



## **Validation of an Ecological Model of Teacher Agency for Iranian EFL Student Teachers**

**Saemeh Arabahmadi<sup>1</sup>, Omid Mazandarani<sup>2,\*</sup>, Seyyed Hassan Seyyedrezaei<sup>3</sup>,  
and Zari Sadat Seyyedrezaei<sup>4</sup>**

<sup>1</sup>*PhD Candidate in TEFL, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul Branch, Iran Email: sae.arabahmadi@gmail.com*

<sup>2</sup>*Corresponding author: Assistant Professor of TEFL, Department of English Language Teaching, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul, Iran Email: Omazandarani@gmail.com*

<sup>3</sup>*Assistant Professor of TEFL, Department of English Language Teaching, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul, Iran Email: srezaei.sh@gmail.com*

<sup>4</sup>*Assistant Professor of TEFL, Department of English Language Teaching, Aliabad Katoul Branch, Islamic Azad University, Aliabad Katoul, Iran Email: zariseyyedrezaie89@gmail.com*

### **Abstract**

Despite the abundance of research on language teacher education, there is a dearth of ecologically informed instruments for measuring teacher agency. To this end, this study aims to fill this gap by designing and validating a questionnaire for assessing the agency of student teachers. Thirteen facets were identified and developed, including instructional beliefs, supportive beliefs, collaborative learning, and competence, which represent an iterational dimension. The practical-evaluative dimension is represented by opportunity to make choice, opportunity to influence, support, equality, trust, institutional context, and professional community. Long- and short-term purposes manifest projective dimension. A 22-item questionnaire on a 7-point Likert scale was developed and administered. Altogether, 210 EFL student teachers from four branches of Farhangian University through convenience sampling participated in the survey research design study. Structural Equation Modeling (SEM) analysis was employed through AMOS 22 to examine the validity of the theoretical model. In doing so, an Exploratory Factor Analysis (EFA) and a Confirmatory Factor Analysis (CFA) were administered, and the ecological framework of student teacher agency was confirmed. The results revealed that the questionnaire had an acceptable fit with the empirical set of data, suggesting that this scale has the potential to be useful in assessing student teachers' agency and raising their awareness of the agency construct. The study has implications for policymakers regarding how the ecology of professional education may influence teachers' practices, actions, and decision-making processes.

**Keywords:** agency, Farhangian University, student teacher, teacher education, pre-service

### **ARTICLE INFO**

#### **Research Article**

Received: Saturday, January 14, 2023

Accepted: Friday, April 28, 2023

Published: Thursday, June 1, 2023

Available Online: Friday, April 28, 2023

DOI: <https://dx.doi.org/10.22049/jalda.2023.28234.1510>

Online ISSN: 2821-0204; Print ISSN: 28208986



© The Author(s)

## **Introduction**

Teacher agency performs an indispensable character in the development of knowledge about teaching and learning in professional development (Heikonen et al., 2020). According to Sen (1999), agency associates with individuals' active participation and making a difference by which their actions can be judged in terms of their goals and values in a working environment and other spheres of life. Agency refers to individuals' capacity to critically shape their reactions to complex situations (Billett, 2008). Concerning teachers, agency means efforts to accelerate the implementation of reforms in many ways (Biesta & Tedder, 2007). If teachers perceive the goals as important, they will be more likely to exercise agency in support of changes (Van der Heijden et al., 2018). Teachers make key decisions and intentional choices at schools through their agency (Bridwell-Mitchell, 2015).

The professional agency of teachers plays a crucial role in describing their teaching practices (Imants & Van der Wal, 2020). It seeks to broaden knowledge of teaching careers (Turnbull, 2005). Professional agentic teachers deem themselves as active learners and pedagogical experts who can take principled actions, enact changes, and make decisions in problematic situations (Anderson, 2010). It is considered as a capacity that is constantly advanced regarding contemporary actors and contexts and previous personal experiences (Greeno, 2006). It advances through conscious participation and decision-making in new and creative ways to organize, adapt, and experiment with instructional practices of new learning at both community and individual levels (Soini et al., 2015). It highlights the ability to teach given the sources and obstacles of the operating environment and considers teachers' values, beliefs, and properties (Brevik et al., 2019).

The ecological framework of teacher agency, proposed by Priestley et al. (2015), includes three facets: iterational, which is engaged with past personal and professional experience; projective, which is informed by future goals; and practical-evaluative, which is oriented towards present opportunities and constraints. From an ecological perspective, professional teacher agency occurs within the possibilities of settings in which actors act upon their ideologies, values, and traits in connection to a specific circumstance. The degree of agentic acts varies. For example, teacher agency can be filled with autonomy and initiative acts in some situations, while in others, hierarchical planning and authoritative administration can be the reasons for the lack of agentic acts (Eteläpelto et al., 2013).

Even though the teacher is a critical factor, it should be borne in mind that such a claim is about a wide range of other elements. A successful teacher with one group of students may not necessarily be helpful with another group, given that factors such as multiple intelligences, gender, and age vary from one student to another (Mazandarani & Troudi, 2017, 2022). To sum up from an ecological perspective, agency is not an innate ability; it is achievable through the active commitment of individuals in the settings. Therefore, the consequence of agency will often be the product of the interaction of available resources, structural and contextual factors, and individual efforts as they come together through specific and, in some respects,

often unique circumstances, rather than functioning as an intrinsic feature within individuals and being absent in others (Biesta & Tedder, 2007).

If educators who teach pre-service student teachers call for trained teachers who are the agents of change, not those who simply convey the educational program, they should also pay attention to the cultures and structures of schools and questions about how one can work on creating enabling cultures and structures (Riazi & Razavipour, 2011). So, to develop academic experiences for learners, it is vital to understand and evaluate student teachers' agency in learning environments.

The first problem is that pre-service English teacher education centers in Iran need to inspire student teachers to move beyond relying on textbooks and conventional teaching and learning methods. They need to make them aware of their agency roles, provide them with self-assurance to make their voices heard and share their views, while most teachers assume the only activity they need to do is to inspire their learners to learn English so they can pass assessments safely, despite their dissatisfaction with the educational system (Izadinia, 2012).

Another problem is the lack of a consistent teacher agency conceptual framework in most of the literature (Pyhalto et al., 2012). Describing the construct of agency from different perspectives, including Giddens's (1984) theory of structuration, Archer's (1995) realist social theory, and Bourdieu's (1977) theory of habitus, is certainly troublesome since they view agency as something that people possess at different levels as a result of their personal traits. In other words, they are tempting to suggest an extremely individualistic view of agency as a human capacity (Priestley et al., 2015). Hence, the researchers pursue an ecological view of teacher agency, in which agency is regarded as an emergent phenomenon from the interplay between the physical environment and individual capacity through which it is enacted. Furthermore, the limited number of empirical studies on teacher agency (e.g., Jääskelä et al., 2017; Soini et al., 2015) and the need for developing robust tools to assess and monitor the dynamics of teachers' agency throughout pre-service teacher education have made the researchers develop and validate the agency of Iranian EFL student teachers to fill the gap of empirical research in the Iranian EFL teacher education context. This research aims to elucidate the potential contribution of Farhangian University towards enhancing the value and sufficiency of students' academic experience, as well as their holistic personal development. The researchers hold a firm conviction that the fundamental objective of Farhangian University is to instill a sense of agency and power in student teachers to grow into caring and responsible individuals rather than those who consider themselves too powerless to do more than transferring language content to learners and tend to ignore their agentic role to contribute to the improvement of conditions and create positive changes.

