ‘Analyzing’ module of the KARDS model in that such an outlook on learners, as Kumaravadivelu (2012) suggests, requires teachers to analyze learners’ needs, motivation (both intrinsic and extrinsic), and autonomy in terms of socio-economic and educational factors as well as issues associated with

students' learning objectives. As Cummins (2011) postulates, language teacher education requires teachers who see themselves as not only responsible for fostering their students' language development but also committed to engaging with the entirety of their learners' identities. In ELT, this dimension of TPI was embraced by Stevick (1990), the most seminal figure of humanizing English language education, who believed that teachers should seek their students' personal growth and self-acceptance.

This module of the KARDS model is on a par with the importance attached, by Zeichner and Liston (1996), to teachers' engagement with learners' interests, understandings, as well as cultural and linguistic backgrounds or, in a word, their identities. Such a whole-person approach also parallels what Akbari, Behzadpoor, and Dadvand (2010) label as the learner and/or affective element in their English language teaching reflection inventory; this reflectivity factor includes whatever "that deals with a teacher's reflecting on his/her students, how they are learning and how learners respond or behave emotionally in their classes." (p. 214).

Factor 5: L2 Teacher Identity as Appraising One's Teacher

Self

The common foci of the items making up this component are on teachers' self-knowledge and their awareness of their teaching philosophy (Korthagen, 2004). These items demonstrate the 'Recognizing' module of the KARDS model, which requires language teachers to identify and, continuously, evaluate their teaching Self which embraces their beliefs and values. KARDS broadly defines a teacher's belief system as "views, propositions, and convictions one dearly holds, consciously or unconsciously, about the truth value of something" (Kumaravadivelu, 2012, p. 60); this system highly affects teachers' decision making and performance and/or behavior. A teacher's belief system is also intertwined with her system of values. Teacher values, as an integral part of the teaching practice, emphasized the moral and ethical facets of language teaching

(Hansen, 1998). Such considerations are reflected in a multitude of ways, including textbook selection, reframing the content of the curriculum, empathizing with learners' feelings and problems (Kumaravadivelu, 2012).

Factor 6: L2 Teacher Identity as a Sociocultural and Critical Practice

This component of ELTPIS consists of items that go beyond the confinements of the classroom teaching and relate to the social, cultural, and political dimensions of pedagogy (Kubota, 2017; Zembylas & Chubbuck, 2018). With regard to KARDS, these items point to the teaching element under the 'Doing' module, which posits that teachers should strive for the personal transformation of their learners. In particular, teachers who actively define and redefine their professional roles and responsibilities in light of their socio-cultural and critical understanding of teaching are believed to enact, in different ways and to varying degrees, a 'teacher as transformative intellectual' identity (Giroux, 1988; Kumaravadivelu, 2012).

In the context of second language education, Abednia (2012) argues that a language teacher who sees themselves as a transformative intellectual goes beyond an exclusive focus on developing learners' language skills closely following commercially produced language instruction books. Instead, such a teacher strives towards raising learners' critical consciousness of themselves and their context through incorporating real-life topics into classroom content and encouraging her learners to critically analyze such topics and think of ways for social change. Although fulfilling such roles can be challenging, teachers with transformative and critical aspirations tend to have a firm ethical commitment to social justice which guides their teaching practices and strengthens their transformative identity (Kubota, 2017).

CONCLUSION AND IMPLICATIONS

As a community of practice, the ELT profession has embraced the concept of teacher professional identity in both theory and research as well as its practice within the last 20 years. Despite the availability of a multiplicity of scales developed to measure the construct in mainstream teacher education, such inventories have proved to be too general to be applied to all contexts and fields of study. To fill this lacuna, the present research project was set up to design and validate a new teacher professional identity scale peculiar to ELT settings since, as the accumulated body of literature on the concept shows, this teacher-related variable is highly sensitive to context and subject matter (Pennington, 2015). Statistical and experts' analyses employed in the present study gave way to a model which demystifies English language teacher professional identity in terms of six constituent factors that consider L2 teacher identity as researching and developing one's own practice; language awareness; institutional and collective practice; engaging learners as whole persons; appraising one's teacher self; and socio-cultural and critical practice.

The findings of the present study bear theoretical and practical implications for the domain of teacher education. On a conceptual plane, the emerged model has the potential to paint a more realistic picture of a highly elusive construct such as professional identity, giving a coherence of outlook to the amalgam of conceptualizations of the issue. The findings can also establish an agenda for future research on TPI and related issues in teaching contexts. To begin with, relations between professional identity and other different teacher-related variables can be investigated using the newly-developed instrument. From a research methodological perspective, the ELTPIS, as a valid, quantifying, and robust measurement instrument can be also employed, alongside qualitative tools such as interview and focus groups, in related research projects with a mixed-method design - which make use of both quantitative and qualitative traditions - since "two different types of data can provide validity evidence by seeking

corroboration and integrity of findings, establishing triangulation of the study” (Karaolis & Philippou, 2019, p. 403). Moreover, the procedures made use of in the present study can be utilized to design and validate other similar constructs in teacher education research. New horizons can be also explored when it comes to teacher education programs and the lenses through which professional identity is looked at in such contexts. Considering the paramount significance attached to the role of teacher education programs in the formation of teachers’ professional identity (Flores, 2020; Hassani, Khatib, & Yazdani Moghaddam, 2019; Shirazizadeh, Tajik, & Amanzadeh, 2019), the elements, that proved to make up the structure of language teacher identity in the context of the present study, can be high on the agenda for the development and design of L2 teacher education programs.

As with any other measuring instrument, the multi-dimensional inventory of L2 teacher professional identity developed and validated in this study will be highly context-sensitive. Educationists and researchers are thus advised to exercise caution while utilizing the new scale. Given the multi-faceted nature of TPI, and because it is highly demanding on the part of the beleaguered teacher to strike a balance among different aspects of her PI - as it is not a one-size-fits-all task - (Pennington & Richards, 2016), context will be a determinant factor as to decide on what type of identity one should take on in a particular setting.

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No potential conflict of interest was reported by the authors.

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