

Original Article

Understanding Iranian EFL Pre-Service Teachers' Professional Agency: An Ecological Approach

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Abstract

This study aimed to investigate the sense of professional agency of English as a Foreign Language (EFL) pre-service teachers at Farhangian University, Iran. The study aimed to examine changes in teacher agency across Farhangian University campuses using a newly-developed survey that was part of a larger study. The survey assessed the professional agency of 210 pre-service teachers through convenience sampling in three dimensions, namely iterative, practical-evaluative, and projective dimensions. Based on the theoretical framework of ecological teacher agency, the pre-service teachers' agency questionnaire comprised instructional beliefs, supportive beliefs, competency, collaborative learning, the opportunity to influence, the opportunity to make choices, support, equality, trust, institutional context, community, short-term and long-term goals. The collected data were subjected to statistical analyses, including Pearson correlation analysis and multiple regression analysis. The study observed a significant correlation between all major elements of pre-service teachers' professional agency. Notably, senior students perceived as having higher agency than freshman students. However, no significant gender effects were observed in achieving agency. In conclusion, this study suggests that the development of professional agency among student teachers is crucial for their overall performance as teachers. The study provides valuable insight into how teacher education programs can enhance student teachers' professional agency and offers recommendations for future research.

Keywords: EFL, Pre-Service Teacher Agency, Student Teacher, Teacher Agency, Teacher Education

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1. Introduction

In recent years, there has been growing concern regarding the role of agency in teacher professional development and school change (Imants & Van der Wal, 2020). Agency refers to the ability of individuals to exert control over the quality and nature of their lives (Bandura, 2001) and highlights the capacity of individuals to effect change in their surroundings. However, some theorists believe that the idea of agency cannot be simplified to just an individual's capacity and intention to take action or oppose something. They argue that it involves a much more intricate understanding. (King & Nomikou, 2018). For example, Emirbayer and Mishe (1998) have a different perspective on agency, where they consider it as a process that is based on an individual's past experiences and circumstances but is directed towards achieving future objectives. Similarly, Biesta and Tedder (2007) consider agency as a component of broader structural factors such as material and social contexts, thereby emphasizing the interaction between contextual conditions, available resources, and an individual's actions.

The concept of teacher agency, which emphasizes teachers' role as agents of change, has gained increasing attention in education policy (Liyanage et al., 2015). Nevertheless, the extent to which change transpires is mainly reliant on whether teachers attain agency in the particular and practical settings in which they operate (Emirbayer & Mische, 1998). From an ecological perspective of teacher agency, the interaction between teachers' environments and personal capacities becomes increasingly important (Priestley et al., 2013). Thus, teacher agency may not universally apply to every setting and purpose (Teng, 2019). In addition, the success of teachers with specific groups or individual students may not necessarily apply to other groups or individuals, as factors such as multiple intelligences, gender, and age can vary from one student to another (Mazandarani & Troudi, 2017, 2022). It is crucial to regard the unique context and needs of each student when assessing teacher agency and its impact on student learning outcomes.

The investigation of language teachers' analytical and philosophical work around agency is a rather new and emerging area of research (Kayi-Aydar, 2019). However, limited knowledge exists regarding the features of student teachers' agency at different levels of their educational careers, the effects of cooperative educational policy environments on shaping and

reshaping teacher agency, and the potential impact of teacher education centers on student teachers' agency. While teacher agency has been explored from various dimensions in teacher education, a hurdle exists in terms of the finite number of surveys that are currently available for studying teacher agency (e.g., Jääskelä et al., 2017; Soini et al., 2015). Filling this gap was the impetus behind this study, aiming to develop a profound understanding of student teachers' complex processes of learning by investigating the close connection between the elements that constitute their professional agency throughout their years of study at Farhangian University and their perceived sense of agency in the classroom.

2. Literature Review

2.1. Theoretical Framework of Teacher Agency: Ecological Approach

The concept of agency in social sciences has a long and complex history, as noted by Loutzenheiser and Heer (2017) and Emirbayer and Mische (1998). Since the Enlightenment, it has also been a key topic of discussion in education (Biesta & Tedder, 2007).