## **Literature Review**

### **The Theoretical Framework of Teacher Agency**

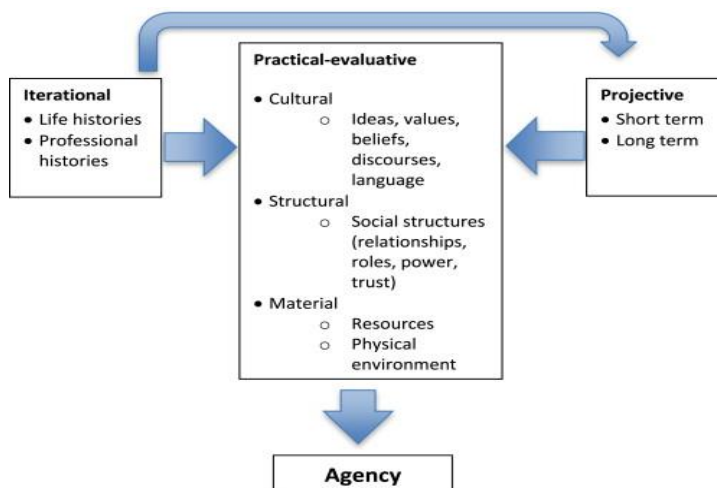
The ecological framework considers teacher agency fundamentally as a decision-making process that is influenced by three dimensions: previous personal

life histories (iterational dimension), future orientations (projective dimension), and the material, cultural, and structural context of a practical situation (practical-evaluative dimension) (Leijen et al., 2021). Overall, practical-evaluative factors affect professional decision-making processes that rely on acquired knowledge and are driven by projective goals (Priestley et al., 2015). The iterational and projective aspects of ecological agency are concerned with how teachers bring their experiences to their classroom interactions. The iterational dimension is concerned with personal life experience and previous perception and action patterns (Beijaard et al., 2004), while the projective dimension is concerned with the long- and short-term innovative generation of potential action trajectories (Leijen et al., 2021). The practical-evaluative aspect, which differs between the cultural, structural, and material realms, is eventually incorporated into the present. The cultural aspect is concerned with concepts, traditions, opinions, and discourses. The structural aspect is concerned with relationships, duties, tasks, and trust. The material aspect is concerned with the tools and physical environment in which teachers work (Priestley et al., 2015).

The ecological viewpoint of teacher agency indicates that agency is realized by dealing with particular contextual circumstances involving either constraints or affordances in decision-making rather than functioning as an intrinsic feature within individuals and being absent in others (Tao & Gao, 2017). In this view, agency is regarded as an emerging experience of ecological circumstances rather than seeing it as a property or capability located in individuals (Biesta et al., 2015). Therefore, agency is not an innate capacity that people should possess; instead, it is what individuals achieve (Biesta & Tedder, 2007).

**Figure 1**

*Three-Dimensional Framework of Teacher Agency (Based on Priestley et al., 2015)*



## **Professional Agency of Student Teachers**

Professional agency is described as a group of people discussing work-related issues and forming, choosing, and taking positions that affect their achievements and professional identities (Eteläpelto et al., 2013). The professional agency within the professional community includes school professionals such as assistants and teachers, specially trained teachers, psychologists, nurses, and social workers who make constructive and intentional attempts to promote community learning (Toom et al., 2017). Peers and teacher educators commonly provoke the professional community for student teachers, which reflects their competencies to smooth the process of their education and the education process of those around them through teacher training. As a result, both the individual student teacher characteristics and common interactions among teacher educators and classmates in groups affect the agency of student teachers in the academic community (Greeno, 2006).

Soini et al. (2015) demonstrated that teacher agency includes judgments of student teachers about their teaching ability, transformational and collective exercise, reflections in the classroom, and interested person modeling as having a learning orientation to encourage proactive learning among peers and classmates. Peer relationships in teaching and teacher education, in particular, show a strong link to a sense of professional agency.

At the beginning of the teacher education program, student teachers' agency can be quietly fragmented, and they may establish perceptions and ideas of themselves as collective professionals without ever being able to cultivate classroom social management or application and development of pedagogical strategies in the classroom (Soini et al., 2015). Student teachers should be motivated from the beginning of their teacher education program to construct their agency in the academic community by role modeling, examining, and enhancing it with classmates and their professional teacher educators (Edwards, 2007). The agency of student teachers seems to be facilitated by the numerous learning environments and the strong relationship among student teachers through teacher education (Van velzen et al., 2012). Student teachers' sense of agency can be facilitated or hindered throughout a variety of interactions and courses of pedagogical practice during teacher education (Toom et al., 2017).

## **International Empirical Studies**

One well-known study that is often cited in research on professional agency is that of Leijen et al. (2020). The researchers conducted a key research on teacher agency and ecological approaches, paying attention to how it is attained, its elements, and the way it might be gradually strengthened. The ecological approach highlighted professional capacity, structural, material, and cultural environment, and career goals as the vital factors in attaining agency. They determined three kinds of reflection to enhance situations for achieving teachers' sense of agency. These include technical reflection, which focuses on improving specific skills or strategies; practical reflection which considers the broader context in which teaching occurs; and critical reflection, which involves questioning assumptions and power dynamics within educational systems. Taken together, the strength of this paper is its emphasis

on the importance of considering multiple factors when examining teacher agency. By recognizing the complex interplay between individual characteristics, social and cultural contexts, and institutional factors, they provide a more nuanced understanding of how teacher agency is achieved and sustained. However, the weakness of this paper is its limited discussion of potential barriers to teacher agency. While the authors acknowledge that institutional structures can constrain teachers' decision-making abilities, they do not fully explore how power dynamics within schools or broader societal forces may limit teachers' agency. Furthermore, the importance of teacher agency for promoting effective teaching and learning was discussed by Molla and Nolan (2020). While they suggest that schools or policymakers should prioritize creating conditions that enable teachers to exercise agency in their work, they did not address any potential risks associated with teacher agency. For example, if teachers are given too much autonomy without adequate guidance or oversight, they may make decisions that are not aligned with best practices or educational goals. Van der Heijden et al. (2018) discussed the views and effects of primary teachers as the agents of change regarding their personal and contextual dimensions. They suggest that teachers have a positive self-perception as change agents, and they believe that they can make a difference in their students' lives. However, they also face various challenges, such as lack of support from parents and colleagues, limited resources, and bureaucratic constraints. Their study shed light on an important aspect of teacher identity and highlighted the challenges faced by teachers in fulfilling their role as change agents. It also provides insights into how teachers perceive themselves in this role and how they can be supported to overcome these challenges.

