

ISSN: 2617-6548

URL: www.ijirss.com



The impact of pedagogical referendariat on beginning teachers' professional development: A case study of Kazakhstan

Gulden Yespolova¹, D Aidana Tanirbergen², Anargul Sharipkhanova³, Bagi Bazarbek⁴, Saniya Nurgaliyeva^{5*}

^{1,3,4}Sarsen Amanzholov East Kazakhstan University, Ust-Kamenogorsk, Kazakhstan.

^{2,5}Abai Kazakh National Pedagogical University, Almaty, Kazakhstan.

Corresponding author: name (Email: sanianur@mail.ru)

Abstract

Professional development of beginning teachers is one of the most important issues of our time. Studies on the professional development of beginning teachers often focus on assessing the value and motives for choosing a profession. Although the pedagogical referendariat program has the potential to develop essential pedagogical competencies for beginning teachers, this issue has not received enough attention in the literature to date. To solve this problem, a deeper understanding of how the pedagogical referendariat contributes to the optimization of beginning teachers' entry into the teaching profession, their professional development, and the generation of modern teaching ideas is needed. The study aims to assess the impact of the pedagogical referendariat program on beginning teachers' professional development and how it shapes their core pedagogical competencies. The program was created to offer beginning teachers high-quality assistance with their successful professional development, professional growth, and entry into the teaching profession. The findings demonstrate the effectiveness of the intervention in providing high-quality support for their successful professional development and professional advancement. It was found that after finishing the PRP, teachers' perceptions of their key pedagogical competency development in various areas are depicted by the improved results. It is determined that the pedagogical referendariat can offer a chance to create a logical and transparent policy for working with beginning teachers, in addition to a thorough examination of the situation of the domestic teaching corps. The application of the research to Kazakhstan's educational setting is particularly noteworthy and adds an important dimension to the broader discourse on supporting beginning teacher training.

Keywords: Assessment, Beginning teachers, Influence, Professional development, Professional growth.

DOI: 10.53894/ijirss.v8i1.4506

Funding: This research is supported by Ministry of Science and Higher Education of the Republic of Kazakhstan (Grant number: IRN AP19679046).

History: Received: 13 December 2024/Revised: 28 January 2025/Accepted: 31 January 2025/Published: 5 February 2025

Copyright: © 2025 by the authors. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Competing Interests: The authors declare that they have no competing interests.

Authors' Contributions: All authors contributed equally to the conception and design of the study. All authors have read and agreed to the published version of the manuscript.

Transparency: The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Publisher: Innovative Research Publishing

1. Introduction

The issue of supporting beginning teachers and the readiness of specialists for professional activity has long been the subject of discussion among researchers [1, 2]. Professional development of beginning teachers is an important component of changing the social status of teachers [3, 4]. The decline in the social status of teachers gives rise to a number of problems [5]. First of all, this is the deformation of the gender and age structure of the teaching staff. A low influx of young personnel leads to a decrease in competitiveness and the perception of innovations by the educational community [6, 7]. In addition, since the status of the profession and high wages are especially important for men, the feminization of the teaching profession occurs. Furthermore, as research shows, the discrepancy between the role of a teacher, the high demands of society for this profession, and the real social status leads to a decrease in the social well-being of beginning teachers and their professional identity [8, 9].

The social well-being of beginning teachers is negatively affected by a certain set of expectations and opinions regarding status and work, often not corresponding to reality [10-12]. Nonetheless, Agyapong, et al. [13] pointed out that the more information about teachers that the public and government officials provide, the more positive the perception of this professional group's status is, and the more it appears that they are taken care of. The introduction of strict performance standards and an increase in reporting volumes also negatively affect the social status of beginning teachers [14-16]. According to researchers, a teacher's status has a direct impact on their self-esteem, social well-being, and confidence, which in turn affects their ability to stay in the profession [17]. Researchers have found that beginning teachers face difficulties and barriers when they attempt to access professional development [18]. At the same time, they are not ready to solve practical pedagogical problems and do not have sufficient knowledge of modern pedagogical technologies. Therefore, beginning teachers need support to expand their opportunities for professional development and growth.

Thus, the development of a beginning teacher is more difficult than that of a representative of any other profession. Consequently, general education institutions need an effective program to support entry into the profession of a beginning teacher. The implementation of this will create a comfortable environment for their effective work, self-improvement, and for maintaining and increasing the share of young personnel in an educational organization. In this regard, not only the problem of supporting a beginning teacher but also the problem of their professional development and growth is of particular relevance.

Professional support and development of beginning teachers have many specific solutions and prove the high efficiency of interaction between universities and general education organizations in the matter of young teachers' entry into the teaching profession. In this regard, timely, comprehensive support for the professional development of beginning teachers is very important. Induction programs help fill existing gaps in knowledge, facilitate the acquisition of missing skills, and also provide psychological support and help socialize in a new team.