According to Bandura's social cognitive theory, individuals are both shaped by their environment and capable of shaping it through their actions (Bandura, 2000). From this perspective, teacher agency includes a capacity of an individual to set goals, make decisions, and take actions that align with their values and beliefs. It recommends that teacher agency is influenced by a variety of elements, including self-efficacy, motivation, and mindset (Bandura, 2000). For example, a teacher who has a strong belief in their ability to teach effectively (i.e., high self-efficacy) is more likely to take risks and try new teaching strategies, thus demonstrating a higher degree of agency. Individuals' choices are mediated through self-influence and proactive commitment, and they exercise forethought to set goals and anticipate the potential consequences of their actions. Finally, through self-monitoring, self-guidance, and corrective self-reactions, individuals link thought to action (Bandura, 2001).

According to Emirbayer and Mische (1998), human agency involves how individuals interact with various structural environments, which are influenced by habit, imagination, and judgment in response to changing historical situations. In some viewpoints, the agency is seen as a variable that explains or understands social behavior, often contrasted with structure, with the main question being whether agency or structure is more crucial in shaping or determining

social behavior (Hollis, 1994). This conceptualization tends to lead to the idea of agency as an innate human capacity owned by individuals, with people demonstrating more or less agentic behavior. However, Priestley et al. (2015) built on Emirbayer and Mische's (1998) perspective and developed the ecological model of teacher agency specifically considering teachers' activities within school settings. It consists of three dimensions, namely iterational, practical-evaluative, and projective dimensions. In this view, teacher agency is not an innate quality but rather an emergent, dynamic phenomenon that is dependent on cultures and structures (Priestley et al., 2015). According to the ecological approach, the agency is a situated achievement that is informed by the teacher's past experiences, current influences, relationships, and future aspirations (Leijen et al., 2020). This situated achievement is an outcome of the interplay between established patterns of thinking, acting, working, and larger structural concerns (Emirbayer & Mische, 1998). Toom et al. (2015) also argue that professional agency is developed through active involvement and a sense of belonging in environments that foster such engagement.

Positioning theory is a framework that examines how people assign roles and responsibilities to themselves and others through discourse (Kayi-Aydar, 2019). While it does not explicitly focus on agency, poststructural feminist Bronwyn Davies has explored the relationship between positioning and agency, redefining it as the ability to move within and between discourses and disrupt current discourses through authorship (Davies & Harré, 1990). Positioning theory suggests that there is a complex and unpredictable correlation between agency and positioning. While individuals may hold identical positions, they may still engage in dissimilar actions. Certain positions may enable or restrict an individual's ability to exercise agency. Individuals can also assign positions to themselves or others, which can impact their agency. When discussing education, teacher agency can be explained as the authorship that is constituted through the teacher's access to available subject positions. In the workplace, teachers can challenge hierarchies through the subject positions available to them (Davies & Gannon, 2011). This view is also supported by Priestley et al. (2015) by arguing that agency is a dynamic and situational construct that is co-constructed through social interactions and discourses. They suggest that individuals negotiate their positions and agency in complex and multiple ways and that this negotiation is influenced by the cultural and social contexts in

which they operate. Therefore, Priestley et al. (2015) align with positioning theory in their view that agency is not a stable or fixed attribute of individuals, but rather a fluid and context-specific construct that is shaped by discursive practices and social interactions.

Drawing on the highlights and similarities in the approaches reviewed in this section, according to Kayi-Aydar (2019), it is not surprising that the ecological approach has developed perhaps the first and most comprehensive framework to conceptualize teacher agency. This perspective allows for a deeper understanding of human reflexivity and creativity, as well as how societal restrictions can be overcome. Additionally, it sheds light on how teachers are both empowered and constrained by their material and social contexts (Priestley et al., 2013). Such an approach further emphasizes the importance of understanding agency within a complex and dynamic social environment.