### **Agentic Teachers in the Iranian EFL Teacher Education Context**

Through qualitative research, Rostami and Yousefi (2020) discussed the agency construction of novice English teachers in Iran from a complexity dynamic / system perspective. The study found that novice teachers' agency construction is influenced by various factors, such as their personal beliefs, cultural background, and institutional policies. The strength of this article is its use of a complexity dynamic / system perspective to analyze novice teachers' agency construction. This approach provides a comprehensive understanding of the various factors that influence teacher agency and highlights the interconnectedness between these factors. However, the article does not provide practical recommendations for improving teacher education programs or supporting novice teachers' professional development. Additionally, the study only examines the agency construction of novice teachers and does not explore how experienced teachers' agency may differ. Riazi and Razavipour (2011) discussed the negative impact of centralized tests on the agency of English as a Foreign Language (EFL) teachers. The authors argued that these tests limit teacher agency by imposing strict guidelines and curriculum, leaving little room for creativity and personalization in teaching. This can lead to a lack of motivation and job satisfaction among teachers, which ultimately affects student learning outcomes. The article suggests that teacher agency can be enhanced by providing opportunities for professional development, encouraging collaboration among teachers, and promoting autonomy in decision-making. This can help

teachers feel more empowered and invested in their work, leading to better outcomes for both teachers and students. However, some critical viewpoints may argue that while centralized tests may limit teacher agency in some ways, they also provide a standardized measure of student achievement and ensure that all students are held to the same standards. Additionally, some may argue that too much emphasis on teacher agency could lead to inconsistency in teaching quality across different classrooms. In their case study, Sahragard and Rasti (2017) analyzed how two teachers from the Iranian Ministry of Education operated with agency and taught in the Iranian EFL academic context according to the requirements of the regulatory processes that govern school districts. During academic year courses, they analyzed qualitative data from semi-structured interviews and emails according to the Priestley et al. (2013) ecological framework. However, while the study addressed the resources and experiences of teacher agency of two in-service teachers, it failed to shift the focus of professional education from the acquisition of knowledge to engagement and voice. The study also did not provide comprehensive insights into the formation of student teachers' agency. Finally, while the authors emphasize the importance of promoting teacher agency, they do not provide concrete recommendations for how this can be achieved in practice. It would be beneficial for future research to explore effective strategies and interventions that can help teachers develop their agency and provide practical recommendations for teacher education programs and policies.

Altogether, the ecological understanding of teacher agency reframed the theoretical basis of this study, which aims to explore how student teachers' agency is interrelated with Farhangian University programs. With this end in view, the aim of this research was to develop and validate an instrument that measures student teachers' agency in relation to individual capacity, resources, and structural and contextual variables. To the researchers' best of knowledge, no empirical study has developed or validated such an inventory, at least in an Iranian context. Hence, the present research is helpful in filling the gap in contemporary studies and contributing to the literature on second language teacher education, agency, and Farhangian University in the Iranian EFL context. So, this research aimed to answer the following questions:

1. Does the newly-modified student teachers' agency survey have an acceptable model fit in an Iranian context?
  - 1.1 What are the dimensions characterizing the formation of teacher agency from ecological model perspectives?
  - 1.2. What is the role of iterational dimension in cultivating student teacher's agency?
  - 1.3. What is the role of practical-evaluative dimension in cultivating student teachers' agency?
  - 1.4. What is the role of projective dimension in cultivating student teachers' agency?

## Method

### Participants

Altogether, 221 student teachers participated in the survey research design study. During the phase of scrutinizing the submitted questionnaires, 11 incomplete surveys were neglected, as they were not fully filled out (for example, those in which an answer was systematically chosen). Of the remaining participants, 117 were female and 93 were male student teachers from four Farhangian universities. To investigate the mediating role of Farhangian University, which is part of a larger study, the target sample in this study consisted of 73 fourth-year and 137 first-year student teachers. The highest proportion of participants were aged 18-25 and were selected based on convenience sampling from Farhangian University's branches in Sari, Ghaemshahr, Tehran, and Mashhad. More detailed information on the distribution of participants is presented in Table 1.

**Table 1**

*Demographic Characteristics of Participants*

Group	Frequency	Percent
<b>Gender</b>		
Female	117	55.7
Male	93	44.3
<b>Year level</b>		
Freshman	137	65.2
Senior	73	34.8
<b>Farhangian University branches</b>		
Ghaemshahr	53	25.2
Sari	25	11.9
Tehran	97	46.2
Mashhad	35	16.7
<b>Total</b>	210	100

### Instrument

#### *Questionnaire*

Overall, construct definition or conceptualization plays a dominant role in research (MacKenzie, 2003). To define the construct underlying the components of student teachers' agency from an ecological point of view, this research draws upon related literature on teacher agency. An item pool was designed based on the concepts derived from the literature. Criteria for keeping items in the questionnaire were established in association with the opinions of an expert panel. The experts



evaluated the suitability of the statements on a three-point scale (1 = appropriate, 2 = marginally appropriate, 3 = very appropriate). The items were also examined for relevance and focus, redundancy, clarity, simplicity, readability, and conceptual consistency with the specific component in the model. Based on the experts' input, the researcher rewrote and rephrased statements with ratings under 3. In the piloting phase following the experts' review of the questionnaire, the initial 40-item version of the questionnaire was checked in terms of aspects of wording such as the clarity of instructions, item length, item comprehensibility, and soundness of examples within each of the three dimensions of the theoretical framework. Subsequent to the piloting phase, the final adaptation of the questionnaire was administered to a sample of 221 student teachers, comprised of 117 female and 93 male student teachers from four Farhangian universities. The ultimate questionnaire consisted of 22 statements with some revision and clarification to capture all three dimensions of agency from the ecological perspective. Thus, the content validity and the face validity of the questionnaire were investigated before estimating the reliability.

The student teachers' agency questionnaire utilized in the present research was adapted from four English versions of the agency scale: Malmberg and Hagger (2009), Jääskelä et al. (2017), Toom et al. (2017), and Leijen et al. (2021). The questionnaire was modified according to the ecological approach and piloted in Sari Farhangian University before data collection.

The conceptual framework of an ecological approach to student teachers' agency consists of three dimensions; namely, iterational, practical-evaluative, and projectivity, as proposed by Priestley et al. (2015). This framework was used to formulate items for the ecological approach to student teachers' agency questionnaire. For each dimension, the researchers identified primary features representing that dimension. Based on the researchers' theoretical conceptualization, the ecological model of teacher agency in Farhangian University was adapted to gauge the iterational elements, such as instructional (2 items) and supportive agency beliefs (2 items) (Malmberg & Hagger 2009), sense of teaching competence (1 item) (i.e., skills & knowledge) and collaborative knowledge building (1 item) (Toom et al., 2017).