1.1. Statement of the Problem

Kazakhstan's education system still faces systemic problems and has many shortcomings; therefore, it requires further reform. In 2022, Kazakhstan ranked 71st out of 78 in the ranking of the best countries for education according to US News & World Report. Growing public dissatisfaction with the quality of teachers and unsatisfactory results of international comparative studies of students in Kazakhstani schools prompted the adoption of the law "On the Status of a Teacher." Consequently, the status of teachers is in the government's focus, and certain measures are being taken to improve it.

The problems of Kazakhstani teachers, their professional deficiencies, and their demands were also identified by the international study Teaching and Learning International Survey (TALIS). Kazakhstan has been participating in the TALIS study only since 2018. The TALIS-2018 data showed that Kazakhstani teachers should not be considered a homogeneous and consolidated group, united in assessing the current situation in the education system and demonstrating common professional attitudes. The teaching staff is differentiated by social context (characteristics of the contingent) and age, while there are some problems that certain groups, particularly young teachers, have most openly stated, and these are related to their professional training. It is this element of the connection between theoretical training and practice, university and school, that is significantly lacking in the professional education that beginning teachers have received and continue to receive [19-21].

The Altynsarin National Academy of Education analyzed 252 curricula from 13 universities that train teaching staff. It was discovered that less than 7% of university curricula incorporate elements of the most recent secondary education curriculum. The learning objectives are not centered on comprehending the concepts of the updated content, and the module names in the curricula do not correspond to the updated secondary education content. The expected learning outcomes, according to experts, primarily represent academic knowledge rather than the future teachers' practical abilities and professional and personal competence; in other words, they do not align with the definitions of the professional standard "Teacher." A survey by JSC "National Center for Advanced Studies "Orleu" among 10,000 beginning teachers recorded that 68% of respondents indicated problems in teaching and learning, working with parents, communicating with colleagues, and managing a team of schoolchildren. According to the study "The Systems Approach for Better Education Results" (SABER), in almost all countries that took part in this project, the tasks that a teacher must perform are regulated by law. At the same time, important components of labor status include working conditions and the level of workload. However, in Kazakhstan, there is a fact of growth in the volume of work that is not related to the direct professional duties of a teacher. At the same time, the educational policy pursued by the state sets an increasingly high level of professionalism for teachers (changes in the system of professional growth and advanced training of teachers, verification of teachers' competencies, new professional standards, etc.), often leading to ambiguous results, among which a significant increase in the bureaucratic workload at school is noted [22, 23]. Moreover, the aging of the teaching staff in Kazakhstan is occurring at an even more intensive rate: over the past 10 years, there has been a constant increase in the number of teachers over 50 years old (about 25% of the total teaching staff) and a decrease in the number of young teachers under 30 years old (they make up no more than 20% of the total number of teachers).

Thus, a timely understanding of the problem caused by the decline in the prestige of the teaching profession, the lack of government efforts to improve its social status, and social security highlights the need to search for new approaches to the formation of a personality capable of enhancing their professional qualities and generating and implementing modern ideas in education. In this regard, the question arises about the relationship between the effectiveness of reforms and indicators such as the quality of teaching staff and the readiness of beginning teachers to participate in the modernization of the education system [24].

All of the above highlights the need to study the problems faced by beginning teachers in the professional space. Research on this issue in the Kazakhstan segment shows that these problems are not coordinated and are heterogeneous. However, there is a clear need to provide effective ideas on how to optimize programs for integrating beginning teachers into the professional space. Unfortunately, despite the declared potential of the pedagogical referendariat program (PRP) in fostering key pedagogical competencies among beginning teachers, the existing literature has not adequately addressed how the PRP contributes to optimizing their entry into the teaching profession, their professional development, and the generation of modern teaching ideas that are necessary.

1.2. Questions for Research

- Q1: What are the attitudes of beginning teachers toward the pedagogical referendariat program (PRP)?
- Q2: Do beginning teachers' attitudes toward the PRP differ based on gender?
- Q3: Does the program impact the development of key pedagogical competencies in beginning teachers?

1.3. Purpose of the Research

This research examined the impact of the PRP on beginning teachers' professional development and how it shapes their core pedagogical competencies.

The research hypothesis is that the PRP will significantly improve beginning teachers' professional development as a prerequisite for shaping core pedagogical competencies.

1.4. Significance of Study

This study provides a timely and significant exploration of beginning teachers' attitudes toward the PRP, particularly within the context of Kazakhstan's unique educational setting. The research addresses a critical issue in educational transformation and offers practical implications for supporting beginning teacher training. Focusing on Kazakhstan's educational setting enhances the study's relevance, though its regional emphasis somewhat limits its global applicability. While supporting beginning teacher training is a widely studied topic, this paper contributes a fresh perspective by examining it within a specific cultural and educational context. The application of the research to Kazakhstan's educational setting is particularly noteworthy and adds an important dimension to the broader discourse on supporting beginning teacher training.

2. Methodology

2.1. Study Design

Key pedagogical competencies were identified based on the literature analysis, focusing on beginning teachers. Specifically, these competencies pertain to pedagogical skills, instructional planning, classroom management, student interaction, and reflective practices. The study is divided into multiple phases (Figure 1).