The iterational dimension of an ecological approach is attributed to the activation of accumulated actions and reflections from prior experiences. Such systems require efficient activities to be developed, which enable greater internal stability and maintenance of assumed identities, as well as the integration of personal and academic institutions. The practical-evaluative aspect necessitates the teacher's competency in the current context to make acute and informed perceptions among possible options, while also taking into account the material, structural, and cultural environments that can be commonly recognized as facilitators, restrictions, or available resources. Within the projective orientation, personal and professional long-term and short-term goals for the future are envisioned, along with desires that acknowledge the formation of individuals' actions and possible plans for the future. Therefore, acknowledges that teachers are not the only factor that determines their ability to take action and make decisions in their teaching practice. This approach recognizes the importance of considering the academic contexts in which teachers operate and maintains a critical stance toward the notion that teachers alone are responsible for achieving agency. Priestley et al. (2013) observe that the interaction of one's competency and ecological situations, across temporal aspects, leads to the attainment of agency.

2.2. Empirical Studies

In the last ten years, most research on language instruction has centered around exploring how professional teacher agency is utilized. However, experimental studies on teachers' educational agency remain relatively sparse (Eteläpelto et al., 2013), and there is limited information available regarding the concept of professional agency in the context of teacher education and its practicality in real classroom settings (Toom et al., 2015). Therefore, this paper aims to present practical studies that provide a scientifically-based interpretation of teacher agency. It proposes limitations and potentials for implementing agency, in line with favorable circumstances, to determine teacher agency in various stages and environments of their career.

Carson et al. (2021) examined the use of podcasting as a tool for student teachers to develop agency and promote change in their teaching practices. They looked at a teacher education program in which students generated a podcast just as a forum for discussion and contemplation on important academic points. Through an analysis of student teachers' podcast reflections, the authors found evidence that podcasting can enhance student teachers' agency by providing them with a platform to share their voices, ideas, and experiences. Student teachers by expressing their opinions and taking part in podcasting establish a dialogical arena for linkages among past experiences, present situations, and future goals as well as establish themselves as prospective teachers while faced with academic obstacles. The authors argue that podcasting can foster a sense of ownership and empowerment among student teachers, leading to greater engagement and motivation in their teaching practice. While the authors highlight the potential benefits of podcasting, it is important to consider the challenges and limitations that may arise when implementing this approach in different contexts. Additionally, the article could further explore the effect of podcasting on student learning outcomes and whether this approach is effective in improving educational outcomes.

Leijen et al. (2021) explored the concept of agency among student teachers and its relationship with their commitment to teaching. They administered key research on teacher agency and ecological approaches as the researchers looked at teacher agency from the ecological viewpoint and paid 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 of attaining

agency. They determined some components of the ecological approach and highly developed three types of reflection to enhance situations for attaining teacher sense of agency. The authors found that agency is positively correlated with a commitment to teaching and can be used as a predictor of future teaching engagement. They believed that teacher agency is a complex notion included of relevant components cooperating to join the personal, situational, and projective factors in real classroom environments. While the authors acknowledge that other factors may also influence commitment to teaching, such as support and contextual factors, they do not fully explore these limitations in their study. Additionally, the article could further explore the impact of agency on student learning outcomes and the potential for interventions to enhance agency among student teachers.

In a similar study, Jones and Charteris (2017) highlighted the importance of a critical reflection and ecological approach to teacher agency in transformative professional learning. The authors argue that transformative learning can only occur when individuals are actively engaged in critical reflection, which involves questioning assumptions and beliefs and considering alternative perspectives. They also emphasized the importance of a supportive learning environment that encourages collaboration and promotes critical reflection. The authors did not address the potential power dynamics at play in collaborative learning environments and the potential impact on individuals with different levels of the agency. Additionally, the article could further explore the potential conflicts that may arise when challenging assumptions and beliefs within a professional community.

To investigate differences in instructional planning approaches, Koni and Krull (2018) carried out a survey study between novice and experienced teachers to measure teacher thinking about instructional planning. They used convenience sampling to collect data from teachers who had taught for at least five years (experienced) and less than three years (novice). Results indicated that novice teachers placed more importance on teaching the material and achieving predetermined objectives, and preferred short-term planning, while experienced teachers emphasized long-term planning. Novice teachers also focused on individual student abilities in assessment planning, while experienced teachers considered the possibility of unexpected events affecting the assessment process.