The researchers assumed that the following factors represent the practical-evaluative dimension of agency: opportunities to make choices (2 items), opportunities to influence (2 items) (Jääskelä et al., 2017), social support (2 items), equality (2 items), trust (2 items), professional community (2 items) (Toom et al., 2017), and institutional context (2 items) (Leijen et al., 2021). The items related to the projective dimension supplemented with using Information Communication Technology in teaching as a short-term and long-term goal (2 items) (Leijen et al., 2021).

The final version of the questionnaire was divided into two sections. The first section consisted of demographic questions that aimed to determine general characteristics of student teachers such as age, gender, and year level. The second section included the 22 statements assessing 13 elements of student teachers' agency in Farhangian University.

The content validity of the questionnaire was assessed through discussions with three TEFL experts who held a Ph.D. As presented in Table 2, the coefficient alpha for the entire questionnaire and its components was .94, indicating a high level of internal consistency for the survey with the sample. The descriptive statistics for the dimensions were also reported in Table 2.

### **Data Collection Procedure**

The survey was conducted electronically via Google Forms with 221 participants. Instructors asked students to allocate a reasonable period of time during class to fill out the online questionnaire using their cell phones. Ethical approval was obtained from different branches of Farhangian University, and all participants answered the questionnaire anonymously and voluntarily. Data from 210 student teachers were collected electronically and archived for later analysis. In the process of developing and validating the questionnaire, various careful steps were taken. First, the fundamental assumptions of ecological student teachers' agency were designated. Then, a bank of items related to the content domain of agency was arranged, coded, and reduced. Finally, CFA was conducted to establish the factor structure of the adapted questionnaire. For the present research, a meticulous examination of the related literature focusing on teachers' agency in academic environments was conducted.

### **Data Analysis**

The construct validity of the newly designed questionnaire to assess student teachers' professional agency was estimated through both EFA and CFA. The Analysis of Moment Structures (AMOS 22.0) was used to fulfill the aim of this research. Structural Equation Modeling (SEM) was employed to test the overall fit of the model, and in addition to the scaled chi-square statistics, tests of absolute fit including Goodness of Fit Index (GFI) and the Root Mean Square Error of Approximation (RMSEA) were also used, as well as tests of incremental fit including Comparative Fit Index (CFI). There is no universally accepted criterion for assessing model fit yet (Heubeck & Neil, 2000). Generally, an adequate to good fit is suggested by a chi-squared statistic of less than 3, with GFI exceeding .90, and an RMSEA of less than .06. Additionally, CFI values with cut-off values  $> .90$  were also calculated to estimate model fit.

### **Results**

The outcome of the first research question serves as the foundation for the subsequent four questions. The statistical test conducted for the first research question provides a quantitative analysis of the data, which is then used to inform the descriptive elaboration of the other questions. Therefore, it can be concluded that the results of the first research question provide a critical starting point for understanding and exploring subsequent research questions in this study.

To check the reliability of the survey, the coefficient alpha index was estimated for the overall scale and each dimension. As displayed in Table 2, Cronbach's alpha index for the overall scale is 0.94, showing satisfactory internal consistency among the elements of the scale. The Cronbach's alpha estimates for each factor ranged

from 0.72 to 0.92 (projective = 0.72, practical-evaluative = 0.82, iterative = 0.92), which demonstrated that the survey and its three dimensions attained the desired reliability index. The results propose initial support for the practicality of measuring agency with the present items; therefore, no alteration was needed for the statements.

**Table 2**

*Cronbach's Alpha for the Ecological Agency Survey*

Items	No	Cronbach's alpha
<b>Iterational</b>	6	.921
<b>Practical-evaluative</b>	14	.835
<b>Projective</b>	2	.725
<b>The whole questionnaire</b>	22	.920

**Factor Analysis**

The scale for evaluating EFL student teachers' agency in the current study was modified from four valid and reliable instruments. The appropriateness of data for factor analysis was measured through two statistical tests. The Kaiser-Meyer-Olkin value was 0.934, higher than the cut-off point of .6 and Bartlett's Test of Sphericity ( $p < 0.05$ ) meets the acceptable fit thresholds which supports the factorability of the statistics in the model. Table 3 presents the results of these two tests.

**Table 3**

*KMO and Bartlett's Test*

Student teacher agency questionnaire	Bartlett's test sig.	KMO
<b>1-22</b>	0.001	0.934

To be assured about the normality of the variables involved in the next step (factor analysis), the Kolmogorov-Smirnov Test was employed. The results are shown in Table 4.

**Table 4**

*One Sample Kolmogorov-Smirnov Test*

Variables	N	Absolute	Positive	Negative	Test statistic	K-S significance
<b>Iterational</b>	210	.178	.178	-.090	.178	.001
<b>Practical-evaluative</b>	210	.083	.083	-.082	.083	.001
<b>Projective</b>	210	.110	.110	-.083	.110	.001

As is indicated in Table 4, the obtained K-S significance for all dimensions is less than 0.05. Thus, it is proved that the data distribution is normal.

Table 5 demonstrates the results of factor extraction which gives detailed information about the amount of statements of the survey shared before / after factorability. As can be seen, all 22 statements of the questionnaire are higher than the cut-off value (i.e. 0.3), so no modification was necessary for the items.

**Table 5**

*The Amount of Items of the Questionnaire Shared Before / After Factorability*

Items of the questionnaire	Initial	Extraction
It1	1.000	.763
It2	1.000	.762
It5	1.000	.727
It6	1.000	.673
It7	1.000	.616
It8	1.000	.609
Cu12	1.000	.656
Cu15	1.000	.329
Cu16	1.000	.312
Cu18	1.000	.477
St19	1.000	.593
St21	1.000	.439
St22	1.000	.473
St23	1.000	.493
St27	1.000	.582
St28	1.000	.643
Re29	1.000	.600
Re30	1.000	.468
Re33	1.000	.486
Re34	1.000	.603
Pro37	1.000	.603
Pro38	1.000	.479

EFA was conducted with the method of Principal Component Analysis (PCA) and the Varimax rotation to check the appropriate number of dimensions to maintain. The result of Kaiser's criterion is presented in Table 6, which yielded three extracted factors and explains 56.308% of the total variance. Factors with eigenvalues exceeding 1 are retained in the analysis.