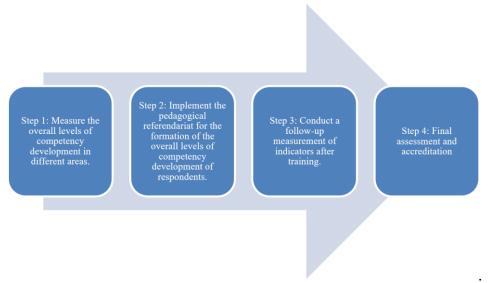


Figure 1
Phases of the study's execution.

The first step involves evaluating the respondents' degree of competence development in various domains. To develop these competencies, PRP was implemented in the second stage. Respondents were retested in the third stage to assess the dynamics of these competencies. Analyzing the results and determining the basis for validating the final evaluation of beginning teachers comprised the fourth stage.

2.2. Research Method

This research was conducted using the survey model. This research method aims to measure the key pedagogical competencies of beginning teachers in the study group. In this method, the current situation is revealed as it is. It allows for working with larger sample groups compared to other research methods. For this reason, the survey model was deemed suitable for determining the attitudes of beginning teachers towards PRP.

2.3. Participants

The study was conducted in Ust-Kamenogorsk, East Kazakhstan, which is situated in the eastern part of the country. The East Kazakhstan region consists of 11 districts and 2 cities of regional significance (Ust-Kamenogorsk and Ridder). Ust-Kamenogorsk was selected to be part of the study. Participants were selected using purposive sampling criteria: (1) successful completion of the teacher pedagogical referendariat program, (2) being early in their teaching careers, and (3) coming from a variety of schools and teaching contexts, ensuring that the results would be generalizable across a wide range of teaching contexts. A total of 400 beginning teachers participated in the study; they were from mixed schools (with Kazakh and Russian as the languages of instruction), secondary schools, gymnasiums, lyceums, and boarding schools to account for potential differences in how the program may impact teachers working in different educational settings. The average age was 26.5 ± 3.4 years (see Table 1).

Table 1.

Participants' demographics, professional backgrounds, and subject characteristics.

Category	Frequency (n)	Percentage (%	
Gender			
Male	160	40%	
Female	240	60%	
Total	400	100%	
Age			
22–25 years	200	50%	
26–30 years	140	35%	
31–35 years	60	15%	
Institution (Of employment)			
Secondary schools	280	70%	
Gymnasiums	60	15%	
Lyceums	40	10%	
Boarding schools	20	5%	
Highest qualification			
Bachelor	300	75%	
Master	100	25%	
Current subject(s) taught			
Mathematics	80	20%	
English language	100	25%	
Physical education	40	10%	
Chemistry	60	15%	
Biology	60	15%	
Other	60	15%	
Years of teaching experience			
0–1 year	400	100%	

According to Table 1, 50% of respondents are between the ages of 22 and 25, followed by those between the ages of 26 and 30 (35%) and 31 and 35 (15%). Secondary schools employ 70% of respondents, followed by gymnasiums (15%), lyceums (10%), and boarding schools (5%). Most beginning teachers have at least a bachelor's degree (75%), while a master's degree is held by 25%. Nowadays, 10% of beginning teachers teach physical education, 15% teach chemistry, 15% teach biology, 20% teach mathematics, 25% teach English, and 15% teach other subjects. The years of teaching experience for beginning teachers: 0–1 year is 100%.

2.4. Procedure

The PRP that was created for beginning teachers only included one path for enhancing the corresponding competencies. The research was conducted for 24 weeks, from February to June 2024. Offline formats were used in the sessions. Each week, there was a single, one-hour session. There were 24 offline sessions in total.

In particular, some themes sought to improve the following elements:

- 1. Teaching Methods and Strategies
- 2. Curriculum Design and Lesson Planning
- 3. Discipline and Behavior Management
- 4. Student Engagement and Building Relationships
- 5. Self-Reflection and Continuous Improvement

The sessions aimed at developing competencies in beginning teachers employed a variety of methods and techniques. These included interactive workshops, case studies, peer collaboration, observational learning, and reflective practice exercises. These diverse strategies were designed to address key areas such as pedagogical skills, instructional planning, classroom management, student interaction, and reflective practices, ensuring a holistic approach to professional development.

The modules were taught by methodologists, psychologists, and educational scientists with doctorates from Sarsen Amanzholov East Kazakhstan University (Table 2).

Table 2. The module's subjects.