Soini et al. (2015) investigated the factors that contribute to first-year student teachers' sense of professional agency in the classroom, particularly in terms of their beliefs, attitudes, and behaviors concerning teaching. The study used a mixed-methods approach, combining survey data and qualitative interviews with 241 student teachers in Finland. The results showed that several factors played a role in the development of professional agency, including the perceived usefulness of teacher education, the quality of support from mentor teachers, the degree of autonomy in classroom practices, and the feeling of being a part of a professional community. The study's findings are based on self-reported data, which could be influenced by social desirability bias or inaccurate perceptions of the agency. Finally, the study did not explore how external factors such as policy changes or school culture may impact the development of professional agency in student teachers.

The role of the learning environment in fostering professional agency among student teachers was further examined by Toom et al. (2017). They argued that teacher education programs should create a learning environment that promotes autonomy, collaboration, and reflection to cultivate professional agency among student teachers. Through a qualitative study of 224 first-year student teachers in Finland, the authors found that a supportive learning environment that encourages critical thinking and teamwork among student teachers and their mentors can enhance student teachers' sense of agency. They do not fully explore the role of institutional structures and policies that may hinder the development of a supportive learning environment. Additionally, the article could further explore the impact of the learning environment on student teachers' actual classroom practices and their ability to navigate the complexities of teaching. Overall, the article highlights the importance of creating a supportive learning environment that fosters professional agency among student teachers, but further research is needed to fully understand the complexities of this process. Similarly, Day et al. (2005) demonstrated teachers' good sense of professional agency in the workplace is connected to lower stress levels, a desire to participate in school change, and a willingness to try new things.

2.3. Teacher Agency in the Context of Iran

Rezaee and Seyri (2021) carried out a study to examine the impact of teacher agency on the implementation of the new English language curriculum in the Iranian educational system. The study utilized a qualitative approach and collected data through a narrative inquiry from seven English language teachers in Iranian high schools. The authors argued that teacher agency played a significant impact in the advancement of curriculum reform, as teachers who had a sense of agency were more likely to take ownership of the curriculum and implement it effectively. The study found that despite the new curriculum being designed to be more communicative and learner-centered, many teachers still relied on traditional teaching methods, which hindered the implementation of the new curriculum. The authors suggested that this might be due to a lack of teacher agency, as teachers may feel constrained by external factors such as standardized tests and administrative pressures. In a similar study, Kordabadi et al. (2021) collected data from the life narratives, professional histories, and classroom observations of five English teachers to examine the role of teacher agency in educational change. The study found that teachers' instructional experiences affected their sense of agency and decision-making processes. The study also revealed that agency was not stable and was shaped by social factors and environmental conditions. Nazari et al. (2023) focused on language teacher agency and how it can be impeded by contextual factors. Using a narrative inquiry methodology, the study found that institutional policies were the main factor hindering the teachers' agentic actions. These policies negatively affected the teachers' autonomy, self-efficacy, emotions, and interpersonal and institutional identities. The study concludes that when power relations limit teachers' agency, it can negatively impact their identity construction.

The existing literature highlights the need for more scholarly research on Iranian teacher education with a focus on exploring the agency of Iranian EFL student teachers in implementing ecological model principles in the local context. As far as the researchers know, no empirical study has yet developed an instrument to measure student teachers' agency from an ecological perspective. To address this gap, this research aimed to compare the level of agency achievement between freshman and sophomore EFL student teachers in teacher education programs.

This study appears to be timely, given the increasing research and development that emphasizes the importance of teacher agency in improving school performance, teachers' work, and students' learning outcomes. With this in mind, the researcher formulated research questions by conceptualizing teacher agency from an ecological perspective, taking into account the temporal and relational processes that shape agency. To achieve the objectives of this research, the following questions are addressed:

1. Are there any significant relationships among the three ecological dimensions of agency, namely iterational, projective, and practical-evaluative?
2. What are the relationships among the different indicators of agency?
3. Does gender have a mediating role in student teachers' perception regarding agency?
4. Does the pre-service teacher education program have a mediating role in the student-teacher agency from an ecological perspective?
5. Does the newly-developed scale significantly predict student teachers' agency?