**Table 6**

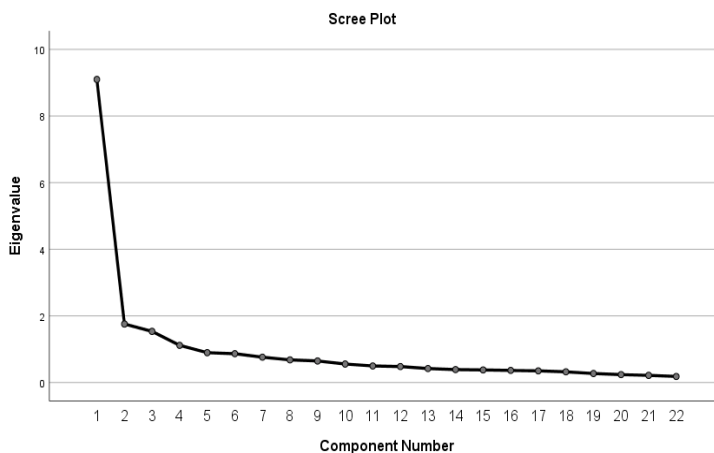
*Total Variance Explained*

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
<b>1</b>	9.098	41.354	41.354	9.098	41.354	41.354	6.352	28.873	28.873
<b>2</b>	1.756	7.981	49.335	1.756	7.981	49.335	4.273	19.422	48.295
<b>3</b>	1.534	6.973	56.308	1.534	6.973	56.308	1.763	8.013	56.308
<b>4</b>	1.116	5.071	61.380						
<b>5</b>	.895	4.070	65.449						
<b>6</b>	.865	3.932	69.381						
<b>7</b>	.760	3.454	72.835						
<b>8</b>	.679	3.086	75.921						
<b>9</b>	.646	2.937	78.858						
<b>10</b>	.555	2.523	81.381						
<b>11</b>	.498	2.261	83.642						
<b>12</b>	.480	2.180	85.822						
<b>13</b>	.419	1.906	87.728						
<b>14</b>	.388	1.765	89.493						
<b>15</b>	.378	1.718	91.211						
<b>16</b>	.362	1.646	92.857						
<b>17</b>	.349	1.588	94.444						
<b>18</b>	.320	1.456	95.900						
<b>19</b>	.270	1.225	97.125						
<b>20</b>	.237	1.076	98.201						
<b>21</b>	.214	.974	99.175						
<b>22</b>	.181	.825	100.000						

The result of Catell's scree test run by SPSS was indicated in Figure 2 confirmed the number of extracted factors in the previous step. Factors above the break have remained which explain the most variance in the scale.

**Figure 2**

*The Scree Test*



To check which statements have high loadings on which variables, the rotated component matrix was employed. The benchmark is 0.3, therefore just factor loadings higher than 0.3 are displayed in Table 7. The rotated matrix presented that the factor loadings were from 0.48 to 0.82 exceeding the benchmark Table 7.

**Table 7**

*Rotated Component Matrix*

Statements of questionnaire	Rotated components		
	1	2	3
1	.829		
2	.828		
3	.814		
4	.774		
5	.763		
6	.744		
7	.699		
8	.660		
9	.640		
10		.796	
11		.714	

Statements of questionnaire	Rotated components		
	1	2	3
12		.701	
13		.615	
14		.600	
15		.590	
16		.529	
17		.524	
18		.486	
19			.682
20			.671
21			.642
22			.536

As presented in Table 7, items 1, 2, 3, 4, 5, 6, 7, 8, and 9 loaded on the first factor which was labeled as the iterational dimension, items 10, 11, 12, 13, 14, 15, 16, 17, and 18 loaded on the second factor to form practical-evaluative dimension, and items 19, 20, 21, and 22 loaded on the third factor to form projective dimension. The results of factor loading demonstrated some cross-loadings to the classifying of items. Items 19, 20, 21, and 22 which were from the second factor (i.e., practical-evaluative), were loaded on the third factor (i.e., projective). Items 7 and 9 which were from the third factor (i.e., projective), were loaded on the first factor (i.e., iterational). Item 8 which was from the second factor (i.e., practical-evaluative), was loaded on the first factor (i.e., iterational). As for the cross-loaded items, it was decided to be neglected after consulting with domain experts.

The factor of iterational dimension, explaining 28.873% of the total variance, embodies 9 items associate with three different dimensions in the theoretical framework. Variances of items 7, 8, and 9 were incorporated under the practical-evaluative and projective dimensions in the conceptual framework, considering that the remaining items of 1, 2, 3, 4, 5, and 6 were classified under the iterational dimension. The second factor, explaining 19.422% of the total variance, embodies 9 items associated with practical-evaluative dimension in the theoretical framework. The third factor, explaining 8.013% of the total variance, embodies 4 items associated with different dimensions in the theoretical framework. Variances of items 19, 20, 21, and 22 were incorporated under the practical-evaluative dimension in the conceptual framework. Therefore, these items did not load on their respective factor.

### **Structural Equation Modeling**

CFA was implemented on the data to substantiate the validity of the scale. The purpose was to check how much of the theoretical framework of factor analysis for the student teachers' agency was in line with the extent students were answering the statements. To validate this model, the dataset was subjected to the model fit

analysis. As shown in Table 8, the goodness of fit indices were acceptable ( $\chi^2 = .234$ ,  $df = 180$ ,  $\chi^2 / df = 1.07$ ,  $RMSEA = .019$ ,  $CFI = 0.99$ ,  $GFI = 0.99$ , and  $NFI = 0.92$ ). The modified model is presented in Figure 3.

**Table 8**

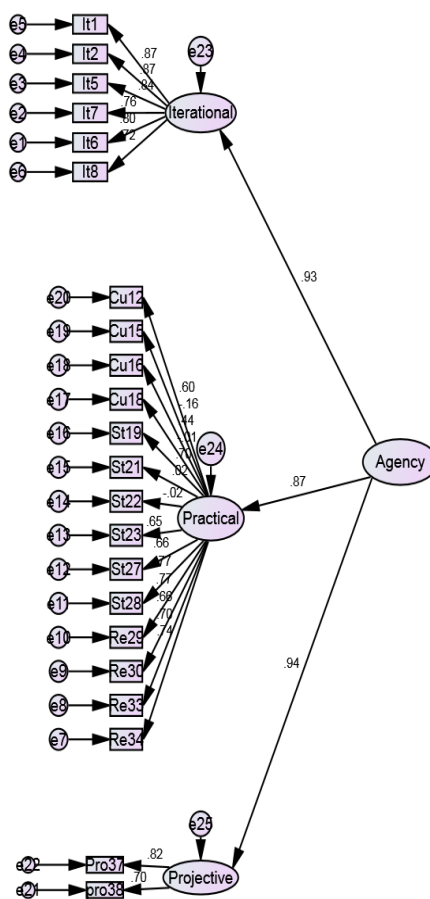
*Model Fit Indices*

Fit indices	RMSEA	$\chi^2$	$\chi^2 / df$	GFI	CFI	NFI	IFI	RFI
The adequate value	$0.08 \geq$	$> 0.05$	$3.00 >$	$0.9 \leq$	$0.9 \leq$	$0.9 \leq$	$0.9 \leq$	$0.9 \leq$
The obtained value	.019	.234	1.074	.992	.994	.923	.994	.902

As is apparent from the goodness of fit indices table, it can be determined that the suggested model demonstrated an acceptable fit to the data. Ultimately, the validity of the scale was confirmed by CFA.