Topic 1 "introduction to pedagogical skills"	Topic 6 "Preventing disruptions"	Topic 11 "questioning techniques"	Topic 16 "managing group work"	Topic 21 "using technology in teaching"
Topic 2 "active	Topic 7 "building	Topic 12"classroom	Topic 17 "feedback	Topic 22
learning strategies"	student-teacher	discussions"	and evaluation"	"professional
	relationships"			development
				planning"
Topic 3 "lesson plan	Topic 8 "motivating	Topic 13"planning	Topic 18 "teaching	Topic 23
design"	students"	for inclusive	critical thinking"	"reflecting on
		classrooms"		student outcomes"
Topic 4	Topic 9 "assessment	Topic 14 "time	Topic 19 "adaptation	Topic 24 "final
"differentiated	for learning"	management in the	for different learning	evaluation and
instruction"		classroom"	styles"	feedback"
Topic 5	Topic 10	Topic 15 "student-	Topic 20 "handling	
"Classroom rules and	"self-reflection	centered teaching	classroom conflicts"	
procedures"	practices"	methods"		

2.5. Research Instruments: The Survey's Format and Content

The survey was developed based on research on contemporary programs for organizing support for beginning teachers in a professional space. Constructs such as program effectiveness and teachers' perceptions of training programs were derived from previous studies [25].

The survey (Appendix A) had six sections with 24 questions each, designed to gather data on a particular facet of the professional development of new teachers (Table 3). Both multiple-choice and open-ended Likert scale responses were included in the questions. This approach was essential for recording specific aspects of beginning instructors' professional development in Kazakhstan's educational setting.

Table 3. Information about the survey.

Section	Focus Area	Question numbers	Purpose
Section 1:	Perceptions of teaching	1-4	To assess participants' views on their ability to select,
Pedagogical	methodologies and		adapt, and implement effective teaching methods for
Skills	pedagogical strategies		diverse learning situations.
Section 2:	Lesson planning and	5-8	To assess participants' views and skills in creating
Instructional	curriculum design		innovative lesson plans that align with curriculum
planning			standards and address diverse learning styles and
			abilities.
Section 3:	Classroom management	9-12	To identify and enhance skills in maintaining
Classroom	and behavior strategies		discipline and managing classroom disruptions.
Management			
Section 4:	Student engagement and	13-16	To assess participants' views on identifying and
Student	relationship building		developing effective strategies for fostering
Interaction			meaningful classroom discussions, building positive
			relationships with students, and addressing their
			individual needs to enhance engagement and learning
			outcomes.

Section	Focus Area	Question numbers	Purpose
Section 5: Reflective Practices	Reflective teaching practices	17-20	To assess participants' views on cultivating the habit of self-reflection for continuous improvement and the ability to adjust teaching strategies based on critical assessment, student feedback, and learning outcomes.
Section 6: Overall program impact	Professional growth and mentorship in education	21-24	To assess participants' views on the program's role in enhancing overall teaching competencies, preparedness for professional activity, and the value of mentorship in supporting professional development and growth.

2.6. Data Analysis

Research data were analyzed using the SPSS 26.0 statistical program. Descriptive statistics were employed to summarize and present an overview of the data, focusing on the central tendencies of the responses (mean, median) and variability (standard deviation). Frequency distributions and percentages were also utilized to depict patterns in the data, such as the number of teachers who reported significant improvements in specific competencies after completing the program. A paired sample t-test was conducted to assess whether there were statistically significant differences in the levels of professional competencies reported by beginning teachers before and after completing the PRP. A paired sample t-test was used because it compares two related groups (in this case, the same teachers at two different time points: before and after the program), allowing for an analysis of how the program influenced competency development over time. Multiple regression analysis was employed to determine the relationship between various components of the PRP (e.g., mentorship, supervised teaching, and reflective practice) and the development of specific teaching competencies. This analysis helped identify which aspects of the program had the most significant impact on the growth of professional skills, providing insights into the relative importance of different program components in shaping teacher development.

2.7. Ethical Considerations

The researcher requested approval from Sarsen Amanzholov East Kazakhstan University's Ethics Review Committee to carry out the study. The administrations of the participating schools received permission to participate in the study. The researcher visited the schools to explain the study's purpose and schedule survey dates. We also assured study participants that we would not disclose any personal information. Additionally, schools and participants in the study were coded. The raw data for the study were only accessible to the researcher and the researcher's supervisors. Anonymization was applied to the data.

3. Results

The weighted average and standard deviations of the PRP attitude scale for beginning teachers are presented in Table 4.

PRP attitude scale with weighted averages and standard deviations.

Variable	M	SD
Overall Sample (n=400)	4.06	0.892
Female (n=240)	4.12	0.85
Male (n=160)	3.98	0.91

Table 4 shows the "attitude scale for beginning teachers towards the PRP," weighted average, and standard deviations (M=4.06, SD=0.892). According to the overall mean score (M=4.06), beginning teachers have a generally favorable opinion of the PRP. Response variability is moderate, as indicated by the standard deviation (SD=0.892). Compared to male teachers (M=3.98, SD=0.91), female teachers (M=4.12, SD=0.85) exhibited a marginally more positive attitude. This reflects a small but notable variation in attitudes by gender. These results align with a positive general perception of the program, with slight differences based on gender.

The results of the independent variables t-test based on the beginning teachers' gender variable are presented in Table 5.

Table 5.T-test of independent samples according to gender.