3. Methodology

3.1. Design and Context of the Study

During the COVID-19 pandemic, Farhagian University required pre-service teachers to study English from home through online means. The university utilized BigBlueButton, a web conferencing platform popular in Iran and other countries, to facilitate synchronous online classes. This platform provides various features such as audio and video connections, a whiteboard for multiple users, breakout rooms, and a chat box, which emulate a physical classroom setting. The students had the option to connect to their online classes using either a laptop or a cellphone. The study utilized a survey research design and was conducted during the final weeks of the spring term in 2019. The participants were asked to allocate significant time to complete the questionnaire online, using their mobile phones, during class time. The study was conducted across multiple branches of Farhangian University.

3.2. Participants

The participants in this study were selected through convenience sampling. The sample consisted of 210 participants, with 117 (55.7%) being female and 93 (44.3%) being male. In

terms of year level, 137 (65.2%) participants were freshmen, while 73 (34.8%) were seniors. The study also included participants from four different branches of Farhangian University, with the highest number of participants 97 (46.2%) being from the Tehran branch, followed by the Ghaemshahr branch with 53 (25.2%) participants, Mashhad branch with 35 (16.7%) participants, and Sari branch with 25 (11.9%) participants.

3.3. Instrument

The present study utilized an ecological approach to establish the construct underlying the elements of agency in student teachers by reviewing the pertinent literature on teacher agency. A set of statements was created using the concepts derived from the literature. Three TEFL Ph.D. holders evaluated the suitability of the statements based on factors related to wording, such as the clarity of instructions, length of items, comprehensibility of items, and appropriateness of examples within each category of the theoretical framework. The final version of the questionnaire that was given to the current sample of 210 student teachers consisted of 22 statements that assessed 13 elements of student teachers' agency, organized into three dimensions. These elements included instructional and supportive beliefs (4 items), collaborative learning (1 item), competence (1 item), opportunity to make choices (2 items), opportunity to influence (2 items), equality (2 items), support (2 items), trust (2 items), institutional context (2 items), professional community (2 items), and long- and short-term purposes (2 items). To make sure that the participants fully comprehended the questionnaire items, the researcher provided them with contact information in case they had any questions or concerns about the study. The researcher made sure that the participants were treated fairly and that their privacy rights were not violated, especially since the study was conducted in their natural settings. Participants were instructed to indicate their level of agreement or disagreement with each statement using a 7-point Likert scale. The content validity of the scale was estimated through discussions with experts, and Cronbach's alphas for the entire questionnaire and its components were calculated at .94, suggesting a strong degree of internal consistency for the survey with the present sample. The construct validity of the questionnaire was also calculated through the validation process by the use of a structural equation modeling test that was part of a larger study.

3.4. Data Collection Procedure

The major aim of this study is to build up a profound perception of the considerable intricacy of the student teachers' process of learning by seeking the close connection between the elements that make up student teachers' professional agency over years of studying in Farhangian University. To ensure that the questions in the Google form and questionnaire were clear and free of misunderstandings, a pilot test was conducted with 30 participants who were similar to the intended audience. The pilot process confirmed the reliability and validity of the questionnaire, which was then administered electronically through Google Forms to 230 student teachers, 221 of whom completed it. The questionnaire included questions about the participants' gender, age, and year level, and was completed online to ensure confidentiality and anonymity. The participants were asked to sign a consent form to ensure their identity remained confidential. The questionnaire's title was not shown during administration to avoid influencing the participants' responses. The data were collected electronically from 210 student teachers and subsequently archived for further analysis.

3.5. Data Analyses

To perform the quantitative data analysis, the statistical software package SPSS 21.0 was utilized. Independent sample t-tests were conducted to compare the means of two independent groups (freshman and sophomore) to determine student teachers' perceptions of their ability to attain agency. The researcher also explored potential gender differences, and Pearson correlation coefficients were calculated to examine the relationships among the three dimensions of agency and its elements. Additionally, multiple regression analyses were employed to determine whether the three dimensions of the ecological model could significantly predict student teachers' agency achievement.