**Figure 3**

*The Schematic Representation of the Model of Student Teachers' Agency*





## Discussion

To accomplish the purpose of the first research question, two complicated procedures were conducted. During the initial stage, the congruency of the questionnaire with the ecological teacher agency theory in the literature was thoroughly checked. This phase's purpose was achieved by repeatedly checking the questionnaire elements with the studies in the relevant literature. Then, EFA and CFA were used in two separate administrations to statistically validate the questionnaire. The hypothetical model of Priestley et al. (2015) was confirmed in the context of this study. The SEM validation process results showed that the thirteen-factor scale provided sufficient conceptual support for gaining the means of agency among student teachers ( $\chi^2 = .234 > 0.05$ , GFI =  $0.99 > .9$ , CFI =  $0.99 > .9$ , and RMSEA =  $.019 < .08$ ). Although some items had low factor loadings, the model fit was acceptable, and the researchers did not omit any factors.

The present research aimed to design a questionnaire to closely monitor the formation of agency in student teachers. Within the ecological model adopted in this research, Leijen et al. (2021) state that no validated scale could be utilized to assess student teachers' agency in a higher education context. For instance, among quantitative studies, Jääskelä et al. (2017) developed a questionnaire based on the sociocultural view of agency, while the one developed by Soini et al. (2015) focused on psychological aspects. Many studies conducted in Iran have mainly focused on qualitative tools. For instance, Rostami and Yousefi (2020) used complexity dynamic / system theory and focused on semi-structured and focus group interviews to manage teacher agency.

The statistical tests conducted for the first research question corroborated that the answer to the second research question is consistent with the hypothetical model, confirming the three dimensions of the ecological approach to teacher agency. The results of the present study substantiated the adopted theoretical framework, showing that the three dimensions of agency are interwoven and highly necessary for the formation of agency. In other words, the three aspects of the ecological model of agency are in a mutually constitutive relationship and cannot be reduced to one individual behavioral feature. The iterational dimension shapes the projective and practical-evaluative dimensions, and the projective dimension also shapes the practical-evaluative dimension. To understand agency, it is impossible to consider just one dimension and not the others. These findings are well-aligned with the previously proposed three dimensions of teacher agency by Leijen et al. (2021) in all three investigated domains.

The third research question aimed to explore the temporal-relational nature of agency, where past experiences may shape and influence present habits and efforts. The researchers hypothesized that student teachers' previous personal and professional experiences, such as their beliefs, values, and competency, may impact their agency and professional skills, thereby reflecting the existence of the iterational dimension of teacher agency. The findings of this study are in line with Lortie's (1975) "apprenticeship of observation," which suggests that student teachers' observations and evaluations of professional activities during their childhood may

shape their approach to teaching. However, gaining professional agency is not always easy, even with teaching and teacher training programs (Munby et al., 2001). The study by Sahragard and Rasti (2017) found that some student teachers may face challenges during their university programs, such as struggling with certain courses, not receiving encouragement or support from teacher educators, or finding it difficult to adjust to the new environment. These challenges forced them to reflect on their experiences and consider how they could improve their situation for change. Therefore, the iterational dimension of teacher agency plays a crucial role in shaping and developing student teachers' agency over time. Overall, the findings of this study suggest that previous personal and professional experiences may have a significant impact on student teachers' agency and professional skills, highlighting the importance of considering the iterational dimension of teacher agency.

Fourth research question confirmed that however agency is actively involved with the previous personal / professional histories and the future aspirations, it can just be performed in the present, as expressed in the practical-evaluative dimension. The findings supported the hypothesis that while student teachers have more opportunity to influence and to make choice, while they treat respectfully and equally, while they receive support from peers and teacher educators, they perform their agency in school / university. Additionally, Leijen et al. (2020) suggest that there are in with a good chance that student teachers will begin to understand their crucial role in decision-making regarding education as part of a broader political and societal context.

Regarding the practical-evaluative dimension, the results of this study corroborated the findings of Toom et al.'s (2017) work, in which it was shown that support from either teacher educators or colleagues is a central feature for the agency construction of student teachers. Student teachers presupposed that collegial support would help them when confronting conflicts. Moreover, teacher educators also share their experiences and expert perspectives by organizing frequent professional gatherings to collaborate in constructing student teachers' professional agency. On the contrary, the findings of this research are in contrast with those of Soini et al. (2015), who found a non-significant role for teacher educators in forming their student teachers' agency, while quality of peer relations is a key regulator for student teachers' sense of professional agency. This rather contradictory result may be due to student teachers experiencing teacher educators and faculty as being more distant than their peers.

Consistent with Jääskelä et al. (2017), to shed light on the practical-evaluative dimension of the ecological model of agency, this study confirmed that gaining more freedom to exert influence and more opportunities to make choices helps student teachers in their course to construct their professional agency. It can be speculated that senior students are provided with more autonomous procedures, such as during taking part in practical projects like apprenticeships or seminar courses, whereas at the beginning levels of education at the university, much more support is needed for students to utilize active agency, particularly if they did not have opportunities to be autonomous during their studies at high school. These issues, which accentuate student teachers' agentic acts, significantly contribute to their

professional skills. It shows that agency begins to boost with experience during years of studying at Farhangian University. It can be speculated that seminar courses, which commonly involve students sharing their thoughts and feelings with each other and receiving feedback, are highlighted in Farhangian University's pedagogical design principles during teacher studies. Such practices advance mutual collegial discussions that may assist student teachers' sense of belonging to the professional community, which further presents contexts for student teachers' education in the professional community (Hökkä & Eteläpelto, 2014).

The fifth research question aimed to find the role of the projective dimension of the ecological model of agency. Student teachers were concerned about using technology to become prospective professional members of their educational community. This feature is associated with the character of the projective dimension of the ecological model of agency, in which student teachers coped with the changes in different agentic ways to refine their visions for the future. This finding was in keeping with those of Leijen et al. (2021), who found that utilizing Information Communication Technology (ICT) in teaching helps student teachers improve their agency construction. Moreover, Priestley et al. (2013) believed that teachers are individuals who play a significant role in promoting their students' lives in various ways. This importance is particularly evident during the widespread outbreak of COVID-19, which demonstrates that it is time for agentic collective actions. Therefore, teacher training universities need to address this changing and uncommon situation that teachers and students are confronting in these unprecedented times to inspire conditions that give teacher educators and student teachers agency and flexibility to act collaboratively.

### **Conclusion**

The findings of the first research question were foundational in setting the stepping-stones for the subsequent questions of this research. From the exploratory and statistical findings of this study, it can be concluded that the components found in this study as the underlying components of student teachers' agency include factors related to the ecological aspects of teacher agency. Each component has unique features that facilitate the active learning efforts of student teachers. The findings suggest that the construction and development of teacher agency cannot be confined to a single behavioral trait. This also means that student teachers' agency is intrinsically relational. Hence, to promote student teachers' agency in Farhangian University, it is necessary to facilitate all of the elements simultaneously. Although teachers are the main characters in the educational context, they can only gain professional agency through cultural, structural, and material resources that are designed for them. This supports the significance of the ecology of academic settings such as schools / universities (Leijen et al., 2020).