Gender	N	M	SD	t	df	p-value
Female	240	4.12	0.85	2.14	398	0.033
Male	160	3.98	0.91			

The average attitude score for females was 4.12, slightly higher than the average score for males (3.98). The standard deviation for females was 0.85, indicating slightly less variation compared to males (0.91). The test statistic is 2.14, indicating a measurable difference between the two groups.

The degrees of freedom for the test were 398. The p-value of 0.033 is less than the significance level (α =0.05), suggesting that the difference in attitudes between male and female participants is statistically significant. The test statistic is 2.14, which indicates a measurable difference in attitudes between male and female participants.

The degrees of freedom for this test are 398, calculated as:

$$n_1 + n_2 - 2(240 + 160 - 2 = 398)$$

The p-value is 0.033, which is less than the standard significance threshold (p<0.05p).

The results suggest that there is a significant difference in attitudes toward the PRP based on gender. Table 6 presents an overview of the descriptive statistics.

Table 6.Descriptive statistics results.

Competency area	Mean	Median	Standard deviation		
Pedagogical skills	4.2	4.0	0.7		
Instructional planning	4.1	4.0	0.6		
Classroom management	4.3	4.2	0.8		
Student interaction	4.4	4.3	0.7		
Reflective practices	4.5	4.4	0.6		

Table 6 shows that the results indicate teachers' perceptions of their key pedagogical competencies development in various areas after completing the PRP. This finding reveals that beginning teachers have positive attitudes toward the PRP.

The paired sample t-test results show significant differences between the levels of key pedagogical competencies that participants reported before and after completing the PRP Table 7.

Table 7. Paired sample t-test results.

Competency area	Pre-program mean	Post-program mean	t-value
Pedagogical skills	3.1	4.2	12.34
Instructional planning	3.2	4.1	10.87
Classroom management	3.0	4.3	14.02
Student interaction	3.1	4.4	15.29
Reflective practices	3.3	4.5	16.45

The test results showed that beginning teachers' opinions regarding each competence area's t-values indicate how much each pre- and post-program assessment changed, and the corresponding p-values reveal whether these differences were statistically significant. This finding demonstrates that beginning teachers reflect the program's strong emphasis on promoting the growth of their key pedagogical competencies.

4. Discussion

The findings of the current study support the research question that the PRP improves beginning teachers' professional development, which is critical for shaping core pedagogical competencies. Taking into account the results obtained, at the initial stage, according to some studies in the field, the program of study undertaken by beginning teachers and their successful entry into the workplace are closely related [26].

Based on the gender variable, it is evident that beginning teachers' attitudes toward the PRP differ significantly. Females (M=4.12, SD=0.85) scored slightly higher than males (M=3.98, SD=0.91), indicating that female teachers had more positive attitudes toward the program compared to their male counterparts. According to several studies conducted in the field, there is a notable difference between men and women in terms of how they develop their professional skills and how they feel about support programs [27, 28]. In contrast to these studies, Uka [29] discovered that female beginning teachers have more positive attitudes and perceptions of professional skill growth regarding learning through support programs than male beginning teachers.

It was found that after finishing the PRP, teachers' perceptions of their key pedagogical competency development in various areas are depicted by the improved results. With a mean score of 4.2 for pedagogical skills, most beginning teachers felt they had made significant progress. Since the central tendency is high, as indicated by the median score of 4.0, most participants believe they have significantly improved their pedagogical skills. The responses show moderate variability (standard deviation of 0.7), indicating that although most teachers reported significant gains, some may have seen varying degrees of improvement. Remarkably, 85% of beginning teachers said they had improved in this area, demonstrating the program's beneficial effects on pedagogical advancement.

The mean score for instructional planning is 4.1, which is marginally lower than the mean score for pedagogical skills but indicates a high degree of perceived improvement. The participants' results are consistent, as evidenced by the median value of 4.0. A more consistent experience of improvement is implied by the standard deviation of 0.6, which shows slightly less variability in responses when compared to other areas. Given that eighty percent of beginning teachers reported growth in this area, it is clear that the program improved their capacity for lesson planning and organization. Among the competency areas, classroom management had one of the highest mean scores (4.3). The majority of participants felt they had made significant progress in controlling classroom dynamics, as evidenced by the median score of 4.2. A comparatively wider

range of experiences is indicated by the standard deviation of 0.8, wherein some participants report higher levels of improvement than others. Nonetheless, 88% of educators noted a general improvement in this domain, suggesting that one of the primary competencies enhanced by the curriculum is classroom management.

Among the competencies, the mean score for student interaction is 4.4, which is the second-highest. This suggests that beginning teachers have great confidence in their ability to engage and interact with students. With 90% of beginning teachers reporting improvement, the program improved teachers' ability to build relationships and interact with students, even though the standard deviation of 0.7 indicates moderate variability.

With a mean score of 4.5, reflective practices emerged as the area in which teachers made the most progress. This is corroborated by the median score of 4.4, which shows a significant overall improvement in beginning teachers' capacity to evaluate and reflect on their instruction. Since there was not much variation, as indicated by the standard deviation of 0.6, the majority of teachers experienced similar improvements. The fact that 92% of beginning educators reported positive growth in reflective practices is evidence of the program's efficacy in encouraging self-evaluation and ongoing professional development.