4. Results

The survey consisted of 22 items, which were categorized into three dimensions: Iterational (6 items), Practical-evaluative (14 items), and Projective (2 items). The results of the analysis showed that the overall questionnaire had a Cronbach's alpha coefficient of 0.920, which indicates a high level of reliability. Additionally, Cronbach's alpha coefficients for each

dimension were also high: 0.921 for iterative, 0.835 for practical-evaluative, and 0.725 for projective. Overall, these results suggest that an ecological agency survey is a reliable tool for measuring ecological agency, and its dimensions are also reliable.

The presented findings in Table 1 demonstrate a positive significant correlation between iterative and projective dimensions as expected based on the theoretical model ($r = .73$, $n = 210$, $p = 0.001 < 0.05$). Moreover, it is shown that there is a positive and significant link between iterative and practical-evaluative dimensions ($r = .72$, $n = 210$, $p = 0.001 < 0.05$). So, it was determined that the projective dimension correlated significantly and positively with the practical-evaluative dimension ($r = .62$, $n = 210$, $p = 0.001 < 0.05$).

Table 1.

Correlation Between Three Dimensions of Ecological Teacher Agency

		Iterational	Practical- evaluative	Projective
Iterational	Pearson Correlation	1	.725**	.731**
	Sig. (2-tailed)		.001	.001
	N	210	210	210
Practical- evaluative	Pearson Correlation	.725**	1	.625**
	Sig. (2-tailed)	.001		.001
	N	210	210	210
Projective	Pearson Correlation	.731**	.625**	1
	Sig. (2-tailed)	.001	.001	
	N	210	210	210

** . Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation coefficient between all sub-scale constructs of student teachers' agency is shown in Table 2. The obtained results demonstrate that all sub-scale constructs were correlated with each other (Table 2, $p < .01$). The weakest relationship found was between cultural components and short-term goals for teaching ($r = .38$, $p < .01$, weak relationship). The structural and material components gained the strongest relationship ($r = .77$, $p < .01$, medium relationship).

Table 4.

Correlation Between All Elements

		Profess ional Beliefs	Personal Beliefs	Cultural	Struc tural	Material	Long- Term	Short- Term
Profession al Beliefs	Pearson	1	.758**	.542**	.649**	.719**	.660**	.573**
	Correlation							
	Sig. (2-tailed)		.000	.000	.000	.000	.000	.000
	N		210	210	210	210	210	210
Personal Beliefs	Pearson		1	.436**	.587**	.589**	.637**	.568**
	Correlation							
	Sig. (2-tailed)			.000	.000	.000	.000	.000
	N			210	210	210	210	210
Cultural	Pearson			1	.655**	.607**	.455**	.386**
	Correlation							
	Sig. (2-tailed)				.000	.000	.000	.000
	N				210	210	210	210
Structural	Pearson				1	.774**	.545**	.423**
	Correlation							
	Sig. (2-tailed)					.000	.000	.000
	N					210	210	210
Material	Pearson					1	.636**	.497**
	Correlation							
	Sig. (2-tailed)						.000	.000
	N						210	210
Long- Term	Pearson						1	.571**
	Correlation							
	Sig. (2-tailed)							.000
	N							210
Short- Term	Pearson							1
	Correlation							
	Sig. (2-tailed)							
	N							

** . Correlation is significant at the 0.01 level (2-tailed).

The descriptive statistics for females (N=117) and males (N=93) of the student-teacher agency survey were demonstrated in Table 3. As it is evident in Table 3, the average mark of female student teachers (M= 78.13, SD= 26.50) is lower than male student teachers (M= 80.58, SD= 26.20). To find that such a difference is significant statistically, a t-test was run.

Table 3.