More specifically, the researchers found that gaining valuable academic experiences is associated with two dimensions of ecological teacher agency that potentially target overall competencies (iterational dimension) and academic aspirations (projective dimension). Furthermore, the findings of the practical-evaluative dimension revealed that teacher agency was not constant, as social aspects and physical environmental contexts played leading roles in constructing it.

It showed that agency begins to improve with experience during years of studying in Farhangian University. It can be speculated that seminar courses, which commonly involve students sharing their thoughts and feelings with each other and receiving feedback, are highlighted in Farhangian University's pedagogical design principles during teacher studies. Such practices advance mutual collegial discussions that may assist student teachers' sense of belonging to the professional community, which further presents contexts for their education in the professional community (Hökkä & Eteläpelto, 2014).

The findings may help us better understand that if teacher agency is strongly influenced by previous experiences, then it can be concluded that present situations will have an impact on the subsequent agency of student teachers. Such consequences have further implications for policymakers, particularly when the aim is to promote teachers' capacity, such as their capability to implement a new national curriculum. Academic policy related to teacher development needs to focus on advancing the ability of teachers as individual actors, while the ecological view tends to focus on the structural and cultural realms that shape teachers and their environment. Hence, policymakers in the Ministry of Education in Iran should be aware of the significance of teacher agency and recruit teachers who are professionally competent and tend to collaborate more as they work together to exercise their collective agency and improve teaching and learning in their schools.

Another implication of the study is that the ecological approach would be considered crucial for constructing professional associations that encourage student teachers' agency. The professional associations for student teachers assume to be their peers and teacher educators in which they can learn how to take advantage of their skills to foster reciprocal co-regulative learning (Edwards & D'Arcy, 2004). Moreover, to boost student teachers' agency, teacher educators should clearly and collectively pinpoint the complexity of cultural and structural elements that hinder or facilitate student teachers' professional learning. They should examine their own curricula, their own willingness to act as agents of change, and their roles and responsibilities in supporting pre-service and in-service teachers' understandings of agency (Flessner et al., 2012). As a result, it is also crucial for EFL teacher education curriculum developers and syllabus designers to consider these elements in planning and administering EFL teacher education curricula and syllabi.

Finally, the researchers have identified potential limitations of the newly designed scale. Despite the generally constructed statements, the researchers wondered whether the results would be the same with more specific questionnaire items. For instance, in the present study, we had a general item in the questionnaire about the competency of student teachers, but we did not specify various fields of competency. Thus, forthcoming studies should focus on instruments with both general and specific questionnaire items. In the future, it would be better to conduct the questionnaire as part of mixed-methods research to examine the individual conditions in which student teachers tend to act as professional agents.

### **Acknowledgments**

The present authors would like to extend their sincere gratitude to *JALDA* editors and reviewers.

## References

- Anderson, L. (2010). Embedded, emboldened, and (net) working for change: Support-seeking and teacher agency in urban, high-needs schools. *Harvard Educational Review*, 80(4), 541-573.  
<https://doi.org/10.17763/haer.80.4.f2v8251444581105>
- Archer, M. S. (1995). *Realist social theory: The morphogenetic approach*. Cambridge university press.
- Beijaard, D., Meijer, P. C., & Verloop, N. (2004). Reconsidering research on teachers' professional identity. *Teaching and Teacher Education*, 20(2), 107-128. <https://doi.org/10.1016/j.tate.2003.07.001>
- Biesta, G., Priestley, M., & Robinson, S. (2015). The role of beliefs in teacher agency. *Teaching and Teacher Education*, 21(6), 624-640. <https://doi.org/10.1080/13540602.2015.1044325>
- Biesta, G., & Tedder, M. (2007). Agency and learning in the lifecourse: Towards an ecological perspective. *Studies in the Education of Adults*, 39(2), 132-149.  
<https://doi.org/10.1080/02660830.2007.11661545>
- Billett, S. (2008). Learning throughout working life: A relational interdependence between personal and social agency. *British Journal of Educational Studies*, 56(1), 39-58. <https://doi.org/10.1111/j.1467-8527.2007.00394.x>
- Bourdieu, P. (1977). *Outline of a theory of practice*. Cambridge University Press.
- Brevik, L. M., Gudmundsdottir, G. B., Lund, A., & Strømme, A. T. (2019). Transformative agency in teacher education: Fostering professional digital competence. *Teaching and Teacher Education*, 86, 1-15. <https://doi.org/10.1016/j.tate.2019.07.005>
- Bridwell-Mitchell. (2015). Theorizing teacher agency and reform: How institutionalized instructional practices change and persist. *Sociology of Education*, 88(2), 140-159. <https://doi.org/10.1177/0038040715575559>
- Edwards, A. (2007). Relational agency in professional practice: A CHAT analysis. *Actio: An International Journal of Human Activity Theory*, 1(3), 1-17.
- Edwards, A., & D'Arcy, C. (2004). Relational agency and disposition in sociocultural accounts of learning to teach. *Educational Review*, 56(2), 147-155. <https://doi.org/10.1080/0031910410001693236>
- Eteläpelto, A., Vähäsantanen, K., Hökkä, P., & Paloniemi, S. (2013). What is agency? Conceptualizing professional agency at work. *Educational Research Review*, 10, 45-65. <https://doi.org/10.1016/j.edurev.2013.05.001>
- Flessner, R., Miller, G. R., Patrizio, K. M., & Horwitz, J. R. (2012). *Agency through teacher education: Reflection, community, and learning*. Rowman & Littlefield education.