It was found that pre- and post-program assessments after completing the PRP differences of participants show the different dynamics of growing their key pedagogical competencies. The t-value of 12.34 indicates a substantial improvement in pedagogical skills after completing the program. The large t-value suggests that the differences between the pre- and post-program means are highly significant, and the p < 0.001 confirms that this improvement is statistically significant. The t-value of 10.87 points to a significant enhancement in instructional planning abilities. The high t-value signifies that the program had a measurable and positive effect on this competency (p < 0.001). The t-value of 14.02 reflects a notable increase in classroom management skills. This result highlights that the PRP had a strong and statistically significant impact on the development of this key competency (p < 0.001). With a t-value of 15.29, the results indicate a significant improvement in teachers' ability to engage and interact with students. The large t-value and corresponding p < 0.001 demonstrate that the program effectively contributed to teachers' ability to build positive student relationships. The highest t-value, 16.45, was observed in reflective practices, indicating that this competency saw the greatest improvement after completing the program. The program's positive impact on fostering reflective practice as a fundamental teaching competency is demonstrated by a p < 0.001.

Research has shown that beginning teachers' professional development is most visible and successful in a variety of innovative support activities [30, 31]. According to Gorard, et al. [32] innovative training programs for beginning teachers allow them to demonstrate their abilities, contribute to the formation of psychological and practical readiness for professional activity, and, most importantly, promote professional growth. Fuchsman, et al. [33]; Nesje, et al. [34] and Gorard, et al. [32] argued that support programs allow beginning teachers to choose the direction of their activities and independently seek out new ways of doing things, enabling them to build an individual professional trajectory based on their subjective personal experience. Thus, the effective possibility of PRP to optimize the process of entry for a beginning teacher into the professional space, applicable to various regions and systems, significantly influences the development of key pedagogical competencies among beginning teachers.

5. Limitations of the Study

This study was limited by the fact that not all target schools had beginning teachers in their first year of employment. Other schools were surveyed and included in the study to ensure this limitation did not significantly affect it. Another restriction was that some new teachers chose not to answer the survey, which limited the study's ability to gather data. The researcher thoroughly explained the study's significance and implications to the participants to prevent these limitations from having a detrimental effect on the research. Since this study focused on beginning teachers in schools in the East Kazakhstan region of Ust-Kamenogorsk, the findings cannot be applied to other educational regions.

6. Conclusions

The study examined beginning teachers' professional development and how the PRP influences the shaping of beginning teachers' core pedagogical competencies. It revealed that core pedagogical competencies were developed formally among beginning teachers. Our findings from a sample of study participants indicate that participating in the PRP is an effective way to improve the core pedagogical competencies of beginning teachers. Thus, according to the study's findings, participation in the PRP enhances beginning teachers' professional development, which is necessary for shaping core pedagogical competencies. The PRP was developed to foster core pedagogical competencies in beginning teachers. It is determined that the PRP can offer a chance to create a logical and transparent policy for working with beginning teachers, in addition to a thorough examination of the situation of the domestic teaching corps.

References

- [1] K. Kager, J. P. Mynott, and M. Vock, "A conceptual model for teachers' continuous professional development through lesson study: Capturing inputs, processes, and outcomes," *International Journal of Educational Research Open*, vol. 5, p. 100272, 2023. https://doi.org/10.1016/j.ijedro.2023.100272
- [2] M. Mlambo, C. Silén, and C. McGrath, "Lifelong learning and nurses' continuing professional development, a metasynthesis of the literature," *BMC Nursing*, vol. 20, pp. 1-13, 2021. https://doi.org/10.1186/s12912-021-00579-2
- [3] M. Karlberg and C. Bezzina, "The professional development needs of beginning and experienced teachers in four municipalities in Sweden," *Professional Development in Education*, vol. 48, no. 4, pp. 624-641, 2022. https://doi.org/10.1080/19415257.2020.1712451