Group Statistics for the Student Teacher Agency Survey in Terms of Gender

Gender	N	Mean	Std. Deviation	Std. Error Mean
Female	117	78.13	26.50	2.45
Male	93	80.58	26.20	2.71

An independent samples t-test as shown in Table 4, was run to explore gender differences to see if male and female student teachers' had different or the same perceptions regarding agency. To this end, Leven's test for equality of variance was first examined. Given that the sig. index for Leven's test was larger than .05 ($sig = .78 > 0.05$) the data of the first line of equality of variances in Table 4 was used. As sig. (2-tailed) value is .505. which is above the required cut-off of .05, so it was assumed that females and males did not differ significantly in the agency scores ($t = -.667, p = .505, \text{two-tailed}$).

Table 4.

Independent Samples T-test for the Student Teacher Agency Survey in Terms of Gender

		Levene's test for equality of variances		T-test for equality of means				
		F	Sig.	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
							Lower	Upper
Agency	Equal variances assumed	.076	.783	-.667	208	.505	-9.66671	4.77893
	Equal variances not assumed			-.668	198	.505	-9.65932	4.77153
					.40			
					7			

Table 5 shows the descriptive statistics for freshman (N=137) and senior (N=73) participants of the student-teacher agency survey. As it is clear in Table 5, the average mark of freshman student teachers (M= 75.63, SD= 25.60) is lower than senior student teachers (M= 85.94, SD= 26.55). To find that this difference in agency ratings among freshman and senior student teachers in association with the number of completed credits is significant statistically, a t-test was run.

Table 5.

Group Statistics for Freshman and Senior Students' Teacher Agency Survey

Year	N	Mean	Std. Deviation	Std. Error Mean
Freshman	137	75.63	25.60	2.18
Senior	73	85.94	26.55	3.10

Table 6 demonstrates an independent samples t-test to analyze differences between pre-service teachers with different credit totals to see if freshman and senior pre-service teachers' had the same or different perceptions of the agency. To this end, Leven's test was checked for

equality of variances. Given that the sig. index for Leven's test was larger than .05 ($sig = .29 > 0.05$) the data of the first line of equality of variances in Table 6 was used. As sig. (2-tailed) index is .007. which is less than the required cut-off of .05, so it was assumed that the answers are substantially different in the agency scores and senior students perceived having higher agency than freshman students ($t = -2.743, p = .007$, two-tailed).

Table 6.

Independent Samples T-test for Freshman and Senior Pre-Service Teacher Agency Survey

		Levene's test for equality of variances			T-test for equality of means			
		F	Sig.	t	df	Sig. (2-tailed)	95% Confidence Interval of the Difference	
							Lower	Upper
Agency	Equal variances assumed	1.108	.294	-2.743	208	.007	-17.71927	-2.90107
	Equal variances not assumed			-2.713	142.467	.007	-17.82309	-2.79724

To explore whether practical-evaluative, projective, and iterational dimensions contributed significantly to the prediction of pre-service teachers' agency, a multiple regression analysis was used (Table 7).

Table 7.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.870	.756	.753	.31358

As reported in Table 7, the R came out to be 0.870 and R square 0.756 so, the model explained 75.6% of the variance ($R^2= 75.6\%$). To assess the statistical significance of the result, it was necessary to check Table 8.

Table 8.

Regression Output: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	62.806	3	20.935	212.902	.000
	Residual	20.257	206	.098		
	Total	83.062	209			

As reported in Table 8, the results of the ANOVA ($F= 212.902$, $p = 0.000 < 0.05$) proved significant and the ecological model identified a notable predictor of pre-service teacher agency. Beta coefficients in Table 9 show an association between each dimension and agency that is significant for all three dimensions (Beta indices = .421, .427, .255). Hence, it was concluded that iterational, practical-evaluative, and projective dimensions could significantly predict pre-service teacher agency.

Table 9.