- Giddens, A. (1984). *The Constitution of Society: Outline of the theory of structuration*. Cambridge university press.
- Greeno, J. G. (2006). Authoritative, accountable positioning and connected, general knowing: Progressive themes in understanding transfer. *Journal of the Learning Sciences*, 15(4), 537-547. [https://doi.org/10.1207/s15327809jls1504\\_4](https://doi.org/10.1207/s15327809jls1504_4)
- Heikonen, L., Pietarinen, J., Toom, A., Soini, T., & Pyhältö, K. (2020). The development of student teachers' sense of professional agency in the classroom during teacher education. *Learning: Research and Practice*, 6(2), 114-136. <https://doi.org/https://doi.org/10.1080/23735082.2020.1725603>
- Heubeck, B. G., & Neill, J. T. (2000). Confirmatory factor analysis and reliability of the Mental Health Inventory for Australian adolescents. *Psychological Reports*, 87(2), 431-440. <https://doi.org/10.2466/pr0.2000.87.2.431>
- Hökkä, P., & Eteläpelto, A. (2014). Seeking new perspectives on the development of teacher education: A study of the Finnish context. *Journal of Teacher Education*, 65(1), 39-52. <https://doi.org/10.1177/0022487113504220>
- Imants, J., & Van der Wal, M. M. (2020). A model of teacher agency in professional development and school reform. *Journal of Curriculum Studies*, 52(1), 1-14. <https://doi.org/10.1080/00220272.2019.1604809>
- Izadinia, M. (2012). Teacher educators as role models: A qualitative examination of student teacher's and teacher educator's views towards their roles. *Qualitative Report*, 17(47), 1-15.
- Jääskelä, P., Poikkeus, A. M., Vasalampi, K., Valleala, U. M., & Rasku-Puttonen, H. (2017). Assessing agency of university students: Validation of the AUS Scale. *Studies in Higher Education*, 42(11), 2061-2079. <http://dx.doi.org/10.1080/15391523.2017.1343691>
- Leijen, A., Pedaste, M., & Baucal, A. (2021). Assessing student teachers' agency and using it for predicting commitment to teaching. *European Journal of Teacher Education*, 1-17. <https://doi:10.1080/02619768.2021.1889507>.
- Leijen, A., Pedaste, M., & Lepp, L. (2020). Teacher agency following the ecological model: How it is achieved and how it could be strengthened by different types of reflection. *British Journal of Educational Studies* 68 (3): 295-310. <https://doi:10.1080/00071005.2019.1672855>
- Lortie, D. (1975). *Schoolteacher: A sociological study*. The University of Chicago Press.
- MacKenzie, S. B. (2003). The dangers of poor construct conceptualization. *Academy of Marketing Science*, 31(3), 323-326. <https://doi.org/10.1177/0092070303254130>
- Malmberg, L. E., & Hagger, H. (2009). Changes in student teachers' agency beliefs during a teacher education year, and relationships with observed classroom quality, and day-to-day experiences. *British Journal of Educational Psychology*, 79(4), 677-694. <https://doi.org/10.1348/000709909X454814>

- Mazandarani, O., & Troudi, S. (2017). Teacher evaluation: What counts as an effective teacher? In S., Hidri, & C., Coombe (Eds.), *Evaluation in foreign language education in the Middle East and North Africa* (pp. 3-28). Springer. [https://doi.org/10.1007/978-3-319-43234-2\\_1](https://doi.org/10.1007/978-3-319-43234-2_1)
- Mazandarani, O., & Troudi, S. (2022). Measures and features of teacher effectiveness evaluation: Perspectives from Iranian EFL lecturers. *Educational Research for Policy and Practice*, 21(1), 19-42. <https://doi.org/10.1007/s10671-021-09290-0>
- Molla, T., & Nolan, A. (2020). Teacher agency and professional practice. *Teachers and Teaching*, 26(1), 67-87. <https://doi.org/10.1080/13540602.2020.1740196>
- Munby, H., Russell, T., & Martin, A. K. (2001). Teachers' knowledge and how it develops. In V. Richardson (Ed.), *Handbook of research on teaching* (pp. 877-904). Routledge.
- Priestley, M., Biesta, G. J., & Robinson, S. (2013). Teachers as agents of change: Teacher agency and emerging models of curriculum. In M. Priestley, & G. J. Biesta (Eds.), *Reinventing the curriculum: New trends in curriculum policy and practice* (pp. 187-206). Bloomsbury academic.
- Priestley, M., Biesta, G., & Robinson, S. (2015). *Teacher agency: An ecological approach*. Bloomsbury academic. <https://doi:10.5040/9781474219426>
- Pyhalto, K., Soini, T. & Pietarinen, J. (2012). Comprehensive school teachers' professional agency in large-scale educational change. *Journal of Educational Change*, 13(1), 95-116. <https://doi.org/10.1007/s10833-013-9215-8>.
- Riazi, A. M., & Razavipour, K. (2011). Agency of EFL teachers under the negative backwash effect of centralized tests. *International Journal of Language Studies*, 5(2), 263-282.
- Rostami, F., & Yousefi, M. H. (2020). Iranian novice English teachers' agency construction: The complexity dynamic/system perspective. *Asian-Pacific Journal of Second and Foreign Language Education*, 5(4). <https://doi.org/10.1186/s40862-020-00082-2>
- Sahragard, R., & Rasti, A. R. (2017). Making sense of EFL teacher agency: Insights from an Iran case study. *Journal of English Language Teaching and Learning University of Tabriz*, 19, 145-168.
- Sen, A. (1999). *Development as freedom*. Oxford university press.
- Soini, T., Pietarinen, J., Toom, A., & Pyhalto, K. (2015). What contributes to first-year student teachers' sense of professional agency in the classroom? *Teacher and Teaching*, 21(6), 641-659. <https://doi.org/10.1080/13540602.2015.1044326>
- Tao, J., & Gao, X. (2017). Teacher agency and identity in curricular reform. *Teaching and Teacher Education*, 63, 346-355. <https://doi.org/10.1016/j.tate.2017.01.010>
- Toom, A., Pietarinen, J., Soini, T., & Pyhalto, K. (2017). How does learning environment in teacher education teacher education cultivates first year student



teachers' sense of professional agency in the professional community? *Teaching and Teacher Education*, 63, 123-126. <https://doi.org/10.1016/j.tate.2016.12.013>

Turnbull, M. (2005). Student teacher professional agency in the practicum. *Asia-Pacific Journal of Teacher Education*, 33(2), 195-208.

<https://doi.org/10.1080/13598660500122116>

Van der Heijden, H. R. M. A., Beijaard, D., Geldens, J. J. M., & Popeijus, H. L. (2018). Understanding teachers as change agents: An investigation of primary school teachers' self-perception. *Journal of Educational Change*, 19(3), 347-373. <https://doi.org/10.1007/s10833-018-9320-9>

Van velzen, C., Volman, M., Brekelmans, M., & White, S. (2012). Guided work-based learning: Sharing practical teaching knowledge with student teachers. *Teaching and Teacher Education*, 28(2), 229-239.

<https://doi.org/10.1016/j.tate.2011.09.011>

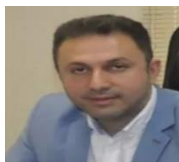
### Authors' Biographies



**Saemeh Arabahmadi** is pursuing her Ph.D. in TEFL at Islamic Azad University, Aliabad Katoul Branch. Recently, she joined the Ministry of Education as an English teacher. She has a general interest in Science Education, Teacher Empowerment, Critical Pedagogy, and Educational Technology.



**Omid Mazandarani** is an Assistant Professor of TESOL at Islamic Azad University. He completed his PhD at the University of Exeter, England. His research interests include Language Teacher Education, Research Methods, and Critical Issues in Language Education.



**Seyyed Hassan Seyyedrezaei** is Assistant Professor of TEFL in the Department of English Language Teaching, Islamic Azad University, Aliabad Katoul Branch. He is the Chancellor of Islamic Azad University, Aliabad Katoul Branch. He actively contributes to research projects related to Testing and Assessment of English literature in domestic and international journals.



**Zari Sadat Seyyedrezaei** is Assistant Professor of TEFL in the Department of English Language Teaching, Islamic Azad University, Aliabad Katoul Branch. Recently, she has also been the Managing Editor of *Journal of Applied Linguistics Studies*. Her research interests include ELT, CALL, and TBLT.