- [4] B. Li, Z. Li, and M. Fu, "Understanding beginning teachers' professional identity changes through job demands-resources theory," *Acta Psychologica*, vol. 230, p. 103760, 2022. https://doi.org/10.1016/j.actpsy.2022.103760
- [5] T. Y. Özdemir, M. Demirkol, and H. Polat, "Teaching as a professionalism through teachers' perspective," *Turkish Online Journal of Qualitative Inquiry*, vol. 10, no. 3, pp. 296-320, 2019. https://doi.org/10.17569/tojqi.498776
- P. Serdyukov, "Innovation in education: what works, what doesn't, and what to do about it?," *Journal of Research in Innovative Teaching & Learning*, vol. 10, no. 1, pp. 4-33, 2017. https://doi.org/10.1108/JRIT-10-2016-0007
- [7] M. Zamiri and A. Esmaeili, "Methods and technologies for supporting knowledge sharing within learning communities: A systematic literature review," *Administrative Sciences*, vol. 14, no. 1, p. 17, 2024. https://doi.org/10.3390/admsci14010017
- [8] W. Hendrikx, "What we should do vs what we do: Teachers' professional identity in a context of managerial reform," *Educational Studies*, vol. 46, no. 5, pp. 607-623, 2020. https://doi.org/10.1080/03055698.2019.1620694
- [9] C. Halal Orfali, M. L. Arancibia Muñoz, I. Riquelme Plaza, and R. Unda Valenzuela, "How higher education teachers see their professional identity," *In Frontiers in Education*, vol. 9, p. 1429847, 2024. https://doi.org/10.3389/feduc.2024.1429847
- J. Burger, H. Bellhäuser, and M. Imhof, "Mentoring styles and novice teachers' well-being: The role of basic need satisfaction," *Teaching and Teacher Education*, vol. 103, p. 103345, 2021. https://doi.org/10.1016/j.tate.2021.103345
- [11] S. Costa, V. Langher, and S. Pirchio, "Teachers' implicit attitudes toward ethnic minority students: A systematic review," Frontiers in Psychology, vol. 12, p. 712356, 2021. https://doi.org/10.3389/fpsyg.2021.712356
- [12] C. Wilcoxen, J. Bell, and A. Steiner, "Empowerment through induction: Supporting the well-being of beginning teachers," *International Journal of Mentoring and Coaching in Education*, vol. 9, no. 1, pp. 52-70, 2020. https://doi.org/10.1108/IJMCE-02-2019-0022
- [13] B. Agyapong, G. Obuobi-Donkor, L. Burback, and Y. Wei, "Stress, burnout, anxiety and depression among teachers: A scoping review," *International Journal of Environmental Research and Public Health*, vol. 19, no. 17, p. 10706, 2022. https://doi.org/10.3390/ijerph191710706
- [14] L. J. Graham, S. L. White, K. Cologon, and R. C. Pianta, "Do teachers' years of experience make a difference in the quality of teaching?," *Teaching and Teacher Education*, vol. 96, p. 103190, 2020. https://doi.org/10.1016/j.tate.2020.103190
- T. Hascher and J. Waber, "Teacher well-being: A systematic review of the research literature from the year 2000–2019," *Educational Research Review*, vol. 34, p. 100411, 2021. https://doi.org/10.1016/j.edurev.2021.100411
- [16] A. Toropova, E. Myrberg, and S. Johansson, "Teacher job satisfaction: The importance of school working conditions and teacher characteristics," *Educational Review*, vol. 73, no. 1, pp. 71-97, 2021. https://doi.org/10.1080/00131911.2019.1705247
- [17] L. Gaikhorst, J. Beishuizen, B. Roosenboom, and M. Volman, "The challenges of beginning teachers in urban primary schools," European Journal of Teacher Education, vol. 40, no. 1, pp. 46-61, 2017. https://doi.org/10.1080/02619768.2016.1251900
- [18] L. McKay, "Beginning teachers and inclusive education: Frustrations, dilemmas and growth," *International Journal of Inclusive Education*, vol. 20, no. 4, pp. 383-396, 2016. https://doi.org/10.1080/13603116.2015.1081635
- [19] S. Abildina, Z. Sarsekeyeva, A. Mukhametzhanova, K. Kopbalina, and S. Nurgaliyeva, "Enhancing reading literacy among elementary school learners in Kazakhstan: The application and effectiveness of modern teaching techniques," *Journal of Infrastructure Policy and Development*, vol. 8, no. 8, p. 5905, 2024. https://doi.org/10.24294/jipd.v8i8.5905
- [20] Z. Karibaev, A. Zhumabayeva, B. Kurbonova, and S. Nurgaliyeva, "Subjective well-being of students with disabilities in kazakhstan: An exploration of practice," *Journal of Curriculum Studies Research*, vol. 6, no. 2, pp. 88-103, 2024. https://doi.org/10.46303/jcsr.2024.12
- [21] S. Nurgaliyeva, A. Bolatov, S. Abildina, S. Zeinolla, B. Kurbonova, and U. Kyyakbayeva, "COVID-19 online learning challenges: Kazakhstan secondary schools case study," *Frontiers in Education*, vol. 9, p. 1448594, 2024. https://doi.org/10.3389/feduc.2024.1448594
- [22] S. Nurgaliyeva, Z. Iztleuova, S. Maigeldiyeva, Z. Zhussupova, G. Saduakas, and G. Omarova, "Examining the Relationships between teachers' job satisfaction and technological competencies," *International Journal of Education in Mathematics, Science and Technology*, vol. 11, no. 4, pp. 898-912, 2023. https://doi.org/10.46328/ijemst.3375
- [23] Y. Ospankulov, A. Zhumabayeva, and S. Nurgaliyeva, "The impact of folk games on primary school students," *Journal of Education and E-Learning Research*, vol. 10, no. 2, pp. 125-131, 2023. https://doi.org/10.20448/jeelr.v10i2.4473
- [24] Z. Tajibayeva et al., "Investigation of the psychological, pedagogical and technological adaptation levels of repatriated university students," *International Journal of Education in Mathematics, Science and Technology*, vol. 11, no. 3, pp. 755-774, 2023. https://doi.org/10.46328/ijemst.3336
- [25] A. Lantz-Andersson, M. Lundin, and N. Selwyn, "Twenty years of online teacher communities: A systematic review of formally-organized and informally-developed professional learning groups," *Teaching and Teacher Education*, vol. 75, pp. 302-315, 2018. https://doi.org/10.1016/j.tate.2018.07.008
- [26] S. Kearney, "The challenges of beginning teacher induction: A collective case study," *Teaching Education*, vol. 32, no. 2, pp. 142-158, 2021. https://doi.org/10.1080/10476210.2019.1679109
- [27] S. Seehuus, "Gender differences and similarities in work preferences: Results from a factorial survey experiment," *Acta Sociologica*, vol. 66, no. 1, pp. 5-25, 2023. https://doi.org/10.1177/00016993211060
- [28] M. Moskos, "Why is the gender revolution uneven and stalled? Gender essentialism and men's movement into 'women's work'," Gender, Work & Organization, vol. 27, no. 4, pp. 527-544, 2020. https://doi.org/10.1111/gwao.12406
- [29] E. Uka, "Exploring differences in primary school teachers' attitudes towards inclusive education in Kosovo," *European Journal of Special Needs Education*, pp. 1-10, 2024. https://doi.org/10.1080/08856257.2024.2334537
- [30] M. Taufiq, A. Widodo, I. Kaniawati, L. Liliasari, and A. Samsudin, "Professional development program on innovative teaching methods for beginner science teachers," *Journal of Innovation in Educational and Cultural Research*, vol. 5, no. 3, pp. 474-483, 2024. https://doi.org/10.46843/jiecr.v5i3.1600
- [31] S. Süer and B. Oral, "Investigation of classroom teachers' views towards innovative pedagogical practices," *Participatory Educational Research*, vol. 8, no. 4, pp. 253-273, 2021. https://doi.org/10.17275/per.21.89.8.4
- [32] S. Gorard, B. H. See, and R. Morris, "How to get more people into teaching? Comparing undergraduates' and teacher trainees' motivation and perceptions of a teaching career," *Education Sciences*, vol. 12, no. 11, p. 767, 2022. https://doi.org/10.3390/educsci12110767
- [33] D. Fuchsman, T. R. Sass, and G. Zamarro, "Testing, teacher turnover, and the distribution of teachers across grades and schools," *Education Finance and Policy*, vol. 18, no. 4, pp. 654-675, 2023. https://doi.org/10.1162/edfp_a_00376