Regression Output: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.229	.174		1.319	.189
	Iterational	.373	.037	.421	10.154	.000
	Practical	.433	.042	.427	10.353	.000
	Projective	.145	.021	.255	6.902	.000

5. Discussion

The objective of this study was to investigate the impact of Farhangian University on the enactment of pre-service teachers' agency within the EFL teacher education setting, the interrelation between elements of pre-service teachers' agency, and the formation of agency through three dimensions of the ecological framework. The present research outcomes indicate that teacher agency is a complicated, dynamic, and ongoing professional process. The pre-service teachers are situated in subjective environments and are expected to adhere to formal rules, while also being empowered to perform in association with individual beliefs. Therefore, empowered pre-service teachers are offered a plethora of favorable circumstances, special rights, and great advantages in exercising their agency. The findings of this study confirm the contextualized elements of agency in the EFL contexts of Farhangian University.

Referring to the iterational dimension the study found that pre-service teachers' past experiences, including their previous teaching competencies, collaborative learning experiences, and personal beliefs and values in teaching, took a significant impact in shaping their sense of agency. Such findings are consistent with Priestley et al.'s (2013) argument that the temporal-relational aspect of agency is shaped by individuals' past professional and personal histories. According to this perspective, individuals' past experiences may adapt to their current attempts and habits, shaping their sense of agency in the present.

The study found that the practical-evaluative aspect of agency is confirmed by the influence of cultural, structural, and material factors on pre-service teachers' agency and academic advancement. Pre-service teachers' agentic actions allow them to control material resources, build a supportive environment, and shape their professional advancement. Regarding the practical-evaluative dimension, the findings emphasized the importance of previous life histories and imagined goals in shaping individuals' agency, as well as the potential reactions to contextual contingencies. The findings of the present study are consistent with Rezaee and Seyri (2021) research, which highlighted the teachers in this study indicated that they were faced with some contextual limitations such as the lack of facilities. However, they made some agentic decisions and choices by using the internet, such as utilizing online resources, seeking guidance from their colleagues, and collaborating with others.

Moreover, the findings imply that agency encompasses a broad spectrum of professional attributes, from beliefs to the learning environment. This suggests that professional agency in student teachers is shaped, reshaped, and understood through the dynamic interplay between them and their educational settings. Thus, professional agency involves their ability to construct their learning context. These results are consistent with Day et al.'s (2005) findings and demonstrate that the sense of belonging of student teachers to professional communities and their active efforts to learn and improve institutional contexts cannot be reduced to behavioral features alone.

The findings determined statistically significant differences in agency between senior and freshman student teachers. Such results are fitted well with Koni and Krull (2018) which represents that as opposed to beginners, senior student teachers appear to be completely more confident and qualified when planning educational activities. It shows that the agency begins to boost with experience during years of studying at Farhangian University. It can be speculated that senior student teachers may take part in relatively autonomous formats of the study compared to freshman student teachers. The higher levels of university education often involve more independent courses and challenging experiences such as apprenticeships and thesis projects. In contrast, at the beginning levels of university education, students might require extra assistance to exercise active agency (Hökkä & Eteläpelto, 2014).

6. Conclusion

This research accentuates the significance of prioritizing the development of teacher agency at Farhangian University and promoting pre-service teachers' understanding of their agency. Teacher agency is influenced by personal attributes such as professional skills and knowledge, as well as values and beliefs shaped by various factors. The study found significant statistical results regarding student teachers' professional agency during studies at Farhangian University. It was observed that freshman student teachers had lower agency than senior student teachers. It offers factual proof that teacher education has an important role in facilitating the intricate and gradual processes through which student teachers form their perception of professional agency at Farhangian University. Despite facing challenges, experienced teachers in the study were effective in their job performance and utilized

technical solutions to ensure smooth lessons and implement new academic practices. The study emphasizes the need for positive learning environments and fostering supportive relationships between pre-service teachers and teacher educators. Future research should examine pre-service teachers' agency longitudinally to gain deeper insights into the ecological framework that shapes their sense of agency. The findings contribute to the knowledge of language teacher education particularly within higher education, which has been relatively understudied as noted by Mazandarani (2022). The study also can impact the implementation and evaluation of language policies in Iran. Another crucial implication of this study is that the fundamental components of pre-service teachers' agency, such as social support, equality, complete trust in teacher educators, competence, and collaborative knowledge construction, should be the foundation of teacher professionalism, particularly in Farhangian University.

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