[34] K. Nesje, C. Brandmo, and J.-L. Berger, "Motivation to become a teacher: A Norwegian validation of the factors influencing teaching choice scale," *Scandinavian Journal of Educational Research*, vol. 62, no. 6, pp. 813-831, 2018. https://doi.org/10.1080/00313831.2017.1306804

Appendix A. Survey.

Survey						
N	Items	Strongly agree	Agree	Partially agree	Disagree	Strongly disagree
Sect	ion 1: Pedagogical skills					
1	Before the program, I had a strong understanding of various teaching methodologies					
2	After completing the program, I am confident in selecting appropriate teaching methods for various learning situations					
3	The program helped me enhance my ability to explain complex concepts to students					
4	I feel more competent in adapting my teaching style to meet the diverse needs of my students					
Sect	ion 2: Instructional planning					
5	Before the program, I was skilled at designing lesson plans that aligned with curriculum standards					
6	The program significantly improved my lesson planning and organizational skills					
7	I am now more confident in integrating innovative teaching strategies into my lesson plans					
8	The PRP has equipped me to design lessons that cater to various learning styles and abilities					
Sect	ion 3: Classroom management					
9	Before the program, I experienced difficulties in maintaining classroom discipline					
10	The program has helped me develop effective classroom management strategies					
11	I now feel more confident in handling classroom disruptions and student behavior issues					
12	My ability to create a positive and productive classroom environment has improved as a result of the program					
Sec	ion 4: Student interaction				'	
13	Before the program, I struggled to engage students effectively in classroom discussions					
14	The program has significantly improved my ability to interact with students and foster engagement					
15	I feel more confident in building positive relationships with my students					
16	I am now better able to assess and respond to the individual needs of my students					
Sec	ion 5: Reflective practices					
17	Before the program, I rarely engaged in self-reflection regarding my teaching methods					
18	The PRP has encouraged me to regularly reflect on my teaching practices					
19	I now critically assess my lessons to identify areas for improvement					
20	Reflective practice has helped me become more adaptable in adjusting my teaching strategies based on student feedback and outcomes					
Sect	ion 6: Overall program impact		1		1	
21	The PRP has positively impacted my overall professional growth as a teacher					
22	I feel more prepared to handle the demands of the teaching profession as a result of the program					
23	The mentorship component of the program was critical in shaping my teaching competencies					
24	Overall, I would recommend the PRP to other new teachers					